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CHARLES LIVINGSTON BULL

Illustration for "The White Nightmare" by Charles Livingston Bull.

IT FELL WITH THE FORCE OF A BOLT.

THE OUTING MAGAZINE



VOLUME LVIII

APRIL, 1911

NUMBER 1

CRUISING WITH THE YAHGANS

BY CHARLES WELLINGTON FURLONG

Illustrated with Photographs by the Author

SWIRLING around Cape Froward, the southernmost tip of the mainland of South America, now east, now west, through the Strait of Magellan, surge the mighty tides of the southern oceans, their huge combers ever battering against the mountain islands of the Fuégian Archipelago, and their icy currents swashing through them.

Never were men more isolated than Magellan and his crews when they passed through the Straits on what, to me, stands as the most remarkable voyage of exploration the world has known. Magellan undoubtedly took the archipelago south of the Straits to be a single land, perhaps the northernmost part of an Antarctic continent.

On either side of the Strait, he saw camp and signal fires. To starboard the smokes of the big Tehuelches' fires rose in great black volumes from the dry maté-negro bushes, breaking the long, level line of the Patagonian pampas.

To port, those of the wild Ona floated from the undulating northlands of their island. Then, further westward, among the steep, mountainous defiles of the Strait, on either side, the smokes of the treacherous canoe Indians, the Alaculops and Yahgans, were stenciled blue against the dank, somber woods which clothe most of the mountains of these islands to the height of a thousand feet.

So Magellan called this land Tierra-del-Fuégo—Land of Fire. However, there is a tradition that he really called it Tierra-del-Huomo—Land of Smoke—but that, on the return of the expedition, the sovereign of Spain changed it to Tierra-del-Fuégo, saying, "Where there is smoke there must be fire."*

My purpose in these parts was exploration and the ethnic study of those little known Amerinds who have almost disappeared, and about whom the world

* Formerly the entire archipelago was called Tierra-del-Fuégo, now this name applies to its largest island. The other most important islands have their names, but the archipelago as a whole is known as Fuégia.

knows so little. One of my most important expeditions was among the Yahgan tribe, the southernmost inhabitants of the world.

The focal point of civilization in the Territory of the Magellanes and in all southern Patagonia is that interesting, little straits settlement of twelve thousand inhabitants—Punta Arenas (Pūntā'rēnas)—P. A., they call it there. As it is the Mecca of the Patagonian and Fuégian settlers, so it is the center of the most deserted territory of the disappearing tribes.

Passing of the Aborigines

The Patagonians (Tehuelches) have shrunk back to the high pampas, and no longer come to trade at Sandy Point (Punta Arenas); the Onas have retreated, fighting the ranchers, to the impenetrable mountain fastnesses of Tierra-del-Fuégio; the Alaculoops secrete themselves in the western archipelago, rarely coming east of Cape Tamar, while the Yaghans, farthest south of all, are found only in the region of Beagle Channel and those lonely, dangerous reaches in the vicinity of Cape Horn.

Hidden in a beautiful bay in Beagle Channel, far south of the Strait of Magellan, framed by an impassable barrier of jagged, glacial-capped mountains, Argentina maintains in this out-of-the-world spot a penal colony of murderers and felons, with its little mushroom settlement composed mainly of prisoners on parole and adventurers. This is the southernmost town in the world—Ushuwaia, they call it, retaining the old Yahgan name of the place.

Except for a couple of sheep ranches along the narrow camp at the base of the mountains on Beagle Channel, a logging camp or two, and a few adventurers, the storm-swept archipelago is inhabited only by the creatures of the deep, a limited variety of land animals, sea birds, and the roving Yaghans.

Few vessels penetrate these regions, and I was fortunate to have been brought south, through special favor of the Argentine navy, in their frigate-rigged warship, the *President Sarmiento*, on her annual cruise through those regions, and

was dropped ashore at that isolated convict settlement.

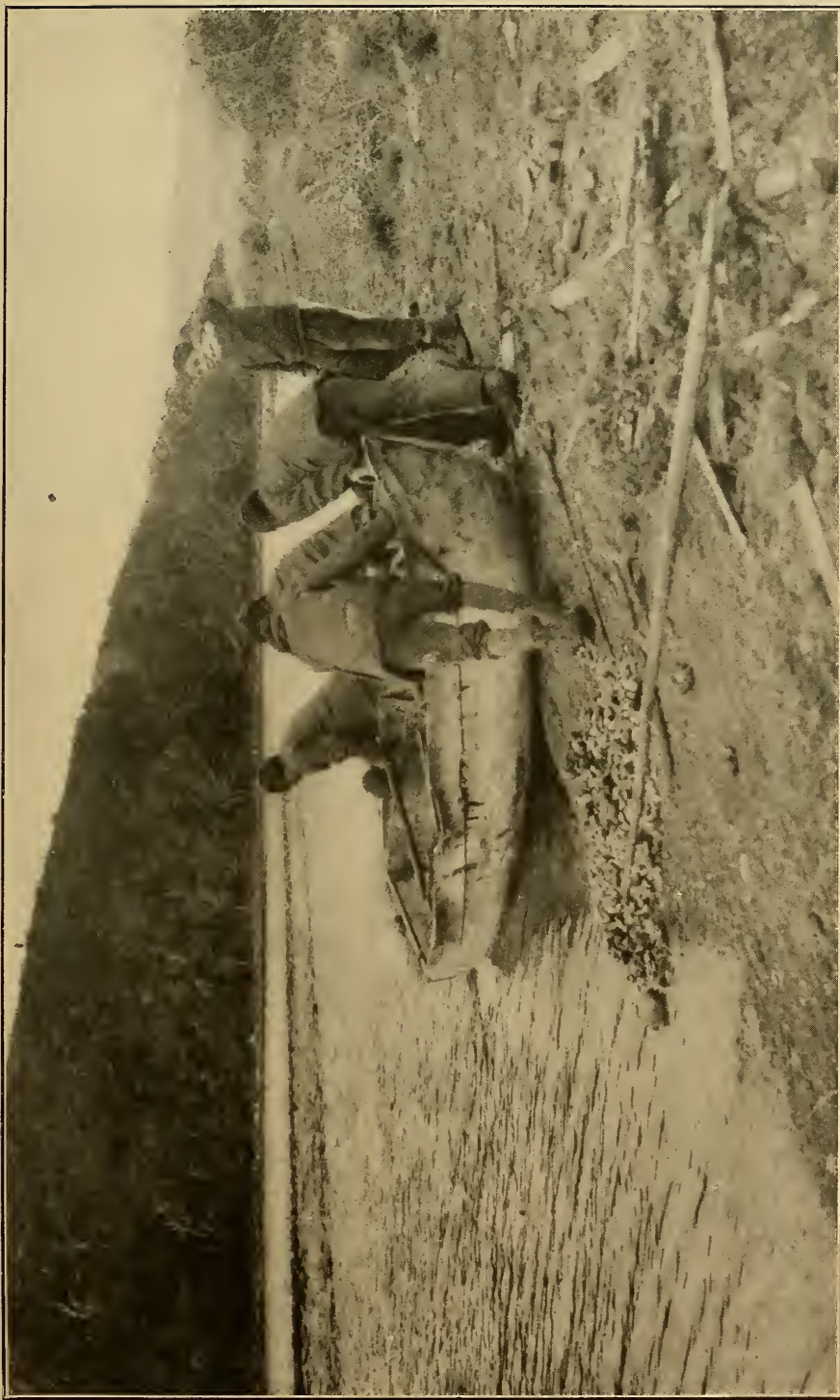
In Ushuwaia fortune still favored me, enabling me to charter the only boat at that time in the harbor, a heavily built, thirty-five-foot cutter, the *Garibaldi*, run by an Austrian named Beban.

In this cutter he transports sheep from the ranches to Ushuwaia, for the convicts, occasionally conveys miners and their supplies to the outlying islands eastward, or goes south Ponsonby Sound way, and trades rum for hard-earned otter and seal skins of the Yaghans. Sometimes he—well, though Ushuwaia is in Argentine territory, the *Garibaldi* is registered in Punta Arenas and flies the one-starred flag of Chile. The *Garibaldi* carried a cargo of sheep below decks, and the filth and stench of the craft would have made a pigsty blush for shame.

We started south in the gray, gloomy drizzle of low-hanging storm-clouds, as characteristic of Fuégia as its fierce winds and penetrating, humid cold, due to the snow- and ice-capped mountain ranges. Even in the middle of summer blinding snowstorms are often of hourly occurrence, the dangerous winds prevailing from the north and south of west.

Close-hauled, with dripping oilskins reflecting the dull light of the clouds, we shot through Murray Narrows with the current. The intricacy of these channel ways is hardly conceivable except through experience, and on the very latest admiralty charts most of the coast is not only imperfectly plotted, but there are still sections showing the undefined dotted line of unexplored coast. In these out-of-the-way channels and bays the nomadic Yahgan paddles his dugout canoe and pitches his wigwam on their shores. As he eats his staple meal of mussels, he chucks out the shells, covering his sites with their glistening heaps. These kitchen-middens represent the accumulation of untold generations of these canoe people, whom Charles Darwin first considered of such a low order of humanity.

Their rugged, desolate land, ever holding over them the possibility of starvation; their constant fighting against storm, cold, and disaster; their everlasting squatting, haunched in canoes, has



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LAUNCHING DUGOUT CANOE FOR THE RIO DOUGLAS EXPEDITION. IN THE FOREGROUND IS A HEAP OF DISCARDED MUSSEL SHELLS—STAPLE FOOD SUPPLY OF THE YAHGANS.



THE BOAT IN WHICH MR. FURLONG CRUISED THROUGH BEAGLE CHANNEL.
ITS GREAT LENGTH AND NARROW BEAM UNFITTED IT FOR ROUGH SEA.

indeed made crude and distorted bodies which otherwise would be well-proportioned and comely. But these same elements have also quickened their powers of observation, made them cunning, cautiously fearless and treacherous.

It is often most difficult to locate these Fuégians. But there was none better able to do this than Beban, the lone trader of these parts. The chances were good for finding some of them on the shores of Rio Douglas, where a lone missionary was ensconced, and so, two days after leaving Ushuwaia, we dropped anchor in the mouth of Douglas Bay. Beban, after setting the whole camp in a turmoil with his "aqua diente," shook me with his horny hand and sailed away for Picton Island. The Yahgans here were, some forty all told, feeding literally, rather than figuratively, on the bread of life from the missionary's scant supply of stores.

My work consisted in studying the life of these people and exploring the neighboring islands and the Rio Douglas in canoes and a narrow boat which had seen its best days. Among these Yahgans there were many interesting individuals, but old Asagyinges and his wife,

shown in the accompanying illustration, serve as types.

With three Yahgans in a canoe I followed up this little river and plotted its course. Shortly after leaving the camp, we passed half a canoe, split lengthwise from stem to stern, cast up on the beach, a reminder of a double murder perpetrated in it the night before my arrival, and now, after their custom, it had been destroyed with the rest of the property of the deceased.

Here and there were other abandoned canoes lying bleaching on the shores. For miles the tide was perceptible, until we reached a point where the river narrowed and became a stream. The receding tide left the rocky bottom quite shallow, and this, with the swift current, forced us to abandon going further with the canoe. Up to this point the Rio Douglas could be considered almost as much one of those narrow arms of the sea as a river.

Leaving the Indians in charge, I pushed through the thick Antarctic beeches and underbrush, or waded in the river, some distance into the forest, far enough to feel sure that the river swings northerly, with its source perhaps in the



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ASAGYINGES AND HIS WIFE, TYPICAL FUÉGIANS OF THE RIO DOUGLAS COUNTRY.

region back of Woolya. There is also a possibility of some extensions or lakes along its course further up, but I found no indications of such.

Certain sections of the Fuégian Archipelago abound with ducks and geese, and in their best feeding grounds, the *lagunás* (shallow lakes) of the northern half of Tierra-del-Fuégó, they are found in countless thousands; but along the coast they seem to be unusually wary of man, considering the few inhabitants and loneliness of these parts. Rio Douglas abounded with beautiful upland geese, and on the way back I shot, at about two hundred yards, a fine specimen with my rifle.

On our departure, near the camp old Asagyinges was peering at us from some long grass on the river bank. Later, up river, far behind us, another canoe stealthily followed under the shadow of the overhanging evergreen beeches and *linea dura*, then disappeared. On our way back, a bit of red complemented among the green foliage on the bank, and my field glasses revealed old Asagyinges and his wife watching us from where they were hidden in the bushes with their canoe, all of which maneuver-

ing was undoubtedly prompted by simple curiosity.

The days spent in this camp, replete with hard work and daily incident, passed rapidly. The Yahgans, when not squatting in their smoke-filled wigwams with their numerous dogs or mourning over the recent dead, were occupied with the simple affairs of camp life—the women gathering firewood and edible fungus, cooking their scant meals of mussels, fish, birds, or eggs, weaving baskets, and looking after the children; the men occasionally assisted the women to gather wood, or hunted, made nets, spears, or canoes.

My time was occupied making notes, sketches, and photographs. I took numerous hand and foot prints, measurements, and phonographic records of their speech, but neither the efforts of the missionary or myself could persuade one of them to allow the taking of a plaster face mask.

Securing the phonograph records proved most interesting, but it was not easy to induce these aborigines to talk or sing into this uncanny thing. A thing which sang back to them their own voice, shouts, embarrassed laughter, and even

the sound of their breathing, was to be approached with discretion. Some of the singers would break down in the middle with a hilarious fit of laughter or suddenly run away altogether from the machine.

The Yahgan responsible for the killing of the two men in the canoe was the most difficult of all. Perhaps he associated the returning voice with evil spirits, which to the Yahgan haunt forest, mountain, and sea, and undoubtedly prey upon the imagination of the evil savage no less than does an evil conscience on the mind of his white brother. With his father, this man had also taken part in the killing of two white men recently on a lonely island in the archipelago.

It was my desire to cross Navarin Island in a north-northeasterly direction from Rio Douglas, coming out north at a Yahgan camp at Mussels Bay on Beagle Channel, then to cross the channel in canoes to Remolino, the westernmost of the before-mentioned ranches, where I stayed between visits to Ushuwaia. But I could not persuade a single Yahgan to accompany me through the deep forests and over the snow-capped mountains. Perhaps, being canoe Indians, they were indisposed and even unfitted for hard land travel; perhaps their superstitions raised up greater barriers to penetrating this land than Nature herself.

The only other apparent way to return north was to wait here, for months, perhaps, for the *Garibaldi*, or venture alone with Yahgans by canoe in one of their clumsy dug-outs. These are frequently overtaken by disaster in a region of gales and fitful whirlwinds, known as williwaws, the terror of the small-boat adventurer.

But, for a third time, fortune came my way. The long boat which belonged to the missionary was placed at my disposal. This craft was obtained from a wreck; long, and of narrow beam, it was essentially a river boat, and quite unfitted for sea work. Old and half water-logged, it was in such a poor state of repair that its owner would not risk its further use to any extent, and understood that a new boat he had long since ordered was due to be left him at Ushuwaia. Arrange-

ments were finally made with four Yahgans to accompany me in this old boat to Remolino.

The introduction of many of the white man's customs and ideas upon aboriginal and Oriental races must ever offend the taste of those who have the least sense of the fitness of things and the picturesque. The clipped hair and dull, ill-shaped, homely garb of the white man, when forced upon the aborigine, I believe, not only take away to some extent his self-respect, but certainly, to no small extent, his health. Pictures exhibited by many well-meaning missionaries of their aboriginal protégés "before and after taking" clothes, as an evidence of improvement, are to me sad spectacles. Among the Yahgans, as among other tribes, clothes affect little the real character underneath. The wearers look less like what they are—Indians, and more like white men. Why should we wish to make Indians look like white men?

"Christian" Names for Natives

But here, too, at Rio Douglas, the Indians who ostensibly accepted Christianity were given an English name by the missionaries, in place of the euphonious picturesque ones bestowed upon them by their parents, usually signifying the place where they were born. They were influenced, too, to disuse and forget the old name, which it was feared recalled their former pagan condition and associations. Two of my four Yahgans I knew by the English appellations of James and Bert, another Yagaashagan, and the fourth I do not recall.

It was with much reluctance that James agreed to go, and then with the understanding that we should cross Beagle Channel well before we reached Mussels Bay, to which I agreed. On inquiring of the missionary the reason, he unwillingly told me that a few months before James was camping in an out-of-the-way inlet, just off Murray Narrows, on Hoste Island, with an Alaculoop and his wife. One day, without any apparent cause, James fired his shotgun point-blank at the Alaculoop, blowing his head off. The woman escaped in her canoe and, after James left, buried the body and



THE GREAT GLACIER IN NORTHWEST ARM, WHOSE FALLING BERGS SEND GREAT WAVES ROCKING ACROSS TO THE OTHER SHORE, A MILE AND A HALF AWAY.

paddled two days' journey to Mussels Bay, where she had friends.

Though the Yahgans are without chiefs and are scattered much of the time in the hunt for food, yet they have certain fundamentals of government. The coming of the woman and her charge

were insufficient evidence, so, launching their canoes, they paddled way down to Hoste Island and verified her story.

Then, as it is the Fuégian custom for the friends and relatives to take blood revenge, James became a marked man, and he naturally had compunctions against

passing along the coast occupied by the Mussels Bay tribe.

It was a beautiful morning when we pulled out of the Rio Douglas, and the sun gave a welcome warmth to the chilly air of regions which have recorded practically a whole year of unpleasant weather and storm. We rounded its northern entrance and passed through a narrow channel between a point of land and a little island. The waters rippled gently against the massive, lichen-covered rocks, out of whose crevices storm-bleached roots of Antarctic beeches, the *linea dura* and winter bark, occasionally poked and twined like great serpents; in dank rich top soil, crowning their tops and upper slopes, were the trees themselves—storm-beaten, twisted, and stunted, like the people trees of Doré's drawings. The weird and oblique shapes of those on the storm line, even in the peaceful quiet of this early morning, were full of potentiality of movement, and to obtain a sense of rest one had to look beyond into the thicker or more protected forest, festooned with light green moss, into which their gaunt arms reached. But, after all, in effect, we might as well have been running through some high-wooded islands off the coast of Maine.

In Open Water

We passed out into the broad reach of Ponsonby Sound. Far away astern, south, Packsaddle Island, Hardy Peninsula, and the Wollaston Islands, which terminate in Cape Horn, stood out in filmy rhythm of blue silhouettes between us and the Antarctic Ocean. Between the Horn and the Antarctic continent sweeps Drake Strait, through the only latitudes where open water encircles the earth's surface without intersecting land.

West, across Ponsonby Sound, Pacha Island humped up its dark, drenched shape like a mighty sea monster up to breathe, and stenciled in dark contrast against the distant, rugged slopes and snow-capped peaks of Hoste Island, the most irregular and indented island, I believe, in the world.

But sifting over its jagged tops were clouds, the forerunners of those terrific

Fuégian storms, and that dread of mariners, the "white arch." Nothing but the steady swash-creak of the long oars broke the silence or stirred the placid waters of the sound.

There were two courses to Murray Narrows—to hug the shore of Navarin and follow around the lee of Button Island, or to hit straight across the open reach of the sound. It is rarely wise in these parts to go out on the broad reaches in canoes or open boats, unless the latter are of high free-board and of the stanchest kind. But such a direct course would enable us to go through Murray Narrows that night with the current, and thus save a day. The chances were good for reaching it ahead of the storm, so we took it.

Rarely is such a calm seen in those parts. The water lay still—a perfect mirror. Feathers from the down of kelp geese floated delicately on its surface, here and there strewn with whale spoor. Penguin, duck, geese, mollimaux, gulls, steamer ducks, and other sea birds, fed, swam, and dove in uncontrolled freedom. Beside me a monster sea lion thrust up his bristled snout, and, as he sported, shattered into atoms the mirrored reflection of that massive distant mountain, King Scott. Far away, a monster leviathan lifted from the briny depths to breathe, spurted his jet of water, which showed like a silver thread against the dark, mossy recesses of Button Island. Then, with a mighty dive, flung spray high in the air and sent great, ever-widening rings of disturbance softly spreading over the tranquil surface. He was well where he was, for it was not pleasant to contemplate what one lash of his powerful tail might do to our boat.

By late afternoon we had passed Button Island and were approaching the twist of the channel between Hoste and Navarin islands, known as Murray Narrows. One end of the storm had passed to south of us. We now had a fair breeze and set the small square sail.

The Yahgans contented themselves with mimicking and ridiculing the birds and mammals about us. Now it would be a pensive, indignant, big, black shag whose importunate, disturbed dignity and lugubrious attitude they would mock



THE EASTERN HALF OF THE FUÉGIAN ARCHIPELAGO, FROM BEAGLE CHANNEL TO CAPE HORN.

Dot and dash lines show Mr. Furlong's course on the *Garibaldi*. Dotted lines show his course with the Yahgans.

and comment upon; or, with loud shouts and waving of arms, they would scare on at an increased rate of speed an awkward-moving steamer duck, as, with its wings beating the water like paddles, it awkwardly propelled its scurrying flight into one of the many inlets.

My position was at the tiller, and always beside me on the stern sheets lay my rifle. With the wind, an hour more of current with us, and followed by slack water, we could get through the narrow turn in the channel, known as Murray Narrows, that night, and make camp somewhere on the north coast of Navarin, well west of Mussels Bay. The Yahgans were informed of this, after which they lapsed into a spell of moody silence, then gathered nearer together in low conversation.

From the stern thwart, the murderer, James, leaned toward me, and in the ex-

pression of those deep-set, wolfish eyes, could be seen things which caused me to grip my rifle stock as I inclined toward him. Yonder, he said, he had a camp where we *must* go for the night. I answered "no." By the fierce scowl which clouded the broad, flat face, it was well that my hand rested on my gun. Recognizing the place as being the site of the murder, I had no desire to spend a night in that obscure inlet, surrounded by dank, thick forests.

These people are very susceptible to their surroundings, and here there were too many recent associations to stir their imaginations in unpropitious channels for me to experiment too far with the psychology of this particular crew. The boat was swung in a bit to see closer into the place, and then, to James's particular annoyance, we sailed by, and I headed cross current to the Navarin side.

His apprehension was evidenced by his furtive glances ahead for strange canoes, and once, when a guanaco up on a hillside suddenly let loose his idiotic-sounding neigh, his keen eyes snapped quickly in that direction. Without that wonderful, stoical self-control of the Yahgan, he would have been visibly startled.

The clouds were now piling up fast toward our course. Luckily, we had a good breeze, for I doubt if the Yahgans would have rowed away from this point

hand, cocked, and from my hip, pointing full at the breast of the third man, who sat amidships in the gap they had opened up, down which I looked at the barbed point of a heavy seal spear. His left hand lightly steadied the whalebone head, in their manner of throwing. But the man in front had moved a second too soon, for the weapon was poised in that preliminary position, but, thank Heaven, not drawn back. By way of subterfuge, he toyed with the loose end of a piece of



USHUWAIA, SOUTHERNMOST TOWN IN THE WORLD. IT IS A YAHGAN WORD MEANING "MOUTH OF THE BAY."

had it been necessary for them to use the oars.

When in the field, it is remarkable how keen and subconsciously sensitive the mind becomes to every sound and sight about one, doubly so to anything visual or otherwise not in attune with what seems to be the natural order of things. While my attention was fixed on the further opening of the narrows, I was not unmindful of every movement of the Fuegians on the four thwarts in front of me. The nearer ones blocked my view of those forward.

The first man scanned me closely, leaned carelessly to one side over the starboard gunwale, while the second lolled over to port. Before he had fully completed this action my rifle was in my

sinew about the spear head and shaft, as though to fix it. Then, slightly disconcerted, he put down the spear. It was too accessible for my peace of mind, and he was ordered to stow it away under the thwarts.

We reached the turn, a scant quarter mile in width, and shot through the narrows, where for untold centuries has passed to and fro the canoe of the Yahgan. It has passed here more often and in greater numbers, probably, than through any other one place of the Fuegian Archipelago, for Murray Narrows is the only artery south of Tierra-del-Fuégio which permits direct access from Beagle Channel to those islands and sounds south, which offer the Yahgan not only more in the way of his scant food

supply, but, what is more important, the furthest seclusion and protection from the white man.

Had Nature projected that little, rocky, tree-clad point which we had but just rounded, a scant four hundred yards further across the little valley we had sailed through, raising here a mountain instead of depressing a valley, it would have greatly affected existing conditions. In that case, to reach the center of the southern maze, the Yahgans would have,

from which this tribe has derived its name.

But for these narrows, I do not doubt that the decimation of these people by contact with white men through this most accessible thoroughfare of Beagle Channel would have been greatly reduced, and that to-day, instead of the small remnant of about a hundred and seventy-five, they would number several hundreds.

But the narrows existed, to which fact



MR. FURLONG'S YAHGAN CREW. THE MAN IN THE FOREGROUND IS JAMES WHO KILLED THE ALACULOOP.

perforce, to paddle their canoes a full hundred miles eastward, circling the rounded end of what is now Navarin Island, or double the distance about the jagged, stormy coast of what is now Hoste Island to the westward. In each case it would necessitate exposing their tiny dug-outs (averaging about sixteen feet in length, three and a half feet beam, and two feet free-board) either to the open reaches of the South Atlantic or Southern Pacific Ocean, which pound in upon the shores some of the most terrific seas of the world.

The importance of these narrows as a Fuégian thoroughfare is also evidenced by the fact that in the channel on the Navarin side was Yahga, the most important settlement in these parts, and

I awoke very suddenly when a squall, without warning, dropped upon us from the highlands. Then the wind veered so as to force us to beat our way to the northern point of the narrows, Cape Mitchell. Here we encountered a strong head sea beating down Beagle Channel from the east.

Few boats could head up Beagle Channel in that sea; certainly not our craft, with its narrow beam, broken rudder-head, and poor condition, so the sail was lowered and the Yahgans, still sullen and moody, manned the oars, and we swung in a lee through a little archipelago. As we pulled through almost land-locked bays, only occasional wind gusts dropped over the hilly islands, giving little idea of the weather without.

At the head of the first bay I found the abandoned Yahgan camp site of Aca-matau, where was also a log hut and some fencing long since deserted by an adventurer. Landing here, we had an *asado* of mutton and some fresh spring water. Some seven or eight miles further



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TYPE OF YAHGAN AT ASSASAWYIA.

westward, at another abandoned Yahgan camp site, called Assasawyia, I had heard there was a white man, the mate of a wrecked vessel, living with a Yahgan wife. Though with difficulty I got the men to continue further westward, Assasawyia was preferable to spending the night alone with my four men under the existing conditions.

Thanks to the long Antarctic twilight, there were still a few hours before darkness. Suddenly one of the Yahgans leaned over the gunwale and pounced upon one of those beautiful dark vermilion crustacea, a lobsterlike crab, indigenous to the Magellanes and known to the Spaniards of Punta Arenas as *centolla*. They are delicious eating, tasting like lobster, though more delicate. These crabs measure as long as two and a half feet between outstretched claws, and often are found, like a myriad of other

sea life, in that remarkable Fuégian seaweed, kelp (*fucus giganticus Antarcticus*).

This kelp has been known to reach its long, snaky tentacles over a hundred and twenty feet from sea bottom to the surface, where it spreads out its broad leaves and pods. The avoiding of this kelp claimed our attention, for it grows in patches so thick as to sometimes check the passing of a boat, and it is an ill fate that awaits the swimmer, though near shore, who may be capsized in its meshes. This dull, yellow-green seaweed takes root from rocks, so serving as a good warning to those who cruise in these parts. To its long, finger-thick stems Yahgan women often make fast their canoe lines while fishing. Flocks of birds often alight on kelp patches, which paint the blue water with spots of dull yellow, green and amber. In a gale of wind the long-pointed, lifting, lipping leaves greatly modify the action of the waves near shore, as we found when we rounded another point into the full force of the gale.

In a bitter wind, which cut through one like a knife, now occurred for some two miles the most strenuous pull of the day—two long, hard hours of it before we brought under the lee of an island, given on both British Admiralty and American charts as a peninsula. This puzzled me somewhat, but the Yahgans gave me to understand that in this inlet was Assasawyia, and we slowly felt our way in the thickening storm and premature darkness, until, passing a slope of beach, the keen-sighted Yahgans perceived the loom of a dusky figure. He was a member of two Yahgan families living here. The white man, who had gone to Ushuwaia, seven miles across channel, had been held up by the gale.

My outfit was carried up the slope to an end compartment of a three-roomed hut. As I entered, a squaw thrust her unkempt, black-haired head through a doorway leading to an adjoining room, then withdrew, and the door was closed. The Yahgan who met us on the beach had sighted us far up channel. Bringing me some water, this sinister-looking chap then joined the others in a near-by wigwam.

I piled a rough-hewn table and one of



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A GROUP OF PONSONBY SOUND YAHGANS IN WIGWAM OF BEECH BOUGHS.
SECOND WOMAN FROM THE RIGHT WEARS A FACE MASK.

my heavy camp bags against the outer door, and deposited the other across the door leading to the next room, when I noticed that it opened outward. In its center was a small hole, and I well knew that, if but for curiosity alone, there would be a Yahgan eye on the other side of it. So, out of range of it, I withdrew the stout rawhide lacing from one of my camp boots, doubled the middle into two half hitches, slipped them over the improvised handle of the door, and made the ends fast to the handle of the bag below. Now only with difficulty, and not without awaking me, could either door be opened.

Spreading my guanaco skins and blankets in the middle of the room, I blew out the candle, then quietly shifted my bed to the farther corner. This put me farthest from the doors, and would have deceived anyone who had been watching me, as to where I slept. This was by way of precaution, for they have an unpleasant habit in these parts and Patagonia of shooting through the house when they know where a man bunks. The wind and rain shrieked, beat, and roared, but I was soon asleep.

The next day brought no cessation to the gale, which, during the night, shifted southwest and drove down from the Pacific all day, sending a mean, quick sea boiling through Beagle Channel. For a small boat these channel seas are perhaps the most dangerous known, particularly with wind against current.

This blow literally tore off the waves, and foam-strewed their tops like streaks from a mammoth spider's silver web. The geese hunted during the day were unusually wary and took on the wild character of the storm. It is occasionally impossible for weeks at a time to cross Beagle Channel in an open boat. Time was of the greatest value, and as, in the late afternoon, the gale moderated, I decided to take a chance.

In the Fuégian twilight the men carried the outfit to the boat and shoved off. Not, however, before I had reinforced the oar locks and, with a piece of beechwood, securely wedged the tiller on to the half-rotted rudder head. Rough though it was, the waves were regular and the southwest wind in our favor as we raced along free, diagonally across channel, directly abreast Mussel's Bay

now, but well off shore. James's black eyes, furtively, constantly, scanned the coast of Navarin, where, less than three miles away, were men who some day would undoubtedly have his blood upon their hands.

High up over the glacial, rocky crags of the regular, Nature-chiseled peaks of the Martial Mountains, angry dark violet clouds bulged over them from the northwest. The low-hidden, setting sun shot cold, silver shafts of actinic light radiating through them, here gilding their fringes with green silver, there selvedging them with saffron gold, which showed their edges in a double brilliancy through the clear, cold atmosphere of the Antarctic, where they lined against the blue turquoise of a single gap of sky. The whole *cordillera* of southern Tierra-del-Fuégó, as it ranged westward, stood out in a great panorama of scintillating beauty. The white, snow-crowned, glacial-capped peaks caught the light on their western slopes and reflected it in a glistening sheen of pinks, their eastern shadow sides contrasted in dark blue green, merging lower down into deeper blues and the somber blue-violet shadows of rock and forest.

The glow also caught in high lights on the coppered faces of the Yahgans, and glittered from their keen, dark eyes, now gazing fixedly toward the wondrous spectacle. They were concerned with certain lowered, faster-moving clouds, knowing well that shortly they would bring with them a very hurricane of wind, and they also realized only too well the unfitness of our craft to stand it. Far away and above us swiftly rolled down the sea of clouds, under it bore down the white yeast of a foaming sea of waves.

The Place of the Williwaws

From the north another danger threatened. Sweeping here and there cross channel were fitful, dreaded williwaws, those swirling miniature whirlwinds which suddenly drop down over the mountains with cyclonic force and sweep terrifically over the water, picking it up in aerial whirlpools and spinning the revolving spray along in their courses. So tremendous is their force that they will

cause an anchored steamer to surge at her chains or capsize an anchored sailboat under bare poles. I cruised later on a small vessel in Last Hope Inlet, whose pinnace was lifted bodily from the water by a williwaw, spun around a few seconds on its painter, like a top on a string, then shot below the water and sunk.

Often the only warning one has of the approach of these, when near shore, is by seeing whole areas of trees falling on the mountainside like ninepins, so fiercely does the williwaw strew its path. We dodged these williwaws, and just before the gale raced down on us, standing up and steadying the tiller between my knees, I obtained a photograph of that inimitable scene; not forgetting, however, when I turned my back on the Fuégians, to keep cognizant of their movements. A blow with a heavy oar or a shove of a powerful arm would send me forever into the icy waters.

Rush-h-h! and the gale struck us. I headed the boat before it, then brought her up a little, for to make Tierra-del-Fuégó it was necessary to quarter. Her sail, being stepped too far forward, coupled with her great length and narrow beam, made her fail to respond quickly to her tiller and caused her to head too much into the wicked, short sea. The sudden changing of the wind against a southwest sea and a strong opposing current, when it first struck, stirred things into a veritable maelstrom.

Never have I experienced a wilder sight; the four Yahgans facing me were the very epitome of stoicism and grim courage. They sat firmly holding their places, clinching thwart and gunwale, their black hair blown and whifted by the wind. Their jetty, beady eyes, lit with the internal fire of self-control, watched the dangerous seas boiling down on our quarter from behind. Occasionally their eyes would shift to me; once Yahgaashagan's lips parted and a short-cut grunt issued through his glistening white teeth, warning me that an extra bad comber was bearing down upon us.

Twice they visibly clinched their holds more tightly to keep from being thrown out, and fixed their gaze more intently upon me. How could any white man quail before such splendid nerve and

fortitude? The vicious wave bore down, struck, turned, and twisted us, seemingly both ways at once, then, in a last spasm, threw the boat on her beam ends. Those were anxious moments when things hung in the balance; less than a minute determined whether the passing wall of water would leave us mere specks, struggling for a few minutes until numbed stiff in the bitter, icy sea. With the greatest difficulty I held my position and handled the tiller. How we ever righted is a marvel, and, had I failed to have wedged the tiller head before starting, this account would not have been written.

In the darkness of the storm we eventually made out the gloom of great mountains above us, and shot thankfully in under their lee. It was after midnight when we landed in the little bay at Remolino, the Lawrence's ranch, where I had previously made my home. The whole lot of shepherd dogs rushed like a wolf pack down upon us as we landed, growled, snarled, and yelped at the Fuegians, but leaped about me and licked my hands in friendly recognition. I saw the Yahgans comfortably housed in a log rancho, and in half an hour was sleeping soundly in one of the most hospitable homes in the world.

GARDEN AND FIELD AT TWIN-FLOWER

BY HELEN DODD

Illustrated with Photographs by Julian A. Dimock

WE felt like children let out of school, when we came to the farm from the city. We worked furiously at our mud-pies, enjoying, with childish enthusiasm, the feel of the soft, fresh earth.

Although we sowed our garden seeds too thick and in furrows so deep that many of them did not come up at all, yet, through the generosity of Mother Earth, we had more than we could use, for plants, like children and animals, do well for the people that love them. It is not alone that we love the plants, but we love the garden spot.

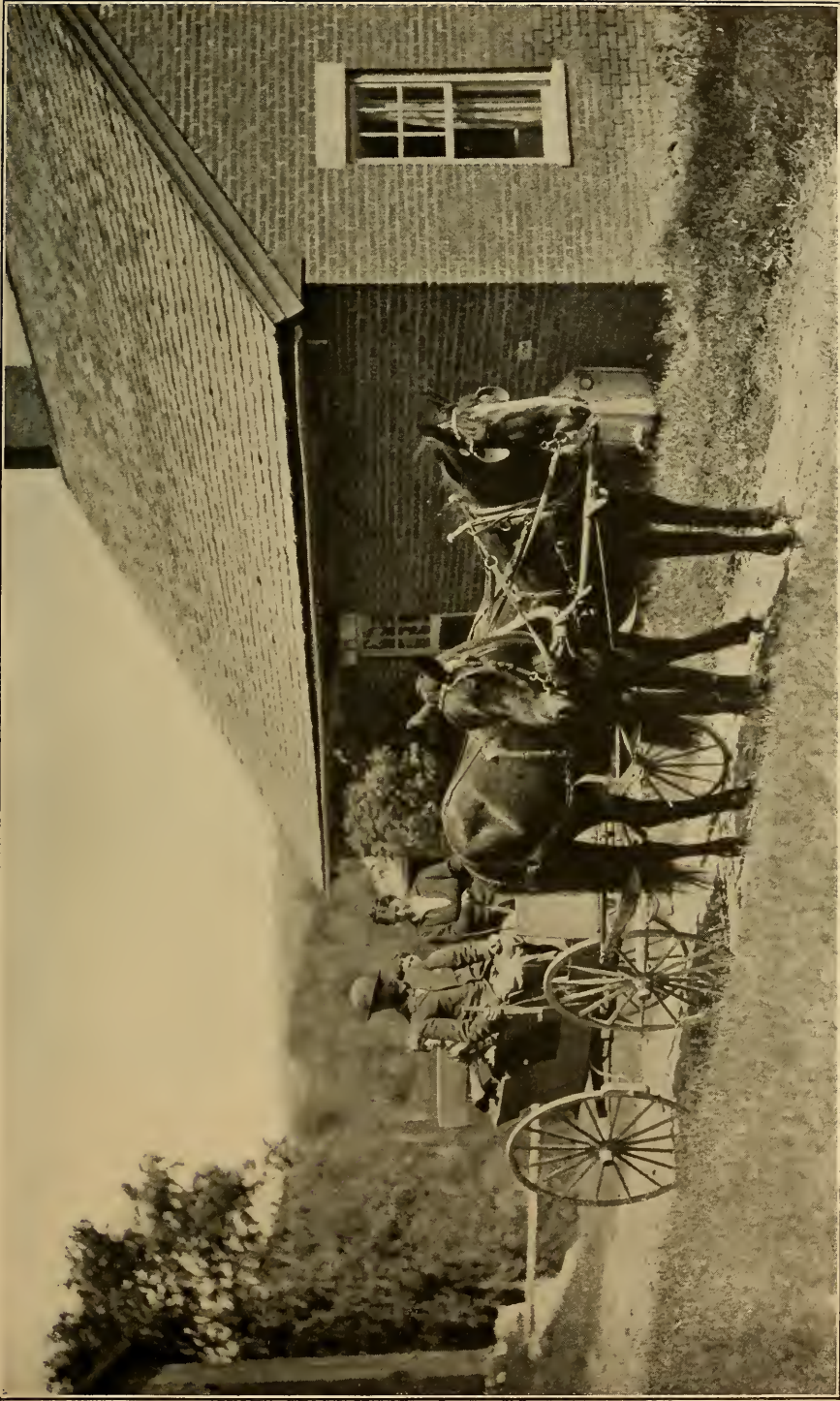
We chose it after watching the little boy and his cats go instinctively to the southeastern slope where they could earliest find a dry, warm playground. It is just beyond, where the big woodland begins, that the first thrush sings in springtime, and from the top of the garden's black furrows the redwings, with liquid notes, bid us begin the working of the soil long before the earth is warm enough to sprout seeds.

When we have harrowed the garden soil, smoothed it, harrowed it again, and raked it fine, we lay out the central salad beds, plant the seeds that like the cool, moist springtime, and plan the arrangement of the whole. We all work together, planting the vegetables that later we will all eat together. The big little boy digs holes by the measuring stick for us to set out the plants from the seed boxes. The littler boy climbs the robin tree and tells us that Kitty Pats is chasing a chipmunk.

The first year we planted our garden according to directions in the books, but we came to some grief because neither the grasshoppers nor the horse that did the cultivating behaved as the books said they would. The grasshoppers attacked the cabbages and cauliflower in their transplanted loneliness and ate them while my kerosene emulsion was drying. Three times one morning I sprinkled them with fresh emulsion, but the only cabbages to escape the grasshoppers were those whose leaves were destroyed by too much kerosene and grew again from the roots.



THE SQUASH VINE PERGOLA IN THE MIDDLE OF THE GARDEN, WITH HOLLYHOCKS AS DOORKEEPERS.



IF WE PREFER A LONG DRIVE OR A DAY'S PLANTING TO A HOT DINNER WE HAVE ONLY OUR APPETITES AND CONVENIENCES TO CONSULT.

We spaced all our rows three feet apart to allow for horse cultivation, as the bulletins advised. But Rastus preferred to gauge his steps four feet wide and wouldn't lead straight. Then I tried riding him and so kept going straighter, but at a pace that made it hard for the Rebel to steer the cultivator among our precious squashes and cucumbers. Finally we came tearing out of the garden, Rastus in flying leaps with the cultivator at his heels jumping from side to side, despite the Rebel's best efforts to keep it straight.

We inherited from the Massachusetts family garden a low-wheeled hand cultivator and, after Rastus had demonstrated the futility of his labor in the garden, we purchased another of the high-wheel type. It now takes no longer to do the closer work possible with hand cultivators than it had before taken us to do the necessary supplementary handwork after the horse had gone over the ground.

When we are tired we go down into the garden as to a refuge. We pull the weeds, prune and tie up tomato plants, rescue the peas blown from their trellises, thin the cucumbers and pinch the squash runners, dispatch each cabbage worm, and water the new lettuce and parsley. Pushing the wheel hoe is easier than sweeping, and dumping a wheelbarrow load of weeds into the pasture is a virtuous accomplishment. When the little boys' voices high in the robin tree mingle with the dreamy evening song of the wood thrush, we come up to the house, dusty, happy, and hopeful. Surely cultivating our garden gives more than any horse can appreciate!

Then, too, the hand tools make possible an arrangement of vegetables in orderly beds with flowers as accents and punctuations. Until we tried it, we did not realize how much more easily we could weed a long row of vegetables when it is broken up by sweet-smelling flowers that refresh the mind as well as the sense. The shade of the squash vine pergola in the middle of the garden, with hollyhocks as doorkeepers, positively enables us to do a double stent.

All through the summer we gather the vegetables when they are most de-

licious. From the salad beds the littler boy brings me the crisp leaves of lettuce, and the big little boy a basketful of luscious ripe tomatoes that are served before they have a chance to think of wilting. Our cauliflowers are picked not more than half an hour before they are cooked, and Mary Cary, the calf, leans over the pasture fence for the leaves she knows are coming to her.

The unexpected guest goes with me down into the garden and digs his own potatoes, collects his own corn, picks and shells his own peas, or gathers his own cucumbers, while his dinner waits on his diligence. But a visiting doctor, after helping to harvest his dinner, tells us:

"This is the *only* place where I can eat *all* the cucumbers I want without getting sick," or, later, there comes from a puzzled housewife:

"What did you give John to eat? He declares he never had a more delicious meal in his life, and yet he cannot remember a single thing he had to eat except cauliflower cooked in cream."

Foolish one—we simply set John to gathering his own food with his own hands from the soil, and old Mother Earth gave him the appetite that she can bestow upon her children!

During the season we two put in about fourteen full days' work in planting, transplanting, cultivating, and weeding. This is in addition to the team work in the spring. During haying time the garden on a one-man farm can have little attention.

It is because we love the garden as a whole that even one injured plant calls out for care. When the big little boy comes up and tells me that two of the cabbages are withering, I go down and replace them. Or when he tells me that a tomato plant has blown over, I tie it up that nothing may mar the luxurious perfection of the whole.

Because the garden is small enough for us to know it intimately and till it thoroughly, our work there quickly brought us rich returns. Not alone all the vegetables we could eat throughout the year, and many to give away, have we harvested from our garden, but also that personal acquaintance with the



THE REDWINGS, WITH LIQUID NOTES, BID US BEGIN THE WORKING OF THE SOIL LONG BEFORE THE EARTH IS WARM ENOUGH TO SPROUT SEEDS.

needs of the plants, that intangible something that makes them grow.

In the fall the Rebel and I and the little boys harvest the crop of vegetables for winter. Pumpkins and squash for holiday pies and jack-o'-lanterns, beets, carrots, cabbages, and many other keeping kinds are put away in the cellar, so that all through the winter we eat of the summer sunshine stored away.

Beyond the garden we give a half acre to potatoes and baking beans. These we plant in three-foot rows like corn and cultivate by horse-power. From these we gather, in a good season, more than we can eat in a year.

Closely linked to the garden is the story of our wheat. For years we looked longingly back to the days of our grandfathers, when they raised, not

only their "roughage," but flour and meal, too. We shall not rest until we do the same. We have grown the corn and oats our animals need, but grains for our own use are more of a problem.

We have become accustomed to choosing the best cereals and meals from the city, and we enjoy the variety too well to cut it off for an idea. Yet we felt that we were not truly self-supporting until we could raise our cereals and have bread of our own growing. So we listened eagerly to the tales of the men whose days were numbered from that earlier time.

"Raise wheat?" exclaimed one of them. "Why, bless you, we used to raise the finest wheat and make the best-tasting bread I ever e't. 'N' we could again, if we only thought so, but, you see, the West took grain growin' away from us, told us they could grow it so much cheaper we couldn't afford to keep it up. Then the smut came 'n' discouraged lots of folks, so we jus' stopped, and even bought corn of the Western farms till silos came in."

"Don't you think we could grow some if we took good care of the land?"

"Why, of course you could! 'N' what's more, I tell you 'twon't be a great while before we'll all have to be growin' it, the way they keep raisin' prices."

So we began to look for seed that would do well in this region and for the mill to grind it into flour. There is no mill now to "bolt" the flour, and only one in the region to make Graham flour.

"Why not eat Graham bread, then? We like it, and if it's one of our principles to like what we raise then let us use more Graham than white bread."

By asking questions of the old school farmers, we learned something of the needs of wheat, how much seed to plant, and were lucky enough to find some grown in our neighborhood.

In the last corner of the home field we planted our wheat. When the faint green appeared on the surface of the soft ground we were afraid it might be grass or weeds, but, on our knees on the edge of the field, we could see that every green shoot was a tiny pipe, yellower

green than grass, and when one was pulled we found the fat kernel of wheat burst open by the tiny pipe and a bunch of curving white rootlets still clinging to particles of sand.

All through the cold, wet June we watched the green waves blow deeper over the little field. July came and we measured the stalks against our proud selves. August was kind and warm, it rainy, and we saw some heads appear.

When the heads of grain were large and yellow spots showed in the field, we called in a passing neighbor to judge of its ripeness.

"It's gettin' ripe," said he, "but where'll y'u git a cradle?"

It was likely that many an old garner contained a cradle, and at length we found one—shaky and rusty—in the shed chamber of an old house. We begged the loan of the tool for our reaping. At odd moments for a week, the Rebel "tinkered" it, and finally had a stiff, self-respecting tool.

Once more we called in a passing neighbor to look at the grain.

"Gorry! Don't it beat all how quick it gets ripe when it wants to! 'Twan't mor'n a week ago 'twas as green as grass. How y'u goin' to git it in? Horses'd thrash it all out."

"Oh, we'll have to have it cradled somehow. I've got an old cradle here. Didn't you ever cradle grain?"

"Why, yes, but it's mor'n twenty years sence I held a cradle. I'd hev' to practice some before I could go in an' do any now. You could learn to do it; it'd come lots easier to y'u 'n mowin' with a scythe. Where's y'r cradle?"

We watched the old man's wide swing and low, almost squatting motion.

"I believe I could do it," said the Rebel thoughtfully, "I believe I'll try it to-day."

After the neighbor had gone on up the road he took his cradle to the wheat field. We could see his straw hat moving slowly about the little field, and a visitor drove out to talk to him. They came back to the house together, and the Rebel said to me:

"He thinks we'd get our wheat in earlier if I went up to the Hollow and got old man Bixby to cradle it for me.



WE ALL WORK TOGETHER, PLANTING THE VEGETABLES.

Do you suppose you could get Wood on the telephone and see if Bixby would come and cradle it for us?"

But the man had gone for the day, and after our caller had gone, the Rebel commented:

"Do you know I am really glad that man was not at home. I *want* to cradle that wheat myself, and I believe I can get it done before he comes home to-night. I'm going to try, anyway."

Presently he came in, hot and thirsty, to stiffen another joint in the old cradle, and said:

"Oh, I'm coming along. David might as well come out and bind up some sheaves. It goes better all the time. I tell you it's hot, and it takes a brand new set of muscles!"

After dinner we all went out into the wheat field. The Rebel swung his cradle quite confidently, I raked the shining, yellow stalks into bundles for one little boy to bind with twisted bunches of wheat, and the littlest boy carried sheaves to stand in shocks. All the long summer afternoon we worked. The sun went lower, and we wanted so much to keep at our work until it was finished, that we allowed the littlest boy to go alone for the cows.

He started bravely, the first time alone, and we watched his tiny figure disappear in the woods on the edge of the big pasture. He was gone a long time and the sun sank until the shadow of the barn lay across the garden. At last we heard his welcome shout as he drove the bunch of cattle through the sugar woods. Down the path under the big-fringed birches they came, Linnea first, with her solemn great eyes wondering at our work on the other side of the wall, then her daughters in single file, all questioning us, and the yellow-haired boy calling exultantly:

"I got 'em! Did it help you get in the wheat?"

Of course it did. And still we raked and bound and stacked. Often I stopped to squeeze out some of the yellow kernels, and I ate them as eagerly as the little boys who could hardly keep away from it.

The wheat was left in the shocks for a week or more to dry.

Late in September the "threshers" came. They finished the oats first, and talked a good deal about the wheat. One man had helped thresh wheat when he was a boy, but the others had never seen wheat grown, and did not know how the machine would do it. All were interested in the idea of making it into flour. When the grain began to pour out of the trembling machine we stood around, looking at the brown stream, as if it were a current of life itself.

Those bins of precious grain were a loadstone. We went often to look at it, and everyone who came to the farm, old hands and younger men, were silent as they watched the handfuls of kernels slide through their fingers. One of our neighbors stood in the barn door holding his restless horse, while we showed the grain to his brother.

"Wheat?" he said in a lower tone, and a hush followed. Then he said, pleadingly, like a child: "Won't you hold this horse a minute so I c'n see that wheat?" On the barn floor he spied some unthreshed stalks. He eagerly squeezed out a few kernels and ate them as we had done that day in the field.

Two months, they told us, it would take for the grain to harden sufficiently to grind. In those short months our splendid autumn weather had come and gone, and the first snow lay on the dusty roads. It was on the heavy sled we carried the wheat to the mill at West Ephesus, ten miles away, the only mill left in the country that can make flour.

The little boys and I took the long drive as a pilgrimage of joy. We did not realize how long it would take the horses to walk that distance, and we had hoped they could sometimes trot on the snowy road, but the travel in the cold had made hard sledding of the snow and sand mixed together, and it was a steady upgrade. We went beyond the region where everybody knows us, or the horses, and many curious glances came to our unusual appearance. Hereabouts a woman rarely handles a team alone, and we could not tell everyone it was the wheat we carried that made us gay!

It was almost dark when we came to the gristmill, under a steep hill, down

which I steadied my team with the voice they depend upon in a tight place.

When I had told the miller about "putting it through twice," and how fine I wanted the wheat cracked for our breakfast mush, I slowly turned the long sled around in the creaking snow and headed for home. We had gone over the roughest of the road and were congratulating ourselves on the better traveling, when the horses told me something was ahead of us. Around a curve in the road, under some hemlocks we saw a lantern appear, and, coming nearer, I saw an old man moving slowly in the soft snowy ruts. As we passed I said something about the hard sledding, and his astonishment showed in his voice when he said:

"Ain't it dretful late to be *out*?"

According to his code, probably, women and children are safe under roofs at night. I didn't dare tell him how much longer we were going to be out in the dark. All of us were relieved when we reached the main road and could trot a little on the downgrades. Familiar scenery helped the miles to pass, and we were soon in sight of the lights of home.

The initial expense of the wheat was three dollars for a bushel and a half of

seed. This we shall not have another year, for we raised enough to keep our own seed, or to sell some and buy better seed. The threshing cost us sixty cents after the oats were finished, and the gristmill charge was seventy-five cents. We have stored away a year's supply of cracked wheat for breakfast cereal and two barrels of flour which would cost us at the local or city stores at least fifteen dollars.

Our labor? It has been a labor of love. The land is plowed and harrowed anyway, in the regular rotation. And what does preparing a half acre cost when horses and tools and man are here on the place? One morning's sowing and harrowing, one happy day in harvesting, and a pleasure drive to the mill. For it we receive food for hearts as well as bodies.

So the rich flavor of the Graham gems at breakfast, the bread that has so "much to it," the brown mush of our growing remind us of our good times from early spring to that cold winter night, and the "wee brown loaves" that have gone to our friends, all carry with them the hope of our springtime, the happiness of our summer, the richness of our harvest, and the inspiration of our winter.

FISHING THE BINNACLES

BY GEORGE M. JOHNSON

Illustrated with Photographs by the Author

DID you ever stalk trout, doing a serpentine through the grass, knowing that the faintest suggestion of your presence would absolutely spoil your chances? Did you ever cast lying flat on your side in the meadow, and bringing your fish from a pool thirty feet away? You have done all this if you know what it is to "fish the binnacles"—fish them successfully, I mean. And if you never have taken trout from the binnacles, you should remedy that lack of experience at the earliest opportunity.

Concerning the word binnacle, Webster has this to say: "A subdivision of a main stream of a river, as a small pond, a mill race, or a secondary channel." As to the derivation of the word, he says: "Probably from Dutch *binnen* within, inner, and *kil* channel." In the termination we see the same source as in many other words of Dutch derivation; for example, Catskill, Beaverkill, and others. The word is used locally, being confined, so far as I know, to certain parts of New York State, where it is employed among trout fishermen.

Along the course of any brook it is a

common thing to find small "runs," which, flowing into the main channel, mingle their cold spring waters with the larger stream. If the brook's course is through a meadow country, these small runs may here and there widen out into quite respectable pools, which are known as binnacles, or spring-holes. In some cases a run may provide but one pool throughout its course, but it is not at all exceptional to happen upon a "string" of binnacles, where several pools, each containing a good supply of trout, are connected with the main stream and each other by a trickle of spring water.

In the early season, when the water of the brook is cold, the spring-holes contain practically no trout of respectable size, but as the stream water becomes low and warm, vast numbers of trout work their way up the cold runs to the deeper pools. These pools vary in size, but average fifteen to thirty feet in length, ten to fifteen in width, and have a depth of one to three feet. Any trout fisherman knows that where a cold spring empties into a brook is a good place to fish, but many have probably missed a veritable bonanza of trout by neglecting to explore the tributary, which seems too tiny to afford any fishing worth their while.

The spring-holes are usually not at all in evidence unless one is looking for them, as they may often lie a hundred yards or more back from the main channel. In one case I followed up a run swarming with baby trout for half a mile, until, at its very head waters, it widened out into a pool containing a number of good fish.

The most important feature in fishing the binnacles is caution, and the angler simply cannot exercise too much of this. Of course, the fingerlings may bite under almost any circumstances, but the binnacles shelter much worthier game than these, to deceive whom "is an art; and an art worth the learning." It is easy to account for the remarkable wildness of these fish, for the extreme clearness of the water and absence of any ripple make it doubly easy for sharp-eyed fontinalis to spot his foes. In this connection it is interesting to note that they never seem especially eager to rise on

windy days, when there is a ripple on the water to help conceal the angler. Then again, as long and accurate casts must be made, the wind is an additional aggravation.

I don't believe that a person who has never fished for trout under these conditions can realize how excessively wild they are. Frequently, the mere dropping of a cast of flies upon the surface will send them scurrying under the banks. And if you wish to start a first-class panic, just walk up and look into the pool. But after such a scare it is no use fishing for an hour or two, for they are never in a hurry about composing their startled wits.

The most approved method of capturing the binnacle trout is to use grasshoppers for bait. During the latter part of the summer the meadows are naturally swarming with hoppers, and many of the ill-fated insects hop their last hop into the gullet of a hungry trout. Here comes another interesting fact. In the early morning, while the meadows are wet with dew, the grasshoppers are in a benumbed condition and far from lively.

If you fish with grasshoppers at that time the trout's mental process will work somewhat along this order: "Huh! Grasshopper, eh? Well, blast my spots, but it was careless of him to fall in when the grass is so wet he couldn't jump a foot. I guess you'll have to excuse me."

Even if the trout doesn't express his ideas exactly that way, the result is the same, anyhow. But let the sun come out and warm up the meadows. Then, when the hoppers are gayly hopping, if you present the lure in the right way, so that it doesn't fall on the water with a splash like a scared muskrat, there will probably be a vigorous response.

The base and vile earthworm is acceptable to the binnacle trout only upon certain occasions, chiefly cloudy or dripping days. Flies are usually not so successful as bait, though it is only fair to confess that most of my attempts with flies have been in the late summer, at a time when the fish were not overenthusiastic on the fly question anywhere. The little trout in the spring-holes—the four- and five-inch fellows—will rise to bait or fly with delightful impartiality,



THIS TROUT WAS ACCOMMODATING ENOUGH TO POSE FOR HIS PICTURE.



A THRILLING HUNT FOR "HOPPERS" IN THE BACKGROUND.

but to score on the wise old chappies there's nothing like a succulent hopper, offered about the middle of a warm, sunny morning.

Binnacle fishing is found at its best where several runs occur close together, offering a string of pools. Here the angler may fish one hole after another, not remaining long enough in any one place for the fish to become seriously alarmed. Then, by the time the last pool in the string is fished, the first will be ready again. While the angler does not cover so much country as in brook fishing, there's nothing particularly easy about it. At the end of the day the enthusiast's knees will be worn to a frazzle and the protesting muscles will be filled with all sorts of weird kinks, a result of remaining in various cramped positions.

But the game is worth the candle. Often, at the tail end of the season, a brook may seem cleaned out and hardly worth the bother of fishing. The chances are nine out of ten that the trout have retired to more comfortable quarters up in the spring-holes. It is surprising how many trout will be crowded into one small pool. In a string of six binnacles which I fished over several times during the past season there were probably fully three hundred trout of

legal size and countless numbers of smaller ones.

Several years ago I spent a whole morning fishing one binnacle. This was the boss pool of them all, though a very difficult one to fish because of overhanging branches. I fished in a decidedly recumbent position, some twenty-five or thirty feet from the water. My total catch for that binnacle was twenty-seven, and when through fishing I walked up and looked in, wondering if I had stripped the pool. Well, not by a considerable majority! The place was literally alive with trout, some of them "old busters," and I am positive that one hundred is a conservative estimate for the number of trout left there.

Unfortunately, this pool is now harder to fish than ever, for some farmer has considerably (from the trout's viewpoint) felled three or four trees into the water, making it a paradise for fish, but the reverse for fishermen. Of course, while making the catch above referred to, I was not fishing steadily. After taking four or five fish I carefully retreated and gave the others fifteen minutes or so in which to quiet down before resuming operations.

Naturally, where a brook comes tumbling and piling down a steep, boulder-filled bed, there will be nothing

doing in the binnacle line. The binnacle is strictly a product of the meadows, and just so sure as your run follows a course through some hayfield, so surely will you find one or more of these small pools hidden away in the grass.

To keep on the right side of the farmers it is generally prudent to leave the spring-holes alone until the hay is cut. For some mysterious reason the average farmer has a deep-rooted prejudice against the angler who wallows around in his hayfield. If the punishment for such unrighteous behavior was confined to the guilty fisherman alone, it wouldn't be so bad, but the disgruntled farmer is only too apt to lump all fishermen into the class of undesirable citizens and post his land—a calamity second only to some such disaster as breaking your handmade split bamboo.

There is one other tip which it is wise not to overlook when seeking to lure the trout from his cozy hiding-place in the spring-hole, and that is the little runs themselves. Trout are more or less constantly working up these streamlets from the main channel, or changing their headquarters from one binnacle to an-

other. It is, perhaps, a far cry from trout fishing on the average brook to dropping your two- or three-foot line down through the coarse meadow grass. But the trout are there, and you won't find it any too easy to induce them to come out, either.

The binnacles offer great chances for studying the habits and nature of trout. Too bad old Izaak couldn't have given us a disquisition on this subject. I can well imagine that it would make a very pleasant addition to the Complete Angler. But—well, may you soon know the joys of binnacle fishing!

If you do your part, the chances are that you'll return home richly laden. Yet, if the tangible results are wanting—for you know that fontinalis is very finical at times—may you still be able to appreciate those other joys—aside from the mere matter of dead fish—which a day on the stream should bring us. Walton knew all about this, and if you are a student of Walton, as every angler should be, you may remember what he said—that angling “has a calmness of spirit and a world of other blessings attending upon it.”

INOCULATING ED

BY CARITA LEMMON

Illustrated with Photographs by the Author

WE must lead him gently. If we try to rush him, he may develop a pseudo case, and we want him to catch the real thing. I'd like to make him a member right now, but we want to be sure he has it. I wish it was the first of October instead of the last.”

“That's it, Jack,” we agreed; “there isn't much time. Still, it's been a mild autumn so far, and he may catch it yet. We have him interested, and there's no telling how soon a germ will hop into his system.”

We, the members of the Campingitis

Club, were discussing Ed, a right good fellow. So good, that we yearned to inoculate him with the only disease that is conducive to health, to wit, campingitis. We all have it. Jack was smitten years ago, when he began to paddle his own canoe; Bert was born with it. Bill caught it by contagion from a rabid case, and the germ entered Cooky's feminine soul one day while two small trout were browning over a camp fire in the hills.

So we were kind to Ed. We told him, with our fingers crossed, that his knack with a chafing dish would make camp cooking easy. We mentioned the convenience of air mattresses and collapsible ovens, and things that could be packed



AT THE FOOT OF THE HILL.

in his little Elmore. We gave him to read articles about the joys of camping with an automobile. We tenderly encouraged his budding enthusiasm until it blossomed like the rose.

Then, during a time of warm Indian summer, we determined to apply the virus. We felt that a good day in the woods might well accomplish our desire. At the Shack the rustling leaves were ankle deep, the jays called overhead, and distant sounds of farm creatures would come faintly up to us from the valley below, as we sat on the bench in the sun with our backs against the cabin.

Up there we had seen an occasional grouse, and a crafty old fox chuckled at the traps we set for him. Thirty years ago, another old fox lived down in the valley and grew fat on innocent game. Once he caught our trusting parent; baited a trap with three acres of wooded hillside and took him in, and a tithe of all he possessed. Nor did the bait ever benefit said parent. Yes, it was a blow to father. But when the disease got Bill,

after he emerged from the cowboy delirium, he took to the woods, and we followed him.

There, with others unworthy of mention, we labored mightily, according to our tastes, with axes, hatchets, and hammers, and there Cooky won her sobriquet. So the Shack was built, and the Campingitis Club was born into a happy existence. Then Ed came to town, raw material, clay for us to model.

His automobile was what troubled us; for, though the way to the Shack was easy for our horses, wise and crafty with Western training, it was not exactly a boulevard, though it did begin well. After a few miles of pleasant going through the valley, the road turns sharp to the right, and starts up a long, rough,

humpy hill. An insignificant village terminates that hill much as the head of a brontosaurus ends the horror of his spinal column. If you pause on the highest vertebra, so to speak, and look about, one of the most impressive views east of the Mississippi will meet your eyes.

But midway on the hill beside a water trough, a little roadway entered the woods, and, staggering among rocks and gullies, led at last to the Shack. We agreed it would be hard going for Ed's car, but we thought he might make it. Certainly he was ready to try.

He had bought "some duffle," he said, which we had examined with dubious admiration. Jack, who lived nearest him, was to help pack this and "some grub" under the seat of the automobile and guide Ed to the scene of action. We telephoned them at the appointed hour that we were ready, and then we started, riders three, Cooky, regardless of form, jogging comfortably on her rabbit-headed little Texan; Bert, straight and supple, in calm certainty that his horse did not

know anything bad enough to unseat him; Bill, a little stiff, more of a trooper still than a cowboy, in spite of his hackamore, and, Heaven forgive him, spurs five inches in the shank, with rowels suggestive of a buzz saw.

Now, the sun did not come out warm as on the preceding days, and as we started to climb the hill a fitful breeze, unpleasantly suggestive of the northern Atlantic, began to make itself felt. By the time we reached the water trough the sun was quite gone, the wind was steady, and it did not require much imagination to picture the impressive view a mile or two ahead become merely a stretch of bleak country, the sunny dignity of the mighty river turned to leaden dullness under the cold, gray sky. We looked at each other apprehensively, fearful for the success of our day.

The horses presently turned from the trough and entered the trail of their own accord. At a certain spot they started directly through the woods up a steep little rise, a short cut to the hitching rail. Then, horrid moment, we blinked and looked again, and sounds of wrath and dismay were borne away on the mocking wind. Our cozy little Shack, that we had built ourselves, chopping the trees, trimming, cutting them in lengths, notching, heaving them into place in the sweat of our brows and the water of our blistered palms—the Shack was a heap of ashes and charred stubs!

As we looked at the ruin we were amazed to the point of silence. We remembered all the good times we had had there, and our hearts sank. We were quite upset.

A shout broke in on our silence. "Ed!" we exclaimed. We had forgotten him. But it was Jack. Wide-eyed, we saw him coming.



A GLIMPSE OF THE RIVER.

"What the—" he gasped.

"It's burnt down," we said.

"And Ed—Oh, Lord!"

"Where's Ed?"

"Oh, the car is stuck in a rut a quarter of a mile back, and Ed won't leave her. What could happen I don't know. We got her out of two other holes, and nearly upset once. Got some paint scratched and one of the hubs, and Ed mashed a finger. He told me to toddle up and bring you fellows back. He says four of us can lift her out, but I don't see the use coming any farther. I thought we'd make up for his trouble when we got him here, but—"

We stood there looking sadly at him, while the wind shrieked through the woods and a few stinging pellets of sleet struck our cold faces. We were hungry, too.

"What are we going to do?" he finished.

"Let's build a fire." This from Bert.

"Yes, and bring up Ed's duffle and the grub. We'll take turns holding hands

with the 'bubble' and have something to eat, anyway."

A relief party was dispatched to Ed, and when the duffle, the grub, and the green one were with us, we began at once to prepare lunch. Ed's "Oh! I say, fellows, this is hard luck!" was sympathetic enough and his only comment on the situation.

Table trimmings had gone up in the blaze, so we ate with pocket knives and twigs, while the wind seasoned the food with ashes and dead leaves. The horses grew restive, and finally began to rear and strike at each other with their fore feet, so that one of us had to run over at intervals and quiet them down. With the aid of his collapsible oven, Ed achieved some humps of dough with tan points. He said they were biscuits, and insisted on having them photographed at once.

"But make as short an exposure as possible," he requested, as he held them up. "They are even heavier than they look."

Well, we kept some of it for the keeper of the "bubble" and took it down to him where he was curled up in the lap robes under the lee of the hill. After the boys had shouldered the little car out of the last of her troubles and we were on the clear road again, Ed gave her the "high," we let the restless ponies have their heads, and ignominiously fled toward home comforts.

We all had supper together that evening—a famous supper—and when we were comfortably seated round the big wood fire afterwards, we were ready to meet our disappointment fairly. Of course, we felt that we had not demonstrated the joys of camping to any noticeable extent. Ed had furnished what little fun there was. We were grateful to him and wondered what he really thought about it. While he pondered, he removed his pipe and spoke.

"Fellows," he said, "I'd like to give up going to Lakewood and spend a couple of weeks rebuilding the little old Shack. Of course, I'm a duffer," he continued, "but I think I could worry a tree till it fell down. The car is no use on that road; I couldn't carry an axe on horseback—I'd have to camp. I saw a sleep-

ing bag at Abernethy's that I coveted. What do you think?"

For the second time that day our emotions silenced us. Somebody said afterwards we were like the ass that was torn between two haystacks. If we did not let Ed go, he might lose interest in the whole matter by spring. If we did let him, two days might end it.

Bert took the rôle of counselor. "Ed, you realize it is not exactly the best time of year to go camping, but of course you could try it. We have axes and all that, but you would need a sleeping bag. We could get you started all right the end of the week."

"I'll drive you up, Ed."

"Lend you my tent."

"Ed, we certainly would elect you president of the Campingitis Club!"

Thus speech was restored to us.

Well, at the close of a bright Sunday, we left Ed pretty snugly fixed, with a clear idea of how to do the work—left him alone to meet the test.

Ere the first uneventful week was over, Cooky's pony threatened to deposit her in the scenery when he saw the saddle coming toward him. Every day she brought word of stiffened muscles, but unflagging enthusiasm, and our hopes soared high. The next Sunday it turned cold, and Monday it snowed; began in the forenoon, and by dusk it was three inches deep. Then it stopped, and a nipping wind rose and shrieked all night. Tuesday it snowed again, hard. "To-day will settle it," we telephoned each other.

Jack and Bert came home from the office with Bill. We thought to bolster up our sinking hopes in their company. Also, if Ed had given up, and was walking down, ours was the nearest house. We were just sitting down to dinner, when we heard the tramp and stumble of tired feet on the steps, the door opened, and there was Ed!

"Had enough, old man?"

Then Ed's slow smile began, spread, and radiated, and he drawled, "Well, a warm bed does sound pretty good to me—but I need to take a horse up there tomorrow. The last logs are cut, but I can't drag them through this—" We were on him with a shout. Ed was in-oculated!



THE POLECAT WATCHED THEM.

THE WHITE NIGHTMARE

BY F. ST. MARS

Illustrated by Charles Livingston Bull

On one side was a wood, and because it was of spruce-fir it was thick with low-hung boughs in place of brushwood, and was filled with a thicker silence. On the other side was a slithery slope, like unto the roof of a house for steepness, dotted with many boulders that seemed to hold their places by a special dispensation of Providence only. Then, lest any find the scene too cheerful, came a beast of strange aspect, and stood twixt wood and slope.

They said this beast came from a hole in a "cairn" on the mountain. Perhaps—but he looked as if he came from a place much deeper than any hole. Nature had given him a long body of wonderful twistfulness, then, forgetting what she had done, added legs two sizes too short. Then she went away, and Satan, coming along, finished the job.

He added a head—surely no one save he could have evolved such a head—that had a sharp muzzle, and upright, rounded, short ears, a head shaped like a wedge, and gave to it an expression genuinely diabolical. For color he chose a grim brown-black. Later he added an unquenchable thirst for something much less innocent than water and an odor which would spoil the best appetite for a week. Finally, lest all the wild folk turn and abolish it, he struck fear out of its composition and added teeth like stilettos set on end.

Men called this tragedy a polecat, and then, as if to contradict the title, placed it at the head of the weasel tribe, where it stands to this day.

Six grouse—red grouse—burst over the place like shells and dropped in a heap over a heather-mantled ridge. The polecat watched them. There are many things worse than grouse to eat and very

many things easier to catch, for an old cock grouse knows all that anyone can teach him about keeping out of harm's way, and a bit over. Polecats, however, are not met every day—or every year, for the matter of that—and their ways of hunting are not those of every wild hunter.

He moved to that ridge. I say "moved" because the gait of a polecat is—well, the gait of a polecat. It is all his very own—and the rest of his tribe's. It is not walking, or running; galloping would not describe it; nor is it a canter. It resembles the going of a snake, as much as it resembles anything at all.

The grouse were feeding well in the open, having no desire to feed anything else in their turn, also they kept there. There was no chance of their working nearer as they fed. And the polecat—twisted among the twisted stems of heather—anathematized them from afar. That occupation did not—as it does with some people—prevent him from thinking, however, and the result was about the strangest sort of polecat those grouse ever clapped eyes upon.

He turned acrobat, that polecat, and contortionist, and many other things that are without a name. What the grouse saw was a twisting, twining, twirling, tottering, tumbling, trembling tom-fool of a thing, and, being grouse, they were forthwith eaten up with curiosity—and they stayed. That the entirely unknown and unaccountable apparition was drawing nearer with every contortion did not strike them.

They simply stood and stared, a fat-cheeked, fowl-like stare, and the polecat, who was temporizing—and extemporizing—calculated each display to bring him at least an inch closer to his prey. It was hard work, and it was also quite a close thing as to which would give out first, the birds' curiosity, or the polecat's breath.

Followed a jump, a squawk, a great confloption of feathers, and the grouse came back to things earthly with a jerk. Five of them shot into the distance and one of them shot into—oblivion. The polecat had him by the neck, and when a polecat gets his teeth that way

the owner of that neck may as well say his prayers very quickly indeed. Then that polecat dined after the manner of his kind, which means that he took so little that it seemed a pity to have killed the bird at all, and certainly not worth all that backaching trouble through which he had gone.

Now, when you have just jumped flop into the dinner of a grouse family and have forcibly, not to say roughly, detained one member of that family for your own dinner, you expect to lose the pleasure of their company for at least a day. Therefore, when that flock come back from over the superb, tumbled, rolling riot of mountain, hill, and heather, and drop like stones within ten yards of you, you naturally want to know what on earth, or under it, has gone wrong with nature. The polecat yanked his flat head around and looked at those grouse as one would look at a madman, and the grouse said never a word, but flattened and looked—not at the polecat, if you please, but at the sky. There was the rub.

They looked at the sky instinctively because they were birds, and the animal did not. Why he did not I cannot tell you, nor can anyone else. It is a fact that animals seldom look up, and the reason for such an omission is, as yet, beyond the knowledge of man.

Then it seemed as if a small-sized riot had begun on the giddy slope aforementioned. Some one on that slope was using language quite unfit for print, chattering obscenely, and the sound appeared to have electrified the polecat. Round jerked his snaky head, and, after the head, flung the sinuous body. It was as if some one had cried "Murder!" In a flash he was over that ridge, pounding along at his indescribable leaping, rippling double. He knew that voice, you see; had good cause to know it, for it was the voice of his mate.

He found her, and she was a sight to make one hold one's breath. Her face was the face of a bad dream, no less, and her eyes shone red—wickedly, fiendishly red—like rubies with a fire behind them, and she jibbered. Round her were gathered her two young, and I give you my word those young were not beauti-

ful, but workmanlike—very workmanlike.

Now that polecat had left his mate with three young, not two. The third? Where was that third baby horror? The wind imitated the sounds of a low tide on a distant beach. A jay screeched from somewhere in the wood, a harsh, annoying screech. A raven croaked, an odd, snoring croak of evil omen, from a neighboring boulder. But they gave no answer to the dumb question.

Then the polecat dropped his nose and hunted as a hound hunts, with all a hound's keenness of smell and twice its cunning. He was slow, perhaps, painfully slow, but—well, ask any mountain hare as to the sureness of his tracking, and, if it does not faint at the mention of his name, it will tell you that his tracking is sure as death itself.

He picked up the trail of his lost son in the wood, followed it to the slope, threaded it to a bush under which a stream was born, and then—nowhere. It just went out, died, as if the owner had taken unto itself wings and flown away. This kind of thing is not customary in the wild, you understand. It is a canon that if you follow a beast's trail long enough you come to the beast. Nor can any animal very well miss the trail of a polecat, for the scent of these animals is a very shocking stink. Yet the old polecat flung up his head quite suddenly and finally. His son had apparently sauntered into Spookland.

It was a little thing, perhaps, no more than a claw-mark in the soft earth where the stream—that nature had destined to be a mighty river farther down—trickled forth, but it explained—well, everything. The sight of it turned the polecat to stone, and the setting sun turned him to blood-red stone, with bronze where the creases were, and the result was a picture that a painter would have given a year of his life to copy faithfully. Beside the mark of this claw were the round



PASSED ONE AFTER THE OTHER DOWNHILL.

imprints of his son's paws, and all four of them could have been placed within the imprint of that huge claw, the claw of a bird without a doubt—but, ye gods, what a bird!

However, since the son had gone, and the unknown slayer had gone (taking the son with him, one presumes), and the grouse and blackcock and ptarmigan had gone—to sleep—and the sun was evidently just about to go, there was nothing for a polecat to do but to go too.

He went, that polecat, very silent and very angry and doubly watchful, through the deepening gloom, and the mist, that lived in the ravines and hollows and damp places by day, rose up and swirled about him. Owls came out and hooted, barked, shrieked, or snored at him, according to their species. A heron flapped homeward, shouting at the night his rancorous, bad-tempered shout, and the badgers—low, gray shadows in the mist—passed one after the other downhill, on secret errands bent.

Then nature suspended in the void a great, round moon, shedding a light all the more brilliant because of the mist, strange though this may sound to a townsman. And the polecat put up a

hare. 'Twas a small matter, to put up a hare. There were plenty of them in this place, the finicking, limping blue hares of the mountains. He dropped his head, picked up the trail, and gave chase with a dumb persistence that looked bad for that hare.

There was no hurry about this beast. It is never he who is certain that hurries. The end was known to him already, and to the hare; at least, they thought it was, for when a polecat fixes to the trail of a beast he might just as well be fixed to the beast's throat for all the chance it has of getting away from that grim pursuer.

You know how a hare can run, with or without cause; how she eats up the miles, as a child eats up sweets, and walks into the background before you are aware. That hare did not. If a fox had given chase, she would have slid into the next county without thought, but the fox would have hunted full speed and lost the scent or given up in disgust.

This thing, this low, slow horror, this polecat, moved no faster than a man might trot slowly, but he would stick to the scent till the Day of Judgment or dawn came to stop him. This the hare knew. She knew that no speed would disgust him, and she was equally certain that she could not "stay" till dawn—or the Day of Judgment, either, for the matter of that. Therefore terror seized her like unto a palsy, turning her blood to water, weighting her limbs with lead, numbing her, and dropping her speed till a terrier, aye, even a dachshund, would have laughed at it.

Then something unforeseen happened, and for the second time that night the polecat stopped dead on a trail that stopped, if I may be pardoned for using the word, deader. For the second time that night, also, he flung up his head quite suddenly, whimpering an odd little whimper—almost of anguish, it seemed—on a trail that died into the earth, or air, and went out like a snuffed candle. And for the second time that night, too, he found himself staring at a claw-mark, huge, forbidding, uncanny, the footprint of a bird, it seemed, in every way identical with the one that

had cut his son's trail—and his life—off short in the beginning.

There was something oddly stupid in the way the polecat stared blankly at that claw-mark, for an animal at a loss for the reason of a thing is either oddly stupid, or frightened, and a polecat, so it seems, cannot be frightened. He knew, he must have known, that before him was the claw-mark of a bird, yet, even then, he did not for some seconds look up, so strong is this habit—curse one might almost call it—that is laid upon all the four-footed ones.

About this time the polecat became aware of eyes, two in number, not smaller than a marguerite, and they were on fire, those eyes, so that they flashed, and in them was the cruelty and cold ferocity of several fiends. Behind the eyes was something, he could not tell quite what, a shadow, a spook, a great white shape or spirit or ghost, which flapped and flapped and never said a word.

The polecat is a slow beast as the wild folk go, and fear was eliminated from his composition by the—never mind. He had, however, as much love for his own life as any of us, perhaps because he and death so often met. Therefore he became a contortionist and acrobat for the second time, with the tables reversed, and found himself—goodness and himself alone knew how he got there—behind a boulder.

From the boulder to a heather-patch was the matter of a leap, and from the heather-patch to the "cairn" of stones in the spruce-fir wood where he lived, the matter of about the fastest thing in running—or whatever he called his peculiar gait—that he had ever found it necessary to put up. He did not look round once. Indeed, he had quite enough to do to keep his feet in the blind smother of herbage, but once he felt something fan the back of his neck and it was as the breath from the grave.

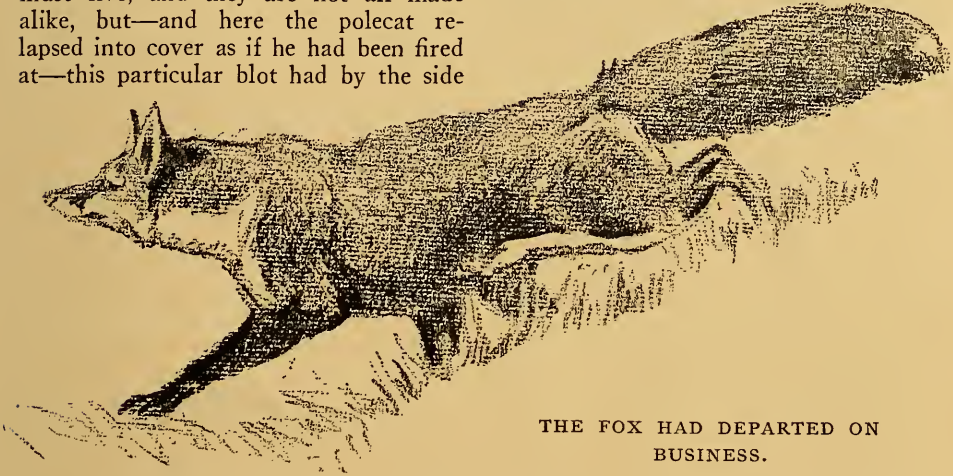
Next evening, after the fox had departed on business, but before the badger had shoved his gray snout out of the "cairn"—it had many lodgers, that "cairn"—the polecat went forth to appease a terrible hunger. He went first, however, to drink from a stream

that meandered chuckling, always chuckling, through the cathedral shades of the wood. The sun had almost burned out as he lifted his flat head and turned to go.

Then his eyes fell upon something about a yard away. It was a smudge, an unclean blot, the spot where a bird—presumably a grouse which had come to that place for water—had been violently done to death. Such sights are not uncommon in the wild. Beasts must live, and they are not all made alike, but—and here the polecat relapsed into cover as if he had been fired at—this particular blot had by the side

all glistening to flash back the silver of the silver moon. In that hour he fed as a king feeds, with all due regard to the sensation his appearance created along the bank.

All members of the weasel tribe love to cut a figure, I think; to rouse the town, as it were; to know the terror of their own name. The rabbits and the voles—water and field—were hopping about with fright, and the moorhens, and coots, and others of the river birds



THE FOX HAD DEPARTED ON BUSINESS.

of it the claw-mark of a bird. The polecat knew what that meant, or rather he did not know, but would have liked very much some one to tell him. It was the same claw-mark as the one he had beheld the night before, and it could not be considered a good omen for the beginning of a night's hunting.

There was a river not far away, broad and flat-bottomed; not particularly fast, as hill rivers go, but shallow and haunted by the lordly trout. Into this river the polecat slid, not indeed as to the manner born, but as to the manner trained. The trout is no flat fish to be walked upon on a flat bottom. He lies head to swell, and he sees you first every time. There is no bluff about the trout. He throws his stake on speed, and in nine cases out of ten the quickness of the fish deceives the eye.

The polecat put up such a trout, cut him off from open water, headed him into a shallow, and, after half-an-hour's fancy dancing, so to speak, landed him

were dancing can-cans of horror; while the rats, the rowdy, low ruffians that haunt every river front, turned fairly giddy with fear, and went about yammering insanelly, as if dazed—all because they had seen, and, worse still, smelt that double-dyed slayer, the polecat. They knew it was he, because although the moon—who is the mother of shadows—may even deceive the quickness of a trained wild eye, there is no mistaking that deadly, sickly, concentrated essence of stink, which is peculiar to the polecat, and—thank Heaven—to him alone.

All at once the whole company "froze," became stiff and rigid with a very sudden rigidity. It was as if a Voice had bidden them be still, and still they were as death. There are two kinds of fear in the wild. One produces movement and sound. The other produces stupor. Evidently the latter, and greater, fear was at hand.

The polecat did not deal much in



LANDING HIM ALL GLISTENING.

fear himself, save to dispense it, but he had never dispensed fear like that. Then something fell with a thud out of the night, fell and was still. The polecat crouched, his little red eyes fixed upon the thing, a dim blotch among the grass blades, but the thing did not get up and walk away as he expected. It had done with movement forever.

Then the water birds, who had been the first to crouch, got up and went away, very quietly and without remark, almost as if they held one claw up to their beak. The rabbits and the rats followed, faded back into the shadows that had given them birth, and they, too, said nothing at all. And the polecat was alone, alone in all that half-suggested, silent world, where the moonlight showed so little and the darkness hid so much.

It was the curiosity which is part of the heritage of the weasel tribe that prompted him to get up and go to look at that dim Something lying huddled in the silver grass. He stood a yard away and sniffed—one sniff only.

If a galvanic battery had been at that moment under his feet he would have—well, acted as he did. Every hair on his body sat straight up, and under it the loose skin rippled, and the sound that came from his mouth was not the sound

of a sane animal at all. He swore strange and terrible things in a sudden wild jibber, executing the while a mad dance for the space of one minute. Then he went, not slowly, and quite blindly, into the night, still jibbering as one who is in pain, or mad, or both.

And the thing which lay on the ground never said a word. It was a young polecat—his young polecat; and on its shoulder lay a single feather, a large, soft feather, white with the whiteness of snow. No wonder he jibbered, that polecat. Imagine one's only daughter descending from the clouds, and for the best of reasons offering neither explanation nor apology for the miracle. If anything was needed to complete the surprise, that feather smelt as the claw-mark had smelt, had come from the same bird, or spook, or devil, or whatever it was that sailed about the night sky and worked unholy miracles. It was to be presumed that that same spook thing had carried off his young one and dropped it by chance while passing above him; at least, that seemed the most natural theory.

After that the thing became a nightmare, and a bad one at that. Those wretched claw-marks seemed to haunt the polecat wherever he went, till he almost came to look for them. Everywhere in the soft ground they showed, and always where some bird or beast had been violently done to death and eaten on the spot.

One night, while loafing along a string of marshy pools where the resplendent wild duck was wont to feed—and feed him, upon occasion—he became aware of a small-sized riot opening up from the mist-hung darkness of the largest pool of all. Something was in trouble there, so that it squawked aloud in a wild and public-spirited fashion. Three wild duck got up from the place and whizzed away above him, and he knew by the whistling of their wings that they had had a mighty scare.

Followed a great snarling, and after

the snarling a series of surprised and terrified yelps. They were the sounds that a fox might make in a trap, perhaps. This the polecat knew, but he knew, also, that there were no traps anywhere near there.

He approached that place through a tunnel that the otters used among the reeds. In the middle of that tunnel he met something in a hurry. It was swearing horribly, that thing, and it ran blindly into the polecat, so that they rolled over together, fighting like cats. It must have been an otter. At least, that was the impression that the polecat had, but whatever it was, it scrambled to its feet on the instant and vanished down the tunnel, still stumbling dazedly, still swearing thickly.

As for the polecat, he got up and continued his path of investigation, spitting out fur as he went. Next moment another thing burst into the tunnel, yelping as it came, and there was no pleasure, but only a great and very fresh fear in the yelp. The polecat flattened against the wall of the tunnel this time, watching the filmy green eyes of the thing anxiously, for he feared it was mad. It passed, brushing his fur all along one side and reeking of bad odors, and he turned and saw by the tail of it that it was the fox who lodged in the same "cairn" he patronized. He was a hard old fox, not given to panic, and had not run from anything save dogs for many years.

It seemed to the polecat that as he reached the pool a white and shadowy something floated away over the reeds, but it made no sound, though it was of immense size. It was but a suspicion of a glimpse he had of it, and it did not come back.

He found where the otter had come up out of the oily black water and fallen upon the wild duck; the couch in the reeds whence the fox had watched and sprang out at the otter; the mud on the lip of the pool, all plowed and spattered, where the two had held a fanged argument. Then—and then he turned and went away quickly. The thing that had eaten the wild duck—the bunched feathers were evidence enough—was neither fox nor otter, but

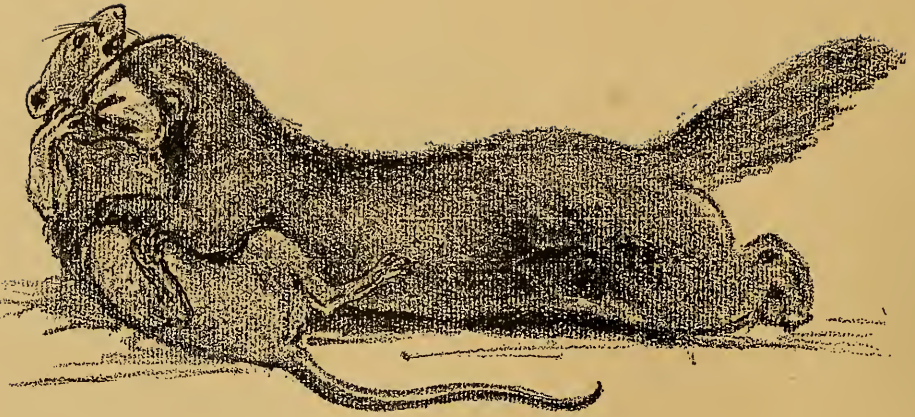
the unknown bird whose claw-marks were all around. He understood then the conduct of the other hunters and knew why they were streaked with gashes such as might be made by many small stilettos. They had been so foolish as to argue with the white nightmare, a mistake on their part not likely to be repeated.

The polecat removed to a hill-farm, small and rude and squat. He was in a hurry to feed and get back to his "cairn." Something was wrong with the wild to-night. Everyone crept about with fingers on their mouths, as it were, and if any crossed the open, they did so at the gallop, with their eyes on the sky. He could hear the snorting of the lean red does, concerned as to the welfare of their fawns, as they moved uneasily about the higher slopes.

He could hear the whistling "when, when, when" of wild ducks' wings stampeding about the sky, and the full, wild, ringing alarm note of the curlews, the tocsin of the wild, pealed incessantly from every hill. Once it seemed to him that he heard the snorting of a horse, but when he reached the post there was no horse there, nor ever had been, but a vixen passed him, going like the wind, and she was not pleasant to look upon, and in place of hoof-marks, he found—Oh, murder!—those unspeakable claw-marks.

Then he hurried to the fowl-house of that farm, and got in by some miraculous contriving of his own, and slew a fowl quickly, much to the disgust of a stoat who was planning the same coup. He fed after his fashion—his ruby orbs gleaming in the darkness, which was full of blundering, half-awake fowls—and removed again with speed. At the entrance he ran up against something that was coming in, and it turned and opened its mouth to squeal, but he leaped at its throat and choked the cry that would have given him away. It was a rat.

There was a clap like thunder as he took the gap in the rough yard-wall at a bound, and a hail of leaden shot splattered the lichened stone slabs behind him. That is the worst of fowls and pigs; they simply will not die quietly,



CHOKED THE CRY THAT WOULD HAVE GIVEN HIM AWAY.

but scream till some one, or death, or both, arrives to stop them. Apparently the farmer had heard them, and had fired from the bedroom window at the long low shadow of the polecat as it crossed the yard. At least, that was the supposition, but the polecat did not go back to see.

Instead, he heard the snorting of that horse, which wasn't a horse, again, proceeding this time from an inky black smudge of fir trees, and he arrived home hot and desperate an hour before dawn, wondering how he got there. The "cairn" was deserted at this hour, for its inhabitants, who were all beasts without the law, carried on business under shadow of night only.

The polecat family's own particular den seemed hollow and lonely, and, knowing that his wife would not be back till dawn, he lay down just within the mouth of the hole to wait. In times of peace he would have slept where he lay, but he was ill at ease this night.

The tocsin of the curlews still pealed from hill to answering hill, and the blackness, now that the moon had gone, was terrifying. A gray shadow, long and low, grew out of the void and faded into the "cairn." Another shadow followed. 'Twas the badgers almost an hour before their time. Something blew past with a snort, and a gleam as of a dim lamp marked the passing of the light rump of a roe-deer. Behind came a second, and they were in a hurry,

fearful and highstrung, ready to shoot off at a tangent at a whisper. And the roe is the last of the wild folk to become flurried.

A suspicion of faintest gray hazed the east, and a rock about ten yards away grew into a rock instead of a crouching goblin which the darkness had made it. Dawn was at hand. And straightway there rose up out of the dirt the lean, slinking, raking figure of the fox. He had come home, like the badgers, long before his time, and he had come on his belly, and went to ground as if he thanked Heaven for the favor. And the polecat, watching with his wicked snaky head erect, knew by these tokens that the shadow of the white nightmare—and the same was the claw-mark mystery—lay heavy and mysterious upon all the wild.

No blackcock announced dawn on the rock near by, as was his custom on other mornings. No jays shattered the silence with harsh, unseemly gibes. No grouse slung themselves in whirring showers across the valleys. No heron sailed up out of the black woods into the caldron of the fiery sunrise, into which it was his wont to beat slowly until the glare engulfed him. All these things were missing this morning—and so was the polecat's wife and her young one. Only the everlasting tocsin of the curlews beat to and fro without pause.

At last the polecat stood up and moved stiffly away into the spruce-fir wood. A cry, half-stifled by distance,

had come to him on the lap of the dawn wind. It was not a nice cry, a thin high chatter, but it was the cry of a polecat for help, and it is one of the rules of all the weasels that that cry must be answered in person and at once. They are not, from the human point of view, desirable beasts, nor is there anything lovable about them, but they will rescue a comrade from a foe if they can, even if their own life pays forfeit—and that in itself is not half bad.

He found the giver of that cry, and it was his wife. Beside her was their only and half-grown son. Both were carmine stained about the back, looking as if they had tried to crawl under some barbed wire, and they were in trouble so that they made obscene noises at nothing at all.

He was wondering in his dull animal way what they had imagined they were fighting, when his eye fell upon that which had once been a grouse, and beside it—help!—was that unmentionable claw-mark. That explained it all. The attitude of the wild folk, the tocsin of the curlews, the silence, the—

A shadow fell athwart the sun. His

eyes lifted, and he was still. Above him, poised on vast flapping wings, which contrary to the custom of all wings, made no sound, was a bird, and it must have been twenty-six inches from head to tail if it was an inch. It was white as the snow, that bird, cruel as the snow, silent as the snow, and it was literally muffled from big round head to tiger-taloned claws with layers upon layers of feathers.

Then it fell, fell with the suddenness and force of a bolt, and the polecat went down under it with a yell. What happened under that white heap, amid the terrible grappling claws, no one knows, for the heap choked suddenly and collapsed in coughing, white whirlwind.

"It was a snowy owl from Russia," said the keeper to me. "I found it lying dead on top of a dead polecat. The polecat's jaws were locked tight in the owl's throat, in a blind, accidental death-grip, and two other polecats ran away as I approached."

Which lucid statement, you will allow, explained everything about the mystery, that in the wild had become known as "The White Nightmare."



A LOST PARADISE

BY CHARLES ASKINS

IN the fall of a time about sixty years ago, Captain Askins, of Lexington, Ky., was riding through northern Mississippi on a horseback tour from his home to New Orleans.

On his right was a big brick building, colonial style, which with a little pretension might have been called a mansion. Red oak, pine, and chestnut mingled over the broad lawn that extended down to the "big road," where a heavy iron gate, with posts of stone and a great arch above it, stood invitingly open. Hedges of boxwood, neatly trimmed, bordered the drive and the walks, while various semi-tropical trees grew about the yard.

Behind the house was a vineyard of native grapes and a fine orchard of peaches, apples, and pears. Some distance below a rambling barn squatted over the ground, with a thoroughbred sorrel colt or two looking longingly over the fence. The doors of a huge cotton shed were open, displaying bale on bale of cotton, and near by the rough-hewn, skeleton arm of a horse-power cotton gin were going round and round under the motive power of a couple of white mules, while the negro boss shouted orders to half a dozen busy blacks.

With a Kentuckian's appreciation of a beauty somewhat foreign to his own State, the captain enjoyed it all as he settled his saddle nag to a slow walk. When almost opposite the gate, a young mulatto boy came rushing down, waving his arms for the horseman to stop. The captain drew rein to see what was wanted.

"The majah says foh yuh to stop, sah."

"Who the deuce is the majah, and what does he want with me?"

"Don' know, sah. 'Spec' he wants talk to yo' all. Majah is Mas'er Jim."

Somewhat annoyed, for he wished to reach a certain point that night, the captain rode up to the house, where the

major met him with an air of mock indignation.

"Now," he said, "what the devil do you mean, ridin' past my house without stoppin'?"

"I was in a hurry to reach Springdale to-night, majah; promised to stay with a friend, Colonel Bolivar."

"You won't get theah to-night, I tell you that, suh. I'll send a nigguh down to invite him up this evenin', and tell him you'll not be theah foh a week, suh."

"Oh, but I expected to be in New Orleans in ten days," protested the horseman.

"The deuce you did! Well, you'll not be any nigher in ten days than you ah now, suh. From Kaintucky?"

"Yes, suh."

"I knowed it by your hoss. Been in the ahmy?"

"Yes, suh."

"I knowed it by the way you set your hoss. What wah?"

"Black Hawk and Mexican wars. Captain Kentucky Rifles."

"I knowed it. Now, wouldn't you have played hell, ridin' past heah without payin' yo' respects. I am Majah Gordon—Mississippi Volunteers; sved through the Mexican Wah, suh. Light captain. *Sam*, you *Sam!* Take this gentleman's hoss to the bahn and rub him down until evuh haih is dry, then feed him.

"Come in, captain. Bring your rifle right in with you. I see you ah very careful with it, and it looks a good one. I have a Joe Manton or two myself, suh. Don't apologize foh the dust. The ladies ah all gone to town, anyhow, God bless 'em. *Ike, Ike!* Damn that nigguh, he's nevuh heah when I want him!

"Bring us a couple of toddies and a smokin' jacket and paih of slippuhs fo' the captain. You've got the Kaintucky foot and ankle, suh, and the shoes will

fit if the coat is a little tight. My wife is from Louisville, captain; the finest women and hosses in the world."

The mollified captain made no further show of reluctance about staying, and the two gentlemen settled down to their toddies while discussing war, horses, and field sports. The major brought out his guns—a big-bored Mississippi Yager, which he had carried to Mexico, a powerful-looking ten-gauge, which he called his buckshot gun, and a pair of highly engraved fowling pieces, made by the celebrated Joe Manton, with long, slender barrels, light in weight, possessing locks that were tuned up like the strings of a violin.

The latter were evidently the pride of their owner, who was surprised that the captain seemed unable to appreciate the beautiful arms at their true worth. Finally, the traveler admitted that he had never fired a smoothbore a hundred times in his life.

"What!" asked the major, "did you neveh shoot buids on the wing?"

"Never shot a bird," asserted the captain, "except to clip the head of a prairie fowl or turkey now and then, and, while I have hit a few flying, it was mostly luck. We don't think much of a shotgun in Kentucky."

"I know you don't, and it's a mistake, suh. You have somethin' to luhn, and had bettuh be about it. Theah is no spo't like wing-shootin'. Why, I would no mo' shoot a pa'tridge on the ground or a duck in the watuh than you would ride to a race meet on a mule. And theah is no othuh country like Mississippi for game in the whole Union. That was why I wanted you to stop and enjoy a few days' shootin' with me."

"Haven't you any deer or bear?" queried the Kentuckian. "I brought my rifle, expecting to do some hunting down below Vicksburg."

"Oh, lawd, yes, plenty of deah and beah, but I mostly leave them to the niggus and for a chase with the houn's. A big buck is lyin' right now in that tall slough grass you see through the window; you can try the rifle on him in the mawnin'."

"So you leave the rifles and the deer to the niggers?" asked the captain, some-

what ruffled. "I don't agree with you, suh, in that. There is no finer game alive than a Kentucky deer, not even a buffalo or an antelope, and I have shot them all. It is nothing short of sinful waste, too, major, feeding them to the niggers. We tried that in Kentucky; that and shooting them for the hides, and now venison is becoming very scarce.

"Letting a black become skilled with a rifle, while your own young bloods go piddling about with a salt shaker is dead wrong, too. No nigger of mine is going to shoot a rifle; it is the weapon of a soldier and a gentleman, suh. Catching rabbits, coons, and birds may be all right, but shooting a rifle at a noble beast like a deer—confound it, what are you all coming to?"

"Softly, softly, captain; there is only one nigger hunter on the plantation, and he shoots only to fill up hungry pots that are always empty. Deah is cheapuh than poak, though the black imps grumble a good deal at havin' to eat it. There will be whitetails in the swamps, too, a thousand yeahs aftuh we have quit pullin' trigguh.

"As for lettin' 'em eat my buids, I don't like to use the whip, but if I caught one of the rascals catchin' a pa'tridge I'd have the overseer skin him. Why, there are five hundred blacks on this plantation, and if I allowed them to trap buids the dear little brown fellows wouldn't last a year. I tell you that shootin' them in the fashion of Forester and Lewis is the spo't of a king. And theah is many a bevy on Gordon Place, too; why, the greatest duke in England neveh saw such shootin' as we have heah. Only last season Colonel Fontaine, of New Ahlens, and I shot a match to see who could bag his hund'ed brace the quickest. We shot from hossback, with spare guns and a man to load. We began at nine, and, knowin' the groun' bettah than he, I finished at twelve—thuhty minutes ahead of him."

The unconvinced captain shook his head at the idea of such shooting being called sport. "I'll tell you what I'll do," he declared; "there are pigeons in those woods?"

"A million of them on Blackoak Ridge now if theah is one."

"Well, I will shoot you to prove which has the better gun—your Joe Manton against my Kentucky rifle; five gallons of Bourbon against as much of your rare wine; you to take your birds singly on the wing, while I kill mine like a rifleman—the man who first scores his hundred wins."

"Done! The whisky is mine. But, not to take advantage of you, I will orduh and present to you anotheuh Joe Manton like mine, for you will want it next season, when we will shoot the match all ovuh again. What is it, Sam?" as the stableman came in.

"Ole Massa Big Geo'ge is comin', sah."

"Oh, yes, I forgot to tell you, captain, we ah goin' to have a little game suppah to-night—that was anotheuh reason I was jus' boun' to have you stop—and I have asked my neighbo' and friend, Big Geo'ge, ovuh to help eat it. I nevuh can enjoy a squaih meal without Big Geo'ge. You know how much bettah a cuhcus is when you take a ten-yeah-old boy, or a theatuh with a fo'teen-yeah-old miss—it is the same with eatin'; he fuhnishes the enthusiasm, the honest zest that causes a runt pig to eat as much as a two hund'ed poundeh. When you have swallowed until you think theah is danguh of splittin' down the middle, you look at Geo'ge jus' gittin' unduh way and staht right in again. But heah he comes. Sit still and watch him."

The floor shook as a huge figure strode in. His chin was buried in folds of flesh, which extended up to his eyes, half concealing them. His head almost touched the ceiling, and his immense legs swung around one another as he walked. Looking neither to the right nor left, he went straight to the table, lifted the bottle of wine, smelled it, and then he exploded:

"Damme, what's this stuff? Like to kill me joltin' ovuh heah in that damn carryall, and then try to pizen me. Where's the applejack?"

"Presently, presently; Geo'ge, my old friend, Captain Askins, of Kaintucky."

The big planter greeted the captain pleasantly and without any show of surprise at the presence of a stranger. "It's just one of the majah's devilish tricks," he said, "tryin' to see if I wouldn't swal-

ler his mis'able grape juice befo' I knowed it. Have a drink with me, captain," as the brandy appeared. "No? Your very good health, suh. Now, Jim, tell me about the suppah."

"Everything done to a tuhnn—been out to see about it myself. If you insult Aunt Sally by suggestin' any changes she'll scald you."

"Git the wild tuhkey hen I sent ovuh?"

"Yes, suh. How in thunduh did a lazy ole—"

"Stuff it with oystehs? Maryland oystehs, now, I tell yuh—none o' them devilish little Mobile pimps. An' cran-behies from Juhsey?—I wouldn't tech one of them Michigan behies."

"The behies are from Noo Juhsey and the oystehs from Maryland, suh."

"Good! The wild pigeons wuh wrapped in brown papuh, coated with white clay, and roasted in the ashes?—brown papuh, now, heah me, no damn Yankee noospapuh will do fo' a pigeon; they taste of it."

"Nevuh feah, Geo'ge, it's brown papuh, and the buttuh is best Louisville cream-made."

"Pot-roast the teal with strips of Mississippi, aco'n-fed bacon?—no cussed Illinois sow-belly, mind ye."

"Shot the po'keh in the woods myself, Geo'ge, and cut the strips as thin as a knife blade."

"Got the robin pie just right this time? You played the devil with that pie once—an English pie, suh, with nothin' but buttuh in the crust—yo' didn't put any blackbuids in this time, yo' young scound'el, to think I couldn't tell blackbuids from robins—fifty robins, no mo', no less, picked dry and laid out to freeze befo' bein' drawn?"

"Tended to it all myself, suh."

"Yuh briled the pa'tridges on hick-ry coals?—no cussed oak flavuh foh me, suh."

"It was sho' hick'ry, Uncle Geo'ge, and the Irish potatoes are roasted in the ashes with theah jackets on, and the oysteh soup is rich enough to beah the weight of yo' spoon."

"Oystehs! Now I got ye. I knowed a rattle-brained young devil like you would fohget somethin'. Did yo' make

the oysteh relish with cayenne peppuh and celery, thickened with the stewed hahts and livuhs of meadow lahks chopped fine?"

"Aunt Sally did that—just as you showed huh. And the eggnog is made of cohn whisky from Kaintucky"—with a bow to the captain. "Captain, this suppuh is to be entiahly of Mississippi buids. Anothuh time we will have one of lahguh game—vanison, beah stake, possum, rabbits, and squir'l soup. With the buids we would have nothin' but light drinks, home-made and impohted wine's, and coffee, except for Big Geo'ge, who won't drink 'em, so we have eggnog and hot milk punch to-night. Eve'y-thing is ready, Brother Geo'ge."

"Good, good; what the hell yo' waitin' foh, suh? I am goin' to live a hund-d'ed yeahs yet, and eat all the time."

The pie was very much to the captain's taste, but he could not forbear saying: "I am 'most ashamed to eat these little songsters. One spring I had the rheumatism, and the only thing that cheered me for weeks was a couple of robin red-breasts singing under my window and hopping about the lawn. They are certainly good eating when cooked so, but I shall never shoot one."

"Don't worry, my deah captain," said his host. "There are millions and millions of 'em down heah. I have stood at one spot and, with two men to load, shot away ten pounds of sixes in one evenin' as they came in to roost in the sage. Bar-rin' the pigeons and the blackbuids, theah is no feathud game on ea'th so plentiful as the robins. Watch Big Geo'ge. 'Eat, drink, and be merry, for to-morrow you may die.'"

"Here's to your scuppanon wine, majah; I'll take a keg of it back to Lexington with me after we have finished with the pigeons to-morrow."

"And I'll teach you how to shoot a Joe Manton, nevu feah."

"Don't drink so much, yo' two young devils; how can yo' all appreciate the flavuh of this meadow lahk and oysteh relish?"

Captain Askins was my father. More than forty years later I visited the major, now Colonel Gordon, a mellow and

sweet old man, living alone on the old plantation, except for a daughter of Aunt Sally and her husband, who kept house for him. My father had paid annual visits to the major before the war, and I went down for a quail shoot, not quite prepared for the changes that had taken place in forty years.

The "Big House" was weather-worn and old, with one wing shot away during the war. A regiment of Federal troops had camped in the yard and felled the oaks for firewood. The frame of the horse-power gin was lying prone. The barn and the cotton shed were gone. No vestige of the negro quarters remained, but about over the plantation were a few darkey cabins, half hidden among the pines. In place of the broad cotton fields, only little, irregular patches here and there were in cultivation.

The dear old man was honestly delighted to see me when I told him my name.

"Come in, come in," he said, with his time-worn face aglow. "You look like yo' fathuh, boy, only not quite so much the soljuh. But I am glad you have a fowling piece in place of the rifle. I have nevu liked a rifle much since they made two holes in me durin' the wah. I have a good gun myself, but it's gettin' old and rusted, like its owner, suh, and the Joe Mantons were buhned in the bahn. I do not shoot much any mo'. The spirit is willin', but old legs are not, and game is hahd to find."

"That is a bit disappointing, colonel. My father used to tell me of the old times, and I thought we would have one more game supper in memory of him. Pardon me for doing it, but I brought you down a demijohn or two, just as he told me that he used to do before the war."

"No apologies, my son. You were bawn one of us, and I know you will unduhstand. Gordon Place will do its best to entertain you, and the present is most acceptable—most acceptable from the son of my old friend. I am real sorry about the shootin', but you know I haven't seen a pigeon in twenty yeahs, and the robins and doves have taken to migratin' futhuh west. I have not seen a wild duck now in three seasons. But

theah is a bevy of pa'tridges back in the garden among the grapes.

"I told the dahkies that if I caught one of 'em shootin' these buids I'd put a 'blue whistler' through him, and I guess the rascals believed me. I like to heah the little chaps whistling. They wake me in the mawning just as they used to when I was a boy. Take yo' dogs and go through the vines, and you'll soon have 'em up. Then theah ah some robins in the pines back of the house, and I have seen a flock of lahks in the weed patch where the bahn used to be."

"Hold on, colonel, for heaven's sake. I wouldn't shoot your pet birds any more than I would you."

The charming old face lightened. "That's like your deah fathuh, boy; he hated to shoot anything that had luhned not to feah him. But, really, those are the only buids I know about the plantation. You might find a few pa'tridges in the edge of the swamp, where the nigguhs are too lazy to hunt. I regret that I cannot go with you to-day, but I have only one hoss now, and I want you to ride him. Puhhaps to-morrow my rheumatism will be bettah or I can borry a mule from old Sam."

I searched all the afternoon with a pair of good setters, and managed to secure half a dozen quail by hard work in the heavy cane of the creek bottom. The colonel beamed as he smoothed down the plump little birds with the loving hands of an old sportsman, then stepped back to admire them, all laid out in a row on the table. I persuaded him that I was highly pleased with the day's shooting, though the great old place was almost denuded of animal life.

I marked the spot where my father killed the big buck with a single ball as it sprang from the rank slough grass. The yellow sedge covered the hill of the "robin's roost," as it had forty years before, but as the sun grew low no birds came stringing in. Not a mudhen nor a muskrat broke the waves of the slumbering little lake. No gray squirrels helped the wind to shake the nuts from the shellbark hickory trees. The rabbits must have slept deep in the ground, for I saw none. The solitary yellowhammer ceased his drumming when he

heard my footsteps among the pines; the jays stole silently away and hid in the dense cedars. The feathers of a cardinal strewed the ground, but I saw none upon a living bird.

A flock of three larks rose wild and went far away, darting and twisting. The scattered quail were afraid to call. The only music was the dirgeful singing of the west wind in the pines.

I encountered three parties of blacks of from half a dozen to fifteen out shooting in gangs, but they avoided me and I kept away from them. They were shooting continuously, at what I could not say, but they were in a widely scattered line, and their wealth of dogs must have combed the cover with fine teeth. In the late evening their whereabouts could be noted by the curling, white smoke from the burning sedge.

"I am greatly pleased, my boy," exclaimed the colonel. "That is mo' buids than I have been able to shoot any day this two yeahs. I regret that we cannot have them for suppuh; Sally says the only delicacy we will have is chidlins. You know pa'tridges ought to ripen at least two days."

"Colonel," I said, "I met three different parties of negroes out shooting to-day. There seemed to be one constant banging of their guns. Is there no way to stop that? I suppose they are partly responsible for the scarcity of game."

"Entirely responsible, suh. I doubt if our own people shoot as much as they did befo' the wah. Our young men have had to leave the plantations to try to make a living in town. With the few days' shooting they can find time for there would be more game in Mississippi than there ever has been since the Cherokees went west. We played ouah game, son; played hahd; we lost, and this is pah of the price we have to pay.

"The only way to stop it would be to fohbid the blacks owning fiahahms, and the Constitution of the United States will not puhmit that. I might run 'em all off the place, but I am too old to work it myself; I couldn't pay the taxes; the old plantation would change hands, and the next ownuh would bring them all back an' tuhn 'em loose to do as they pleased. You cannot shoot a niggah fo'

killin' a buid, or stealin' yo' bacon, or robbin' a hen-roost, and the State has enough to do without prosecutin' all the blacks in the South.

"Why, if one of my people was arrested foh shootin' my own buids, I should have to go up and pay his fine or beg him off. If he went to jail, I should have to divide my meat and bread with his family until he got out to tend his crop. The Government might regulate 'em, but we cannot."

"I hate to see changes in the South my father knew, colonel—the country of the wild pigeon, the wild turkey, the quail, and the deer. In all the world there is no country like it used to be and there never will be again. Still, I fancy it looks quite the same; the same pine groves that are always green, the sedge as yellow, and the cotton fields as white."

"Yes, my young friend, it looks the same, just as the man who has been suddenly killed may be smiling in his last sleep. But the old South is dead, though still smiling, and the new South is yet unbohn; what it will be like I do not know; it cannot mattuh much to you and me—to any who like the wild things that can nevuh come back. The quail are gone; the wild fowl gone; in ten yeahs mo' the robins, redbirds, meadow lahks, thrushes, even the blackbirds will all be killed and eaten. Kismet. It is the fate of the South—the price that must be paid—now no more like the old South than the Desert of Sahara is like the South of your father and of me."

"I fear there is much of the Indian in you, Colonel Gordon. Your heaven would be a heaven of wild things that you might hunt and chase."

"You are only pahtly right, my boy, for I should not caih to kill them now. I see where we were wrong, where we set an example that these children of Africa were boun' to follow. But if I could only heah the mocking-bird singing again; see the cardinal balancing on a cedah twig, the robins coming in to roost, the pigeons feeding in the pin-oak trees, the bronze gleam of a gobbler's breast; hear the whistle of the cock quail in the wild-pea field, feel the shrill whir of a wild duck's flight, see the ghostly flitting of a wild buck's flag as he fled through the black woods—that would be heaven enough for me; heaven enough for me without killin' a single one; heaven enough to know that all of them were still with me—still alive."

"Colonel Gordon, there are many of us who would go to that good land with you. We are traveling over this earth to find it now—breaking family ties, forgetting love, deserting friends, freezing in the Arctic, dying in Africa; searching, searching for a heaven where the wild things live undisturbed. They call us sportsmen and think we go to kill, but they do not know and cannot understand."

An expression of infinite pathos came over the rare old face. "Son of my old friend, I have lived all too long. A few years more, and theah will not be a sparrow or a wren to turn the leaves that drift ovuh me up on the hill. When my time comes theah will be only the black crows left to call taps ovuh me and the grisly bird of the dead, sitting silent on the gaunt and naked limbs of a withered pine. I have lived too long—all too long."



BAD MEDICINE

BY HULBERT FOOTNER

Illustrated by R. W. Amick

CHAPTER I

The Gathering Storm

THE REVEREND RICHARD SAUNDERS, M.D., lifted the latch of the Moose River store, and ducked his tall head under the lintel. A warm, pungent odor of groceries, raw skins, and kinni-kinnick assailed his nostrils. Within, the low, log-ribbed room, with its deep, smoky shadows, was like a painting blackened by time. A single small lamp, with a tin reflector, supplied all the light there was; heaped everywhere were the staples of the North, and the furs already taken in exchange, while many of the trader's dark-skinned customers squatted on their heels on the floor.

Bags of flour, sides of salt pork, and bolts of flannel cloth comprised the chief stock, with a meager line of luxuries on one shelf, and a tiny showcase of cheap jewelry. A vivid note of color was supplied by a row of last summer's "Indian" millinery, which remained hanging from a rafter because times were bad.

It was mid-afternoon in the first week of December, and darkness had already fallen. The breeds had come in to meet the mail. It arrived at Moose River once a month—when it got through. This was the Christmas mail and the first in two months, for in November, between seasons, the trails were always impassable.

Parson Dick, physical and spiritual guide alike to this community, was a ruddy and cheerful young man, with a broad frame well able to withstand the rigors of the North, and the bluest of blue eyes, whose open look was like a beam of light in dark places—obviously a visitor to be hailed warmly—but a

curious thing happened. When he entered the store a silence fell abruptly on the breeds, all the dark faces stiffened into blank casts of human features, and the air became charged with a subtle antagonism like coming thunder.

The men showed it in various ways; St. Jean Bateese, a kindly old man, averted his head with a look at once deprecating and obstinate; Coquenoigan, a hulking youngster, merely looked his stupidest; and Jack Mackenzie, an unwholesome-looking breed with whitey-blue eyes rolling strangely in his swarthy face, scowled at Dick openly. As for the women, they stared straight in front of them with eyes as bright, unwinking, and expressionless as the eyes of fowls.

Young Dick glanced around this circle of wall-eyed redskins, and his stout heart sank. He had worked so hard with them—and this was his reward! For some time past he had been aware of a smoldering animosity, but this was the first open and defiant manifestation of it. He searched himself for the reason, but in vain. He had given them of his best—sympathy, kindness, and a painstaking effort to understand. To have a mystery to contend with is sufficient to appal the stoutest. Parson Dick felt terribly alone.

The trader, St. Pierre Fraser, seemed to be his one friend there. "Hello, Parson Dick!" he cried heartily. "What's the matter with your prayers? Ain't took in but five fox, nine link, and two marten in a week!"

St. Pierre was likewise a breed, but light-skinned. He was a few years older than Parson Dick, lithe and good-looking in his dark way. His black eyes had an odd, uncanny brightness, which for the most part he kept veiled, and there was a mocking line at either side his thin mouth. St. Pierre had been educated "outside," and was distinguished from



R. M. Smith

AT THIS MOMENT THE CHEERFUL YELPING OF AN APPROACHING DOG TEAM WAS HEARD.

the others by better clothes and a worldly air.

Dick was on his mettle to hide his discouragement from his people. "All in good time, St. Pierre," he answered good-humoredly.

"Well, look out we don't all starve before they begin to draw," St. Pierre said.

"Perhaps the fox, the link, and the marten have been offering up prayers on their own account," suggested Dick whimsically.

"Well, a white man's prayers sure ought to shout down the little varmint on high," returned St. Pierre.

Dick turned to the scowling Mackenzie. "What's the matter, Jack?" he asked.

"My wife 'ongry, my children 'ongry," muttered the breed.

Dick looked at the trader. "Can't you help him out?"

St. Pierre shrugged. "He's down for fifty skins already."

Dick gave a low-voiced order, and St. Pierre weighed out pork and flour. Jack's eyes gleamed, but the others looked on with the utmost indifference. While the package was making ready St. Jean Bateese drew his old blanket around him, not without dignity, and stepped to the counter.

"That will be for me, St. Pierre," he said, ignoring Dick.

"I ordered it, St. Jean," said Dick in surprise.

The old man's eyes narrowed to two inimical slits. "The man's wife is my co'sin," he said stiffly.

Dick was aware that every pair of black eyes was fixed on him with the same hard look. In the face of such open and united animosity, any further attempts to conciliate would only have shown weakness. He had the dreary sense of the man faced by the shape of failure, but he kept his colors flying.

"Just as you like," he said quietly. He pulled out his pipe and filled it unconcernedly. The situation was a difficult one for him. To stay in the store only made matters worse, but to leave it at such a time would be to acknowledge defeat.

St. Pierre relieved it. "You'll find

the old woman at the other end of the house," he said casually.

The excuse was a good one; moreover, Dick felt a mighty desire for the society of his own kind. But if the breeds were bent on sending him to Coventry, at least he was not going to let them see that it affected him; with a serene brow he nodded to them all around, and made his way through the storeroom to the trader's living-room.

There his reception was very different. Mrs. Croome and Ralph were at supper. The old woman jumped up in unaffected gladness and seized his hand in both of hers.

"Parson Dick, the sight of you is good for sore eyes," she cried. Her son's greeting was cooler. "Sit right down!" cried the old woman. "I knew you'd be here, and I brought fresh bread and butter, cold roast moose, and a wild cranberry pie."

At the sight of her some of the hard, anxious lines smoothed out of Dick's face. He did not intend to inflict his troubles on her. "Old woman," he said lightly, "you're a magician! Fancy, outside bread and real cow butter within hail of the Arctic circle!"

She bustled about him, filling his plate. "You are the magician," she said; "you imported the cow."

Parson Dick was the kind of man who instinctively cracks a joke when things loom blackest. "I and others," he corrected. "I don't know how the cow enjoys it up here; maybe she's lonesome—but none of the rest of us regrets the deal. There isn't a man in the North wouldn't ride two hundred miles any time to let his teeth sink into the old woman's bread and butter!"

"Gammon!" she cried, affecting great scorn.

The old woman, as everyone called her, was no more than five-and-forty, but hard work and anxiety had added a good fifteen years to her looks. She was a meager little body, worn fine like old gold, sharp and quick in her ways as a weasel. Her hair, snow white, was drawn back into a tight little knob, and she wore a red flannel waist, a short skirt of coarse woolen material, and hobnail boots—with it all she had the look of a lady.

The old woman's tongue was like a whip lash, sparing none—her heart had come out of the crucible of suffering, the pure metal. Only she and Parson Dick knew what each was to the other in that lonely land.

While Dick ate he chaffed her affectionately, diverted from his black thoughts by her sharp, good-natured retorts. More than once he tried to draw the boy into the talk, but without success. Ralph was a singularly handsome lad, with the proud, free look natural to wild youth, but he had lately reached the age of acute egotism and self-consciousness. He had never been "outside," and, like the breeds, he was sullenly conscious of his disadvantages, and the easy banter of his elders only made him more dumb. It was only in the native cabins that the poor lad felt thoroughly at his ease.

"May I smoke?" asked Dick at last.

"You, Parson Dick!" cried the old woman derisively. "One would think I was a lady!"

"So you are, old woman," he said. "The first lady of my parish, and that's two hundred miles from end to end."

He lighted his pipe.

"I suppose you are looking for a letter from your daughter in this mail?" he said diffidently. He did not care to let her see how dear this subject was to him.

The old woman's face shone as with a light from within. "This is the Christmas mail!" she exclaimed. "I shall get a photograph of her, and something that she has made me herself!"

"To be sure!" said Dick wistfully.

The old woman scampered to her grub-box and drew out a card from her old reticule. "Here's the last picture—I brought it along to compare," she said, thrusting it into his hands. "Ah, your manners wouldn't be wasted on *her*, Parson Dick! Isn't she the prettiest and stylishest little lady your eyes ever rested on?"

Dick had already learned this pictured face by heart. It was his dream o' winter nights. In the midst of unremitting work and discouragement a man must have something to beguile his heart with. "She's more than pretty," he said gravely. "She's lovely!"

"And writes me the sweetest letters!" said the old woman.

"How long is it now since you've seen her?" he asked.

"Eighteen years," she said simply. "I've never been out since we first came in, you know. Ralph was a year old and Annis five then. I couldn't bring them both into the wilderness, so I left her with my husband's sister. They are well-to-do. Annis has been to the best schools and moved in society, Parson Dick."

"How was it you and your husband happened to pick on this place?" he asked.

"It was the year of the Minitaw gold rush," she said reminiscently, "and he thought we could get through this way, his geography being poor. Well, here we stuck, and he decided to settle. He saw a fortune in it. He was an optimistic man."

"Eighteen years!" said Dick wonderingly.

"We didn't do well," the old woman went on in a matter-of-fact tone that concealed much. "He fell sick, and at last he died. Then there were debts to be cleared, and Ralph kept in the mission school—and traveling is expensive. So I never got out. Lately I've hesitated—the girl has been doing so well, and I don't want to thrust an old scrub of a mother on her."

"Nonsense!" he said. "She'd be proud of you!"

"Parson Dick, my dear, you're a simple goose!" cried the old woman tartly. She jumped up to hide the feelings that threatened to betray her. "Well, well, the mail will be here directly, and I must pack the grub-box! When you journey out, Parson Dick, you shall go to see her and bring me a full account."

He shook his head.

"Why not?" she demanded.

"I'd be afraid," he said.

"Afraid?" she echoed.

She was struck with his youthfulness. His expression, as he looked at the pictured face, was much the same as a child's who looks through a barred gate at a blooming garden.

"A sub-Arctic missionary mustn't think of such things," he said a little

harshly. "A failure; a rank failure, at that," he added bitterly to himself.

Meanwhile, in the other end of the house, a kind of witch's broth was brewing. The breeds, impenetrable in the presence of white men, could talk their own guttural tongue fast enough when by themselves. St. Pierré, apparently engaged on his books, took no part in the discussion, but in reality he followed it closely, and, when the opportunity offered, he let fall an offhand word or a suggestion that acted like a subtle poison in the childlike hearts of the breeds. For weeks he had been injecting it, drop by drop, until they were ripe for any act of madness. The famine and the sickness that raged among them played into his hands. He never needed to show his game; completely at the mercy of his superior intelligence, they did not even suspect whence the promptings to evil issued.

To those already in the store entered a middle-aged native, stout and well-braced as an oaken cask. White man's blood showed in his florid cheeks and curly black beard. He had a look of greater capacity than any man there excepting St. Pierre. This was Aleck Whitebear. As St. Pierre's emissary, he had a knowledge of the world, and he could read and write.

"Well, Aleck?" cried the trader.

The newcomer angrily threw a bundle of little pelts on the counter. "Yah, mus'rat!" he snarled. "Walk all day, traps empty, snares loose, wolf get my colt!"

He was followed by a handsome, wild-looking lad of fifteen, in whose veiled eyes there was something lacking. Without taking the least notice of anyone, he went to the stove and, squatting, held out his hands to the warmth.

"Man can't trade on mus'rat," said St. Jean Bateese oracularly.

"This is worse than last year," put in St. Pierre.

"One bad year people poor; two bad year people starve," said St. Jean, wagging his head.

"Bad medicine!" muttered Coque-noigan.

St. Pierre, with a sudden thought, looked at Aleck's son. "What does Joe

say?" he suggested, with a sneer too subtle for the natives to apprehend. "Sometimes the simple speak very wise. Joe, where is the fur gone?"

The suggestion met with instant favor from the superstitious breeds, who saw in the boy's filmy eyes something unearthly and mystical.

Joe, finding all eyes on him, scowled, and, like the wild thing he was, looked for a hiding-place. "Joe no tell," he muttered.

"Answer, fool!" cried his father harshly.

St. Jean Bateese held up a restraining hand. "Let him be," he said. He shuffled over to Joe, and, producing a worn little bag containing his "medicine," gravely rubbed his forehead with it. "Speak," he said kindly.

The others waited in a breathless silence, with intent eyes on the boy.

Joe, intuitively apprehending what they wished him to say, spoke it in order to be let alone. Sweeping the shock of black hair out of his eyes, he said, with graphic, illustrative gestures: "Fur gone outside, white man's country. Weasel tell Joe him see houses tall as spruce trees—Wah! Wah!—and fire wagons go quick as wild duck fly!"

A breath escaped the assembled breeds like the hiss of a great serpent. They moved uneasily, like tethered animals, and scowled toward the other part of the house. St. Pierre exchanged a rapid glance with Aleck Whitebear. St. Jean Bateese received the boy's nonsense as an inspired communication. A kind of ecstasy seized on the old man. Drawing himself up and extending a shaking arm, he began to harangue them. His voice was hushed at first and trembling with passion.

"It is true, my brothers! Two years ago, before Parson Dick came, there was plenty. Every man had credit at the store, and there was bacon and flour and tea and tobacco for all. The women were fat and good-natured, the men were strong. Ye were your own masters then; there was no white man but Duncan McPhatter, who is married to a squaw, and Ralph Croome, who is a boy. Then comes Parson Dick from the outside with his white men's laws—what

do we want with white men's laws?—ye must not drink fire water, ye must open the window of your house in the winter, ye must wash yourselves every day! He say he want to make us good—good hunters?—there is nothing more to hunt! Good for what, then?—good for white men's *slaves!*"

The words meant little to them; it was the old man's shaking, tortured voice that stirred them beyond endurance. His voice broke on the last words, ending in a shrill cry. It had an electrical effect. A wail answered from the women, the men muttered deep.

St. Jean was not yet through. He quieted them with an imperious gesture. "Parson Dick offers us gifts when we are hungry," he went on with ironic humility—like many of his race, St. Jean was a born orator. "How is it he has credit? Has he any fur to bring to the store? No! The white men send him credit from the outside. They send him first to make us tame.

"He has driven the link, the marten, and the fox away, so we are poor and weak. Soon all the white men will come and drive us from our land! Do you ask me for proof that Parson Dick has strong medicine? This it is! No man among ye can look in the middle of his eyes!"

A hoarse groan broke from all his hearers; clenched fists were shaken, and dark faces—many of them gaunt with hunger, or marked with disease—worked passionately. Coquenoigan sprang to his feet.

"But I can strike him in the back," he hissed. He held out his hands to St. Pierre. "Give me long knife, and I do it to-night!"

St. Pierre was not ready for this. The fire he had so carefully nourished now threatened to escape him. He looked up from his cash-book with the coolness of the evil one himself. "Fool!" he drawled, "and bring the redcoats up from Fort Somervell on us!"

The words acted like a shower of cold water on the fiery temper of the breeds. They shrank back abashed, and the men looked at each other, awaiting the next voice of authority. They talked confusedly and indecisively. Finally, St.

Jean suggested that all the people come to his shack. His ecstatic fit had passed.

"Let us make a white man's plan before we strike," he quavered.

They trailed out of the store. When St. Pierre and Aleck Whitebear were left alone, they looked at each other and laughed.

"It's working pretty well," said the trader, coolly enough—but his eyes were blazing.

"St. Pierre, you're a devil!" cried the simpler man wonderingly.

St. Pierre threw off all pretense of disinterestedness. "You go with them," he said. "I can't show myself in this. It's your job to blow on these coals and keep 'em hot till we're ready to use them."

"Why not now?" asked Aleck.

St. Pierre looked away, knitting his brows. "I'm not ready," he muttered, more to himself than to Aleck. "There's a lot to be done. I can't risk a failure. The boy must be married to a breed girl. That will secure him to us and make a break between his mother and Parson Dick. She's his last friend. Then—we'll see!"

Aleck was startled by this glimpse into the mysteries of St. Pierre's consciousness. "What do you expect to get out of this, St. Pierre?" he asked wonderingly.

The most secretive of men is obliged occasionally to unburden his breast or suffocate—especially if, as in this case, vanity has a large share in his scheming. St. Pierre unveiled the full fires of his terrible eyes.

"I will be the master here, as I was before," he cried. "What's more," he added, "I hate them; hate them all!" He struck his breast. "I'm a red man! They're too strong for me to fight in the open. I'll stalk them. I'll strike from behind. They taught me in their schools. Let them beware how I use it against them. Oh! they'll get me in the end, I know, but I'll have my pleasure of them first! They shall dance to my fiddle!"

Later, St. Pierre was walking slowly up and down inside the store, with bent head, thinking hard. From beneath his lowered lids his eyes shot forth a queer

gleam of pleasure—the gratification of the successful plotter. It was sweet to him, the only sweetness he knew, to be the power that molded and swayed the simple natives, all unknown to them, and all his faculties were concentrated on that end.

At the sound of the latch he straightened like a released bowstring, and turned his ordinary bland, mocking face toward the door. A slender native girl came in from outside. Two great braids of black hair hung over her shoulders, and there was a tinge of deep rose in her dark cheeks.

“Aleck say you want me,” she said stolidly.

For a while, St. Pierre affected to ignore her. “Marya,” he said suddenly, “do you want Ralph Croome to marry you?”

A gleam of pain showed in the girl’s eyes, quickly covered by the usual walled expression. “I like him moch,” she said sullenly.

“Don’t you want him to marry you?” persisted St. Pierre.

“I wish him good,” she said.

“Isn’t it for his good to be with you all the time, so you can work for him and be his wife?”

She began to weaken.

“He is strong and clever,” St. Pierre went on. “We want him to be one of the people.”

Marya hung her head. “Yes, I want him marry me,” she said very low.

“Sure!” said St. Pierre, “and I’m going to help you. This is the way to win a white man. Tease him, make him mad, make out you don’t like him at all. Keep him at a distance—never forget that; keep him at a distance until you have his promise fast.”

Marya’s eyes glistened. “I on’er-stan,” she said a little breathlessly.

St. Pierre went to the door of the storeroom and set it ajar. Coming back, he said: “He’s in the living-room. Come here and speak loud to me; laugh. He’ll come in.”

Marya, instantly comprehending, put her head through the door, and laughed affectedly. “Go along, you St. Pierre!” she cried. “W’at foolishness you tell me!”

Sure enough, Ralph presently crossed the storeroom, and bent his head to look under the low doorway. St. Pierre at the same moment discovered an errand outside the store.

The boy came in. “What was he saying to you?” he demanded scowling.

“W’at do you care?” said Marya.

“I’ll make you tell me!” he cried.

“How?” she asked, with inimitable impudence.

Ralph, taken aback, rapidly succumbed. “Marya!” he cried reproachfully.

It was the old, old game. She mocked his entreaties, until he was fairly beside himself—and the ignorant lad thought this was love.

“Marya, why do you treat me so?” he pleaded. “You know I’m crazy about you.”

She abruptly changed her tactics. Snuggling close to him, she whispered, all softness: “Then marry me.”

“There’s my mother,” he stammered. “She’d starve.”

Marya, with a cool shrug, left him. “Then keep away from me,” she said.

“I can’t,” he said brokenly. “I am thinking of you day and night!”

Turning, she came swiftly back and wreathed her soft arms around his neck. “Me, too,” she whispered. “I want you so bad! Marry me, Ralph, and I am all, all yours.”

His eyes widened in a kind of horror. “Oh, you little witch! You little witch!” he murmured—but he did not thrust her away.

When St. Pierre returned to the store he affected not to notice the youthful pair, but went behind the counter and reopened the cash-book.

“Ralph, buy me a ring,” Marya whispered.

St. Pierre looked up quickly. “What’s this, a ring?” he cried, with a gladness genuine enough, though it did not rise from friendliness. He came from behind the counter. “Well, Ralph, you’ve done it at last! Count on me for a bag of flour! Shake, old boy!”

Ralph, with a miserable, sheepish grin, allowed St. Pierre to take his hand.

“The ring,” wheedled Marya at his other elbow.

"Sure, she must have a ring," said St. Pierre, leading the way to the show-case.

Ralph tried to speak, hesitated, and gave it up. "Give her what she wants," he said.

As Marya proudly turned the brass circlet on her finger, the old woman's voice was heard, calling Ralph. The boy whirled about, showing a face of horror. "For God's sake, St. Pierre, don't tell her—yet!" he cried.

"Sure, we don't want to have any trouble," St. Pierre said soothingly.

CHAPTER II

The Passenger

AT eight o'clock the mail had not arrived. When they had almost given up hope of its getting through that night, Duncan McPhatter and his wife arrived, bringing word of the mailman. He had spelled at their place for supper and was close behind them on the trail. Parson Dick, Ralph, and St. Pierre were in the store at the time; the old woman was within, preparing for the homeward journey. Since afternoon there had been no further sight nor sound of the breeds.

Duncan made the announcement in a casual tone that the mailman was bringing a passenger on his sledge. An explosion in the store could scarcely have caused his hearers greater astonishment. In a year their visitors from outside could be counted on the fingers, and at this season the coming of a stranger was unprecedented. The three men received the news characteristically—Ralph incredulously, Dick hopefully, St. Pierre, though he hid it well, with alarm. The success of his plans depended on his complete knowledge of every element in the little community. Any outside factor was likely to wreck the whole edifice.

"Company man? Missionary? Policeman?" they guessed in turn.

"No-o," drawled Duncan to each query. Duncan was a lean, elderly Scotch trapper, "smoked" like a redskin.

"What else could bring a man up here at this season?" exclaimed Dick.

"Did I mention it was a man?" drawled Duncan, thoroughly enjoying the sensation he was creating.

"Not a woman!" cried Dick.

"Indications pointed that way," said Duncan dryly.

St. Pierre looked relieved. He held the sex in contempt. "Some breed who has married South, coming up to see her folks," he suggested offhand.

"Didn't strike me thataway," said Duncan.

"Good Heavens! Not a white woman!" cried Dick.

"Nancy thought so," said Duncan, with a nod toward his wife. "Showed all her teeth first go!"

The three men were struck silent. A white woman! There was a spell in the words that caught at their heartstrings. St. Pierre felt it no less than the others; he was largely white, too, though he affected to deny it.

Ralph was the first to recover himself. "Ah! He's stringing us!" he said.

"Look at Nancy's face," said Duncan. "There's confirmation strong as holy writ. 'Taint my fault a white girl spelled with us to-day. Just the same I have to buy Nancy two silk hankies at God knows how many skins each, just to square myself!"

At this moment the cheerful yelping of an approaching dog team was heard.

"See for yourself," said Duncan.

In an instant the store was deserted. A minute later the mysterious traveler entered the room alone. No one had ventured to speak to her yet. They were busy pumping the mailman for information. At first she presented to the eye only a shapeless bundle of furs and woolens, with nothing of herself visible but a pair of bright eyes and two spots of scarlet cheek. The eyes roved over St. Pierre's rude stock full of wonder and interest. Removing her wrappings layer by layer, she presently revealed an urban, girlish figure clad in the perfection of simplicity—strange apparition in the Moose River store! She had bright brown hair and gray eyes under dark brows. The unforgettable thing about her was her offhand, valorous air, quaintly compounded of the fearless child and the experienced woman of the world.

The room remaining empty, she began to explore, pushing open the door of the storeroom and looking within. From the further room she heard sounds that drew her on. In the living-room, the old woman was packing her grub-box at the table, humming to herself abstractedly in a high key. Hearing a slight sound at the door, she looked up sharply, and, seeing the girl standing there, stopped short, petrified with astonishment. It was as if one should, in the midst of one's kitchen tasks, look up and see a shining angel standing on the threshold.

In the wide-eyed look of the little old woman, with her coarse clothes and her worn face, there was something infinitely brave and piteous. The girl's eyes slowly filled with tears, but she smiled, too, smiled wonderfully.

"Mother!" she said softly.

The old woman went as white as chalk and her hands stole to her breast.

"Don't be frightened," murmured the girl. "It's only I, Annis."

The old woman passed a hand over her eyes, as if she doubted her sight. "Annis! . . . Annis!" she murmured, awestruck.

The girl held out her arms. With a strange, loud cry, the old woman suddenly cast herself into them, flinging her own arms around the girl and clipping her fiercely. "My baby! . . . Oh, my baby!" she cried brokenly, over and over.

They sat side by side on a bench. It was some time before the old woman's speech became coherent. She clung to her new-found treasure as if she expected her momentarily to be snatched away again.

"What a sweet woman's voice," she murmured. "Can it be my own child, or am I dreaming? You feel solid! However did you get to this place?"

"Came with the mail," Annis said. "I wrote a month ago to warn you."

"No mail in November," the old woman said. "The ice road isn't formed."

Every moment she broke afresh into delighted praises, much to Annis's embarrassment.

"Ah! my sweet, remember I haven't seen a white woman but twice in eighteen

years—and they were as homely as hedge fences!" she cried.

Annis caressed her anew.

"Can you understand what it is never to have had a woman friend?" she went on. "Never a woman to unburden yourself to, sick or well! Oh! how I've hungered and thirsted for you, my daughter!" Her tone changed comically: "But you shouldn't have come. What made you come?"

"I wanted to see my mother."

"Well, here she is!" said the old woman grimly. "What do you think of this rusty old piece of goods?"

Annis kissed her. "I think you're lovely! Just like your letters."

"Just the same, I'm a terrible old hag, my lambie," said the old woman sadly. "Summer and winter here in the North, scratching for a living. Remember, if you find me ugly and hard and coarse, it's been a terrible hard life!"

Annis affectionately stopped her mouth, but the old woman still struggled to tell the worst about herself.

"I have the very devil of a temper," she went on. "I'm a perfect shrew—storming around the house! I swear!"

"So do I, sometimes," said Annis, smiling.

The old woman sat very erect. "Annis Croome!" she said severely. "Well, you'd better not let me hear you, that's all! I'll send you to bed—I'll—"

Annis gathered her in her arms. "You dear, funny little mother!" she murmured.

Later Annis explained to her mother in more detail how she had made the trip.

"It was quite easy," she began. "I decided to come three months ago, though I said nothing about it at first. I wrote to the Hudson's Bay commissioner at Prince George asking how to get to Moose River. He answered that his company had no post here; that the nearest was at Fort Somervell. The inference was that a settlement where there was no company post was no fit place for a lady. But I didn't care. I wrote again, asking how to get to Fort Somervell, and I kept on writing, until at last, in self-defense, he wrote that the wife of the police inspector there was going up

to join her husband as soon as the snow road formed, and gave me her name."

The old woman was still dazed. Every now and then she turned inquiring eyes on the girl, and fearfully stroked her cheek.

"I came with her—Mrs. Forshew," Annis continued. "Her husband had a little caboose built on a sledge with beds and a stove, and the two of us were as comfy as possible. We had a trooper to protect us. We were sixteen days on the trail, seeing new sights and hearing strange tales. We had the time of our lives. At the fort they told me the mailman was a safe protector the rest of the way—and here I am!"

The old woman was gazing at her sadly. "Yes, here you are!" she murmured doubtfully.

"Why do you say it that way?" asked Annis.

"Now you're here you can't get away again until the steamboat comes up the river next summer."

"But I didn't come all this way just to stop a week or two."

The old woman patted her daughter's hand and chose her next words carefully. "You see, my pet, there's never been a white girl—not to say a pretty white girl—in the country before. You see—the chances are in favor of there being—trouble."

Annis hung her head—and presently raised it again. "Doesn't that depend mostly on the girl?" she asked. "Besides, we have Ralph."

"Oh, Ralph!" exclaimed the old woman, with a despairing gesture. She told Annis what she knew of the trouble there.

"There's a breed girl, Marya Sasher-mah. I'm afraid he'll end in a tepee and make me grandam to a dozen yellow brats!"

"A breed girl!" exclaimed Annis in strong horror.

His mother, of course, rushed to his defense. "You can't blame the poor lad! He's never seen a white girl of his own age. How should he know any better? It's just Nature working."

"Perhaps Parson Dick will know what to do," suggested Annis thoughtfully.

It was the old woman's turn to look astonished. "What do you know about Parson Dick?" she demanded.

"Parson Dick is well known in the East," said Annis, with sparkling eyes. "There was a magazine article about him—how he cures the natives' bodies and saves their souls; how he built a little hospital and a church with his own hands; how he travels night and day in all weathers! He's a hero!"

"A hero! God bless my soul!" cried the old woman with scorn. "Why, he's my best friend!"

Annis smiled. "What is a hero, dear?" she asked.

The old woman was nonplused. "Why, a hero's a prince or a general on horseback, or in a book—but Parson Dick! Why, I know him like myself!"

"Well, hero or no hero, I want to meet him," said Annis.

The old woman looked at her and sadly shook her head. "You, too!" she said. "Bless my soul, who would be a mother!"

The living-room was yielded by tacit consent to the mother and daughter. In the store, while the mailman, Duncan, and Duncan's wife sat coolly having a snack, the three young men waited for their introduction to the amazing visitor in great trepidation. The ordeal loomed worse than they expected—they had learned she was beautiful. The effect of a beautiful woman, the first to grace a lonely settlement, may be likened somewhat to that of a flaming brand in a hayrick.

St. Pierre's thin, closed lips and veiled eyes masked a furnace within. His excitement showed in his inability to keep still; he sidled ceaselessly from counter to door and from door back to store-room. He surreptitiously slicked his hair in front of a mirror and retied his cravat. He had seen her; she was beautiful, and, therefore, dangerous. She threatened all his plans. This was true, but not exactly in the way he told himself. The fact was that, at the first sight of her fair skin, his blood had taken fire, and the conflagration was hurrying him he knew not where. He was no longer capable of planning coldly.

Parson Dick sat on a bale of furs, looking before him with a white, set face. His state of mind was less complicated. At first it had seemed too good to be true that the lady of his dreams had come to cheer him in the hour of his greatest discouragement. But hard upon that had followed the thought: this is no place for her; we must get her away. He resolutely put aside the thought of self and set about steeling himself to resist her charm.

The boy, Ralph, looked as if he wished he were any place else. He had no conflagration to fight, but certain late acts of his, which he regretted anyway, now looked hideous to him in the presence of a beautiful white woman. And he saw no way of escape from the consequences.

The old woman called Ralph in first. The meeting of brother and sister was not a success. At the sight of the radiant girl from outside, the tall lad could only twist his cap in an agony of diffidence.

"Can't you speak?" demanded the old woman sharply.

"This is no place for the likes of her," muttered the boy.

"I'm strong and able to do my share of work," said Annis.

The boy's secret remorse found vent in surliness. "You can't trap or set a snare or shoot," he said gruffly. "You can't make skins where there are none."

"Ralph, think shame to yourself!" cried the old woman.

"I'm not ashamed," he said defiantly. "We've had trouble enough to scratch along without having a fine lady to feed!" He turned on his heel, and left the house.

The old woman was in great distress. "Don't you mind what he says, my sweet! I'm glad to have you, whatever betide. He was never like this before. There's a poison working in his blood!"

"What did he mean about feeding me?" asked Annis anxiously. "I have plenty of money."

"Ah, my dear, money is of no use up here," said the old woman. "We must have skins or starve!"

St. Pierre, who had been loitering in the storeroom, came in with a significant, offhand air. The old woman, observing

him with a secret uneasiness, introduced him to Annis with the best grace she could muster.

St. Pierre bowed with an exaggerated deference. "It is a great privilege to have such a charming visitor," he said smoothly.

The blaze of admiration in the inscrutable black eyes roused Annis's indignation. At the same time his devilish aplomb struck a little chill to her breast, though she would not confess it to herself. She greeted him coolly, averting her head and shaking out her skirt as an excuse not to see the extended hand of the trader.

St. Pierre uttered a light laugh in which Annis heard a threatening note. "You will find many things different in the North, Miss Croome," he said. "For instance, storekeepers are looked down on in your country. Up here we are more important members of the community."

"My father was a storekeeper in the East," said Annis.

St. Pierre betrayed no consciousness of a rebuff. He bent his fiery eyes full on her. "Let me show you this country," he said in a deeper voice. "I can tell you of the old days when the factors traveled in great state, and about the red people still farther back."

His enthusiasm, genuine enough, caused Annis a strange uneasiness. She thanked him noncommittally. St. Pierre transferred his attentions to the old woman. He pressed a package of Ceylon tea on her—a precious luxury. He went to get it.

"He's insolent, mother!" said Annis indignantly.

"Careful, dear," said the old woman anxiously. "All the food in a hundred miles is under this roof, and I'm deep, deep in his debt!"

Parson Dick, in equal degrees dreading the meeting and longing for it, finally went into the living-room. The sight of Annis caused him to catch his breath—she was so much more beautiful than he had expected. The photograph had charmed his imagination; the bright-eyed, warm-blooded reality struck a blow at his heart. He gazed at her in a maze of pleasure and pain—the same



"THIS IS PARSON DICK," SHE INSTANTLY CRIED, APPROACHING WITH
OUTSTRETCHED HAND.

look, intensified, of the boy outside the locked gates of the garden.

"My daughter," said the old woman proudly—and yet a little wonderingly still, as if she could hardly believe her own words.

Annis turned and saw him. "This is Parson Dick," she instantly cried, approaching with outstretched hand.

The old woman was smitten by a sudden pang of jealousy. "Yes, that's your hero," she muttered to herself, turning away.

Dick's heart leaped. He had not prepared himself to resist such frank friendliness in Annis, nor had he counted on the effect of holding her hand in his. He took fire at the touch and forgot his doubting and his sacrifices.

An instant communion was established between the two. To Dick it seemed as if the slender, swimming figure filled a great and aching void in his breast, and to her, fresh from civilization, Dick, in his hand-to-hand struggle with the raw forces of Nature, was like the first man. They stood beside the table talking, blue eyes straight to gray. For the moment they forgot the old woman, who sat, lonely and miserable, on the bench, giving a pathetic and yet laughable exhibition of childish, hurt feelings.

"I love it up here!" Annis cried; "the bigness, the simplicity of life, the work there is to be done! For the first time in my life I feel as if I were fully alive!"

"But you shouldn't have come," Dick said. "You should have thought of us. How will we ever endure our lot after you have gone?"

"Does Parson Dick make compliments?" she asked.

He shook his head. "It's true. It would be like a blind man who gets his sight back, only to lose it again."

There could be no doubt that he meant it, and Annis was more pleased than she cared to show. "Why should I ever go back?" she said. "This is a better life than I knew before. Besides, my mother stays here."

To have her there always! Dick's brain reeled at the thought. "Then the

North won't be the North any longer," he murmured.

They sat down by St. Pierre's fire. Annis held out her arms to her mother, but the old woman's heart was still sore and she would not join them. She moved about the table, spreading a supper for Annis with a wholly unnecessary amount of bustle.

Themselves was the fascinating and inexhaustible subject of Annis's and Dick's talk. Each had the secret feeling that he had been waiting for years to meet the other, and the slightest happenings of the time between were therefore charged with importance to them. Annis required to be told all about his work and volunteered her services as coadjutor in the parish on the spot.

"I am not making the triumphant progress you seem to think," he said sadly. "In fact, lately I have been going backward fast. There's some hostile influence blocking me at every turn." Up to now, Dick had carefully guarded the secret of his discouragement, but it was sweet to confess it to her.

"Has anybody got a grudge against you?" asked Annis thoughtfully.

"Possibly one called Aleck Whitebear," said Dick. "He made his living smuggling in whisky to the natives, and I stopped it."

"Was he alone in the business?" asked Annis, with a flash of intuition.

"No; St. Pierre profited largely from the trade," Dick admitted. "But St. Pierre has told me many times how glad he is that I broke it up. St. Pierre is the only friend I have among the natives."

Annis leaned toward him a little, looking at him with the hint of a smile—there was great tenderness in the look, too. St. Pierre, returning from the store with the old woman's tea, was just in time to see the look and the smile. He stopped in the doorway, and his face slowly blanched to the color of muddy ivory, his lips parted painfully, and he drew a long breath between his clenched teeth.

And so the devil's favorite herb, jealousy, was added to the poisonous stew already on the fire at Moose River.

(To be continued)

THE STREAM THAT ALWAYS LAUGHS

BY N. C. ADOSSIDES

Illustrated with Photographs

IT is seldom that a sportsman, no matter how widely traveled, has an opportunity these days of walking into virgin American territory and finding that he has really arrived ahead of the press agent, the real-estate boomer, and the railroad folder. I had such an experience a few months ago and found, besides a hidden rhododendron paradise, a good mountain friend, who taught me that I knew slightly less about the gentle art of angling than I thought I did, and taught another member of our company, who claimed to know vastly more than I, that he really knew next to nothing.

There is joy in dropping a fly in a pool where another had fished strikeless by the hour and landing speckled beauties that tire one's wrist before the landing net slips under them. It is that joy—mean though it may be—that I chiefly remember when I think of that particular all-claiming friend. As for him, I have in mind several occasions when he suffered all the distress that a bedecked and troutless angler feels when a small boy with traditional willow and worm and a burden of beauties looms upon his horizon.

You have all met the kind of angler who does his brave work with the rod at the camp-fire breakfast before the boats have been brought out and the landing nets put into play. I want to tell of this one because he heaped my own shortcomings upon me so vigorously before the time came to open the lids of our baskets at nightfall. And where it happened—well, it surely is only a matter of days or weeks before the press agent will arrive at our little rhododendron retreat, so that might as well be spoken of, reluctantly, though, and with a fervent hope that the first of the vanguard of

sportsmen who will enter will be real lovers of the sport and will find therein as much of the pure joy of fishing as it was my portion to enjoy.

The unspoiled country, then, is in North Carolina, where the Blue Ridge Mountains separate Tennessee from the Carolina country. The reason it is unspoiled is merely that the men who have sought sport for pleasure have followed the course of empire westward, and a thousand trails lead to the Yellowstone and Jackson's Hole and up the Arkansas, to one that turns aside into the South.

As is the case nearly everywhere else, the natives have too much to do to care for the wild freedom of a day with a trout pole. They haven't the pressure of skyscraper office on their minds and the clangor of the city pavements is not to them a familiar noise, sounding the knell of vacation joys. So those who knew this wild gem, which bears the modest name of Linville, were all unaware of its charm for others than themselves, and what few sportsmen have found it have been careful to guard the secret.

My discovery of Linville came through a Scotchman whom I met in New York at a dinner party. He was a lover of the woods and an intelligent one, too, but his stories of the beauties of Linville, and, above all, of the fish of Linville, sounded unreal—too much like the stories of forty per cent profits and one hundred per cent increase in bond values to which one must sometimes listen at Metropolitan dinner tables.

But the manner of my Scotch friend was convincing, and in the face of his vast experience afield it was not for me, who had few great wilderness journeys to my credit, to discount his claims.

So, somewhat dubiously, I invested my

precious vacation season and set out. "Go and see 'The Little Stream That Always Laughs,'" was the admonition from my friend that I recalled as we wound slowly over the circuitous route that led to our destination. I looked, and as I looked I marveled. A year before I had summered in the canyons of the Far West, making my bed beside Trail Creek, where it springs from the glaciers of the Grand Tetons, and dining on the sage hens of Swan Valley, along the Snake. I had fished there, too, in water so swift that one hardly dared venture out above his knees, filling my basket with the Hoback trout of four and five pounds apiece, with a fighting pull all their own that one must learn by losing many lines and breaking countless leaders.

Mountains Without Equal

But this was unique and different. I do not know how to put it into words, but I thought of the mountains of my native country, and there was nothing to suggest a similarity. In Scotland I had found the Argyles and the Northumberland chain very beautiful; Mt. Blanc and the Jungfrau had left memories of majesty and imposing heights; the Tyrol had seemed picturesque and inviting. But these high altitudes about Linville—it is the only mountainous spot I have seen where there is such an infinite variety of exquisite qualities, each with a separate power to charm, producing the sportsman's paradise of which we all may dream and few of us may reach.

From Johnson City, Tennessee, where we left the main line from New York for a mountain-climbing narrow-gauge road, we made our way upward very slowly to Cranberry station, a mining town, below which the panorama already was taking on the characteristic look of the Blue Ridge country.

Another railroad, still narrower in gauge, carried us from Cranberry to Montezuma, and that was a railroad ride for the gods! The road was built for lumbering, and with due respect to its owners and managers, I may say quite truthfully that it suggests much more a toy train in a recreation park than a real

agency of transportation, especially when it takes its task quite seriously and bends itself to the labor of climbing the steeper grades and skimming the edges of mountain chasms.

As our toy train proceeded out of Cranberry, rising higher and higher in a spiral runway toward the clouds, we caught glimpses farther afield with every turn, now a view of a precipice seeming to lead down indefinitely almost from the roadbed's edge, and now a glitter where a mountain brook tumbled from the forested ridge tops.

The constant surprises which made the three hours consumed in getting to Montezuma station seem a mere trifle, even to an office-weary New Yorker, continued without abating in the least after we left the lumber road and began our drive by carriage over the ridges to Linville. Swinging around one particularly beautiful curve there came suddenly before us one of the rarest of mountain views—not of picturesque valleys seen from aloft, but of mountain tops seen as far as the eye can reach from one a little higher than the rest.

In the midst of this great field of cliffs and crags and wooded ridges, stood Grandfather Mountain, third highest peak of the Alleghanias and the Blue Ridge system. Our driver told us that it was only 6,000 feet above the sea. I recalled the peaks of more than twice that height I had seen and I thought how little, after all, the mere altitude of a peak in measured feet has to do with the splendor with which it may impress those who behold it.

I am telling in detail of the way the Linville scenery caught my eye, for whoso goes there will find the pulling power of its charms as strong as any that may come from the fishing in lake or river.

Our streams we caught our first sight of just at sunset, when I was nearly frozen, not having dreamed, as I left New York in the midst of a sweltering afternoon, what a difference in climate a few hours of travel could bring about. The thermometer, during the three weeks I was in the mountains, registered mornings and evenings from 40 to 45 degrees, and never, on even the hottest

days, climbed higher than 75. Its record, I was informed, was 86 degrees, reached in the summer of 1907.

I made it my first business, my frozen toes having been thawed out at a log fire in the tiny, cabinlike hotel, to inquire about a fisherman guide. Zach Garland was the man who came in answer to my inquiries, and I found him a native of the mountains, who, had he been trained in the misfortune of using his pen, might have written volumes on the wisdom, cunning, and indefinable eccentricities of his much-loved trout, which he, with all the world, was quick to class as lord among fishes and ruler of the mountain brooks!

"How are they biting?" I asked.

"Depends on your flies, sir, as to the brooks," he answered, with hardly a touch of the typical Southern drawl. "But down in the lake," he added, "they're taking anything from a hayfork to a coachman, and they bite like all geehosafat."

The cheering quality of this news to one whose angling arm was sadly out of trim, and who felt correspondingly nervous in new territory, was immediately dimmed by the announcement that quite a group of men had come the night before, all bent on fishing in the lake and bragging as to their infinite skill.

"The lake for me," I said, "at least until I have the joy of really landing some beauties, for I don't want to take all my fun out in fine casting." I wasn't very strong on artistic casting, anyway, and I had seen too many fishermen mess their sport on unfamiliar streams to feel any sense of courage or bravado.

When I asked about bait I was told that worms were not in fashion either with the fish or the successful fishermen, and that my guide had some flies of his own devising that he thought would make an immediate hit with any fish in the country. Our next conference was about rods and reels and different strengths of line, and we made the usual preparations of the fisherman who is building great hopes on the-morrow.

As we busied ourselves with the tools of the game, our cosmopolitan companion, who was later to impress himself

upon me so vividly, made his first appearance. His first remark was about the six-pound trout he had landed in the upper Columbia, and the Green River trout as long as his leg that broke his rod before he got it ashore. To cap the climax of the story, he told how he had landed it, despite a broken rod, without landing net or gaff. No stream in the Union had failed to deliver its tribute to his art and skill—at least, that was the way he remembered it.

Some of his brave words made me even more doubtful as to myself than I had been before, but when he began to offer promiscuous advice to my guide, I noticed that the latter dropped out of the conversation and gave his whole attention to his lines and leaders. His silence was effective, and the Cosmopolitan Angler soon left us.

Then Garland turned to me and remarked: "He seemed to know it all, but did you ever see that kind of a fellow catch anything smaller'n a sucker, and that about five foot ten?"

I hadn't the courage to agree with Garland, but I hoped his diagnosis was correct.

First Fins for Garland

Next morning, as we made our way to the lake's edge through fern-trimmed mountain paths, Garland remarked that if I wasn't particular about casting while it was still early and was particular about not letting our friend's boat overshadow ours in size of catch, it might be well to let him try out his flies first while I handled the paddles. The morning was fine, calm, and still, with a little southeast breeze. Garland gave our canoe a shove and leaped in, and I applied the paddle noiselessly. The canoe leaped forward to the stroke, and I, a tired, office-broken, and office-weary business man, was afloat on Lake Kawana, with rhododendrons blossoming everywhere along the shores.

"You see those ripples over yonder in the bay?" Garland said. "Row for them, for that's where the trout'll be feeding this time of day—right at the head of the ripples."

And so we made our way through still

waters, Garland casting as we moved along. It was the casting of an artist. I was admiring the mountain glow that was all about and drinking in its glory when I saw Garland's whole body stiffen in attention and his light rod bend under a heavy pull.

"If I land him," he remarked, as the fish showed above the water and disappeared as he rushed away while Garland gave him all the line he wanted; "if I land him, those other folks can't show first fins, anyhow."

"How does he pull? Is it a big one?" I shouted, feeling the blood rush to my own finger tips and a sudden disdain come upon me for the paddle.

"Twenty inches at least—sort of teacher to the school he's running with, maybe."

"Why don't you hurry him in? What's the use of risking him after you've got him hooked?" I was losing all semblance of composure.

"A tired fish comes up an awful lot easier than one with some fight still in him, and it's many a fine fellow that's jerked off right at the net at that."

Garland was strong for his own method. It was merely to keep his rod pointed sharply upward and then to watch the bend in the tip of it. As it straightened a bit when Mr. Fish came to the end of his harder lunges, Garland went at him with the reel, gathering in the slack as fast as it would come. Then there would come another rush, and the rod tip would bend under the strain of it. Garland would ease away with the line, toying with his captive as a cat with a mouse. It was easy to see he feared impatience more than loss of time.

I was ready with my net and stood motionless, too sure of my guide's skill to seem impatient, and yet counting the seconds as if they were hours. I watched the line wind itself round and round on Garland's reel, intermittently at first, with frequent reversals, and then gradually gaining in bulk until the reel showed almost all its original size. Off in the water, splashing it up in a great fury, appeared our captive, lashing blindly with his tail, but so firmly held by the taut line and the hook in his upper jaw

that his mouth was wide open, and I knew that he was being drowned.

Almost docile he was when I slipped the net under him and felt the weight of his body against the meshes. Twenty-two inches was the length of him, and he was long and lean—the fighting breed, and not the fat and flabby loafer that comes easily to the landing net.

Of course there was no such thing as my sticking to the paddle while Garland caught the fish. It was my turn now. I seized my rod, nervously gathered the slack line in my left hand, and made a try. My first cast was fully half the distance of Garland's average, and, for all my determination to be cautious, my first strike tore the hook away from the fish, and I had only a momentary thrill of anticipation.

Strikes and Little Else

My second strike I handled more gently, and got him halfway to the boat before he was free. Then, four times there were strikes of which nothing came, my line being instantly freed, and I learned a lesson over again which all of us learn on our first trip out. I had neglected to inspect my hook after my first fish had got away. When finally I thought to do so I found that the barbed tip had snapped off. It was a thing one would not notice except on careful inspection, and I have no doubt it accounts for many a fisherman's failures.

With a new hook I succeeded in landing a small fellow without power enough in his fins to make even my rough handling of him fatal. It was odd that with all my previous experience I had yet to learn to be patient and suit my speed of reeling to the fish's fighting condition. In two hours we had caught fourteen trout, varying from nine to twenty inches, our first fish proving to be the largest of the day, and, in fact, of the whole three weeks I spent in and about the lake country.

As luck deserted us gradually—Garland said it was because the fish were finishing breakfast and settling down for their noon siesta—a strange boat drew into our territory, in the bow of which we descried our beblazoned friend, of



BRINGING IN A DENIZEN OF THE LITTLE STREAM THAT ALWAYS LAUGHS.



ZACH GARLAND, PASTMASTER
OF THE ROD.

whose prowess I had had more than a little fear. He was casting as he came, working with obvious nervousness, and reeling in after each cast far too rapidly to make his fly any temptation for a suspicious trout.

"How's luck?" Garland called out to him, and there was a world of irony in his smile. Glancing down at our fine catch, I was glad that, after his bragging, he had not found us quarryless.

"Rotten," he answered. "Nothing doing except with little ones I was ashamed to keep."

His line was in a tangle from careless casting, we observed, as we paddled toward the river mouth, determined to give him full sway over the ripples which had now quieted down until not even hungry trout would visit them in the hope of finding food.

"It's so fine a day," said Garland, "we'll try the river from the falls up. They bite mighty strong along there sometimes in the afternoons."

From noon to sunset, in an entirely different kind of fishing problem, we

reveled, while our baskets filled slowly toward our respective limits—twenty-five fish. Garland had his string by five o'clock, and I had seven more to catch. At six o'clock I had only two to go, and Garland suggested a quiet little pool close by the hotel where the ripples at its lower end ran over a pebbly bottom, a favorite playground for trout after supertime.

"They'll be there for a dollar," he said, "and we can snag a couple of 'em, at least, so we can both go home with a full catch."

When we reached the place we were surprised to find there our Cosmopolitan Angler, to whom we had abandoned the lake. He had fished Linville River downward from the lake while we had been going up.

"Still no luck?" queried Garland.

"Only five," he answered, opening his basket with an air of deep gloom. We watched him cast a time or two, and then I threw in my line, straining every effort to imitate as well as I could the dexterity of my guide. For a time my friend and I dropped our flies into the same spot almost, our lines touching at times, our flies striking the water not more than a foot or two apart.

It was rare sport. There came over me an uncontrollable desire to land a fish right at his very feet and hold it there until I had been fully repaid for all the uneasiness he had caused me by his brave manner in the early morning. And I had my chance to do it. It was a little fellow, only nine inches long, but fair-sized as brook trout go. He came up out of the water on my first jerking of the line as I felt him strike, and flopped almost ashore. There was no chance of his getting away, but I said no word of triumph; it wasn't necessary.

"What kind of a fly are you using?" Garland asked, as the gloom on the other man's face deepened.

"At first I used the coachman, and then I tried everything I had—reds, blacks, whites, blues, and yellows. Now I'm using a red and white."

"And scaring the fish to death. Better try 'em with something that looks a little like the critters they've seen before. It'll help powerful."

And with that we left him, still casting and still reeling in without results.

"If he had acted halfway white this morning," Garland said, "I'd have told him what to do; but when a rooster gets as anxious as he was to crow he wants to be mighty certain whose barnyard he's in."

Our greeting at the hotel was a chorus: "How did you do it?"

"Fishing; just fishing," was Garland's only answer.

If the day's mark had humbled our fisher-of-a-thousand streams as far as we were concerned, it had not lowered his crest before the dinner guests. To them he laid his stories on thicker than ever, ranging the world over instead of only the North American continent. His prize story was of catching crocodiles with native babies for bait. Having more need of sleep than of his tales, we left him entertaining the others, and awoke in the morning thoroughly refreshed for a second day's experience.

"Say, old man, will you tell me where the fish bite best this time of day?" our friend called out to Garland as we were leaving to fish the Linville River upward to the Grassy Ridge.

"Yes," Garland answered dryly. "Wherever they happen to be when they feel hungry."

In a little while we were working the river, I going ahead of Garland, but in spite of myself rather than through any intent, leaving him more than half of the available supply. He cautioned me often to cast for the head of the ripples, since it was morning, as I would find the fish feeding there just as I would find them playing in the bottom of the ripples at night, and asleep in the center of the pools at noon.

By ten o'clock I was well ahead and, finding the scenery too beautiful to resist, I sat down on a rock, lit a cigar, and lost myself in the singing of the wind in the tree tops and the swaying of the luxuriant growth of flowers, the white, pink, and yellow petals still glistening with the dew, although the sun was well up in the heavens.

A sign on a nearby tree caught my eye. "Boone, 9 miles," it read, and my thoughts went back at once to tales I



A RELIC OF PIONEER DAYS.

had read of a pioneer's wonderful work in this wilderness while my own ancestors were busy in distant Greece, toiling and hoping for a country that had lost an ancient prestige, and was not yet ready to regain it.

I tried to picture the vision and the dream that had drawn the men of that day westward and was peopling my forests with red Indians and buckskin-clad heroes, when suddenly Garland came upon me.

"I caught twenty," he said.

"And I ahead of you caught only four," I admitted, with some little shame, yet glad to know that I was learning, even if slowly.

"We know the Boones," he went on, when I pointed out the sign to him, "and down the Linville Gorge, at Banner Elk, there's still a lot of 'em living. We call 'em 'Boonins,' and they're a mighty scrappy lot, settin' much store by their great-granddaddy Daniel."

I could hardly believe I had come so close upon the pathway of the westward-bound empire. "I can show you," said Garland, "over by Grandfather Moun-



ACROSS THE BROAD REACHES OF A MOUNTAIN STREAM.

tain, the very place where Boone camped and fought the Indians. There's more yarns about him in these parts than you could count in a coon's age."

But there were too many fish still to be caught for us to waste our time dreaming of pioneer heroes. Taking to the stream again, we soon worked our way to the forks of Linville River, where two streams lead upward to the heights of Grandfather Mountain. That was the end. Each fork was small and so steep that hardly any trout would want to leap its way along, the pools being far between and of no size. A third stream, Grassy Ridge, offered some possibilities, but we found it overhung with laurel and crossed by many fallen logs, so that there was no chance for the free play of either rod or line. We became entangled in the underbrush, swore at the fallen trees, and finally abandoned our fishing to enjoy the beauty of the hidden brook, which lavishly repaid us for our effort to pass along its banks.

"'The Stream That Always Laughs,'" said Garland, as we lunched at noon, drinking the cold water that flowed like nectar from the mountain top.

"'The Stream That Always Laughs!'" I remembered the words of the gentleman to whom I was indebted for all this celestial joy. "You must be sure to go and see 'The Stream That Always Laughs.'"

"The Indians gave it that name," Garland explained, "and a little ahead of us is the 'Pool of the Daring Maid.'"

I wanted to see it, and upward we climbed till we had reached Grandfather Mountain's very crest. It was a wonderful sight that met our gaze as

we looked downward, and I christened the place in my mind "The Yosemite of the East." Anyone who goes there I am sure will find all the witchery of the California wonderland, save only the sequoias, and perhaps the steepest of the cliffs.

I hoped, as I stood on Grandfather Mountain, that my vacation would last all summer. But it didn't. Three weeks' tramping and fishing in those Carolina mountains I was destined to have, and then a telegram called me back to my office; it is the way of all the office-worn, and of course I had to travel it.

Coming from my room with my belongings packed for departure, I encountered in the hotel hallway a young Kentucky belle, to whom the Cosmopolitan Angler had been paying particular court. At that instant there joined us a Civil War veteran, commander in his time of a Confederate brigade.

"How's our friend?" I asked them, and they both laughed.

"My dear suh," said the general, "he's right out there at the pond at this minute, suh. He has been fishing for frogs all day long with rod and reel, and he's positively exterminated our whole supply. He's bringing them in by the basketful."

I looked the way the general pointed, and there, sure enough, was the fisher of many streams. He was busy with the frogs, crawling on the ground, hiding for a moment behind a bush, and then jumping forward with a shout of triumph. He had found, at last, a sport to which his capabilities were equal, and he was happy. And so I left the Cosmopolitan Angler and "The Stream That Always Laughs."





BOOTH'S FERRY ACROSS SNAKE RIVER AT THE LOWER END OF THE GRAND CANYON OF THE SNAKE.

SADDLE AND CAMP IN THE ROCKIES

BY DILLON WALLACE

Illustrated with Photographs by the Author

ON THE ROAD TO JACKSON'S HOLE

BEFORE history began, an ancient lake, called by geologists Lake Bonneville, covered a great portion of what are now the fertile fields of northern Utah and southern Idaho. Lake Bonneville was a freshwater lake two thirds as large as Lake Superior, a thousand feet deep, with an outlet to the north toward Snake River. Growing aridity of climate dried Lake Bonneville away until all that is left of it now is Great Salt Lake, the "Dead Sea of America," some eighty miles in length and forty miles in width, with an extreme depth of fifty feet, and lying 4,210 feet above sea level.

Through Baron La Hontan the world first heard of Great Salt Lake, in the year 1689. In 1820 Mr. Miller, of John Jacob Astor's fur company, visited

its shores. It was seen and reported again in 1825 by Mr. John Bedford, and again in 1833 by members of Captain Bonneville's expedition. Later, Kit Carson and some others of the adventurous trappers, who penetrated this far wilderness, saw the lake. But the first attempt at scientific exploration was made by Fremont, under the guidance of Kit Carson, in 1843, when, by means of a leaky folding India-rubber boat, he visited with Carson and some other members of his party what is now known as Fremont's Island, but which he himself named Disappointment Island.

This was a land of deepest mystery and romance in those early days. Trappers had brought out to the world marvelous tales of the wonders of the great lake. Birds that attempted to fly over its surface, it was said, fell dead. Ear-



HOW THE MEN OF THE UNITED STATES GEOLOGICAL SURVEY LIVE
IN THE FIELD.

lier reports told of strange, weird peoples inhabiting its shores, of cities of fabulous wealth and grandeur built upon mountainous but fertile islands.

The old myths have been dispelled; the old trappers and their romantic lives, Pocotello and his marauding Indians, the struggling pioneer and settler, have all given way to the new reality—comfortable living and civilization. Salt Lake City stands on what was once the bottom of Lake Bonneville, whose foamed waves rolled a thousand feet above her present streets.

The abundance of game that was found here by the pioneer has largely gone, also, and the sportsmen of to-day are greatly interested in the preservation of what remains, and not only the city, but every town and hamlet in the valley, has, in proportion to the population, an unusually large number of men devoted to rod and gun. For example, Salt Lake City has an organization known as the Hot Air Club, formed to discuss and devise means for the better protection of the diminishing game. The members of this association are well-informed business and professional men intensely interested in game protection, who believe that the conservation of game and fish should be taken out of the realm of politics and established on a scientific basis.

When they first came together the politicians facetiously dubbed them the "Hot Air Club." The club promptly adopted the name and bear it with honor.

Allied with the Hot Air Club are eleven other game protective associations spread out over the State. A large proportion of the members of these allied clubs have been sworn in as deputy game wardens, to serve without pay, and through them many violators of the game laws have been apprehended during the past year. Their efforts, however, have been chiefly directed toward the education of the people in the preservation and conservation of fish and game. They are teaching and demonstrating that here is a valuable resource of the State, and the people are learning to appreciate it.

The Hot Air Club, with its allied associations, is probably doing more in the way of practical education along these lines, and in real game protection, than any other similar association in the country. It is making its power felt, and the facetious politicians are humbly recognizing this power.

When I was in Salt Lake City the members of the club were interested in several concrete and flagrant violations of the game laws which had come to their notice. A man at Morgan, Utah, had killed thirty-three pheasants, which are

perpetually protected by law, and several days before the opening of the prairie chicken season had killed twenty chickens. So safe did this fellow feel in a political "pull" which he believed he possessed, that he was openly boasting of what he had done and defying prosecution.

One member present had just returned from Strawberry Valley, where he had found the half-decayed carcasses of fifty chickens and five ducks, all killed out of season. Tracing the matter down, he learned who the vandals were that had killed them, and that these fellows had shot so many more birds than they could have used under any circumstances, or could have carried away, that those found by the sportsman had been abandoned.

The club had also under consideration several streams that had been "shot" in violation of law, and were endeavoring to collect evidence against the guilty parties, or at least to have the suspected ones watched and caught red-handed.

Work that Counts

The commission, too, is urging adequate fines for infringement of the laws—not merely nominal fines, as in some States. For instance, during 1910, fines of one hundred dollars for each deer killed out of season were levied in several instances.

These organized efforts of the Utah sportsmen to protect game are already being rewarded by a material increase in deer, and Mr. Fred W. Chambers, State Game and Fish Commissioner, reports at last that antelope are increasing in Kane, Washington, Grand, San Juan, and other southern border counties. I may add that my personal investigations and reports given me by sportsmen in various parts of the State bear out this statement. From these reports, I am also inclined to believe that there is a slight increase in mountain sheep.

Neither is Utah neglecting her trout streams. She has established several hatcheries, and last year, from these hatcheries, planted 4,379,000 eastern brook, German brown, and rainbow fry, and 5,197,000 native fry. I spent the

summer of 1907 in Utah, and, comparing the reports of catches during that season with those made me when I was again on the ground in 1910, I should say that there is a marked improvement in the streams.

The sportsmen of Utah were greatly agitated over an epidemic among ducks and other water fowl on the marshes contiguous to Great Salt Lake. It was estimated that at least a quarter million ducks, as well as innumerable geese, plover, snipe of various species, and even some sea gulls, lay dead on these marshes, and they were still dying by thousands. I visited the lake, and the stench at some points from putrefying flesh of birds can only be described as awful. The gun clubs were not to open, and no shooting was to be done during the season.

Some of the dead ducks were sent to the Division of Pathology, of the Bureau of Animal Industry, of Washington, D. C., and Dr. J. R. Mohler, Chief of the Division, reported, after an examination of the specimens, that death was due to intestinal coccidiosis. Dr. Mohler's report stated that the ducks were in good flesh and the viscera apparently normal, except the intestines, which presented throughout the entire length more or less extensive areas of inflammation. Microscopic examination of the intestinal contents revealed immense numbers of coccidia in various stages of development.

There were many theories as to the source of infection, but the one generally accepted, and undoubtedly the true one, was this: The Jordan River is the depository of Salt Lake City sewage. Near the point where it empties into the lake it spreads out into a wide and shallow mouth. The season had been an unusually dry one, the river was low, and wide mud areas had been left partially uncovered and strewn with sewage, upon which large numbers of ducks were constantly feeding.

The fact that ducks fly long distances in a few hours probably accounts for the fact that many ducks were dying in other sections, north and south of Great Salt Lake. If this was in fact the source of infection, the remedy is undoubtedly to dredge the channel near the mouth of



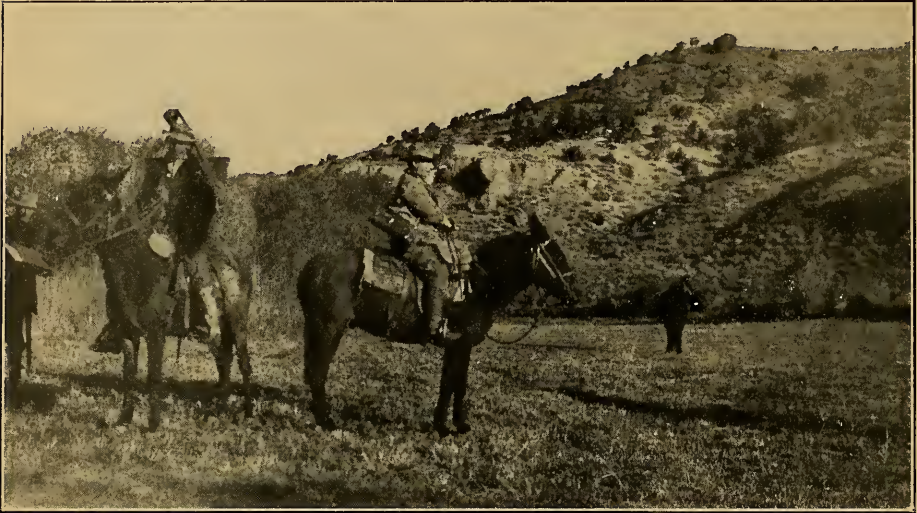
BUTTON AND HEART LUNCHING AT THE ROADSIDE NEAR OGDEN, UTAH.

the Jordan. This would carry all sewage directly into the lake, instead of spreading it over the mud flats as at present.

My two horses, Heart and Button, were fat and frisky and in splendid shape when I saddled Heart, packed Button, and turned northward, *en route* to Idaho and Wyoming. My course took me directly through Salt Lake City

The near-by mountains, where they spread to make room for the valley, were spotted with green and yellow; where they draw together again, on the opposite side of the valley, the intervening autumn haze had tinged them a delicate, opalescent blue and purple.

Though the days were filled with balm and sunshine, the nights were growing cold, and every morning now the



THE MEMBERS OF THE SURVEY OFF FOR THEIR DAY'S WORK.

and Ogden. Ogden Canyon, with high, perpendicular walls, rushing river, and wood-clad corners, is one of the most picturesque spots in northern Utah. At one point a stream of water gushes out of the rocks several hundred feet above the river and is lost in mist.

But the canyon is too near civilization to be permitted to retain its wild and primitive natural beauty undefiled. Painted and plastered over the walls of Ogden Canyon one's eye meets such legends as, "Use Pillbox's Sure Cure Remedies"; "Walkfast shoes give comfort"; "For elegance of form, wear Madam Fuzyhead's Corsets"; "Learn to dance at Professor Littlewit's Academy," and so on, *ad infinitum*.

It was October, and the warm sun shone down upon the valley beyond Ogden Canyon through an Indian summer haze. Here lay the little village of Huntsville and some scattered ranches.

ground was stiffened with frost. Hoar frost lay thick upon everything, sparkling in the first rays of the rising sun, when I rode out of Huntsville in early morning. My trail led up the valley and into Beaver Creek Canyon, *en route* to Bear Lake, Idaho. At Salt Lake City I had been warned that I should find the country around Bear Lake covered with snow, and the frosty air at this lower altitude gave strength to the prophecy as to the country farther on.

Presently ranches were left behind and the trail turned into the canyon to follow its magnificent trout stream, tumbling down over a rocky bed. Beaver Creek had considerable volume where the trail entered the canyon, but as it ascended it gradually shrank into a mere rivulet trickling from some springs. Beyond this the diminishing trees disappeared and presently, above the canyon on the summit of a ridge dividing two

watersheds, even willows and shrubs gave way to sagebrush.

The main road here is a wood road, which drops over the ridge and sends branches into some three or four canyon lumber camps. The direct road for Bear Lake turns to the left and is little used. At midday, on Beaver Creek, I passed an outfit consisting of a teamster with a heavily loaded wagon of lumber-camp

fortunately, we had not gone far when a camp fire glimmered through the trees, and a few minutes later I rode into the circle of its light, where three men lounged with their pipes. It was Lewis's camp, and I received a hospitable greeting.

Lewis's lumber camp was situated in a national forest reserve, and the government had ordered all tree cutting



SHACK FOR TRAVELERS AT HALFWAY, PREUSS MOUNTAINS.

supplies and a man in a buggy. The latter was a lumberman named Lewis, the former one of his men, on the way to Lewis's camp in Skunk Creek Canyon. Mr. Lewis invited me to spend the night at his camp, where he told me forage could be had for my horses.

The sun was low when I passed the Bear Lake trail and followed down the other in the hope that good luck would lead me to Skunk Creek Canyon. The several branching trails rendered the selection of the right one uncertain, but presently, when I found a brook flowing out of a canyon, I took a chance on its being Skunk Creek and turned up the canyon, deciding to follow it a reasonable distance and then, if nothing developed, bivouac for the night.

It was twilight when I reached the brook, and it soon grew so dark in the canyon that I was compelled to rely on Heart's instinct to keep the trail. For-

stopped. Some logs of a previous year's chopping were still on the ground, and Lewis had established this temporary camp to clean them up and discontinue operations in accordance with the terms of the edict. His loggers were just coming in to haul the logs already cut to a portable sawmill which the three men with whom I stopped were then engaged in setting up. The only buildings yet erected were a makeshift barn, a small shack, and an open shed.

The sky was heavily clouded when Lewis and his teamster joined us at nine o'clock that evening, and a little later a gale was sweeping up the canyon. I spread my blankets under the open shed, and before I fell asleep felt the first flakes of a coming snowstorm on my face. When I arose at dawn the following morning a thick blanket of snow covered me, and nearly four inches had fallen during the night. The storm had

passed, however, though the morning was raw, with fleeting clouds scudding over the sky and a cold, penetrating wind blowing, a chilliness that even the dazzling sunlight that followed did not modify appreciably, as I pushed my way up the canyon.

Travelers over the mountain ridge are rare at any time, and all day long, beyond the lumber camps, I picked my way over unbroken trails through snow-hung firs, up and down ravines or across wind-swept open spaces, and saw no sign of human life—or any kind of life, in fact, save a fox track or two, a few rabbit tracks, and now and again a squirrel. This disappointed me, for there are deer here, and the lumbermen told me I should in all probability see some of them, or at least their signs, in the fresh snow. Bear, too, were said to be fairly numerous, and I had hoped to see a track, for they were still abroad.

Beyond the ridge somewhere in a valley was the little settlement of Woodruff, and with neither compass nor definite trail to guide me, I took the general course in which my map—a very imperfect map, I had discovered—said Woodruff lay, avoiding, as best I could, gulches and canyons. From one high point I had a magnificent view of the snow-clad country to the northward—timbered areas, wide stretches of valley and plain, and rugged mountain peaks.

With the Geological Survey

Traveling was slow. The horses' feet balled badly and they slipped and slid, particularly on steep down grades, in anything but a reassuring manner. At mid-afternoon I crossed a wind-swept reach of the open country, and then began a gradual descent. Presently the snow was left behind, to the relief of myself and the horses. Here, as we dropped into the head of a canyon, several prairie chickens were started. Following the canyon to its mouth, I passed an abandoned ranch, on the banks of a brook which coursed down a narrow valley into which the canyon opened, and near sunset glimpsed a group of tents which I recognized as a government outfit. I rode up to them and halloeed, and

two or three men answered the call. It was a United States Geological Survey camp, they told me, and, in answer to my inquiries, said Woodruff was six miles away, straight ahead, too far to go that evening, and invited me to stop with them for the night.

The camp was in charge of A. E. Murling, a veteran in the department, and with him and his assistants the evening spent here was a particularly pleasant one. They were making the first geological survey of the region. The day before my arrival they had descended from the higher altitudes, and had thus escaped the snow that I had encountered.

All of these forest-covered mountains, with open, grassy parks, were formerly richly stocked with elk, deer, antelope, and bear. A few elk remain, but all the antelope have been killed, deer are far from plentiful, although bears are said to be fairly numerous. I did not see one deer track in the fresh snow. The surveyors told me that they had seen some earlier in the fall, as well as bears.

As for the birds, the natives about Huntsville, and in that region generally, believe protective laws are unjust and that they have a moral right to shoot when they please; and they do shoot a great many chickens, and sometimes other game, out of season. Several of them boasted to me of having done so, and one showed me a chicken he had just killed.

The brook, the headquarters of which I came upon in the valley where the engineers were encamped, was Birch Creek, emptying a little way below the engineers' camp into Twelve-mile Creek, a tributary of Bear River. I followed these creeks down to Woodruff, thence turned northward along Bear River to Randolph over a high ridge, and down Laketown Canyon to the little settlement of Laketown, at the canyon's mouth and at the head of Bear Lake.

Practically the only settlements that have yet found foothold in Rich County are Woodruff, Randolph, Laketown, Meadowville, and Garden City, the last-named village lying on the west shore of Bear Lake, close to the Utah-Idaho State line. Randolph, with a population of



ONE OF THE PRIME FACTORS IN THE DESTRUCTION OF RANGES. SHEEP ARE THE GREATEST ENEMY OF ELK AND ANTELOPE.



A SHEEP HERDER'S WAGON IS FITTED FOR LIGHT HOUSEKEEPING WITH COOK STOVE AND BED.

six hundred, is the county seat and the largest and most important settlement in the county. The houses are chiefly of hewn logs, and this is the construction used in Rich County generally.

While the county is large in area, it is for the most part mountainous, and the land adapted to agriculture is practically confined to Bear River Valley. The crops are almost exclusively hay and grain. Isolated from railroads, it still flavors of the frontier, and the traveler's imagination is not taxed very greatly in an attempt to picture it as it appeared in the days of the early fur trappers, when Kit Carson and his companions trapped beaver along Bear River and chased Indians into the mountains. The valley lies at a mean altitude of 6,500 feet above sea level. Its climate is, therefore, too cold for successful fruit culture or general farming, and to this, no doubt, is due its tardy development.

One of the most delightful surprises of my journey met me just before emerging from Laketown Canyon, when suddenly, at a turn of the road, Bear Lake, stretching away between rugged mountains as far as eye could reach, and the little settlement on the lake shore in the foreground, surrounded by green and framed by canyon walls, flashed up be-

fore me as suddenly as a lantern view appears upon the canvas.

There is a road on either side of the lake. That on the west leads to Garden City and Idaho settlements beyond; that on the east is little traveled. The latter is the nearer route to Star Valley, Wyoming, and I chose it, both because of this and because, as I looked down the lake, it appealed to me as the more attractive, with precipitous mountains crowding it on the one side, the waves of the lake washing it on the other.

Bear Lake is one of the most beautiful lakes in the West, and therefore in the world. The water has a greenish tinge and is so clear as to be perfectly transparent. The pebbly beaches reach down with a gentle slope and are washed white by the pure waters. Innumerable wild fowl hover above or float contentedly upon the bosom of the lake. Trout by thousands may be seen where streams empty into it. Had the sage brush on the mountains paralleling it on either side been fir trees, it would have been a counterpart of some of the Labrador lakes that I have known.

Morning came frosty, with a cloudless sky, and was followed by a day perfect beyond compare. My ride down the shore of Bear Lake atoned fully for every



BOOTH'S HOUSE AT THE ENTRANCE TO THE GRAND CANYON OF THE SNAKE
CLOSE TO THE FERRY.

disagreeable feature of the trip that had gone before. Halfway down the lake I crossed the State line into Idaho, though there was nothing to indicate its position. At the little ranch at Turnpike, which I reached at half past four in the afternoon, hot sulphur springs boil out of the mountain base, and the water runs down in steaming brooks to join the lake.

With a native of the ranch I walked down along the beach sands to see the sun set in sublime effulgence of red, purple, and yellow beyond the mountains on the opposite shore. The man was a poet and a dreamer. He had a most deliberate manner of expression, which accentuated his peculiarities. He had spent his life in this region; beyond a bit of the surrounding mountains and near-by wilderness, he had seen nothing of the world.

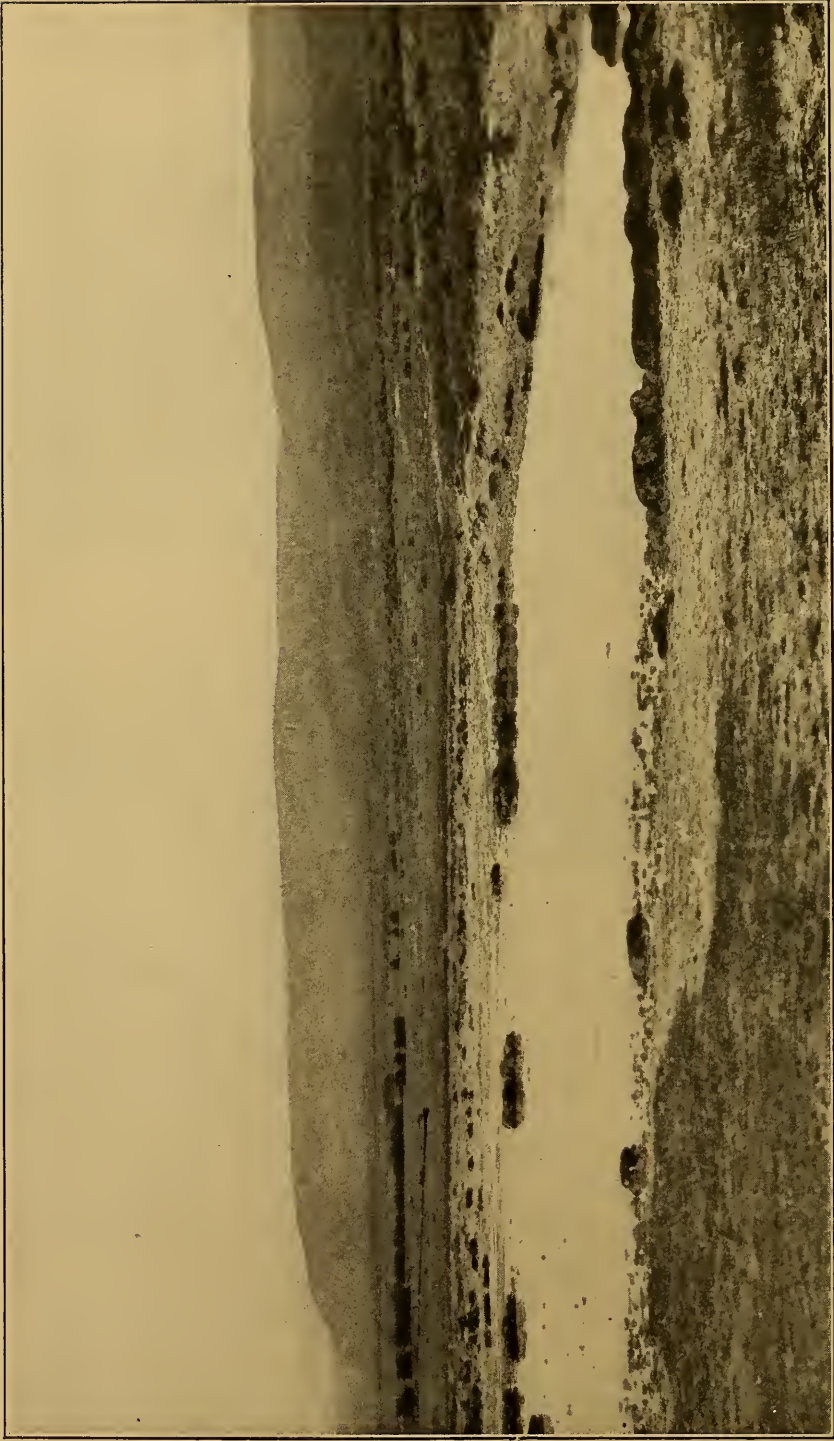
"Every evenin' I come down here," said he, "t' see th' sun go down an' th' sky light up with bright colors, an' I think I'd like t' see th' other countries th' sun lights when it leaves us. They must be lands of great beauty t' reflect such colors in th' sky, for th' sky, I takes it, is just a big mirror. Maybe, though, it's not earthly lands, but heaven, that's reflected. An' what wonderful people

must live there, for they sure must be fit for th' land, or th' Almighty wouldn't let 'em stay."

We walked down to the beach again, at his suggestion, to see the lake by the light of a brilliant moon. The mountains threw black shadows upon the near-shore waters, while beyond them rippling waves glistened and sparkled to the base of rising shore line opposite; while far up the lake the star-sprinkled sky came down to meet the sparkling waters. The only sound was the lap of waves at our feet, and the bark of coyotes in the hills behind the ranch.

"I often wonder," said my friend, "what the world is like outside of this, and th' big ocean with waves as high as these mountains. I've never seen none of th' world exceptin' some of these hills and canyons, and Montpelier. Montpelier's a big place, an' they have all sorts of contraptions there. You'll hit th' town to-morrow. I don't care much about it. Th' folks seem different.

"I was some interested in wagons that run without horses—watcher call 'em I don't remember. One of 'em tried to run down here in th' summer, and got stuck just above in th' sand. I'd like t' go and see what there is in th' world, for I expect there's a heap bigger places than Mont-



BOILING POND, SURROUNDED BY HOT SPRINGS IN STONE VALLEY, WYOMING.

pelier, with a heap of strange things they don't have there. But," he added, after a pause, "I expect I'll never see anything but just this round here, an' it ain't so bad, I reckon, with its sunsets and moonlights."

From Montpelier, the seat of Bear Lake County, and a local metropolis with 2,500 population, I turned to the northeast, through Montpelier Canyon, past Thomas's Forks—not a town, but a fork in the river; there are no settlements here—and thence across the Preuss Range. At Montpelier I had crossed the railroad, and there left it behind me. Montpelier is the nearest railway point for the settlements in Star Valley, Wyo., across the Preuss Range, the first one fifty miles away and some of them a full hundred miles.

Supplies are hauled over the mountains to the settlements by freighters driving two, four, and sometimes six, horses. Comparatively light loads are necessarily carried, for the mountain grades are steep—at some points even precipitous—and the road is not always good. In the canyon I met two of the freighters, and beyond the ridge several others.

This, too, is the route of the mail stages. A station is maintained by the stage company some two miles beyond the summit of the pass and high up in the mountains, where tired horses are changed for fresh ones by passing stages. This is known as Halfway House, and a stage driver is always in charge. Travelers are not entertained here with beds or food, but one's horses will be cared for if one is prepared to pay three or four times the charge usually made for hay and grain in settled localities. Such excessive charge is justified by the necessarily large expense incurred in hauling forage so far. It was at Halfway House that I planned to halt for the night.

Well up the canyon are some abandoned mining claims and cabins, though each year the owners visit them for a short period and do the assessment work required by the law to hold them. Poor men, most of them are, and for lack of funds they have never been able to develop their claims sufficiently to put them on a paying basis. Some time in the

hazy, mystic future they believe the holes they have dug will reward them richly.

Each believes that King Solomon's mines, with their fabulous wealth, were nothing to what his will prove to be some day, for the prospector is an optimist and a dreamer. I never yet met one who was not quite certain he was destined to "strike it rich." The last of these before beginning the steeper ascent of the pass is a tumbledown cabin and barn, where some one had unsuccessfully attempted ranching and mining in conjunction. It is known as "Giveout"—very suggestive and appropriate.

Close to Giveout I encountered a great herd of sheep, which the shepherds told me they were taking to Boise for the winter. In their course over the pass they had swept all grass and browse before them, making it quite impossible for the traveler to find a suitable place for his horses to graze for even a single night. I thought a good many hard things about sheep many times in the course of my journey. Cattle and horses eat the grass. Sheep not only eat it, but tramp out the very roots, and destroy it for all time.

In the Trail of the Sheep

A grassy park, this year capable of supporting many animals, will be transformed by a bunch of sheep, in a very short space of time, into a verdureless, barren waste. This destruction applies not only to grass, but to small shrubs, and when the heavy rains come, the soil of hillsides, swept clean of grass and shrubs, is loosened by a thousand hoofs, the top soil is washed away and the land is left unproductive permanently, or for an indefinite period.

This is what is taking place in all of our forest reserves, and the price of wool and the price of lamb and mutton are going up. The sheep barons hold the situation in the palm of their hands. The government charges them a nominal price for the privilege of grazing herds on public lands; they have grown to feel that they own these lands and send up a cry of horror at any hint that their privileges be curtailed. Many of the wealthy sheep men of to-day began a dozen years

ago with practically nothing. They grew rich at the expense of the public. In many instances the government had better have voted them a competence, for the large overstocking has ruined the ranges for many years for any purpose, where a moderate stocking would have preserved their value.

Not only have wide territories been thus rendered valueless for either cattle or sheep grazing, but absolutely uninhabitable for antelope and elk. Had reason governed the sheep men and government officials concerned in this, wide areas that to-day will not support a grasshopper might have still held herds of domestic sheep, as well as wild antelope and elk. This applies to much of the public land in national forest reserves through which I rode, from southern Utah to Montana.

Into Wyoming

Beyond Giveout the road rises steadily, and at last abruptly, to the summit of the pass. Quaking aspens, pines, and firs cover the mountain sides, and the air is sweet with forest perfumes. From the summit one has a magnificent view of surrounding mountains, overtopped by snow-capped peaks.

Halfway House lies in a romantic hollow, at the head of Crow Creek, a tributary of Snake River. There are three log stables, a cabin where the stage driver lives, and another log cabin where travelers camp. There is no woman within many miles of the place. I stabled and fed my horses, cooked my supper, and then spread my blankets on the earthen floor of the unoccupied cabin.

There are really two Star Valleys, the Upper Valley and the Lower. Between the two the hills crowd in to form a short canyon. These valleys are devoted almost wholly to cattle raising. The altitude is too great and the climate too cold for any other than hay and grain farming. Here below the Preuss Range I crossed the line into Wyoming, in the Upper Valley. Crow Creek, where it enters the valley, has developed into a stream of considerable volume.

In the Upper Valley I came upon a light prairie schooner and one forlorn

man, who told me that he and his partners, who were looking for suitable land to locate and homestead, had halted for noon, picketed one horse, turned two others which they had loose, and while they were catching trout for dinner the picketed horse had broken loose and all the horses had disappeared when they returned from fishing. He "reckoned th' hull d—— outfit had lit out fer Ogden," where they came from, and his "pardner was chasin' 'em ahoof." I had not seen them.

At the lower end of the valley are some remarkable hot springs—quite as remarkable as some of the lesser ones in Yellowstone Park. One group of them covers several acres, and side by side are springs of cold water and boiling water. Steam escapes from several fissures under considerable pressure and with much noise.

In the canyon between the two valleys; where the canyon widens, a ranchman has run some irrigation ditches, and here I saw a notice of which the following is an exact literal transcription:

"Parteys or Parson Driven Sheep over this Ditch and Damas it they Will Be Prasicute a carden to Law."

At the junction of John Day's River with the Snake River, at the lower end of the Grand Canyon of the Snake, Booth's Ferry, across the Snake River, is situated. Jackson's Hole may be entered from the west either by way of the Grand Canyon of the Snake, or farther north over Teton Pass. I chose the former route as the least traveled, and directed my course down the lower Star Valley to Booth's Ferry.

This was the third day after crossing the Preuss Range, and all day, save with a few brief intermissions, the rain fell in a steady downpour. It was growing dusk when I reached the ferry. The ferryboat was on the opposite side of the river—a scow, made fast to an overhead rope stretched from shore to shore. It was guided with a tiller, and the current furnished motive power to propel it. I shouted, and presently the ferryman appeared, crossed the boat for me, and carried me and the horses safely over. The man's name was Rogers, and he and Booth, two bachelors, lived here

in a little log cabin, with one room and a loft. It was pouring rain, and they invited me to stop with them until the rain ceased. I accepted, turned Heart and Button loose to forage, cooked my supper on the cabin stove, and spread my blankets on the floor.

I had received many warnings about the trail through the canyon, which was said to be particularly dangerous. Several horses, I was told, had fallen from it into the river, hundreds of feet below. Booth and Rogers confirmed these stories, particularly with reference to a stretch known as the Blue Trail. A short time previously, they told me, a forest ranger's horse had been lost here, and though very little traveled, several horses, they asserted, were lost every year in attempting to cross it.

It was described as only a few inches

wide, hanging upon the edge of a cliff, and of blue clay, which, when wet, is exceedingly difficult for smooth-shod horses to keep a footing upon. The men agreed that it would be unwise to enter the canyon until the rain ceased and ample time had been allowed for the trail to dry. Upon this advice, I decided to accept their invitation to remain at the ferry the following day, even though the rain ceased in the night.

Isolated as they were, and rarely enjoying any companionship other than each other's and that of an amiable dog, my advent was a welcome break in the monotony of their life. And I was glad to stay with them, for they were both men of the early frontier type—a type that one rarely sees these days, and only meets occasionally in such secluded spots as this.

(To be continued)

THE THIEF AT CIRCLE BAR

BY CHARLES ALDEN SELTZER

Illustrated by Clarence Rowe

THE sun had reached the peaks of the mountains of the Hogback range, and its rays were touching the snow caps and shedding broad white shafts into the basin where the cattle were feeding. Presently the white shafts dimmed, taking on hues of saffron and violet, blending these with newer colors that slowly appeared. The sun sank lower and a slumbrous haze rose mysteriously toward the sky, like a gauze veil of many colors, melting and fading and glowing until the darkening shadows appeared over the foothills and began to steal far out into the basin.

As the shadows reached his pony's hoofs and a slight breeze began to rustle the dried mesquite of the basin, Dave Thompson, the Circle Bar owner, urged his animal closer to the range boss, who stood at one of the wheels of the chuck wagon.

"I reckon I'll be goin'," said Thompson. "Me an' Jane have been ridin' most of the day, an' she'll be gettin' some tired."

"She's a right brave girl, to be ridin' all day," observed the range boss admiringly.

Thompson smiled. "Just like her mother," he returned. He urged his pony about, rode twenty feet, and then returned. "I reckon you're keepin' Luke Lynch with the wagon—like I told you?"

The range boss laughed shortly. "It's pretty hard to keep track of Luke," he said, "especially when Miss Jane's around."

Thompson fidgeted. "That's the worst of havin' a good-lookin' man in the outfit," he said. "Tryin' to keep a girl from takin' a shine to a man like that is worse than tryin' to get enough water durin' a dry spell." He gazed gravely at the range boss, his eyes lighting with a sud-

den suspicion. "Where's Luke now?" he questioned.

"He's workin' down the crick," returned the range boss, wheeling away from the wagon and peering in the direction of the river. For a moment he stood, his hands shading his eyes. Then he smiled furtively, his back to Thompson. "That's him comin' now," he informed Thompson. "An'—well—thunderation! He's with Miss Jane!"

Two ponies with riders had just appeared from one end of a narrow draw not a hundred yards from where Thompson and the range boss stood. They came on slowly, talking in low tones. Once, while they continued to approach, the young woman's voice rose in laughter. Thompson's face wreathed into a scowl.

The riders came slowly up to the wagon—a young woman of twenty, who looked strikingly graceful on her pony, and a tall young puncher, lithe, picturesque, whose face wore a broad grin.

The puncher dropped from his pony and came forward to the wagon, standing near the range boss. The latter slowly closed one eye at the young man and shook his head with an almost imperceptible negative motion.

"Dave was thinkin' Miss Jane had got lost," said the range boss.

The young woman laughed. "Luke said dad would be worried," she said. She blushed as she looked at the young puncher.

Thompson's lips straightened. "Dad ain't worryin' none," he said. He turned, throwing a sharp glance toward his daughter. "Your mother'll be waitin' supper."

He ignored Lynch and nodded coldly to the range boss. Then he spurred his pony away from the wagon, halting at some little distance and looking back just in time to see Lynch take Miss Jane's hand and squeeze it, the range boss looking on with a smile.

Thompson said no word to his daughter during the five-mile ride up the river trail to the ranchhouse, but several times, as her pony traveled close to his, he noticed that her eyes shone very brightly and that her lips were wreathed in a tender smile. At supper he watched her

closely, and, after the meal was finished and the young woman was in the kitchen washing dishes, Thompson drew his wife into the best room and talked long and earnestly to her. A little later he called Miss Jane in.

"Jane," he said quietly, "day after tomorrow me an' your mother is goin' over to Bill Deming's place, just the other side of Las Vegas, for a visit. His place ain't very big, so we can't take you along, like we'd like to. But we don't want you to stay here alone. So we've decided that you could go over to your Uncle Raymond's place for a month or so. You c'n start in the mornin'. I'll have Wes' Cole ride over with you."

Miss Jane's eyelashes suddenly drooped, and a flush swept slowly over her face. Thompson did not see her eyes flash with a swift understanding. When she looked up there was a smile on her face.

"Of course, I shouldn't like to stay here alone. It would be unbearable. And there is always fun over at the Two Diamond."

She was suddenly at her mother's side, kissing her. For a moment Thompson stood looking at the two, and then, with a smile of satisfaction over his daughter's ready acquiescence, he turned and went into his office to pore over his accounts.

At dawn the next morning Thompson walked down to the gate of the horse corral, where Miss Jane was watching Wes' Cole saddle two ponies. He found his daughter deeply chagrined over the discovery that her favorite horse, Silver, a big, rangy white, had gone lame during the night. But she was having another animal saddled and was patting Silver's muzzle affectionately when Thompson reached the gate.

"Silver has gone lame, daddy," she said, as her father came up. "I want you to take good care of him while I am gone."

"I'll have him taken to the box stall an' let Jiggs tend to him. He'll be all right when you come back."

An hour later Thompson and his wife stood at one end of the wide gallery, waving their hands at the departing figures of Miss Jane and Wes' Cole. After the figures had disappeared over a swell



LOOKING BACK JUST IN TIME TO SEE LYNCH TAKE MISS JANE'S HAND AND SQUEEZE IT.

Thompson turned to his wife, whose eyes were moist.

"I hated to lie about goin' away to Deming's," he said, "but I reckon there wasn't any other way. She'll forget about Lynch in a month."

The mother looked lingeringly at the spot on the crest of the swell, beyond which her daughter was riding.

"Perhaps," she said, with a little catch in her voice.

II

THROUGH the range boss the following morning word reached Luke Lynch that he was wanted at Thompson's office in the ranchhouse. He caught up his pony, saddled, and was ready to

mount, when the range boss came close to him.

"I don't know what's comin' off," said the range boss, "but I'm tellin' you what I think. It's this: The Ol' Man was sort of put out to see you with Miss Jane last night. I'm lookin' for developments."

Lynch grinned broadly. "I reckon I won't be any surprised—whatever he does," returned Lynch. "He's a right wise daddy, but he ain't got all the cards."

He was gone before the range boss could answer, riding loose and loping his pony easily.

It was late in the morning when he rode up before the Circle Bar ranchhouse and dismounted at the office door.

He strode unconcernedly over the threshold, halting when he reached the side of Thompson's desk. The latter was awaiting him.

"Set down," directed Thompson.

"Thank y'u." Lynch made no effort to comply. "Y'u wanted to see me," he said.

"Yes." Thompson absently fingered some papers. Then he looked up and caught Lynch's gaze. The latter's face was a trifle pale; Thompson's reddened slightly. "I reckon you know my daughter Jane?" questioned Thompson.

"You didn't need to ask that," returned the puncher.

Thompson smiled grimly. "No; I didn't need to ask. Not after what I saw last night. But I'm lettin' you know that I've had my eyes open. I reckon you've got some sort of an understandin' with Jane?"

The young puncher flushed. "There ain't nothin' ever been said in words," he said slowly.

Thompson sighed with relief. "I reckon it ain't so bad, then," he observed. He spoke more frankly. "I'm sorry things has turned out like this. I've seen that you're a pretty good man. But you ain't just the sort that I'm pickin' out for Jane to marry. I'm thinkin' to find somethin' better'n a puncher for her. I've sent her over to the Two Diamond for a month, so she'll kind of forget you. An' I'm givin' you your time now. I'm sort of sorry that I've got to part with you, but there ain't any other way."

He reached into a drawer and drew out a handful of double eagles. "You've got quite a lump comin'. Six months. I expect you'll strike another job before long." He rose and extended a hand toward Lynch. "That's all, I reckon," he concluded. "You might as well make up your mind to be decent about this. You ain't never goin' to be my son-in-law."

Evidently Lynch had decided to be "decent." He grinned genially. "I've been listenin' to you," he said. "I ain't been hurt none by your palaver. Some dads has got gall enough to think they c'n stack the cards on a girl an' get away with it. Such dads forget that they was

young onct themselves. I've hearn tell that your wife's dad tried the same deal."

Thompson reddened again. "I reckon Jane's told you about that," he said. "But I reckon what's happened to me is my business," he added coldly.

"Shore," returned Lynch, as he walked to the door; "it shore is your business. An' I reckon that my business is my business, too."

He went out and mounted his pony. Five minutes later Thompson saw him loping his pony slowly down the river trail in the direction from which he had come.

III

THREE weeks later the range boss rode up to the ranchhouse to make a report. He found Thompson in the office. For a time the talk was about the condition of the cattle and the details of their well-being. Then the range boss leaned back in his chair and narrowed his eyes at Thompson.

"I was ridin' down the crick yesterday," he said.

Thompson looked up, and caught a strange expression in the range boss's eyes.

"Well?" he questioned.

The range boss continued slowly. "I was down at Turner's Flat, where that nester was two years ago. I looked at the shack he built."

Thompson nodded. "I recollect," he returned.

The range boss's lips parted in a furtive grin, which he concealed with the palm of one hand. "That shack has been fixed up," he continued. "There's another nester in it."

Thompson's lips straightened and his voice was cold. "I reckon you talked some to him?" he asked.

The range boss grinned. "Yes, some," he returned. "You see, I happened to know him. It's Luke Lynch. Been nesterin' there ever since you fired him."

Thompson cursed recklessly. "The damn cuss!" he concluded presently. "That's the reason he acted so quiet when I give him his time!"

The range boss looked soberly up.

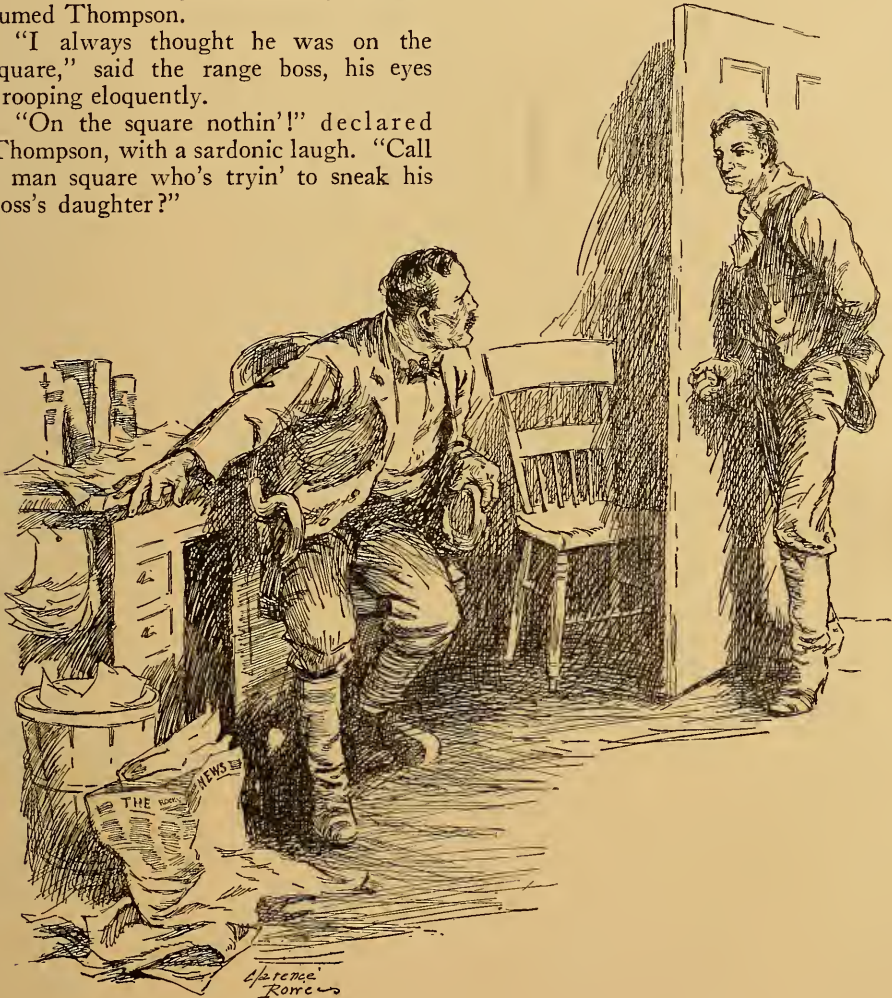
"He always was a quiet sort of a cuss," he said; "deep an' quiet. You never c'n tell which way that kind'll jump. Their actions are sure hard to anticipate."

"I reckon he's just an ornery sneak!" fumed Thompson.

"I always thought he was on the square," said the range boss, his eyes drooping eloquently.

"On the square nothin'!" declared Thompson, with a sardonic laugh. "Call a man square who's tryin' to sneak his boss's daughter?"

"That's just what it is," agreed Thompson heavily. "But I reckon he ain't goin' to stay long in that nester's cabin, now that I know he's there."



"YOU MIGHT AS WELL MAKE UP YOUR MIND TO BE DECENT ABOUT THIS. YOU AIN'T NEVER GOIN' TO BE MY SON-IN-LAW."

Thompson's lips twitched. "Was he tryin' to do that?" he questioned, his eyes widening with surprise. "I seen him with her a good bit, but I thought mebbe it was just a false alarm. An' you sent him away for that! An' you sent Miss Jane away so's he wouldn't get a chancst to talk to her any more! An' now he's gone an' took up that nester's shack, thinkin' to be near Miss Jane in spite of you. I'd call that defyin' you."

"You reckonin' on runnin' him off?" said the range boss, his cheeks swelling in an effort to suppress something.

Thompson banged a fist heavily down upon the desk top. "I won't have him nesterin' on this range!" he declared.

The range boss rose to his feet. "Well, now," he said, "I reckon Luke'll be some surprised when you tell him that." He went out, and then, returning, stuck his head in through the door-

way. "I think you ought to know this," he said quietly. "Yesterday, when I was talkin' to Luke he said that you'd know what he meant if I'd tell you for him that he was mindin' his own business." He grinned into the vast arc of sky as he turned toward his pony.

An hour later, Thompson rode down the river trail, his lips set in determined lines. Some time later he came to a bend in the river, where the buttes broke off sharply and revealed a broad flat, through which the waters of the river spread over a broad shallow. A small cabin was to be seen well back in a grove of cottonwoods, and some cattle grazed by the water. Thompson saw a man riding near the cattle and spurred his pony toward him. It was Lynch. Thompson's face was red as he came close enough to be heard.

"You figgerin' on stayin' here long?" he questioned.

Lynch sat quietly in his saddle, regarding his old employer with a quiet grin that broadened at Thompson's question.

"I'm mindin' my own business," he said. "I reckon you c'n do the same thing."

Thompson ignored the suggestion. "I've rode over to tell you that I don't want you nesterin' on this range," he snapped.

Lynch's quietness fell away from him like a cloak. He leaned forward in the saddle, alert and watchful, his lips drooping into a sneer.

"I reckon I ain't carin' a heap what you think," he returned. "Give you a chancst an' you'd want the whole earth. But I've got a hand in this game. I'm mindin' my own business—like you told me you was mindin' yours. You don't need to stay here wastin' your time. You ain't scarin' me none."

"I'd give you five hundred in cold cash to get—"

Lynch grinned coldly. "If it was five thousand that you wanted to give me it wouldn't be enough," he said. "I ain't sellin' nothin'."

Thompson's face was white with the anger that he was trying hard to repress. "I've offered you your chancst," he said, his voice quivering. "Hereafter there

ain't goin' to be any sentiment holdin' me back."

"Correct," sneered Lynch; "sentiment's a poor thing to tie to. I ain't thinkin' of doin' any mushin' myself—with you. I'm startin' now to tell you. Don't you come monkeyin' around my cabin. An' don't go for to try an' prove that I'm rustlin' any of your cattle." He tapped his holster significantly. "I've got a gun here that's yearnin' for to speak to you—to tell you that you've acted plum mean. But you ain't goin' to act mean any more."

Thompson sat silent for a moment, contemplating the puncher with frowning eyes. Lynch's gaze was steady; in his eyes swam a mysterious, puzzling light. The corners of his mouth seemed to twitch with a saturnine curl. His whole lithe young body seemed to radiate confidence. He seemed not to be in earnest, yet there had been a threat in his words.

Thompson's eyes snapped with decision. He touched the spurs to his pony's flanks and rode a little distance. Then he turned. "I'm warnin' you to get off this range," he said coldly. "I'm givin' you one week."

Lynch watched him until he disappeared beyond a rise. Then he rode slowly down toward the cabin in the grove of cottonwoods, his face wreathed in a broad grin.

IV

"I RECKON by this time Silver must know he's a pet," observed Jiggs, the puncher who had been selected by Thompson to look after Miss Jane's horse during her absence. "I never seen the boys take such an interest in any horse."

In the gathering dusk Thompson was watching Jiggs as the latter curried the white, slender-limbed animal. "Miss Jane ought to be home to-morrow," he said; "it's been a month since she went away to the Two Diamond."

Jiggs looked up from his currying. "You got rid of Luke Lynch yet?" he questioned.

"Damn Lynch!" flared Thompson.



JIGGS LOOKED UP FROM HIS CURRYING. "YOU GOT RID OF LUKE LYNCH YET?" HE QUESTIONED.

Jiggs smiled evilly. Six months before, when Jiggs had come to the Circle Bar, he had tried to take Luke Lynch's measure. He could still remember his surprise when Lynch had shown him that he was "man size." And in Jiggs's soul still lingered a burning desire to "get even." He looked up again, his eyes glittering.

"I reckon there ain't any better way to damn a man in this here country than to have him ketched stealin' a hoss," he said.

"Talk sense," sneered Thompson. "How's anyone goin' to get Luke Lynch to steal a horse? Give him a chance to steal a man's daughter, an' he'll jump

at it. But steal a horse! Lynch is some loco, I reckon, but he ain't no such fool as that."

Jiggs smiled significantly. "I didn't say he'd steal a horse," he said. "I reckon you didn't git me right. There's some difference between stealin' a hoss an' bein' ketched stealin' one."

"I don't reckon that I get you," returned Thompson. But he showed his interest by edging toward Jiggs.

Jiggs stood up, the currycomb still in his hand. "Miss Jane is comin' home to-morrow," he said softly. "First thing she'll do is to look for Silver. I reckon she'd be some disturbed if Silver was gone."



*Dorance
Rover*

"WHAT'S THE USE OF TALKIN',
ANYWAY," HE SAID.

"She sure would," agreed Thompson.
"But—"

"An' if she found Silver'd been run off by Lynch I reckon mebber she wouldn't think so much about Lynch after that."

Thompson clinched his hands to steady himself. He began to see what Jiggs was hinting at.

"An' the boys think a heap of Miss Jane an' Silver," continued Jiggs.

"That's right," agreed Thompson, a little more positively.

"An' if they found Silver in Lynch's corral they'd be pretty apt to git some riled," resumed Jiggs. "Then I reckon you know what'd happen."

Thompson's lips came together grimly. "I reckon you ain't got any love for Lynch?" he said.

"Him an' me's bosom frien's," returned Jiggs ironically.

Thompson turned on his heel and walked away. But presently he returned.

His eyes glittered coldly and his lips were set with decision.

"Jiggs," he said evenly, "it's only ten miles to Lynch's place. There ain't been any moon for three or four nights, an' I reckon there won't be any to-night. I don't mind tellin' you that if I could find a man who could keep his head shut an' could get Silver into Lynch's corral to-night, I'd fill one of his hands with twenty-dollar gold pieces."

Jiggs dropped his currycomb and reached out his hand. "Shake," he said. "You ain't goin' to have much of a job findin' a man like that. One end of Lynch's corral butts up against a right smart cottonwood. That's a handy place for Silver to get into the corral." He smiled with anticipation. "An' that cottonwood's sure a fine place to hang a hoss thief."

V

An hour before dawn the following morning the Circle Bar wagon outfit was rudely awakened by Thompson. The latter was laboring under great excitement.

"Silver's gone!" he informed the range boss, as that person approached him with a question.

The range boss was surprised. "Who do you reckon got him?" he questioned in return.

"There ain't anyone around except Lynch," returned Thompson. "An', though I ain't exactly in love with Luke, I wouldn't think he'd steal Silver—bein' as Silver is Miss Jane's horse."

The range boss contemplated Thompson gravely. "There ain't been any strangers around?" he questioned.

Thompson shook his head negatively.

"None of the boys is missin'?"

"None."

The range boss turned to the men who had crowded around and gave the curt order to "saddle up." Then he turned to Thompson.

"I hate to think it of Luke," he said, his voice tingling with regret, "but if he's gone an' stole Silver he ain't no better'n any other hoss thief."

Dawn was just breaking when the Circle Bar outfit, led by Thompson and

the range boss, loped their horses down the river trail, out upon the flat where Lynch's cabin could be seen, and down to the gate of the horse corral. Silver was discerned immediately and whinnied with delight when Thompson approached him. He was bridled and led forth. Then the outfit straggled down around the corral fence toward Lynch's cabin.

When within a hundred feet of it they saw Lynch come out of the door. He stared at them for a moment and then moved a few feet from the cabin toward them. Grimly silent, the outfit surrounded the puncher. Several of the men nodded shortly.

"I'm thankin' you for comin' over to see me," said Lynch.

"You needn't," declared Thompson. "You ain't got anything to be thankful for. We've just got Silver back. Found him in your horse corral."

Lynch's face whitened. "Silver in my corral?" he questioned, his gaze wandering around the circle of faces for confirmation of Thompson's statement. His voice took on an awed note. "I reckon you don't mean Miss Jane's Silver?"

Several of the men nodded.

"I didn't think you'd do it, Luke," said the range boss in a low voice. His eyes rested pityingly upon his former friend.

"What made you do it, Luke?" questioned another man, who stood well back in the crowd.

"Why—why—hell!" exploded Lynch. "You fellows make me tired. I reckon you think you're damn smart, tryin' to fool a fellow that-a-way! I don't know nothin' about Silver, except that he's Miss Jane's horse." His face wrinkled slowly, as he repeated, "Miss Jane's horse."

"Yes," said Thompson, "Miss Jane's horse. Remember that. Silver is Miss Jane's horse. An' he was found in your corral not ten minutes ago. I reckon there won't be any nester around here this time to-morrow."

Lynch was looking at Thompson with slowly narrowing eyes. For a man who was about to be hanged he exhibited very little fear. As his eyes continued to narrow the wrinkles in his face grew deeper. Finally he grinned broadly.

"I reckon I heard you say that that there Silver horse belongs to Miss Jane?" he drawled, speaking directly to Thompson.

"Correct," agreed the latter.

"Do I understand you to say that Silver belongs to Miss Jane alone—that you ain't got no claim on him at all?"

"Silver belongs to Miss Jane," declared Thompson sententiously. "I reckon she'll be some surprised to know that he's been found in your corral."

"She sure will," agreed Lynch. His grin grew wider. "I reckon you fellows has lost some good sleep, gittin' up so early to come over here," he said, closing an eye deliberately at the range boss. "A man can't very well steal a horse that belongs to him, c'n he?"

Thompson sneered. "That there pal-aver ain't goin' to help you none," he said.

But Lynch ignored him and, turning, faced the cabin. At that instant a woman came out of the cabin door, standing before it and watching the group of men with a smile. She came toward the men, beaming. Hats came off; the range boss smiled; Thompson's jaws opened wide.

"It's Jane!" he gasped, hanging to the pommel of his saddle. "What in—"

But by this time Lynch had seized Miss Jane by the hand and had drawn her close to him.

"I'm introducin' you to Mrs. Luke Lynch," he said. "We was married two days after Thompson give me my time. I rode right over to the Two Diamond an' got her, and we got tied up over in Cimarron. There wasn't any weddin' cards. But I reckon the weddin' is legal anyway—Mrs. Lynch is over age and I've had my eye-teeth cut for a right smart while."

He turned to Thompson. "I'm glad you had my wife's horse brought over to her, father-in-law. She'll need it, ridin' over to the Circle Bar to see you an' her mother. An' I won't have to buy none." He grinned broadly, holding out a hand toward Thompson, while Mrs. Lynch smiled. "Father-in-law, ain't we goin' to get your blessin'?"

Thompson turned and slowly surveyed the circle of grinning punchers.

"I ain't sayin' nothin'," he said, as he slowly slipped down from his pony and approached Mrs. Lynch. "What's botherin' me is this: When I asked you the day I give you your time if there was an understandin' between you an' Jane, you

said there'd never been anything said between you in words. I reckon you lied about that?"

Lynch leaned over and kissed his wife full on the lips. "What's the use of talkin', anyway?" he said.

THE MOTOR CAR'S SPARK OF LIFE

BY HAROLD WHITING SLAUSON

THE spark is to a gasoline motor what his heart is to a man, and to the ignition system can be traced many of the ills to which an automobile is heir, from a complete "balk" to intermittent skipping and muffler explosions. Delicate as much of the ignition apparatus may be, however, the average owner can make his own replacements and adjustments, and the results, measured in terms of personal satisfaction and improved running on the part of the motor, will more than compensate for any time or trouble that may be spent on the job.

Gas engines of the early days were designed with the "hot-tube" system of ignition, which, although it produced combustion in the cylinder, was bulky and incapable of retard or advance, and was in no way suited for use on an automobile motor. The invention of dry batteries solved the difficulty to a certain extent and made possible the use of electric ignition on practically every gas engine, and although storage batteries and magnetos are improvements that have since replaced the earlier forms of current supply to a certain extent, nearly all of the old cars and many of the new machines are equipped with modern dry cells.

The average dry battery, when new, should give a current of from twenty to thirty amperes, and should have a pressure of $1\frac{1}{2}$ volts. These measurements may be made by means of a pocket volt and ammeter, which should be part of the equipment of every autoist whose car

uses dry batteries, and tests should be made frequently. When any battery fails to deliver more than six or seven amperes, that cell should be discarded, as it will serve only as resistance in the circuit and will do more harm than good.

The cells should be connected in series; that is, with the positive of one wired to the negative of the next, and so on; in this manner the amperage of one and the voltage of the total set will be obtained. Six cells to a set have been found to give about the best service, and if two sets are used, each on alternate trips, one will be given a chance to recuperate while the other is at work. A dozen batteries used in this manner will last much longer than would be the case were one set switched on until worn out and then the other connected in its place.

It is almost impossible to determine the length of time that a set of dry batteries can be used, as the life of the individual cells will vary to a great extent, but when connected in the manner described above, a dozen batteries have been known to run a car over five thousand miles. This is no criterion, however, as the next set, used under almost identical conditions, may run out before the five-hundred-mile mark has been passed. It should be remembered, when testing old batteries, that it is the amperage that will be reduced, while the voltage of each cell will remain practically constant.

Those of us who remember demonstrations in the physical laboratory in high school or college will call to mind the experiment with frictional electricity

in which a current was made to pass from one point to another through an air space several inches across. We were told then that the resistance of the air was so great that a pressure of about twenty thousand volts was required to force a current of electricity across a gap an inch wide. This means, then, that the ordinary high-tension current, as used in the ignition system of the jump-spark motors, has a pressure of from ten to twenty thousand volts, for the spark will often jump an inch in the open air.

The increase from the nine-volt current at the batteries to one of several thousand at the spark plug terminals is brought about by the "step-up transformers," or coils, generally located on the dash of the car. Each coil consists of two windings, one of coarse wire, known as the primary, through which the current from the batteries passes, and the other called the secondary, which consists of many turns of fine wire. The two windings are insulated from each other, but the current passing through the primary "induces" another current of a high voltage in the secondary.

This voltage bears a relation to the pressure of the primary current, and is proportionately higher as the number of turns in the secondary is greater than those in the primary winding. There is a corresponding decrease in the amperage, or amount of current, however, so that a current from a set of six dry batteries, when transformed to a pressure of ten thousand volts, would be reduced in amount to about $\frac{1}{250}$ of an ampere. Although a current of this nature can make itself felt most decidedly, it is absolutely harmless so far as physical injury is concerned.

In order that this current shall be induced in the secondary winding, it must be interrupted so that it will "pile up," or form a "surging," as it were. These interruptions are brought about by the vibrator, or interrupter, which is placed in the circuit, and is generally located on the top of the coil. An iron core, around which the coil is wound, becomes a temporary magnet when excited by the current, and this pulls down the armature, or vibrating tongue of the interrupter.

This armature is so arranged that the

current is broken as soon as it is pulled down, and when this happens, the iron core loses its magnetism and the vibrator springs back into place, where the connection in the circuit is reestablished and the same operation is gone through with again. The same principle is applied in the design of the "nonvibrating coil," but in a transformer of this type, the circuit is broken but once for each spark at the plugs. The vibrating coil, on the other hand, interrupts the current so rapidly when the connection is made through the timer, that a pronounced buzz is set up that can often serve as an indication of the proper action of this part of the ignition system.

Curing Imperfect Contact

There is a tendency for a small arc, or flame, to be formed at the points of contact on the armature each time the circuit is broken, and this results in the generation of a considerable amount of heat. Consequently, small platinum buttons, which have high heat-resisting powers, are placed at the points of contact between the armature and the frame against which it rests and through which the current passes. Although these platinum points will withstand a great amount of heat, the continual formation of the slight electric arc will eventually pit them and make perfect contact impossible without a readjustment.

It is this imperfect contact of the vibrator, due to pitted or worn platinum points, that is often the cause of irregular running of the motor, even when the spark plug, in the open air, seems to deliver the required blue-violet flame. By removing the armature, or vibrator, and the contact screw against which it rests, the platinum buttons, or nubs, may be smoothed over with a piece of fine emery cloth, thus removing all pit marks and corrosions. This will admit of perfect contact when the armature and contact screw are again placed in position.

In replacing these parts, care should be taken to make certain that the two platinum points "register," or are set so that one will have its entire surface directly against that of the other when the armature assumes its normal position. The

adjustment of the tension of the armature and the set screw to which the contact screw is attached is an important one, for upon this depends not only the amount of arcing that will result when contact is broken, but also the quantity of current used for each spark and the consequent life of the batteries.

The adjustments should be made so that the armature will rest about $\frac{1}{8}$ of an inch away from the core of the magnet, and the tension should not be too tight, and yet it must be sufficiently stiff to allow the vibrator to spring back readily with no "lag," as soon as the circuit is broken. When the proper adjustments are obtained, a constant, businesslike buzz will be given off that should not change in tone until the current is stopped. By alternately making and breaking the circuit and noting the readiness with which the vibrator responds, a fairly accurate adjustment of the mechanism may be obtained.

On extended touring, it is a good idea to carry along one or two extra armatures and contact points, provided the car is equipped with the old style of ignition, but these will not serve to repair any breaks in the coils themselves. It sometimes happens that a coil becomes worn out, or "broken down," through excessive use, and in this case rewinding is necessary. As a rule, however, a coil that is burned out is useless, and it is far the better plan to purchase a new one in its place than to spend time and money endeavoring to repair the old.

The vigorous, one-tone buzz from a coil is only an indication of the proper adjustment of the vibrator and good condition of the windings and batteries, and is no proof that the entire ignition system is in working order. In fact, the proper sound will be given off from the coils when there is no spark whatsoever at the plugs, for a short circuit in the wires or at the plug terminals will allow the current to pass through the windings and will operate the vibrator in the ordinary manner. It is consequently necessary to test each plug occasionally by laying it on top of the cylinder and observing the nature of the spark at the electrodes when the circuit is completed through the switch and timer.

Care should be taken not to allow the wire leading to the plug to come too near the cylinder, as otherwise the current will make its return by this route and there will be no spark at the proper end of the electrodes. When the plug is set properly and is in good condition, a bright, blue-violet flame should be seen jumping across the space between the terminals of the electrodes when the circuit is completed. A spark that is not particularly vigorous in the open air may not be formed at all in the engine cylinder on account of the greater resistance offered to the passage of the current in the highly compressed charge, and this must always be taken into consideration.

Length of the Spark

The air space across which the spark jumps should be about as wide as the thickness of a ten-cent piece. Unless the batteries are very strong, a distance greater than this thickness will cause the motor to miss occasionally on account of the high resistance offered to the passage of the spark; while if the electrodes are too close together, a sufficient area of flame will not be presented to the charge to cause perfect ignition.

The exhaust gases from an imperfect mixture in the cylinder, or the use of too much oil of an inferior quality may cause the end of the plug to become covered with a carbon deposit that will interfere with the formation of a proper spark. The same emery cloth with which the platinum points of the coil armature and contact screw were polished may be used to good advantage on the sooty terminals of a spark plug, and by rubbing thoroughly both surfaces across which the spark jumps, much better results will be obtained. But it may happen that the carbon deposit has been collected in the hollow space inside of the plug and has formed a bridge connecting the two electrodes.

As carbon is a much better conductor of electricity than is the air, the current will follow this easy passage from one electrode to the other, and this short circuit will thus prevent the formation of a spark across the air gap at the proper end of the plug. By standing the plug

on end and filling the hollow space with kerosene, the carbon deposit may be loosened so that it can be removed easily with the small blade of a knife, and, simple as this operation may seem, it is often the means of transforming an apparently useless cylinder into one that is the "huskiest" and most vigorous of the entire motor.

With a high-tension current, there is a continual battle between the pressure, or voltage, which tries to find the shortest and easiest way back to the opposite pole, and the insulation of the coil, wire, and plugs, which is endeavoring with equal firmness to confine the electricity within its proper channels and force it out to the end of the plugs where the spark should be formed. When the current wins and breaks down the confines of the insulation, there is a short-circuit formed and a consequent absence of spark at the plug. If this break in the insulation occurs between the two separate electrodes in the body of the plug, the latter is ruined and may as well be thrown away.

Oil, grease, and gasoline are enemies to even the best of rubber coverings or insulations for high-tension wires, and if a bundle of these wires is exposed to the action of the hydrocarbons, it will not be long before a serious "leak" will be found in the secondary circuit. If the high-tension wires run near any metal of the motor, the current will be almost certain to penetrate any partially disintegrated insulation, and consequently the two precautions to be observed in this connection are to run the high-tension wires at a distance of a couple of inches from the motor, and to keep oil, grease, and gasoline away from their coverings.

Inasmuch as there are several causes that would produce imperfect insulation, it is a good precaution to carry a roll of insulating tape in the tool kit. If a leak is found in the high-tension wiring, a few wrappings of the insulating tape will serve to confine the current within its proper bounds for an indefinite period, or until new wire can be obtained.

The most satisfactory and dependable form of current producer for ignition purposes is the magneto. By means of this, a very small part of the mechanical

energy of the motor is transformed into the electric current, and a continuous supply is thereby obtained whenever the engine is in motion. The majority of magnetos, although called "high-tension" machines, generate the current at the low pressure of from nine to twelve volts and then step this up to the required voltage by means of a coil, as in the case of dry or storage batteries.

High Tension Magnetos

Some magnetos are manufactured, however, in which the step-up windings of the transformer are included in the rotating armature of the machine itself, and these are bona-fide high-tension magnetos, as the original current is generated at the proper voltage without the intervention of a dashboard coil. Most of these magnetos of both the so-called and bona-fide high-tension type belong to the alternating-current class. That is, there is no constant flow of the current in one direction, and the positive and negative poles are continually changing from one terminal to the other.

Inasmuch as the spark will only be formed in machines of this type when the armature of the magneto is in a certain position, the magneto must be connected to the motor by means of positive gearing in order that the relation between the armature and pistons of the engine will always be the same. If there were no positive connection between armature shaft of magneto and crank shaft of motor, the spark might be desired in a cylinder at a time when the armature was in a position at which no current could be delivered. Consequently, it is out of the question to consider attaching an alternating current magneto to a motor by means of belt or friction drive.

If it be desired to attach a mechanical current generator to a motor not already so equipped, and if there is no room for the installation of a gear that will mesh with any of those driving the cam, timer, or pump shafts, the direct-current magneto will solve the difficulty. This is a magneto having a special form of armature and "commutator," by means of which a constant flow of current is maintained in one direction, thus forming

well-defined positive and negative poles in the circuit. Such a magneto will form a spark when the circuit is closed at any position of the armature, and it may consequently be driven with no constant relation to the speed of the crank shaft or position of the pistons necessary.

This, then, is the machine that will come to the aid of the motorist who desires to convert his car into an automobile having magneto ignition, and in some types the installation of such a system is very simple. Magnetos are built that are driven by a belt from the front of the motor, but probably the most satisfactory forms are those that are connected to the fly-wheel of the engine by means of a friction pulley. In the latter case, the magneto may be placed by the side of the cylinders of a vertical motor, or on the crank case if the engine is of the horizontal type, and the automatic governing arrangement used in connection with the friction pulley will prevent the armature from being driven beyond its most efficient and safest speed.

With the ordinary form of magneto is generally embodied both the timer and distributor, the latter of which makes necessary the use of but a single coil for any number of cylinders. With the ordinary forms of battery ignition, a separate coil is used for each cylinder, and the timer is driven by a shaft geared to the cam shafts or crank shaft of the motor. There are, however, several satisfactory distributors which enable but a single coil to be used for any number of cylinders, even when battery ignition is employed. But, whatever system is used, the timer will need to be cleaned occasionally with gasoline or kerosene and repacked with clean oil or grease.

The brushes and commutator should be wiped thoroughly, and care should be taken to see that there are no rough corners or edges which will come in contact with any moving part. In old motor cars, the timer may have become so worn that the spark will not occur at the proper point in the travel of the piston, and in this case the ignition should be retimed. This is not a particularly dif-

ficult operation, and it can be performed in a comparatively short time, as follows:

Set the timer handle in its central position and place the spark plug on top of the cylinder, so that the time at which the circuit is closed can be readily observed. Insert a long-handled screw-driver or iron rod in the spark-plug opening and turn the starting crank until the rod is raised as far as possible, indicating that the piston has reached the top of its stroke. If the switch has previously been thrown on and the timer is properly adjusted, the spark should occur at the top of the stroke.

It should be remembered, however, that the spark only occurs at the top of every alternate stroke in a four-cycle motor, and consequently it should be made certain that it is the power stroke on which the test is being conducted. If the spark occurs too early or too late, the set screw securing the commutator to the timer shaft should be loosened and the commutator turned forward or backward until the connection is made at the proper time. The fly-wheels of many motors are now marked to indicate the position of the crank shaft at which ignition should occur in the various cylinders, and in this case the spark plug will not need to be removed in order to determine the top of the stroke of each piston.

Although a good magneto will stand a great amount of hard usage, it is in reality a delicately adjusted and finely constructed instrument, and it is not recommended that the amateur should endeavor to make repairs. The only attention a magneto should require is the application of a few drops of oil to the armature bearings once every five hundred or a thousand miles, and if any trouble should develop from other causes, it is far better to return the machine to the factory for inspection than to run the risk of having it utterly ruined by intrusting its overhauling to anyone but an expert. In fact, the motto of every manufacturer of high-class magnetos is, "If any trouble develops, return the instrument to the factory immediately."



A TEAM OF FANCY DRAFT HORSES. ALL FOUR ARE WELL-BUILT, ACTIVE, AND EASY IN THEIR MOVEMENTS, WITH GOOD LEGS AND FEET WHICH ARE KEPT WELL UNDER THEM. THE FREEDOM FROM LONG HAIR ON THE LIMBS, WHICH ARE UNTRIMMED, IS NOTICEABLE.

DRAFT HORSES IN AMERICA

BY DAVID BUFFUM

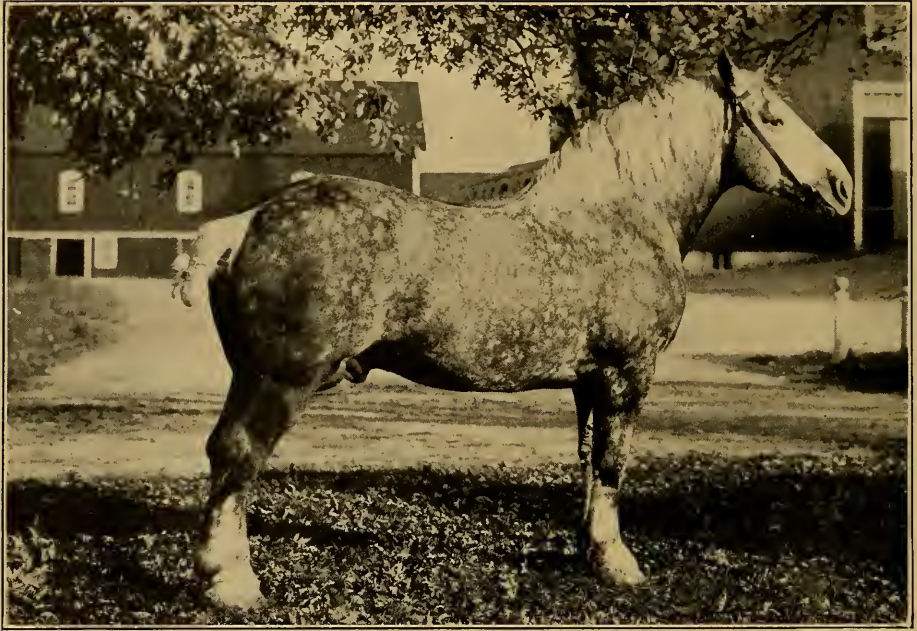
Illustrated with Photographs

THE draft horse, more than any other, is an evolution—or, more properly speaking, a modification—of the horse as nature formed him, brought about by the necessities of man and his skill as a breeder. He is a far greater departure than any other from the original type. For the horse, in a state of nature, is never very large; he is formed for speed and for living on a grass diet, and his first adaptation to man's uses was doubtless in the carrying of comparatively light burdens and in traveling with a speed rather greater than less than that which he first possessed.

But the draft horse has little speed; his chief use is in the moving of heavy burdens, and he is more dependent than other horses upon a grain diet. He is also so much larger and of such different characteristics and general appearance that, when compared with a horse of racing or carriage blood it is difficult to realize that both sprang from the same source.

This striking difference between the draft horse and all other types must always be considered if we are to understand fully his possibilities and limitations. In all other types, however modified to suit such different uses as riding, driving, and racing, the development has been mainly along the lines of the animal's natural traits and qualities—as his speed, endurance, and beauty of contour. Even in coach horses, which have often to pull a considerable load, this holds true. But the draft horse is so modified as to serve a totally different purpose from that which nature intended, and size and strength, rather than speed, endurance, and grace of outline, have always been the chief things aimed at in his development.

This great change is very often ascribed wholly to the art of man. But it is well to remember that the art of man alone, without the right environment, could never have brought it about. The draft horse is peculiarly the product of the temperate zone, and then of only its comparatively level and fertile sec-



GRAY PERCHERON STALLION, OWNED BY W. S., J. B., AND B. DUNHAM.

tions. In the far North, in a mountainous country, or in the tropics, his development would have been impossible; nor can he, even now, be bred in such regions and made to retain his standard size—a fact that should always be kept in mind by all who contemplate breeding him.

Now, in departing so far from the purposes of nature, in bringing about a change in the animal in which not only the skill of man, but the influence of soil and climate, have been pressed into service, there have been certain great and unavoidable losses—for it must be remembered that the loss of grace, of activity, and of endurance at other gaits than the walk, have all been incidental, and were not matters of intention with those who developed him. It was simply that, if all these things had been considered, it would have taken a great deal longer to breed him to his present size, if it could ever have been done at all; and so, in making size and strength always the chief aim, much had to be sacrificed, and other qualities were lost along the way.

With his increase of size also came a greater coarseness of structure, most no-

ticeable, perhaps, in the feet, which never average as good as those of road horses. But the defects of conformation we so frequently see in draft horses, such as upright shoulders, long backs, drooping rumps, and ill-proportioned limbs, were never an evolutionary necessity; they came about through the insane striving of the breeder for great size, to the sacrifice of everything else, and should not be tolerated in a draft horse any more than in any other.

With these facts in mind, we can better judge what a good draft horse should be. The best draft horse is the one that, with the needful size and strength for an animal of his type, is most truly a horse, and not a lumbering equine monstrosity. He should be active and easy in his movements, of a cheerful, lively temperament, and compact and handsome in build. As regards the points of his conformation, there is a very common idea that he should be judged by a different standard from that which is applied to road stock. But, if examined critically, the well-formed draft horse will be found to possess the same points of excellence that characterize a good road horse, combined, of course, with



TWO BELGIAN STALLIONS OWNED BY W. S., J. B., AND B. DUNHAM.

those modifications of conformation which the purpose for which he is intended have made necessary.

To put it in a little different way, he should be judged first as a horse, and then as a draft animal. For instance, the draft horse is wide in the chest and his legs wider apart than in a good carriage horse. But, *in addition to this breadth*, he should have the depth of chest that is a good point in all horses. He should also have the strong loins, short back, and slanting shoulders that go with all good horses, and his limbs should be well formed, clean, and flat. That they cannot be as clean and flat as those of a thoroughbred signifies nothing, and is no argument against the standard to be applied, for again the type of horse must be taken into consideration and the limbs as clean and flat as his greater coarseness of fiber will admit. It is needless to say that a horse, of whatever type, should be homogeneous throughout, and the limbs of a thoroughbred under a draft horse would be sadly out of place.

It need hardly be said that in the raising of draft stock it is always most profitable to produce the best. For, barring the greater cost of good foundation stock,

it costs no more to produce a good horse than a poor or indifferent one, and his value is much greater. In fact, mediocrity in horseflesh is a thing that there is little profit and no interest or satisfaction in producing. The latter consideration can no more be ignored by intelligent farmers than the former, for the production of the best draft horses, like the best of any other kind, calls for skill and attention to detail and knowledge of the principles of breeding—matters that are always of absorbing interest and that bring pleasure as well as profit into the business.

Breeders of road stock sometimes speak slightly of the skill required to produce draft animals, but every intelligent breeder who has raised both kinds knows that this contemptuous viewpoint is unjust, and usually arises from not realizing the fact that the production of the best of anything, whether road or draft horses, or oxen or pigs, or fruit and vegetables, is never easy. It cannot, of course, be denied that the road horse is the higher type of the two. But his production is also a matter of greater risk and anxiety, and more care and pains are required for his proper breaking and

training. Not all men have the right qualifications for raising him successfully. To a great many farmers the draft horse, with his lesser liability to accident, his more even disposition and temper, and the greater ease with which he can be broken and fitted for market, offers a more inviting field.

Draft Horse no Fool

I would not be fair to the draft horse if I did not mention one matter in which he is very often misjudged—his intelligence. A very common impression among those who are not acquainted with him is that his tractability and the ease with which he is usually broken to harness are owing rather to a sort of ox-like docility than to his ability to understand what is required of him. But in a life-long experience with horses of all kinds, I could never perceive that the draft horse was one whit less intelligent than other equine types.

Indeed, if there is any difference, it is the other way, for the draft horse, being by temperament more free from nervous excitability, his mind is usually in better condition to absorb instruction and to comprehend what his master requires of him. Fire-engine horses, which, though not of the most pronounced draft type, are, nevertheless, much more of the draft type than any other, are a good exemplification of this.

The farmer who wishes to raise draft stock has two distinct ways open to him, and both are good. If he has good judgment and a right understanding of the requirements of the case, he can select large, handsome mares of unknown breeding and breed them to a pure-bred draft stallion. It is highly important that the stallion be strictly pure-bred, a good representative of the breed to which he belongs, possessing, individually, good points throughout.

A great many very fine draft horses are produced in this way, and it should be remembered that, when sold for other than breeding purposes, pedigrees count for little. The horses sought for pulling a coal truck or a fire engine must be, *individually*, what is wanted, and if they fail in this vital requirement, the fact that

they are Percherons or Clydesdales will not help them one iota. In fact, all geldings, of whatever type (and more than half of the horses sold in the market are geldings), must stand solely upon their individual merits, and mares that are used in the same way must be judged very largely by the same standard.

But, while this holds true as far as stock that is sold in the market is concerned, it is blood that tells in its production, and the farmer who can afford to buy pure-bred stock on both sides may be sure that it will prove a good investment. Apart from the chance that this gives him to sell some of his stock for breeding purposes, it makes him more certain of the quality and uniformity of all his stock than he can ever be when using mares of unknown breeding.

In buying pure-bred animals, however, he should never depend too much upon the mere fact that they are pure-bred, but should select them with just as much reference to their points as individuals as if he were buying common stock. Failure to do this will surely result in disappointment—and disappointment, too, of a peculiarly heart-sickening kind; for there are few more depressing agricultural sights than an animal having a long, recorded pedigree, and yet failing in the very points that such distinguished lineage should promote. It is true that the progeny of a pure-bred animal that has not the best of points will frequently revert or "take back" to ancestors that had better ones, but to depend upon this possibility is taking much too long a chance. The reversion, too, is just as likely to be to inferior ancestors as to superior ones.

Animals that are themselves individually good and that also trace back through individually good ancestors are the kind to buy for breeders. For it will be readily seen that, however good a breed may be, if care is not exercised in the mating in each generation, the offspring will, as a rule, fall below the general average, and the breed will deteriorate.

It is hardly my place here to say which of the draft breeds is the best. The Percherons are the greatest favorites, and it may be doubted if there is any better breed. But there is no reason to



THE TWO OUTSIDE HORSES IN THE TEAM REPRESENT A VERY FINE TYPE OF DRAFT HORSE. THEY ARE COMPACTLY BUILT BUT ARE FREE FROM CLUMSINESS, EITHER IN APPEARANCE OR ACTION. THEY HAVE GOOD FEET AND LEGS AND CLEAN, LIVELY LOOKING HEADS.

believe that there are not others equally good; other things being equal, the breeder had best be guided in his choice by his personal preference. But, before buying, he should carefully examine the stock that is in keenest demand for practical purposes in the open market, and see if the breed of his choice conforms to it in characteristics and general type.

I would also caution all against breeds that are excessively hairy on the legs. Not only is this an unsightly and unequine feature, but it serves no good purpose, and—what to the breeder is still more to the point—it is unfashionable in the market. For the fashion in draft horses has improved of late years, and the fancy teams that we see in the cities are

more trappy in their movements and look more like horses and less like pigs or elephants than those of a few years ago.

It is the fashion to have draft horses excessively fat when offered for sale in the market. So universal is this custom that there seems to be no help for it, though it is greatly to be deplored. It serves no good purpose, as far as the use of the horse is concerned, for this soft fat, which is put on when the horse is idle or practically so, must all be worked off and a good, hard flesh worked on before he is of much use for hard service. It also conceals, to some extent, bad points in conformation, and a pair of horses that are quite deficient in good

points, if only of large size and closely matched, will, if excessively fat, often sell very well in the market.

This is not as encouraging as it might be for the man who is taking pains to raise good ones, but he may console himself with the fact that, however good a disguise fat may be, no amount of it can make a poorly put up horse look quite as well as one that is well formed and "horsey," nor can he, any more than his competitors, afford to despise such factitious aids as may make his horses sell better; condition, grooming, close matching, and so handling his stock that it will "show well," all count. But, other things being equal, the reward is, as it should be, to the man who raises the best horses.

All of our breeds of draft horses, without exception, have been imported from European countries; not one has been developed on American soil. This, in view of our achievement in the development of the American trotter as a distinct breed, may at first seem strange, but the cases are by no means similar. All through the earlier years, and until a comparatively recent date, in this country, there

were very few horses bred expressly for draft purposes, and the majority of those that were needed for heavy work were simply selected for their size and strength from the ordinary rank and file in the market. Thus a great many of them, except in size, did not differ very greatly from the road type, and among them were often found many very excellent roadsters.

The finest draft teams of forty years ago would look light and of decidedly different type if placed alongside of our best specimens of draft stock at the present day. When heavier horses were needed, we found in the European breeds what we wanted, all ready-made, and there was no need, as with our trotters, to develop a breed of our own. There is still room for much improvement, however, and as the true standard to which the draft horse should conform becomes more fully realized by breeders, the raising of stock of this kind will doubtless attract a greater degree of skill and attention, and we may reasonably expect to see more representatives of the draft horse as he should be—a draft animal, but still a horse.



HOW TO FISH A TROUT STREAM

BY SAMUEL G. CAMP

Illustrated with Photographs by the Author



ASSUMING that the prospective trout fisherman is properly outfitted for fly casting for brook trout, and, to some extent, familiar with the correct method of casting; and further assuming that he has arrived at the chosen waters where, even if the ouananiche is not leaping crazy for the fly, there is the possibility of taking a fair number of brook trout, there remains the rather important question of how to go about it. As a matter of fact, there are several methods of procedure, all calculated to produce fairly satisfactory results, but some, it would seem, to be properly preferred on the typical trout stream and the average occasion.

First of all one must decide whether to fish up or down stream. This is a pretty important question and one into which enter a large number of deciding factors, too many to discuss fully here. It may be said safely that the custom of most seasoned American fly fishermen, when fishing the typical swift-running trout streams of this country, is to fish downstream. Latterly, as the result of the taking up to some extent by American anglers of the English practice of dry-fly fishing, upstream fishing is done here—and positively advised—by those who have perhaps allowed their enthusiasm for the dry-fly method to blind their better judgment. Downstream fishing was practiced and advised by such men as "Thad" Norris, William C. Harris, W. C. Prime, and other veteran anglers and angling writers, who wet their flies in many and widely separated waters; and I am strongly inclined to believe that this, as a rule, is the best

method to follow on the average trout stream.

The swift-running stream should always be fished "down." However, if the stream is a placid and slow-running one, with only here and there short reaches of fast water, it may properly and, on occasions, even preferably be fished "up," as an instance when the water is very low and clear. In any case it is always well to fish a pool from the foot as well as from the head.

But fishing downstream does not necessarily mean that the angler should cast the flies always in the direction of the current; in fact, that is the very thing to be avoided. The best way to fish the flies is to cast across the current of the stream. Wade slowly and quietly down the stream and cast flies diagonally across it—if the stream is a very wide one cast straight across at right angles to the current—toward the opposite bank.

Then, holding the rod in the right hand and the line in the left, the left hand grasping the line about midway between the reel and the first rod guide, allow the flies to be swept downstream by the current practically in a semi-circle, keeping a taut line by stripping it gradually in through the guides with the left hand, and clipping the line stripped in against the handgrasp of the rod between the first and second fingers of the right hand. Fortunately, this is not half as difficult and complicated as it sounds, although it does require some practice; and it is the very best way to handle the cast of flies in the average stream.

A closely approximate simulation of the appearance and action of the natural fly by the artificial is, of course,



BROWN TROUT OFTEN LIE IN THE EDDIES ON THE UPSTREAM SIDE OF A BOULDER.

the theoretical basis of fly fishing for trout—this is not so as regards certain bass and salmon flies—and is, as far as possible, the end to be attained. The fly caster's success on the stream is in direct ratio to his skill in nature faking with a trout fly. Wherefore the angler should cast across the current, when wet-fly fishing downstream, and should never—if he believes at all in the eternal fitness of things, and, what is more to the point, if he would like to catch a few good trout—cast straight downstream and then drag the flies up against a current which would defeat the efforts of the best canoeman who ever handled a paddle, to say nothing of the feeble struggles of a helpless insect.

The beginner at fly fishing, possibly mindful of the fact that in imitation of the natural insect lies the fly fisher's success, but generally at a loss as to just what constitutes exact imitation of the actions of the natural fly on the water, usually pursues the worst possible course in managing his flies by "skitter-

ing" or "buzzing" them over the surface of the stream, thus, as it seems to him, imitating in the most highly satisfactory manner the frantic efforts of a shipwrecked insect to escape a watery grave. Not only will the beginner skitter the flies across the current, but he will often, sometimes religiously at every cast, drag them directly upstream as well; it seems hardly necessary to say that the natural fly is rather rarely observed to do anything of the sort.

If the next time the novice goes fishing he will take pains to note the way of the natural fly on the water, he will discover the fact that usually the natural fly floats with the current; while the wings may flutter, the fly always goes with the current, taking the natural trend of the stream, sensitive to each little side-eddy, eventually finding lodgment in some patch of floating foam, some quiet little bay under the bank, or sometimes it will succeed in taking wing again.

The moral of all this is to allow the



A GOOD PLACE IS WHERE THE STREAM HAS WASHED THE SOIL AWAY FROM TREE ROOTS.

flies to float naturally with the current, with the least possible "drag" or restraint from the line consistent with a line sufficiently taut to take immediate advantage of a rise, and to avoid as a plague any perceptible and pseudo-imitative twitching and fluttering of the flies. The fly caster cannot imitate the fluttering wings of the natural fly as it follows through the current, but he can imitate, and very closely, the floating or submerged body of the fly in both action and appearance.

If the angler casts with the right hand, it is always well to keep to the left bank looking downstream, as consistently as possible; of course, if the casting is done with the left hand, he should wade down along the right bank. This is in order that the back cast may be over the water rather than over or in the direction of the brush of the stream side, thus eliminating to a very material degree the chance of hanging up the flies. This, naturally, does not apply to the ambidextrous fly caster. Wade

slowly, disturbing the stream bottom as little as possible lest the current carry down warnings of your advent, and keep out of sight. It is axiomatic that two things are fundamentally imperative for resultful fly fishing, viz.: Keep your temper and keep out of sight. Watch the back cast very carefully and do not try to cast too long a line.

Fine tackle and ability to cast exceedingly well, also due familiarity with the best stream fly-fishing methods, are of no possible practical use unless the angler has a fair working knowledge of the habits and habitats of the brook trout. Even as the still hunter, who, although a good shot at a target, knows little about the habits of the game he is pursuing can never be successful except by virtue of chance and good luck, so the fly caster, however skilful, who lacks fish sense, cannot hope to catch a trout save on an occasional and exceptionally lucky cast. Luck, indeed, is a factor in fly fishing quite as much, possibly more, as in other outdoor sports,

but there is positively no luck, no element of chance whatever, in the way an expert fly caster "spots" a likely looking trout "lie" and proceeds forthwith to make connection with the resident thereof.

Our native trout, the speckled brook trout, the brown trout, and the rainbow trout, all are fast-water fish, instinctively seeking the rapids and riffles and the pools below the falls and swifter reaches where the water is highly aerated. When found in the stiller places, such as quiet pools at the foot of rapids and falls, they will usually lie at the head or foot of the pool near the inrush of the falls or rapids above or in the increasing current at the outlet.

Only Little Ones in the Riffles

Early and late in the season only fingerlings, as a general rule, will be found on the riffles. When the stream is still very cold, while "snow broth" is still running and for a little time thereafter, the best fish are usually taken in the stiller and deeper reaches of the stream. Late in the season also, when the water has grown very warm, the trout seek the deeper and cooler portions of the stream where there are spring holes and at the influx of little "feeder" brooks whose waters are of a lower temperature than those of the large rivers.

In mid-season fly fishing the riffles is at par. At this time one should fish all the water and with all possible thoroughness, drifting the flies over every eddy and whirl in the current which appears as if it might hold a trout; it is almost impossible to describe such places, but the seasoned fly fisherman will recognize them at a glance. Where large boulders stand out above the current, work the flies over the still places just below them. Brown trout often lie on the upstream side of a boulder rather than in the lee below. Other good places for trout are where the stream has washed away the soil from the roots of trees, or where it has worn out a cave beneath an overhanging bank; also in the vicinity of submerged logs and brush and where, in the bends of the stream,

"flood trash" and patches of floating foam collect. Remember that the hardest places to fish hold the best trout.

Trout habits and the best ways to fish for trout with the fly are more or less matters of locality. For this reason it is always the best plan when fishing a new stream to seek the company and advice of some one of the local angling talent. Often this will save the angler on strange streams from vainly whipping by the hour waters locally well known to be barren of trout; sometimes, as a result of various conditions such as pollution of the stream, or over-fishing without restocking, the very best-looking water is at the same time the very worst place to fish. One should also take the advice of local fly fishermen—if he has reason to believe that they are men of experience—in the matter of what flies to use both as regards pattern and size.

Other things being equal, whether or not the fly caster will have much success will depend measurably upon the flies he elects to use, and in what manner they are fished. The two extremes in the methods of presenting the flies to the fish are represented by the English method of dry-fly fishing, in which an artificial fly dressed in exact imitation of some natural insect, with erect wings and waterproofed with paraffin, is cast dry, that is, floating above a trout which has previously been seen in the act of rising to the natural fly, and the method of fishing the orthodox wet fly considerably submerged, say, from three to ten inches. Between these extremes are numerous variations, the normal one, of course, consisting in fishing the wet fly practically floating or only a little submerged.

Early in the season, while the water still holds the chill of winter and the stream is fairly high, it always pays best to fish the flies somewhat submerged. At this time the angler should cast across the direction of the current, as above detailed, and allow the flies to go with the stream without endeavoring to keep them on the surface; this will result in their sinking from three to twelve inches, the depth varying according to the swiftness of the current.

This is by far the most effective meth-



IN MID-SEASON FLY FISHING THE RIFFLES IS AT PAR. THE PHOTOGRAPH SHOWS THE METHOD OF USING THE LEFT HAND TO STRIP IN THE LINE.

od of fly fishing when at any time the stream is high and dark colored and the water is low in temperature. Under these conditions trout will take a submerged fly when nothing at all can be done by surface fishing in the usual way. Fairly large flies should be selected for this sort of fishing, at least number eight, and they should be bright in color, flies, such as the coachman, silver doctor, Parmachene belle, "Wickham's Fancy," and others having some

striking and easily seen color in either body or wing.

When the stream is normal as to stage of water, temperature, and color, a coincidence of favorable conditions, by the way, not of very common occurrence, surface fishing with wet flies of average size and subdued coloration, the various hackles and palmers (the latter are to be preferred, as the method of tying the hackle along the shank of the hook causes the fly to float better), the

cow dung, Beaverkill, Cahill, queen of the waters, and others, is most successful.

When the season is nearing its close and the streams are low with a correspondingly high temperature and the water is very clear, the only consistently successful fly fishing is done with either the very smallest sizes of wet flies, midges, tens and twelves, fished fine and far, or with dry flies. Very fine leaders must be used, and the flies should be of modest coloration, grays and browns, and should be fished dry with the least possible submergence.

Strike at the first suspicion of a rising trout, not too strenuously but quickly, with a snappy backward motion of the wrist. If the angler strikes so quickly as to take the flies away from

the fish, and this occurs very infrequently, at least the trout will not be pricked, and in all probability will rise to a subsequent cast. But if the strike is delayed the fish will drop the fly on discovering its artificial nature and will not come again.

Once a trout is fastened play him easily, not forcing the fight until he is fairly well played out, meanwhile, if possible, getting below the fish so that when the time comes to use the net the current will float the trout over the net and not away from it. Then kill the fish at once, preferably, if you are wading, before taking it off the hook. Always kill the fish immediately, both as a matter of prevention of cruelty and for the sake of an orderly and good-looking creel of trout at the end of the day.

POOLS

BY DANIEL IRVING

BY the bridge of the Firehole River,
 Where it goes to the Yellowstone,
 Lies a beautiful, cavernous, amethyst pool
 Paved white with horn and bone.

And far in the hectic city,
 In a canyon of dull brownstone,
 Leans a woman whose cavernous, amethyst eyes
 Hold skull and marrow bone.

Now the bones in the Firehole River
 Sleep deep, and warm, and well,
 But the bones in the brownstone canyon picked
 Rot restlessly in hell.

WHEN THE TROUT ARE RISING

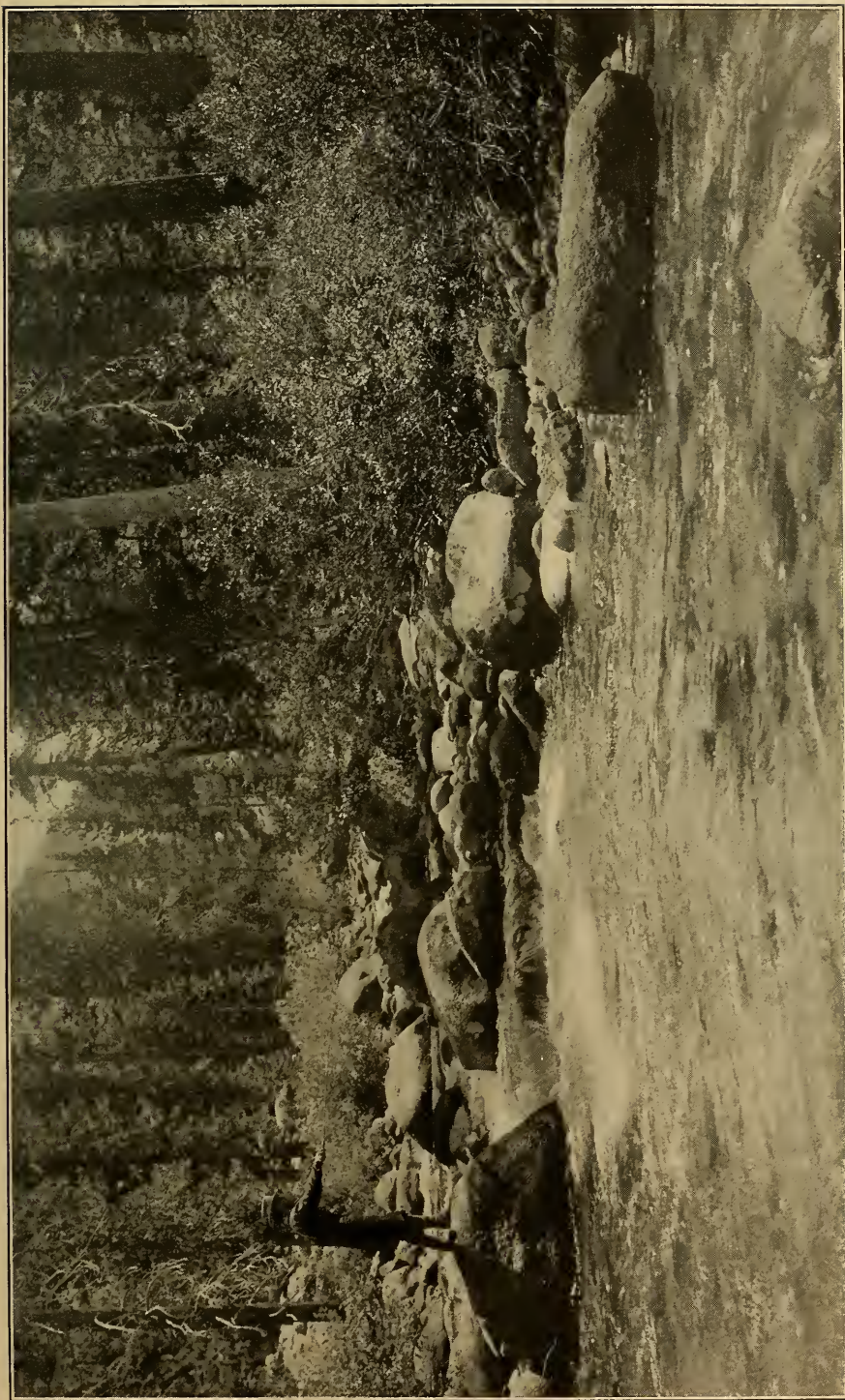
Photographs from W. H. Ballou



TWO'S COMPANY IN FISHING—ONLY WHEN EACH GIVES THE OTHER ROOM
TO CAST AND PLAY.



THE MOST ANXIOUS MOMENT OF ALL IS WHEN YOU STOOP TO SLIP THE NET UNDER HIM. THE LAST OUNCE OF FIGHT OFTEN SPELLS LIBERTY HERE.



A BOWLDER-STREWN BROOK IS AN IDEAL BACKGROUND FOR PHOTOGRAPHS BUT MIGHTY UNCERTAIN FOOTING FOR A STRIKE.



A MOMENT LIKE THIS CANNOT BE MEASURED IN TIME OR BOUGHT FOR
MUCH FINE GOLD.

JACK OTTO, HERO

BY B. W. MITCHELL

WE lolled about in the tent killing time and trying to make discomfort less uncomfortable. The rain and sleet rattled on the tight-stretched canvas. The flaps were thrown back, and in front of the tent blazed a huge fire that sent grateful little thrills of warmth to our chilled marrow. Every now and then Jack Otto dived out into the whirling storm and threw great logs on the blaze. The cayuses stood with drooping heads and dripping backs, the picture of misery and resigned grief. For attitudes of infectious sorrow nothing can equal a cayuse or a rooster in the rain; if you want to be cheerful in a storm, never look at either. They simply radiate woe.

The downpour leaked abundantly from a leaden sky, the gale howled among the balsams, and the clouds descended and blotted out the mountains. Everybody tried to be cheerful by recalling some worse fix he had been in. It's a good method, and I cordially recommend it.

"It's pretty tough to be in a hole when you get yourself in," commented Jack, as we discussed our "worse fixes," "but when some bloomin' ass gets you in, and you have to get yourself out and him, too, it's a blue sight tougher."

"There's no telling," he continued, "what a man can stand until it comes to him. It was more years ago than I care to count, and I was engaged as chief packer for a Government survey in the James Bay country, a continent's width from here. Yes, I've knocked about a good bit up here, one ocean to the other. Now, if you want to find engineers that know it all, get young chaps just out of college and on their first Government job.

"The two we had must have had courses in everything from weather to woodcraft, for we couldn't tell 'em a thing. They had never been in the Big

Woods in their lives, but that didn't make any difference. They even did their own outfitting, and it was weird. I took one look at what they had laid in and then I went at once to the chief, Hurlston was his name, and I said:

"I beg your pardon, sir, but I've been over the stuff and you'll need about two hundred pounds more bacon, and you've no extra socks for the men."

"You're engaged as packer. I'm doing this outfitting," he snarled. "Go and make up the loads."

"I ought to have had sense enough to throw up the job then and there, but I didn't. I got the loads fixed up and we started. We went in from Sudbury early in May, fifteen men all told in the party, including the surveyors in command, twelve white men and three Indians in five canoes. This fellow Hurlston was the chief and his assistant was a youngster named Nuttall, a little decenter and less headstrong, but utterly unfit for any responsibility in the woods. We were in Geological Survey work, and I will say those fellows took us hustling; they knew the professional side of their job.

"We hit up the Little Wahnapiatae River, crossed the Height of Land by a fierce portage over the terrible rock outcrops and dense short timber at the head of Montreal River, and got to where the water ran north. It was all pack-strap work here. Those two fools would take eleven of us, traveling light, and go on their survey duty every morning, leaving only two men to move up all the stuff and canoes and have camp ready for the night. It was grueling work, and we didn't always get through; then we were well cursed by Hurlston, who knew as little about transportation conditions in that country as a cayuse knows about Heaven, never hearing it mentioned to him and being so often consigned to the other place.

"We pushed across some bad muskeg country, wading knee deep in the bog

with hundred-pound packs, till we reached Lake Chanantri. Here the meat gave out, as I'd told Hurlston it would, and we were on the country for game; and there was precious little of it, always the way when you need it most. At one camp we couldn't get what was left of the supplies through the awful muskeg for three whole days, and the fellows nearly starved.

"There were only a couple of rifles in the party, and the best men took them and went off to hunt. The others laid around camp, too hungry and weak to work, and right into camp walked a big caribou, took a look around, and walked out again as cool as you please. It was a heartbreak for those poor, hungry fellows, but the next day, by working twenty-four hours straight, we managed to get up with the flour, and they at least had bannock.

"Instead of turning back, that infernal idiot took the canoes down the Chanantri River and made the head of Lake Abitibi and the Chippewa Indian village there. I'm no quitter, but a train in the Big Woods is like a snake; it crawls slow, and it crawls on its belly; we're all slaves to a pig and a grain of wheat.

"We managed to get some meat in the village after a long pow-wow, and then the Indians took the outfit clear down to the foot of the lake, a hundred and ten miles, to the Abitibi River. We shot down the Abitibi like a streak of lightning; there were forty miles of it flat rapids. No trouble there to get the outfit to camp site by evening; the canoes were always way ahead of the survey. By this time it was near the first of November, and there was frost in the air, and plenty of it. Everything was calling 'Winter' to every man of us except that precious pair.

"They made us cut across country to near the mouth of Moose River, an utterly useless hike. The men were in deplorable plight. We had no socks at all, not a snowshoe, nor any way to make them. The dense forest had torn our clothes from our backs. Our trousers were made of gunny sacks, and it was every man his own tailor. We wore gunny-sack turbans instead of hats and had our feet wrapped in the sacking.

And then that Heaven-forsaken fool ordered us back to the foot of Abitibi to wait for him and Niven, while they went on to Moose Factory. Then I had to talk out.

"Mr. Hurlston,' I said, 'this is madness. Winter is just on us, and if it comes, we're all dead men. We haven't the equipment, and you know it. You can't march naked men through the Big Woods in winter.'

"Shut up, you coward,' he hurled back. 'You don't know anything about the weather. You're only soldiering on your job. There'll be fine weather for a month yet. This is a Government party, and you're under my orders. Get back to the lake and wait. I'll start when I'm good and ready.' And off they went to the Factory.

"We hiked it back to the foot of Abitibi, portaging most of the stuff, for the men were in no condition to track the canoes in those ice-cold rapids. We made it in two days. The weather was still fine, but the stars fairly shot sparks at night up in the black sky, and you could hear the Lights crackle and hiss. Hurlston got into camp on the fourth day.

"Pack up, men,' he ordered; 'we start to-morrow. All in a blue funk now, I suppose.' The factor had probably been telling him a few things, but he couldn't resist being ugly to the last.

"It was fearfully cold that night, and I wasn't surprised, only struck dumb, when I heard Toosa, one of the Indians, call out in the morning, 'My God, lake he freeze; he come snow!' You know how winter comes in the North Woods. One hour it isn't winter at all; the next, you can't see ten yards through the snow. It's all so sudden and so silent.

"Far as you could see over Abitibi it was one glittering crust of ice. The sky was lead-gray, but the silent sift of the snowflakes hadn't started. Then a howling gale came down and broke up the ice, and when the wind calmed, which it did by a miracle on a rising temperature, a dense fog settled on the tossing lake. It was our last chance, and we started out in the canoes, steering by compass and dodging the sharp ice cakes as best we could. The fog was like a blanket, and

when three or four hours out, Toosa, who was paddling one canoe, called to me, 'No go right. Me know. Medicine needle no good.'

"'You stay in line,' I ordered. You see, I was giving orders now; our smart Alecks had reached the end of their string. But you can't order an Indian, and Toosa cut loose with his canoe and two men, following what they call the Indian instinct for direction. Me for a compass; it beats instinct a mile.

"Toosa brought up on an island, where he insisted on stopping, kindling a fire, and wasting precious hours cooking grub. After dinner they pushed out again, and they hadn't gone a quarter of a mile offshore when a sharp pan of ice cut the bow out of their canoe, and they were in the icy lake where big cakes of ice were tossing like playthings. Toosa was drowned, a sort of retributive justice, I suppose, but the two white men gained the island, more dead than alive, made up a fire from the embers of their dinner fire, and dried out. Every bit of food had gone with the canoe, and there they were, marooned on an island in the middle of Abitibi at the outbreak of winter, with neither food nor clothing.

"They stayed three days there, eating roots and twigs and keeping up the fire. Then an Indian happened to come to the island to trap, and took them off, bringing them to the head of the lake, where they fell in with a search party I had sent back in the hope that Toosa had managed to land, for I had held up the retreat to make sure. We were so bad off then that a day or two more would make no difference.

"The reunited party hurried on, traveling by the rivers until even they froze over in the bitter cold. Then in our summer clothing, and little of that, we made toboggans out of the canoes and tramped on in the snow, through spruce and jack pine and hemlock as dense as they can grow, and over frozen muskeg which cut our feet till you could track us by the red footprints. There Fred

Deane gave out. I was in the lead breaking trail, and the fellow in the rear—you know who—left him on the snow to die. When camp was pitched I noticed Fred's absence. I went right up to Hurlston, and I said:

"'Where's Fred Deane?'

"'Fred gave out,' he whimpered; 'he told us he was done, and said just to leave him.'

"'And you did it, of course,' I yelled at him. 'Well, you hear this, Hurlston: fourteen live men pull into the settlements or fourteen dead ones lie here in the snow, unless a man dies in camp. I may be under your orders, but, by the Living God, no man is abandoned alive by any party I am a member of.'

"I and another fellow took the back trail and we found Fred crawling along after us. We brought him into camp at two o'clock that night. Fred was a big, strong fellow, but what made him give out was that he had cut his leg during the summer and the blowflies had got at it and it gangrened. We had hard work to save his leg, even to save him, then; and he hadn't got his full strength back yet. It was a close call for poor Fred, but we brought him in and you bet there was no more abandoning on that trail.

"How we ever made it I can't tell. We were nearly dead from our tremendous toil, from starvation, and from the horrible exposure. But we managed so that nobody got a bad freeze, though frostbites were plenty.

"Just the day before Christmas we crawled—one poor fellow on his hands and knees—into Haileybury on Lake Temiskaming, over ledges and boulders of solid silver we never knew was there—that's in the Cobalt district now, you know, and there's a trolley from Haileybury to Cobalt. It was a wilderness then, all right, but the few little houses at Haileybury were palaces to us."

And Otto, wholly unconscious of the heroism in the tale he had told, plunged out into the storm for fresh logs.



NEW IDEAS FOR THE MOTOR BOATMAN

BY LAWRENCE LARUE

THIS year's motor boat exhibitions have demonstrated conclusively that safety and comfort are the two main points considered in the design of

accessories for the power craft, and the owner should now be able to find "just what he's looking for" to suit his own particular needs. In several devices, the combination of safety and comfort is attained to a high degree, a single apparatus serving the needs of both. This is well exemplified in the small lighting plants that furnish power for the search light that enables landings to be made with safety on the darkest night, and that also supply the cabin illumination, as well.

A small, gasoline motor-driven generator of one kilowatt, capable of supplying current for all signal lights and for a couple of dozen ten-candlepower electric bulbs will be found exceedingly useful on the cruiser that can spare a few square feet of floor space in the engine room for the installation of this compact illuminating plant. The generator is driven direct by a two-horsepower, single-cylinder, two-cycle, high-speed gasoline engine, and by means of a small switch board, any or all of the lights may be used as desired. The addition of a small set of storage batteries in conjunction with the generator, enables the lights to be used when it is undesirable to operate the power plant.

Even though its cockpit does not afford room for the installation of the more pretentious electric generating plant, the small open boat or cruiser need not be without a brilliant searchlight and means of interior illumination, for acetylene gas can come to the rescue in the form of a very compact and easily-operated generator of a capacity sufficient to meet the requirements of even a large

craft. The nuisance of old and half-used carbide has been done away with, and by means of these generators, the very last ounce of the substance may be consumed, even when the lights have been in operation only at long intervals.

This generator is mounted on a horizontal axis set in spring supports and is inverted when it is desired to stop the generation of gas. This inversion breaks the contact of the water with the carbide, and only a small amount of the acetylene, under very low pressure, is stored in the generator. By turning the chamber to its original position, the carbide is again brought into contact with the moist residue, and generation is immediately resumed. One, two, or three units, depending upon the number of lights to be provided for, are mounted upon the single horizontal axis and constitute the entire generating set. A single generator is also made especially for the production of acetylene for one searchlight and one cabin light.

Not only must a motor boat make itself visible at night, but it must be able to make itself heard at any time, and consequently a lusty noise producer of some kind is absolutely necessary. Steam-propelled vessels have always had the advantage over motor boats in that the medium with which a whistle could be operated was directly at hand in the case of the former, whereas the gasoline craft had to depend on a separate power. This difficulty has been overcome by the design of many varieties of electric horns and sirens which can be operated from storage batteries by merely pressing a button.

The man who desires a real whistle for his boat may take his choice of that operated by hand or power. For the small craft, the former type is satisfactory, but the larger cruisers and speedy boats are generally equipped with the

power-operated whistles. One class of these whistles is operated by the exhaust gases taken from the top of the cylinder just after the explosion, and these gases are automatically stored in a tank under pressure, ready for use when the whistle cord is pulled. Another type of power whistle is blown by compressed air stored in a tank by means of a separate pump.

Many a motor boat is afflicted with the ill known as "water in the hull," and the curing of this is to the nautical enthusiast what pumping up the tires is to his automobilist cousin—for both entail about the same amount of back-breaking work. As the power of the motor has come to the aid of the automobilist in helping him pump up his tires, so does the bilge pump relieve the motor boatman of much of the time and trouble of "baling out." Some forms of bilge pumps are attached to the flywheel by means of a friction pulley, while others are a part of the circulating system of the cooling water.

All of these systems operate by means of a rotary or plunger pump, but in a third type, the steam injector principle is applied to suck out the bilge water without the use of any moving parts. The water jacket of the exhaust manifold is tapped and the stream of circulating water between it and the outlet is used to form the suction for the bilge connections. The overflow from the engine circulating water, or all that is not forced through the "injector" with the bilge water, is discharged into the muffler, which is tapped in order to provide for this.

As in all gas engines, the most delicate part of the motor boat power plant is the ignition system. And the man who has been caught out in the rain in an open motor boat will also probably realize that the average ignition system is not amphibious and that water on the spark plug puts as effective a damper on the spirits of the engine as does an empty gasoline tank. But the sight of an ignition outfit consisting of a coil, wiring, and plug entirely immersed in water, with a spark merrily leaping from one electrode of the plug to the other would indicate that the above-mentioned rainy-

day troubles of the motor boatman are at an end.

Such outfits as those that gave this astonishing demonstration are not only waterproof, but they are compact as well, eliminate all high-tension wiring, and require but two connections in the whole system. In one type of this system, the "step-up transformer," or coil, is wound around the spark plug so that the latter is practically embodied in the core of the former. The sparking end of the plug projects from the coil, and this is screwed into the engine cylinder in the same manner as is the ordinary spark plug. A circuit breaker, corresponding to the vibrating armature of the ordinary coil, and the set of batteries, form the only parts of this ignition system that are not combined with the coil and plug on the engine cylinder.

Combining Ignition

Another device similar to that just described combines the coil, condenser, and vibrator in a single waterproof covering that can be attached directly to the spark plug of each cylinder without the use of wires. The electrical connection is made automatically with the tip and shank of the spark plug, and the attachment will fit any standard make.

Spark plugs and coils are not the only parts of the ignition that can be rendered temporarily useless by water, and it is well known that dampness is as disastrous to the life of a dry battery as is excessive use. In order to keep these current generators dry at all times and under all conditions, several forms of battery cases have been devised. These are made in various sizes and will hold from one set of two cells to two sets of eight batteries each. The covers of the boxes are clamped down tightly over a rubber gasket that serves to keep the contents absolutely dry, even when the cases are entirely immersed in water, and all wire connections are made from brass terminals that project through the top and sides of the box.

In one form of battery box, the cells are provided with special screw tops that engage with similar tops that are attached to the lid of the box. These

form one battery terminal, while connection is made with the other pole by means of a brass spring in the top of the box over each cell. Connections between the individual cells are made through brass strips set on the inside of the top of the box, and there is consequently no exterior wiring except that leading to the coils and motor. A special switch can be provided on the top of the box by means of which various wiring arrangements between the sets of batteries can be obtained. By this means, either set may be used separately, or both may be used together, either in the series or in the series-parallel arrangement.

Another form of battery box is intended to be used with any kind of a dry cell of the standard size. This box is filled with a waterproof compound into which holes are moulded to accommodate the individual batteries. The cells are thus separated from each other by a waterproof insulating material, and as each fits tightly in its pocket, the batteries are held in place as rigidly as though they were screwed to the cover of the box. Special wire connectors are used between the individual cells, and the current is conducted to the terminals on the outside of the box by means of brass strips. Brackets are supplied by means of which the case may be attached either to the floor or to the underside of a seat or the deck.

Those who want to know how fast their boat is running may now satisfy their curiosity by referring to their speedometer. One type of this device designed for use on motor boats is operated by means of an inlet pipe in the bottom of the boat. The change in pressure, due to the speed of the boat, is shown on a mercury gauge marked to read in miles per hour.

In order to cut down the number of separate tools required on board and to lessen the chances of losing or mislaying any or all, a special device has been designed which in reality comprises eight separate, solid end wrenches in one piece that will easily fit the coat or vest pocket. This consists of four, flat, thin, solid end wrenches of the same length placed one

above the other and held in position by a centerbolt that passes through a slot cut through the middle of each piece. This centerbolt has a squared shank that keeps each individual wrench from turning, and on its threaded end is screwed a wing, or thumb, nut that serves to keep the four tools held rigidly together when it is tightened.

As the slot through which the centerbolt passes is a couple of inches long, any one of the four wrenches may be slid out from the rest of the nest so that the desired end projects a sufficient distance to be applied to the nut that is to be turned. As there are eight ends of different sizes on the four wrenches, and each tool may be slid to the limit of the slot in either direction, eight sizes of nuts may be wrestled with, and yet only in thickness is the tool larger than a single wrench. A square hole cut near the end of one of the wrenches in the nest serves as a key with which to open or close the valve of a gas tank of standard make.

Another unique type of wrench consists of a pair of adjustable jaws operated by the thumb nut and thread of the well-known "monkey" principle. Opposite the jaws the shank of this wrench is held in an "eye-piece" which is, in turn, mounted in a ratchet joint at the end of a heavy handle. These two joints, the eye-piece and the handle, thus allow the jaws to occupy two different series of positions in relation to the handle. By loosening a thumb nut at the end of the eye-piece, the jaws may be turned through an arc of approximately ninety degrees about their shank as an axis, while the ratchet joint in the end of the handle in which the eye-piece is mounted enables the jaws to be revolved to any position about the eye-piece as an axis.

The ratchet operates in either direction and may be turned on or off by means of a milled nut. It will be seen that, inasmuch as the jaws have any number of adjustments through both a horizontal and vertical plane, independent of the handle, almost any nut can be reached. The ratchet attachment allows the nut to be turned by moving the handle through but a very small arc.

A MIXED BAG

THE YARNS THEY TELL AROUND THE CAMP-FIRE WHEN THE SHADOWS
GATHER AND THE PIPES ARE LIGHTED

PERSISTENT BEARS

THE P. P. (Principal Prevaricator) finished his supper, leaned back against a stump, produced a plug of T. & B., from which he proceeded to shave a liberal amount, stuffed it into his pipe, fished a coal out of the fire, juggled it into the bowl, and heaved a sigh of satisfaction.

"Boys," said he, "that mixup we had crossin' th' river this afternoon somehow reminds me of how I just missed death one time by a hair."

We waited expectantly. The P. P. relapsed into silence, as though his last intention was to relate the story. Finally Harris said, "Well?"

"Oh, yes. I forgot. I was pickin' huckleberries in the mountains below Boisé one summer. One mornin' I was on a steep hillside an' just 'bout had my pail full an' was thinkin' 'bout makin' f'r camp, when I looked up an' see two grizzlies comin' tearin' down th' mountain. They was after me, that was plain, so I dropped my pail and lit out. Drop-pin' that pail was what saved my life, f'r th' bears, bein' fond of berries, stopped t' eat 'em, an' that give me a few yards th' start. Soon as they had finished th' berries they started after me ag'in.

"I was some runner in them days, an' th' way I covered groun' was a caution. The bears kept gainin' on me, though, 'till I come t' a big river an' run out on th' ice. Th' ice was thin an' hel' me up all right, but th' bears broke through an' both of 'em drowned. That's how I escaped."

There was silence for a few minutes, then one asked, "Thought you said you were picking huckleberries. How is it possible for there to be ice in huckleberry time?"

"Huh! Who said anythin' 'bout there

bein' ice in huckleberry time? Them durn bears run me 'till 'way after Christmas."

C. S. M.

WEIGHTING FOR THEM

THE stove at which Mrs. Dode was cooking supper stood in the middle of the room. Cap'n Dode sat in one corner of the room. In another corner, behind the stove, rested the sand box, but Cap'n Dode hit it at regular intervals with ease and accuracy.

It must be admitted that the Cap'n was keen of perception, for he noted the visitor's anxiety for the safety of Mrs. Dode, who was directly on the firing line.

"Don't worry 'bout her," said the Cap'n. "I ain't hit her in forty year, an' if I should meescal'late a leetle, she'd dodge."

Ducks? Sure, Cap'n Dode knew a purty big pile about 'em. But shootin' wasn't as good as 'twere oncet.

"Twenty-two year ago this fall," said the Cap'n, "there was more birds here in this yere bay than there's been all totally ever since. An' most of 'em was black duck at that. Why, boy, there was millions an' millions of 'em."

"But where have they all gone to, Cap'n Dode?"

"Guess we killed the biggest part of 'em off, fer there ain't been no sich swad along since. Anyhow, even if there was, 'twouldn't do you no manner of good now."

"Why not?"

"You ain't got heavy enough shot."

"Number fours, Cap'n. What's the matter with those?"

"Wa'n't no good the year we killed all that swad. We used buckshot, an' the fact'ries up th' city couldn't make

enough to keep us goin', neither. They jest runned clean out o' buckshot, an' we had to quit shootin' for twa'n't no use usin' no smaller size.

"You see," and Cap'n Dode drew a long breath for explanation, "that was a powerful cold year, an' the bay was most all froze up tight, so there was awful leetle feed, and a whoppin' lot of birds to eat it. In course, a lot didn't get no feed nohow, and they was powerful poor. They was so scan'lous poor, young feller, that we had to use buckshot so's when we hit 'em they'd have enough weight in 'em to make 'em fall outen the air. That's what."

P. M. C.

IN A DARK CORNER

A SHORT distance above the mouth of St. Francis River, in the fork with the Mississippi, is a great canebrake, known to all cabin-boaters as "The Dark Corner." It is alive with game, but the growth of cane is so tall and dense that few try to hunt there. Sometimes men venture around the outskirts of the Dark Corner, and the consequence is that men are lost there.

One of the overflow stories, told by way of warning against canebrakes, is about Randolph Wiggins, a reckless sort of hunter who lived in the Forks. Wiggins hunted coons and possums with a firelight on his head. One night he started hunting with others, and when he came to the wire cattle fence beyond which was the edge of the Dark Corner, despite warnings, he climbed over to hunt beyond.

Morning came, and Wiggins did not return. Three days later a man came out of the Dark Corner. He came out at a little clearing on the side of the brake. A woman was at the cabin door. The man went to her.

"Ma'am," he began elaborately, "will you tell me where I am and who you are?"

"Sho! You old fool!" she exclaimed. "Don't you know your own wife, Ran Wiggins? Here I be'n waiting to git some wood cut up for two days!"

"Lawse!" was Wiggins's only comment as he shuffled to the wood pile.

R. S. S.

UNFAIR FIGHTING

THIS is a story of the squire's about a young Irishman, told after a hard day in the Arkansas canebrakes. "He was a lusty, strapping young sapling," said the squire, "only lately come from the old country, and it seems he had never seen a negro. He had heard, though, that they were big, black fellows and great wrestlers. Now it happened that the Irishman took a lot of pride himself in the fact that he had never yet found a man who could put him down at fair 'side-holts,' nor did he believe that a darky could do it.

"I was out working about the stables one day when this Irishman came up on a run. 'Misther,' he said, 'Oi've jist kilt a naygur down in the bush!'

"'What!' I shouted. 'Killed one of my niggers! We'll hang you for this, you infernal fool. Don't you know a nigger is worth a thousand dollars? How did it happen?' I noticed the man looked like he had been in a fight, and some of my blacks were tough customers to handle.

"'Yez can hang me if ye loike,' declared the man, 'but the dommed naygur didn't wras'le fair. I wor coomin' along down forninst the crick, all peaceable loike, whin a big, black naygur stipped out of the cane and waved his arrums at me. "Good marning," I said. "It's a foine day the like." He niver said a worrud—jist danced aboot, wavin' his arrums and grinnin' at me. Thin I understood what he mint.

"'Oh, ho!" I tilt him. "It's a wras'le ye're afther, is it? Will, Oi'm yer mon. Awnly it's got to be soide holts. Oi've niver wras'led back holts since I hoorted me back liftin' fifty stone weight in ould Cark."

"The naygur accepted the conditions be noddin' his head, an' we wint at it. He wor big and strong, but he hadn't the skill of a Dootchmon, an' I thripped him up aisy. We got up to thry it a sicond toime, but the spalpeen grabbed me roight around the neck and comminced hoogin' toight.

"'Lit go! Be done!" I said. "The agramint wuz fur soide holts awnly." But he kip awn hoogin' me toighter and toighter with his big, black arrums.

"Lave awf!" I yilt. "Ye're breakin' the tur-rms. What did Oi till yez about havin' me back hoorted in Cark? Lave go av me or Oi'll take out me knife and stob ye."

"That dommed naygur wouldn't lave go, but squazed me till me toongue stook out. Warse en thot, he raiched over an' bit a paice out of me shouldther. Who iver heard of the loike of thot in a fair wras'le! Jist wanst more I war-reened him. "Have done!" says Oi; but he wouldn't, so Oi took out me knife and let 'im hov it."

"I went down with Pat to see which one of the niggers it was, and found he'd killed a four-hundred-pound black bear."

C. A.

SOME SHOOTING

WHEN the night wind whines about the gunning cabin nestled in the beach hills, the hearts within grow reminiscent.

"The best canvasback shooting I ever had was down off the mouth of Crazy Inlet," said the Parson. "A ripping northeaster was blowing, and I was out on the end of the point alone. The ducks came down-wind along the edge of the shoal, and they were so far away that it was just impossible to kill them outright.

"I could have had a hundred shots that day, they came so thick, but I let a lot of them go by. At dark I had picked up twenty-two birds. Not one of them was dead when I dropped them as they wheeled by, but, boys, I didn't have to shoot a single cripple in the water."

Curley gave the Parson a long look, carefully filled and lighted his pipe, then snorted in disgust, for he was an old hand and he knew that one needed more than a pinch of salt to capture a wounded canvasback in open water.

"Suppose you hypnotized those birds you couldn't kill dead into coming ashore for you to wring their necks?" he grunted.

"No," said the Parson slowly, "they were going so fast that when I knocked 'em down, they'd hit the water and bound up ten or fifteen feet. Then I'd kill 'em on the first bounce with the second barrel."

P. M. C.

THE SIMPLICITY OF COLA

"WHAT simple, guileless folk these Frenchmen are," sighed the tenderfoot, as our Canadian guide withdrew from the range of the camp fire. The naturalist smiled grimly.

"I don't know so much about that," said he. "After you've had a little more experience with them, you'll probably change your mind. At all events, I've met one Frenchman who was anything but simple. He was a Cajun, of Louisiana, a people who, in looks, speech, and habits, are a little closer than first cousin to our Canadian friends.

"The particular individual in question rejoiced in the name of Agricola—shortened to 'Cola' for daily use—and I met him in pursuit of an ivory-billed woodpecker. A friend of mine in Boston needed one to finish his collection, and I had promised to bring him a specimen on my return. Cola lived at the edge of a swamp where I was told that I would probably find the birds, and, after I had explained to him what I wanted, he agreed to guide and lodge me for two dollars a day.

"I spent the first night in a room the size of a closet, and at daybreak I was awakened by the sound of a woodpecker hammering away at the shingle roof overhead. It was a queer sort of an alarm clock, and, in view of my mission, a most appropriate one.

"Now I'm not going to weary you with the details of my search, which was a thoroughly unsuccessful one. Every morning the woodpecker would wake me at daybreak, and Cola and myself would hunt through the swamp till nightfall. I discovered hundreds of common woodpeckers and several really valuable water birds, but never a trace of an ivory bill could I find. After three days I gave it up, and having paid the disconsolate Cola, prepared to bid him an affectionate farewell.

"Ah, m'sieu," said he, "although I told you that the birds were scarce, I did not think that we would be unable to find a single one."

"One was all I wanted," I replied. "I had promised it to a friend, and I hate to disappoint him."

"Then, rather absently, I added: 'I would give ten dollars for a bird right now.'

"'A moment, m'sieu,' said Cola, and, reaching inside for his gun, he disappeared around the corner of the cabin. A minute later there was the sound of a shot, and Cola came hurrying back with one of the finest ivory bills that it has been my good fortune to see. I have suspected ever since that it was the very bird that woke me each morning.

"'Ten dollars, if you please, m'sieu,' said Cola, presenting his prize.

"'And do you mean to say that you have led me through that swamp for three days, when all the time you knew that this bird was in your back yard?' I asked sternly, as I handed over the money. 'Why didn't you tell me at once where I could find what I wanted?'

"Cola smiled shrewdly as he folded up the bill. 'Ah, m'sieu,' he replied, 'in that event I would not have earned those two dollars a day.'

N. G. H.

THE SCARECROW'S VOTE

"'DID I ever tell you,'" Bob Gooding asked, lighting a fresh pipe, "how Governor John Reynolds was fooled by a scarecrow when he came through here 'lectioneering last spring? Of course you know John is running for governor again, against McKinnie, and Mac is holding him a pretty close race. Before an election Uncle John shakes hands with every man he knows, which is everyone in the State, unless there is a newcomer. On this trip the governor had a pair of saddlebags filled with copies of his last speech in Congress, and listening to him read it is as good as a slow mule race when you're not in a hurry.

"The crows had been getting into my patch of early corn, so I made a handsome scarecrow, one resting on a hoe, with arms that flapped in the wind as though it were at work. That scarecrow didn't frighten the birds very much, though, and I was sitting in a fence corner near the road waiting for them with a gun when John came pacing along on his old bay pony. You remember that

John is nighsighted, been reading his speech too much, maybe, and he thought the scarecrow was my Dutch hired man, Willem, the only man in the settlement he had never seen.

"John reined up his horse, drew out his speech ready to read it, and spoke to the bundle of old clothes, busy hoeing away fifty yards out in the field. I was within twenty feet of him, but he never looked at me, though his horse shied at the gun.

"'Good morning, good morning, sir,' said he. 'I am glad to see you setting such an example of industry to our American youths, who are prone to be altogether too fond of hunting and the chase.'

"The scarecrow flopped its arms and still seemed to be hoeing on without paying any attention.

"'Hold on a minute, man,' pleaded the governor. 'Maybe you are unacquainted with me, suh, but I was formerly governor of the State, and am now a member of the United States Congress, suh. Your industry is commendable, most commendable, suh, but your master, I mean Mr. Gooding, will be glad to have you give me your closest attention for a moment while I read to you this extract from my last speech in Congress on the United States Bank— What? You haven't time!' (as the scarecrow shook its head). 'W-e-l-l—I hope you'll vote for me, anyhow. D'ye know that McKinnie is a Hardshell Baptist and bitterly opposed, suh, to foreign immigration and the Germans?'

"'You wouldn't vote for a Hardshell, now, would you?' The ragman nodded in the wind.

"'W-e-l-l—damme, suh, what kind of a man are you, anyhow? I'll have to talk to Bob Gooding about this.'

"I couldn't help but guffaw, and the scarecrow flopped one arm as high as his head.

"'Now, don't laugh at me and shake your fist, suh. I've a mind to go over there and wear you out with my whip. You're nothing but a damned Dutch furriner, anyway, that never ought to have been allowed to come to this country.'

"John put the birch to his nag and

went off down the road, lickity split. I laughed until I accidentally discharged my gun, which he thought was the Dutchman shooting at him. The old gentleman is quick on the trigger, and he instantly whipped out his saddle pistol and took a shot at the ragman. I fired my other barrel at the scarecrow, too, and over it went, flat in the corn.

"John came riding back, pistol in hand, but the man in the corn never moved. 'There,' said the governor, 'you got what was coming to you that time, damn you, but'—reflectively—'I 'most wish I hadn't done it, for I believe Old Bob Gooding would have made him vote for me, anyhow.'"

C. A.

THE INTOXICATION OF JULES

"HAVE I told you fellows how I missed getting that Louisiana deer?" inquired the Cheerful Prevaricator.

"We hope so," replied the chorus.

"The animal was quite celebrated," continued the C. P., in contemptuous disregard of his answer. "So was my guide. His name was Jules, and he was known as the most industrious drunkard in his parish. On the advice of the natives I was careful to see that no liquor went along with our outfit, but it didn't seem to do the slightest good. The first night in camp, there was Jules, curled up in his blankets, dead to the world. After I'd searched his things and found nothing, I came to the conclusion that he'd sneaked along a bottle and used it all.

"Of course, there was no hunting the next morning. Jules said the wind wasn't right, and I let it go at that. Frenchmen are curious, and there didn't seem to be the slightest possibility of a second jag. That afternoon Jules took me over to the sea marsh for a duck *passé*, and then went out prospecting by him-

self. After supper he was full again, and although I jumped him good and hard, all I could get out of him was a couple of French songs.

"Well, the thing kept up for four nights, and I got disgusted and decided to go home. Before leaving, however, I made up my mind that, if possible, I'd solve the mystery. Jules went out regularly each afternoon, and I determined to follow him and find his cache.

"Accordingly, I trailed him the next time he went prospecting, and knocked enough skin off my shins against the cypress knees to cover a saddle. I stuck to it, though, and, after about thirty minutes' walk through the swamp, Jules pulled out on to a piece of high ground. I followed him to the edge, and then hid behind a tree to watch.

"Now you may not believe me, but that piece of high ground was nothing more or less than a blind tiger run by old mother Nature herself. In the middle of it was a big china tree full of fruit, and in the tree were about a thousand robins pecking away as hard as they could go.

"Every now and then one of the robins would get such a china-berry jag that he couldn't hold on any longer, and would fall to the ground. I watched Jules for a while, and saw that I might as well give up the hunt. It was the most remarkable orgy I've ever seen."

The C. P. paused and began to knock out his pipe against a convenient log.

"Well?" asked some one. "What's the rest of it? I've seen robins full on china berries myself, though not in the quantities you mention. But what's this got to do with the guide? You're not trying to make us believe that he got jagged on the berries, too?"

The C. P. rose stealthily to his feet. "Oh, no," he replied, as he dodged a firebrand and jumped for his tent. "Jules got his from eating the birds."

N. G. H.





THE WORLD OF SPORT

OPEN SEASONS FOR FISHING

THE laws given below are for the year 1910. We have been unable to get the complete laws for 1911, and in a few instances slight changes have been made since last season. They will be found substantially correct as given below, however:

Alabama.—No close season.

Arizona.—Trout, June 1-Sept. 1. Bass and crappie, Sept. 1-Dec. 1.

Arkansas.—No close season.

California.—Trout (not less than 5 inches), and whitefish, May 1-Nov. 15. Steel-head trout, in coast streams (not less than 5 inches), April 1-Nov. 15; in tide water, April 1-Feb. 1. Golden trout (not less than 5 inches), June 1-Sept. 1. Salmon, tide water, Oct. 23-Sept. 27; above tide water, Nov. 15-Sept. 17. Striped bass (not under 3 lbs.), no close season with hook and line; July 1-May 1, with net or seine. Black bass, June 1-Jan. 1. Shrimp, Sept. 1-May 1.

Colorado.—Trout (not under 7 inches), May 25-Nov. 30.

Connecticut.—Trout (not under 6 inches; limit, 30 in one day), April 1-June 30. Lake trout (not under 10 inches), May 1-Sept. 30. Black bass (not under 6 inches), July 1-April 30. Pickerel or wall-eyed pike (not under 12 inches), May 1-Feb. 28. Striped bass (not under 12 inches), closed season, seines or nets, between March 13 and July 1. Shad, May 1-June 10.

Delaware.—Black bass (not under 8 inches), pike, pickerel, wall-eyed pike, or pike perch (not under 10 inches), June 1-Nov. 13. Trout (not under 6 inches), April 16-Aug. 15.

District of Columbia.—Black bass and crappie (not under 9 inches), May 30-March 31.

Florida.—No close season.

Georgia.—No close season.

Idaho.—No close season.

Illinois.—No close season.

Indiana.—No close season.

Iowa.—Trout, salmon, April 15-Oct. 1. Bass, pike, crappies, pickerel, catfish, May 15-Nov. 15; not more than 40 of any or all kinds in one day, not more than 20 bass, pike, or pickerel. Bass, catfish, wall-eyed pike, crappies, trout, not under 6 inches.

Kansas.—No close season.

Kentucky.—No close season.

Louisiana.—Black bass (not under 4 inches), May 15-Feb. 1. Striped bass, March 1-Nov. 30. Catfish (not under 2 lbs.), "Gaspargou," June 10-April 10. White perch, crappie, and other fresh-water fish, March 1-Dec. 1. Buffalo fish (not under 3 lbs.), May 1-March 1.

Maine.—Landlocked salmon, trout, and togue, from time ice is out of water in the spring until Oct. 1; local exceptions. White perch, July 1-April 1. Length: Trout, 5 inches; landlocked salmon, 12 inches; black bass, 10 inches; white perch, 6 inches. Not more than 25 lbs. in all for one day of trout, togue, or landlocked salmon, or 20 lbs. of white perch.

Maryland.—Trout (not under 6 inches), April 1-Aug. 15; local exceptions. Black bass, pickerel, pike-perch (not under 8 inches), June 16-March 31. Potomac River—Black bass, green bass, rock bass, pike, or pickerel, or wall-eyed pike, June 1-April 15 (not applicable below Little Falls, near Washington).

Massachusetts.—Trout, lake trout, and landlocked salmon (trout not under 6 inches; salmon, 12 inches), April 15-July 31. Pickerel and black bass, no close season. Pike-perch, June 1-Feb. 1. Smelts, June 1-March 14. Local exceptions.

Michigan.—Landlocked salmon, grayling, and speckled, California, Lock Leven, and steelhead trout (not under 7 inches), May 1–Sept. 1. Bass, June 15–Feb. 1; small- and big-mouth bass, not under 10 inches, not more than 50 in one day or more than 100 in possession at one time; strawberry, white, silver, or calico bass, not under 7 inches or more than 20 in possession at one time.

Minnesota.—Trout, April 15–Aug. 31. Black, gray, or Oswego bass, May 29–March 1. Pike, mascalonge, crappies, perch, sunfish, catfish, sturgeon, May 1–Feb. 28. Size limit: Pike, 14 inches or 1 lb.; lake trout or whitefish, 2 lbs.; mascalonge, 30 inches; other fish except rock bass, sunfish, and bullheads, 6 inches. Not more than 25 fish at one time except sunfish, perch, pickerel, or bullheads.

Mississippi.—No close season.

Missouri.—No close season.

Nebraska.—Trout (not under 8 inches), April 1–Sept. 30. Bass (not under 8 inches), June 1–Nov. 15. All other fish, April 1–Nov. 15.

Nevada.—Trout, March 30–Sept. 15 (not over 20 in one day, not under 6 inches). Landlocked salmon, whitefish, big-mouth bass, March 30–Sept. 15 (not over 20 big-mouth bass in one day).

New Hampshire.—Brook trout (not less than 5 inches), April 1–July 31; local exceptions. Lake trout and landlocked salmon (not under 12 inches), Jan. 1–Sept. 15; local exceptions. Whitefish, shad, and bluefins, Jan. 1–May 1. Pickerel, pike, and grayling, June 1–Jan. 15; local exceptions. Black bass, July 1–April 30; local exceptions.

New Jersey.—Brook trout (not under 6 inches), April 1–July 15. Crappie, calico bass, black bass, pike, perch, and white bass, May 20–Nov. 30. Pike and pickerel, May 20–Nov. 30, and month of January. Length: Black or white bass, not under 9 inches, and pike-perch, pickerel, and pike, not under 12 inches.

New Mexico.—Trout (not under 6 inches), May 15–Oct. 15; not more than 15 lbs. in one day. Large- and small-mouth bass (not under 7 inches), May 15–Oct. 15.

New York.—Brook, brown, and rainbow trout (not under 6 inches), April 16–Aug. 31; local exceptions. Not more than 10 lbs. at one time. Lake trout and whitefish, May 1–Aug. 31; local exceptions; lake trout not under 15 inches, whitefish not under 2 lbs.;

not more than 25 lbs. of lake trout in one day. Black bass and Oswego bass (not under 10 inches), June 16–Dec. 31; local exceptions, not over 24 in one day. Pickerel and pike, May 1–Feb. 29; local exceptions, not under 10 inches. Mascalonge, June 1–Feb. 29; local exceptions, not under twenty-four inches.

Long Island.—Same as New York, except: Brook and brown trout, March 25–Aug. 30. Lake trout and rainbow trout, April 1–Sept. 30. Black bass, May 30–Dec. 31.

North Carolina.—Varies with counties.

North Dakota.—Trout, May 1–Oct. 1. Bass, June 1–Oct. 15. All other fish, May 1–Oct. 15. Not less than 8 inches.

Ohio.—Black bass, inland fishing district, June 1–April 30; Lake Erie fishing district, July 16–May 24; not under 10 inches. Trout and salmon, April 15–Sept. 15.

Oklahoma.—No close season.

Oregon.—Trout (except salmon trout), April 1–Nov. 1; not less than 6 inches nor over 75 trout in one day; local exceptions. Salmon, unlawful to fish in the Umpqua River, bays or tributaries, from April 10 to May 10 and from Nov. 20 to Dec. 10.

Pennsylvania.—Trout, April 15–July 31; not under 6 inches and not more than 40 in one day. Lake trout, June 15–Dec. 1. Black bass, large- or small-mouth, June 15–Nov. 30; not under 8 inches and not more than 12 in one day. Rock, white, strawberry, or grass bass, crappie (not under 6 inches), June 15–Nov. 30; not over 25 in one day. Blue pike, pike-perch, pickerel (not under 12 inches), June 15–Dec. 31; not more than 25 in one day. Mascalonge, June 15–Nov. 30; not less than 24 inches and not more than 4 in one day. Bullfrogs, July 1–Nov. 1. Terrapin, Nov. 1–March 15.

Rhode Island.—Trout (not under 6 inches), April 1–July 15. Black bass (not under 8 inches), July 1–March 1. Lobsters, April 15–Nov. 15.

South Carolina.—We have been unable to obtain a copy of the fishing laws of this state.

South Dakota.—Trout, April 1–Sept. 30. Bass, shad, crappies, pike, pickerel (not under 6 inches), May 1–Oct. 31.

Tennessee.—No close season.

Texas.—No close season.

Utah.—Trout, mountain herring, and bass, June 14–Dec. 1; bass not under 8 inches, trout or herring not under 6 inches.

Vermont.—Black bass (not under 10 inches), June 15–Jan. 1. Trout, landlocked salmon, or mascalonge, May 15–Aug. 15; not over 6 lbs. of trout or salmon or 25 lbs. of lake trout or mascalonge in one day. Pickerel, May 1–Nov. 1. Pike, perch, or wall-eyed pike, May 1–Nov. 1. White perch and mascalonge, June 15–April 15; local exceptions.

Virginia.—Black, green, or rock bass, pike or pickerel, or wall-eyed pike, in Potomac River, June 1–April 15. Mountain trout, protected at all times. Bass, July 1–May 15.

Washington.—Salmon, local exceptions. Bass, perch, pickerel, and pike, July 1–May 14; not under 6 inches nor more than 20 lbs. in one day; local exceptions. Sturgeon, Columbia River, Nov. 1–March 1. Trout, April 1–Oct. 31; not under 6 inches nor over 20 lbs. in one day; local exceptions.

West Virginia.—Jack salmon (not under 7 inches), June 16–April 14. Trout or landlocked salmon (not under 5 inches), April 1–Aug. 31. Black, green, willow, or rock bass, pike or pickerel, or wall-eyed pike (not under 7 inches), June 15–April 15; local exceptions.

Wisconsin.—Bass, June 1–March 1; not under 10 inches nor more than 15 bass in one day; local exceptions. Trout, April 15–Sept. 1; not under 6 inches nor more than 45 trout in one day; local exceptions.

Wyoming.—No close season.

THE LAST BUFFALO HUNT

THERE is a melancholy interest attaching to the buffalo hunt held recently on the Flathead reservation in Montana, when Michael Pablo rode down and shot down some of the few remaining bulls of his once great herd. This government having refused to purchase his herd, Pablo sold about five hundred to the Canadian government a year or two ago. Finding no purchasers for the remnants, he proposes to have a buffalo hunt of his own, the protests of the State of Montana to the contrary notwithstanding. The ethics of the situation are complex and uncertain, but the duty of the United States gov-

ernment in the matter would seem to have been clear. However, we let the chance go, and now we have small cause to quarrel with Mr. Pablo if he decides to turn this melancholy remnant into beef and overcoats.

Meanwhile, reports from the Jackson's Hole district in Wyoming show that another tragedy is being enacted in the case of the elk there. The sheep have eaten their natural forage and there is scarcely enough hay in the district to feed the cattle of the settlers. As a result the elk are starving. The fact is that there is no longer forage enough at the best to feed them and this winter's conditions have been far from the best.

Two solutions present themselves. Either transport some of the elk to a region better fitted to sustain them or instruct the settler to give them a merciful *coup de grace*. It is apparently idle to expect aid from either State or National governments. If transportation is decided on, the Apache reservation in Arizona offers an ideal location. The range is wide and forage is plenty and the nature of the country as well adapted to the elk as could be devised. At present it is practically bare of big game, save deer and bear.

TO RAISE WILD GAME

CONNECTICUT has taken the lead in an experiment that sportsmen and lovers of wild life should watch with interest. Under the direction of Herbert K. Job, State ornithologist, breeding farms are to be established for the propagation of wild fowl, especially quail. Much money has been spent in attempts to introduce foreign birds, such as the pheasant and the Hungarian partridge, and no one seems to know how far the efforts have succeeded. We know the habits and powers of endurance of our native birds. If we can succeed in breeding them economically, a long step will have been taken toward solving the problem of game preservation.

NEWS FROM THE OUT-OF-DOORS

Basketball

BASKETBALL games played during February resulted as follows: Yale, 37-University of Pennsylvania, 33; Naval Academy, 34-Swarthmore, 28; Brown, 39-Yale, 15; College of City of New York, 28-Tufts, 16; University of Pennsylvania, 18-West Point, 16; Wesleyan, 26-New York University, 20; University of Pennsylvania, 27-Princeton, 19; Columbia, 23-Carlisle, 10; Yale, 26-Cornell, 16; Wesleyan, 43-Williams, 11; West Point, 31-Colgate, 11; Columbia, 17-Pennsylvania, 15; Yale, 23-Princeton, 19; New York University, 21-Colgate, 14; Williams, 25-Dartmouth, 19; Wesleyan, 43-Brown, 29; Cornell, 29-Princeton, 27; College of City of New York, 29-Rochester, 17; University of Pennsylvania, 34-Cornell, 24; Naval Academy, 50-University of Virginia, 10; Wesleyan, 48-Rhode Island State College, 20; Williams, 32-Colgate, 28; West Point, 22-Rochester, 20; Columbia, 25-Yale, 10; Princeton, 36-Yale, 32; West Point, 35-Dickinson, 24; Columbia, 28-New York University, 12; Princeton, 36-Yale, 32; Brown, 21-College of City of New York, 20; West Point, 35-Dickinson, 24; Cornell, 16-Pennsylvania, 14; West Point, 31-New York University, 14; Columbia, 20-Yale, 10.

Columbia won the Intercollegiate Basketball championship for this season.

Hockey

HOCKEY games played in February resulted as follows: Harvard, 12-Dartmouth, 1; Cornell, 4-Columbia, 0; Massachusetts Institute of Technology, 12-Williams, 3; Cornell, 5-Dartmouth, 1; Amherst, 1-Williams, 1; Harvard, 3-Yale, 2; Williams, 3-West Point, 2.

Cornell won the Intercollegiate Hockey League championship for 1911.

G. A. Hornfeck has selected the following 1911 All-Collegiate Hockey Team: Vail, Cornell, goal; Blair, Princeton, point; Huntington, Harvard, cover point; Hornblower, Harvard, rover; Magner, Cornell, center; Boutrell, Yale, left wing; Cressweller, Cornell, right wing.

The Crescent Athletic Club of New York won the 1911 championship of the Amateur Hockey League.

Aviation

LE MARTIN flew with seven passengers for five minutes in a monoplane at Pau, France, February 2d. The total weight carried was 1,042 pounds. This is a new record for passenger carrying.

Lieutenant Stein was killed in an aeroplane in Germany, February 6th.

Noel and Delatorre were killed in a military aeroplane in France, February 9th.

A syndicate in Cincinnati has pledged \$70,000 to back Melville Vanniman in his proposed flight across the Atlantic Ocean in a dirigible balloon. The start will be made from Cincinnati some time this summer.

The French aviator Busson made a new record for speed in a monoplane with a passenger on February 13th. He flew 100 kilometers in 1 hour and 1 minute at Rheims.

At a meeting of the Aeronautical Society recently a resolution was passed to erect a suitable monument in Washington, D. C., to the memory of the late Lieut. Thomas Selfridge, Ralph H. Johnstone, John B. Moisant, and Arch. Hoxsey.

Miscellaneous

THE Chicago Athletic Association defeated Northwestern University in the swimming meet held in Chicago, February 2d, by a score of 49 to 34. George Johnson made a new world's swimming record for sixty feet, of 24 $\frac{1}{2}$ seconds. Michael McDermott made a new world's record for 100-yard breast-stroke match, of 1.12 $\frac{1}{2}$. The Chicago relay team also made a new American record of 1.47 $\frac{3}{4}$ in the 160-yard breast-stroke swim.

Columbia defeated the College of the City of New York in the aquatic sports held at New York, February 7th, by a score of 36 $\frac{1}{2}$ to 16 $\frac{1}{2}$. In the water polo game, Columbia scored 20 points, New York, 0. Columbia defeated Princeton in a swimming match, held February 10th, by a score of 28-25. University of Pennsylvania defeated Columbia in swimming match. Score, 43-10. Princeton defeated College of City of New York in swimming match, February 13th. Score, 41-12. Yale defeated Columbia in annual swimming meet at New Haven, February 17th. Score, 46-7. Columbia defeated College of City of New York and Amherst

in swimming meet held at New York, February 24th. Score: Columbia, 30; College of City of New York, 17; Amherst, 11.

Charles M. Daniels made a new world's swimming record at New York, February 20th. He swam 200 metres in 2 minutes 28½ seconds.

At the Intercollegiate relay races held February 21st at Hartford, Conn., Harvard defeated University of Pennsylvania, Columbia defeated Amherst, and Wesleyan defeated Brown. Wesleyan took the trophy offered to the university taking the most points.

Edmund Lamy made a new record for the broad jump on the ice at Saranac Lake, February 7th, of 25 feet 2 inches.

Joseph Miller won the quarter, the half mile, and the mile championships in the Eastern championship skating races held near Newburg, N. Y., February 13th.

P. J. Kearney won the quarter and three-quarter mile championships in the international skating championship races held in New York, February 23d.

The International Curling championship and the Gordon medal were won by the United States at Boston, February 20th.

The Boston Curling Club defeated the Thistle Club of New York in the district medal match played in Boston, February 21st. Score, 17-11.

Andrew Haugen, of Chippewa Falls, broke the American record for ski jumping, February 19th, at Ironwood, Mich., jumping 152 feet.

Frank S. White won the national squash racquet championship at Philadelphia, February 13th, defeating G. W. Wales by a score of 15-13, 15-7, 15-11.

Frederick B. Alexander and Theodore R. Pell won the national indoor lawn tennis championship in doubles, February 17th, at New York. Theodore R. Pell won the singles championship the following day. This is Mr. Pell's third victory and holding of the title, and wins him permanent possession of the cup.

The New York Athletic Club won the annual team championship at sabres of the Amateur Fencers' League of America, held in New York, February 6th.

Dr. Walter G. Hudson, of New York, made a new record for 100 shots at a 200-yard standard American target, at Jersey

City, February 22d, making 922 out of a possible 1,000.

The following men have been announced for umpires in the National League this season: W. E. Finneran, Jack Doyle, Henry O'Day, W. J. Klem, J. E. Johnstone, Charles Rigler, William M. Breenan, and Mal Eason.

The international polo matches will be played in this country by a team from England and a team from the Meadow Brook Hunt Club, early in the summer.

Columbia University wrestling team defeated Pennsylvania in a meet held at Philadelphia, February 9th.

Emil E. Fraysse, a member of the Century Road Club of America, broke all riding records of the organization for the year, with a mark of 22,645 miles on a bicycle.

The Naval Academy defeated the University of Pennsylvania in a gymnastic tournament held at Annapolis, February 18th, by a score of 26½ to 18½.

Miss Mary Fownes won the gold medal in the qualifying round of the fourth annual St. Valentine's golf tournament for women at Pinehurst, Fla., February 15th.

The Naval Academy fencing team defeated University of Pennsylvania, February 25th, 6-3. West Point fencing team defeated Columbia, February 25th, 7-2.

Miss Lillian B. Hyde won the woman's golf championship of Florida, at Palm Beach, February 25th.

The Australian swimmer, Longworth, swam 121 yards in 1:05 at Sydney, N. S. W., February 26th. This is a new world's record.

The University of Pennsylvania swimming team defeated the College of the City of New York, February 25th, 46-7. The Yale swimming team defeated Princeton, February 25th, 41-12.

John Devine, of Chicago, ran a half mile in 1:57½ at South Bend, Ind., February 25th. This is a new world's record.

Reginald Fincke defeated J. Gordon Douglas in the final racquet match at the New York Racquet and Tennis Club, February 25th, thus winning the national racquet championship.

The Harvard fencing team won the annual tournament with Yale and Princeton, February 28th. Harvard, 13; Yale, 12; Princeton, 2.





From a Drawing by Charles Livingston Bull.

Illustration for "The Master Rogue."

COAL DEVILS, ON A COAL TREE, PERFORMING CONTORTIONS ABOVE A CLIFF
OF COAL—ALL IN SILHOUETTE AGAINST A SILENTLY RAGING FURNACE.

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LEARNING TO FLY

BY AUGUSTUS POST

Illustrated with Photographs

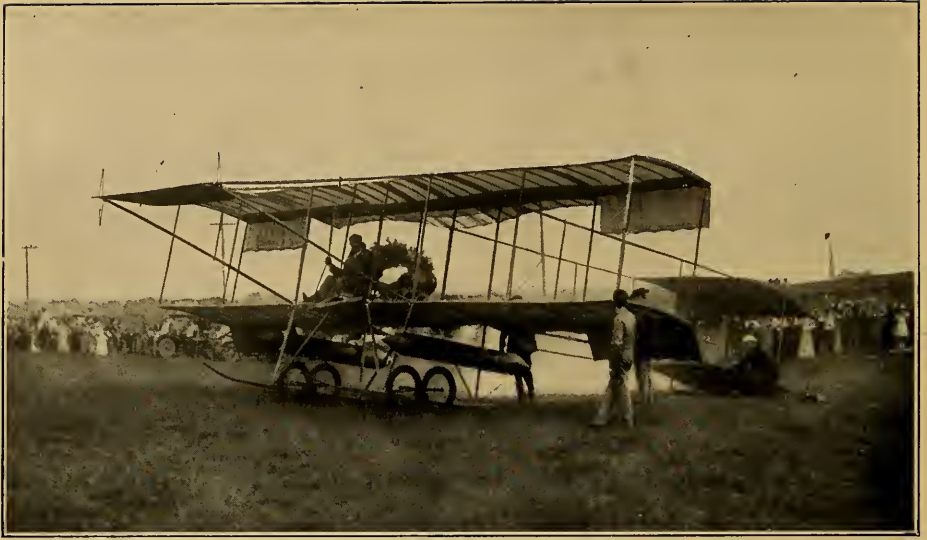
FLYING is a fascinating sport; it calls for the greatest exercise of self-control and requires, as essential elements for success, bravery, daring, to a slight degree, courage, confidence in yourself, your men, and your machine, good judgment, clear sight, intuitive knowledge, quickness of thought, positiveness of action, all combined with a most delicate sense of feeling and acute powers of perception. Good health is both a result and a prerequisite of good flying, and your mind must be clear and free. When flying in ordinary calm weather and under perfect conditions, when your movements are automatic, the mind may wander to the beauties of the landscape below; Mr. Orville Wright once remarked, that he nearly went to sleep while flying round and round over the same place for a long time.

In addition to these qualities, which apply primarily to what is done in the air, there is another side to the business of flying which must by no means be

overlooked. The aviator should have a good knowledge of mechanics and should understand something about materials and construction with metal and wood; it is not enough merely to order this or that part built; you should also know how it is to be done and what materials to use. You must have a sense of relative values and proportions and know the comparative weights and strengths of the various articles used.

The aeroplane with its light wires and thin framework is quite as strong and heavy, when compared with the air in which it moves, as a boat is when compared with the water in which it floats, which is eight hundred times denser than air, or the structure of an automobile when compared with the ground over which it runs. What looks to be a flimsy structure of wood and wire is as proportionately strong when compared with the medium in which it flies as is any vehicle for land or water. Bolts should be of just the right size to stand the strain and to perform the structural

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Photograph by Pictorial News Co., N. Y.

READY FOR THE START.

function for which they are used without unnecessary weight or size, and so it must be with all the other parts, whether of wire, metal, or wood.

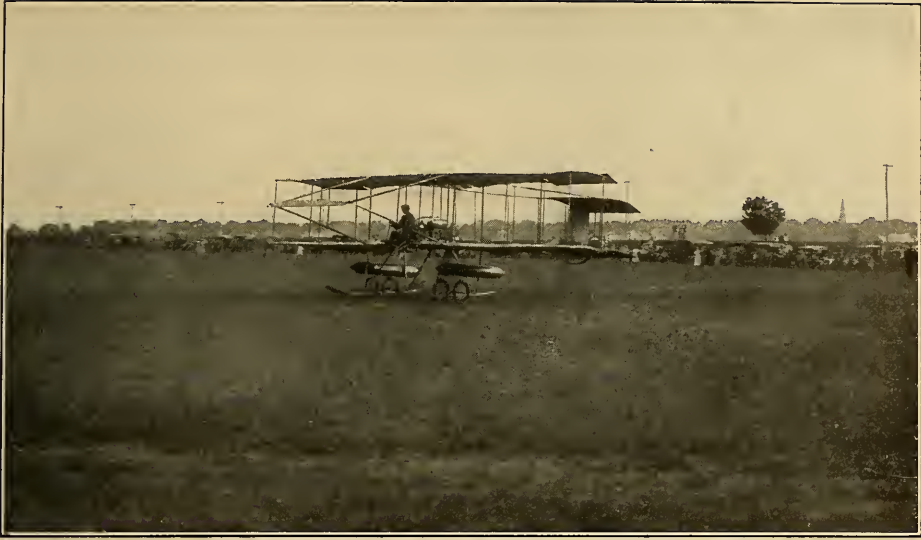
It must be borne in mind, however, that the entire proportions of the design must be adjusted to an element eight hundred times less dense than water, and harmony in weight and strength must exist through all elements of the structure. It is easy to see the fundamental difference between an aerial motor and one of marine or automobile type. The same difference is evident in a well-built frame and chassis.

Another element enters into the construction of an aerial motor, which is the comparatively constant speed at which it is required to run; there are no shocks or jars caused by changing gears or reversing the direction of the thrust, so much lighter construction can be used. The main structure of the aeroplane itself is lighter than the framework of water and land vehicles, in regard to weight and strength, as the aeroplane is comparatively free from great irregularities in its path such as waves on the water and rough roads on the land.

There is no cushion so soft as the air although special construction is required

for maintaining equilibrium and absorbing the shock of landing, but it must be admitted that the strain of making spectacular dips and spiral circles is almost as severe as even a sailboat may have when you suddenly jibe its sail. The wings and braces creak and give under the increased pressure until it seems as if they must break. This is what has happened in several accidents, notably the one in which C. S. Rolls was killed in England last summer during an accurate landing competition. He miscalculated the distance and was forced to make an abrupt descent in order to land within the prescribed limits; one of the rudders gave way and the machine fell to the ground.

In the accident to Johnstone's machine in Denver something seemed to be wrong with the warping device and the machine became uncontrollable, but whether this was due to excessive strain or to a defective repair is not quite clear. This accident seems to emphasize the fact that the mechanical knowledge referred to as an essential element in a flier, although it need not be of such a degree as is necessary to invent a machine, should be enough to enable the aviator to repair his machine when it is broken or to direct the manner in which



Photograph by Pictorial News Co., N. Y.

UNDER WAY JUST BEFORE RISING.

the repairs should be made, and to know also, when they are completed, whether the work was properly done.

With the same regularity that a track walker goes over the roadbed of a railway, must the mechanic examine the fastenings of an aeroplane to look for weak places; failures cannot be remedied in the air and a human life depends upon the absolute reliability of every detail. Safety devices of all kinds are used and important wires and braces are made double; cable is largely used in places of single strand wire; struts, wires, and braces that might break and fall into the propeller are tied so that this cannot happen; rudders and ailerons are fastened by safety wires to prevent their becoming free, if their hinges should break, just as chains are used to hold railway cars together in case the couplings break.

Wires from the magneto are fastened in their place so that they cannot come loose or the connections be broken; valves from the gasoline tank are fastened open so there is no possibility that they will become closed by the vibration. The same degree of care that is used in railroad operation is necessary in the practice of aviation.

There is still another side to flying

that affects the aviator of the present time which is of no less importance than the possession of the necessary qualities and mechanical knowledge. I refer to the study of the air itself and the familiarity that must be gained with its conditions, actions, and effects. The study of the subject of meteorology bears the same relation to flying that navigation and hydrography bear to sailing and geography and touring to automobiling.

Lists are already prepared which give the prevailing weather conditions in different parts of this country and indicate the best times of the year for flying, the prevailing direction and velocity of the wind, and other matters of general information.

A great deal has been said in the newspapers about "holes in the air," but there is no such thing; holes do not exist in the atmosphere. It is a fact, however, that you encounter rising and falling currents about as often as those which blow in a horizontal plane.

When the aeroplane enters one of these descending currents, the wings are blown down precipitately, on account of their large surface, giving the sensation of falling in a vacuum. The machine descends so rapidly that it is necessary to strap the aviator in his seat, as the ma-

chine would otherwise leave him sitting on nothing and he would have no solid purchase to enable him to operate his controls, for you do not seem to start to fall, when this occurs, as quickly as the machine is blown down by the wind.

A thorough inspection of the field is the very first thing to be done before flying is attempted, and the aviator should take great pains to walk very carefully over every foot of the ground over which he intends to fly. He should observe every detail and examine every obstacle, making a clear mental map of its location. The actions of the air currents should be studied and every minute thing that could in any possible way affect the flying of the machine should be most accurately observed and distinctly remembered. He should not confine his investigations merely to the field over which the flights are intended to be made, but all the open country in the vicinity should be examined also, and the direction and extent of their available smooth ground for landing should be thoroughly mapped in the aviator's mind. Once when Mr. Ely was flying at Poughkeepsie, N. Y., a rudder wire broke on the machine so that he could not change the direction of his aeroplane and he was forced to fly in a straight line until an open field appeared which offered him a safe landing place.

Besides the chance of accident, the wind may blow the machine far away from its starting place and it may not be possible to get back; Ralph Johnstone was blown in this way nearly sixty miles away from Belmont Park during a severe gale.

Beware Even the Gentle Breeze

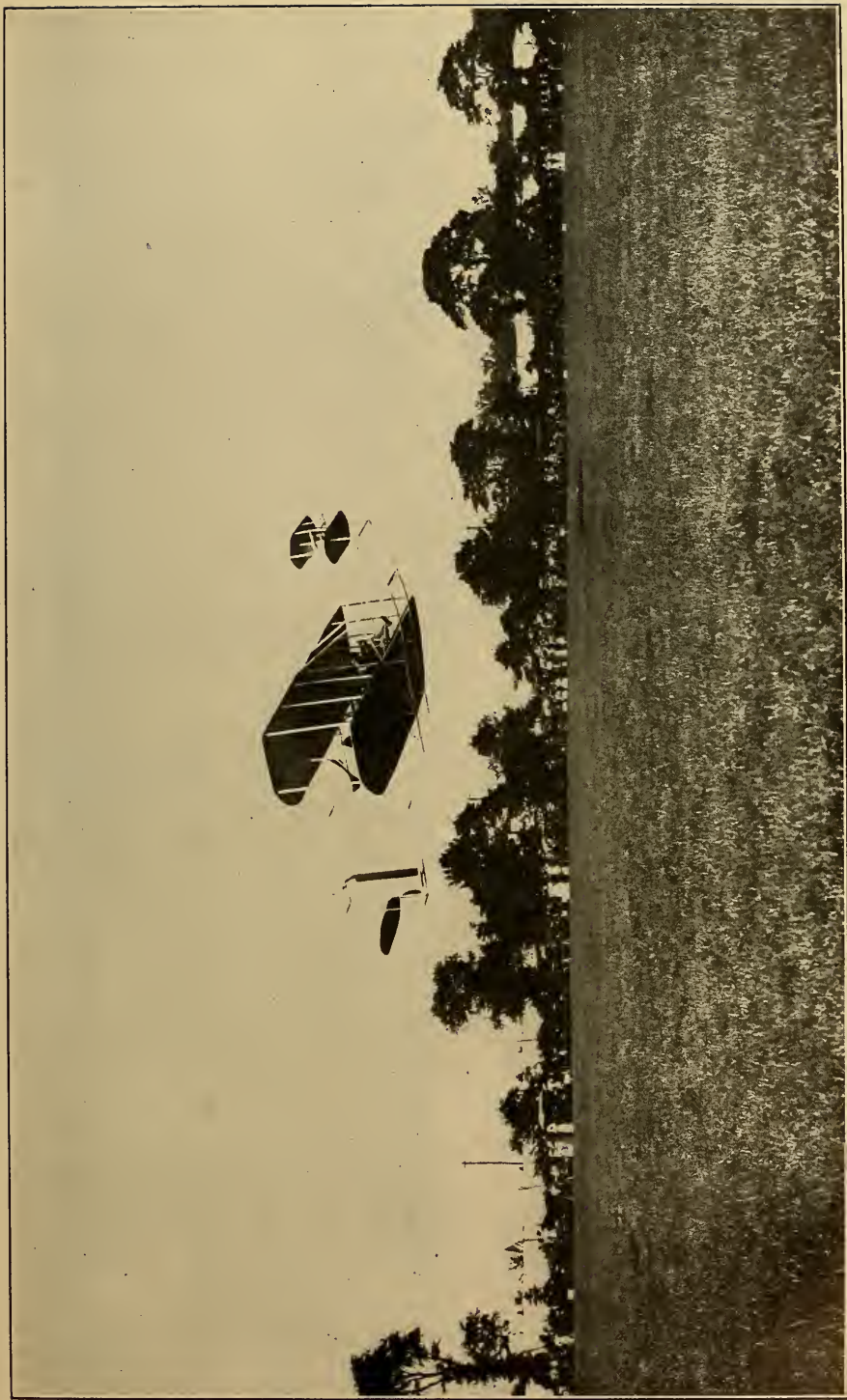
The novice must attempt practice flights only when the conditions are perfect and the air is dead calm (and this means *dead calm*—when not a breath of air is stirring the leaves of the trees). There is plenty for the aviator who is making his first flights to do to manage the machine itself without being required to look out for gusts of wind and unknown and unforeseen dangers. A beginner should no more think of attempting a flight in high wind than should

one learning to drive an automobile take his first lesson on Fifth Avenue during the crowded part of the day. The quickness of thought required to make the decisions necessary for passing through the maze of traffic safely leaves no time, energy, nor attention for thinking which lever must be used, and you must perform the mechanical movements which are necessary in such a place as you use your feet in walking—with absolute unconsciousness, and without the least demand upon the attention.

The accident to Moisant was described to me by a person who was as close as anyone to him, and it seems a good illustration of just this point. Moisant went up in a machine which had been used by his friend, Barrios, because it had a much larger gasoline tank than his own, and extra fuel was necessary as he intended to attempt to win the Michelin Cup and to beat the world's long-distance record of 365 miles recently made by Maurice Tabuteau in France. The machines were the same in every way except that the spark and throttle levers controlling the engine of this machine differed slightly from those on his own machine.

Moisant flew from the City Park race track in New Orleans to a field at Harahan, about twelve miles away, where preparations had already been made for making the record flight. The prepared landing place was not very large and after twice circling the field, as Moisant was about to land to fill his fuel tanks for the long flight, he was seen to shut his motor down and immediately afterwards, it is said, he seemed to straighten up his machine as if to make another circle of the field, probably to stop earlier in order to have more clear ground for his machine to run over after landing.

The motor apparently failed to respond immediately and it became necessary to descend very abruptly, as he was nearing the end of the ground suitable for landing. The machine pitched down at such a steep angle that Moisant fell out and was killed. The levers, I understand, indicated that the motor had been stopped. This seems to show that there was a moment of indecision or a sudden change of intention on the part of the



Photograph by Fictorial News Co., N. Y.

WELL AWAY FOR A FLIGHT. AN ACCIDENT AT THIS HEIGHT IS MORE DANGEROUS THAN IT LOOKS, BECAUSE THE AVIATOR HAS SCANT ROOM IN WHICH TO MANEUVER.



Photograph by Pictorial News Co., N. Y.

AN IDEAL LANDING, ONE OF THE FIRST THINGS THE AVIATOR MUST LEARN IS TO COME DOWN EASILY IN THE RIGHT PLACE.

aviator which was fatal. This may have been caused by his pulling the wrong lever when he wanted to accelerate the motor, and finding that it did not respond, he turned down at once, taking a chance that it could be accomplished in safety.

At a later stage in the course of instruction, when the aviator has gained confidence and after all the movements necessary to operate the machine have become purely automatic, so as not to require the least thought on his part, the aviator's attention may then be devoted to overcoming the problems presented by the wind. Gusts are felt without warning; swirls of air are encountered when passing over or near buildings, and puffs come without regularity and without warning. When sailing a boat they cause ruffles on the water and thus give the helmsman warning in time to prepare for them. It is not so when flying in an aeroplane.

Gusts of wind are only evident when they are perceived through the delicate and highly acute sense of feeling of the aviator, who must immediately adjust his balancing devices and rudders to meet the situation and to counteract the effect. When you become exceedingly skillful you can tell just how much to do and how much not to do, allowing the machine to follow its own inclination to a slight degree, to go with the undulations of the air or be turned out of its path by the air currents, allowing it to drift back again slowly of its own accord, when it will resume its proper direction with a gentle and easy return and with much more saving of friction than an excessive or impulsive movement of the controls would occasion.

This ability to let the air have its way, like letting a horse "have its head," is equally important and perhaps more apparent in the handling of a balloon, for the aeronaut soon gets the touch or the "feel of the air" and quickly learns just how much ballast to use to check the balloon when it starts down. The same "feel of the air" can be learned in a flying machine.

A usual fault with all beginners in anything, and sometimes with old hands when they lose their flexibility, is that

they are inclined to be too abrupt and to steer too close to a line. We all remember our first experience on a bicycle when we wobbled all over the road and turned the front wheel much too great a distance in the opposite direction in order to correct a slight tendency to turn in the other. This overcorrection itself requires to be righted and is apt to cause complications in other directions, especially if there are many obstacles.

There seems to be also a lesson to be drawn from the accident to Archie Hoxsey, who was killed at Los Angeles while flying in a high wind and attempting to surpass his own record for altitude. After three days of marvelously successful flights, during which he exceeded the world's altitude record and set it far above all others, Hoxsey ascended when the wind was too high for some of the other aviators to fly and after they had tried out the conditions in their own machines. There can be no conception of the terrific strain that he was under as a result of his previous success; this feeling, amounting almost to overconfidence, that nerved him up may have been responsible for the momentary loss of control or attack of air sickness, caused by his aeroplane coming down at too great an angle of descent and at such a frightful speed that the wind was seen to turn it completely over in the air, after which it dashed to the ground before it could be righted, instantly killing the daring pilot.

Not Always the Machine's Fault

Whether it was the prolonged strain or the violence of the wind that caused this accident it is hard to tell, but it seems to show that the machine itself is not always to blame. A mistake in judgment, air sickness, which may be caused by too quick a descent, or momentary lack of attention at a critical moment, are equally to be guarded against. Cecil Grace was seen to take a wrong direction and head for the North Sea instead of the shore of England, and finally become engulfed in a dense fog while returning after a successful flight over the English Channel. The mere thought of being lost in a fog is bad enough, but to

be compelled by necessity to continue on flying until overtaken by exhaustion is enough to send the cold shudders down one's back.

It must be realized that the aviator practically steers in three directions at once, up and down and to right or left, and he must also maintain his balance. All these functions must be kept in his mind at the same time; and this is only a small part of the problem presented to him in flight. It is like steering an automobile upon a moving sidewalk, or an even more realistic simile would be steering an automobile upon a great moving escalator mounted upon a moving sidewalk; thus, motion in three planes may be visualized, for the path of the aeroplane would be the resultant of the movements of all three machines.

Imagine that you are endeavoring to avoid an obstacle upon which your mind is fixed, as, let us say, a tree in the center of a large field; some subtle force seems to be always drawing us toward the very obstacle from which we desire to escape; it seems to fascinate us and we are almost sure to collide with it as long as it is a dominant idea in our mind. But when we forget about it, or pay no special attention to the thought, its terror vanishes. When Captain Baldwin was making practice flights at Hammondsport, N. Y., there was a lone tree in the flying field which had plenty of clear space all around it, but he succeeded in hitting it, for no other apparent reason than that he was trying so hard to avoid it.

My own machine, a Curtiss biplane, fell while I was flying in New Orleans last December, but this accident was caused by a combination of circumstances which illustrates other problems of the air which the aviator must overcome. We were flying at the City Park race track, just outside the city. Only a little more than half of the infield of this mile track was available, because of a large pond or lake which occupied one end of it; on the far side of the grounds, opposite the grand stand, there were tall oak trees which grew in the City Park; this made it necessary to attain a comparatively high altitude very quickly after starting from the ground, as a sharp

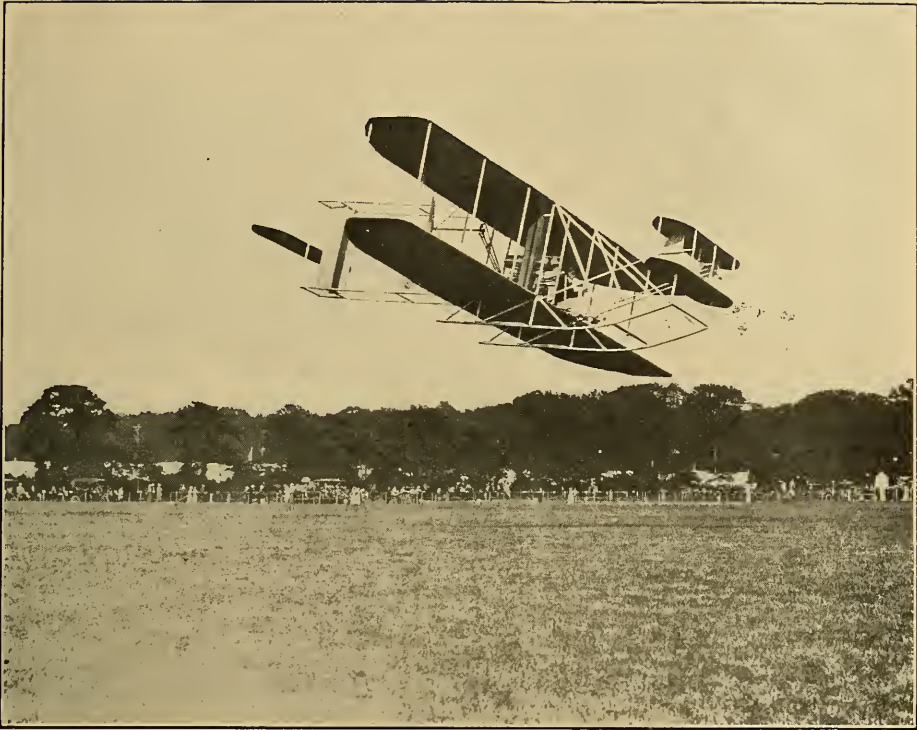
turn had to be made at the western end of the track.

To make a quick turn with a low-powered machine, such as I was flying, it is necessary to fly at a sufficient height to enable you to pitch down at a steep angle on the turn in order to gain additional speed to compensate for the loss of headway caused by the resistance offered to the air by the rudders and controls when they are turned in steering. In maintaining the proper banking angle for the turn it was also necessary to compensate for the loss in support gained from the air because of the machine's slewing sideways while turning and moving obliquely forward instead of presenting its wings squarely in the direction of flight; in addition to these considerations, which are always present, even when the air is still, the air was somewhat puffy, and although the start was made against the wind, on the turn and upon flying with it, speed, relative to the wind, was also lost, causing the machine to sag and sink lower and lower toward the tree tops along the back stretch.

One tree stood out a little distance in front of the others, and while endeavoring to steer clear of it, the left wing of the aeroplane caught one of the top branches, a big limb of the tree was broken off, and the aeroplane spun around as if on a pivot, and then it turned completely over, looping the loop in air as it fell. The front control, the sides, and the tail were uninjured, but the wheels of the running gear were forced up through the lower plane and the engine was broken loose by the jar of the shock.

Effect of a Fall

They told me afterwards that I crawled out of the wreckage and said I was not hurt and begged McCurdy, who insisted on taking me back to the hotel, to remain and finish the flights. Later in the evening I woke up in my bed in my room without even the faintest recollection of what had happened. The last impressions that I remembered were of going out to the grounds in a taxicab with the other fellows. But by delicate questions on my part and from the an-



Photograph by Pictorial News Co., N. Y.

BANKING AT THE TURNS LOOKS EASY TO THE SPECTATORS, BUT IT IS ONE OF THE MOST DANGEROUS PARTS OF THE GAME.

swers that I received the whole story was made clear to me. A day or two later I began to feel a stiffness in the cords of my neck, due probably to the great concentration of mind during the rapid course of events which were too speedy for my senses to follow, and partly due to a possible shock. All these effects finally passed entirely away, but this experience serves to show the serious results that may follow even a slight miscalculation among many which the complicated conditions demand.

The aviator is confronted with another curious feature of the aeroplane which can hardly exist in the mind of a person who has not had the actual experience of these conditions in the air. It is almost impossible for an observer on the ground to conceive of the results which follow the tipping or the tilting of the aeroplane while banking on a curve, or making a "spiral dip," such as was made so famous by Johnstone and

Hoxsey, who turned their machines up sideways until they were flying at an angle of nearly ninety degrees to the horizontal, or at almost a right angle to the normal position of the aeroplane in flight. Let us see what happens to the rudders and control planes when they are revolved about a fore-and-aft axis until they are at right angles to their normal position. The horizontal front control ordinarily used for ascending and descending is completely turned from the horizontal plane to the vertical and becomes a rudder which steers the aeroplane to the right or to the left; the vertical rudder in the rear, on the other hand, assumes a horizontal position and by its operation tends to make the machine ascend or descend like a rear control.

Hence, in making a spiral dip, the steering must be accomplished by means of the elevating plane, and as you draw the control lever toward you the ma-



Photograph by Pictorial News Co., N. Y.

WHEN AN AVIATOR CAN TAKE HIS WIFE UP FOR A PLEASANT LITTLE SPIN
IT'S A GOOD SIGN THAT HE HAS MASTERED HIS ART.

chine comes around like a bicycle on a "saucer track," while the steering rudders must be carefully adjusted to control the descent. When the aeroplane is flying at an angle of forty-five degrees to the horizontal, the front control and the rudder should, theoretically, be equally able to perform the functions of the other.

Careful adjustment must be made between the movements which control these functions, and after long practice they become instinctive. It is in just such fine points as these that the personal equation and the characteristics of the individual aviator reveal themselves most clearly.

The art of preserving the lateral equilibrium or balance must be studied carefully, for the tendency of the aeroplane to slip sideways or skid through the air on the turn causes it to lose the support

of the air which is gained by its forward motion and makes it necessary to bank the planes on the turns; if they bank too much, on the other hand, the whole machine will slip down through the air on the inside of the circle and may easily come to grief by striking one wing on the ground. Fortunately, the machine tends to take its natural inclination, for in turning the outside wing proceeds faster than the other, giving it a slightly greater lifting effect and canting the machine on that side, as has already been mentioned.

The aviator must be very delicate in his movements, keenly sensitive to the least suggestion of what may be required, and quick and sure to act, but not in an arbitrary manner, for the "feel of the air" is one of the most fascinating and subtly artistic touches that can be learned. Like confidence in swimming

or riding a bicycle, if once secured, it never leaves you.

There is often discussion among aviators as to whether you should "bank" before using the rudder in turning, or use the rudder to turn and have the banking take place automatically, because of the fact that one wing travels faster than the other, giving it greater lifting power. Mr. Curtiss has often criticised his pupils for not banking enough when making a turn, for it is extremely necessary to get just the right angle to prevent a serious accident.

In the construction of a flying machine the movements that the aviator must make with the controlling levers should be as instinctive as possible. There should also be some natural relation between the movements of these levers and the effect which it is desired to produce.

The Blériot monoplane has a standard with a small hand wheel on its top, placed just between the knees of the aviator (very much like the steering post of an automobile, but much smaller). This hand wheel is pulled backward toward the operator if you wish to rise, and this seems quite a natural movement to make. If it is desired to descend, this hand wheel is pushed forward, also a perfectly natural movement to make with the body. If the machine tips up on the right side, the standard is moved to the right to counteract it. If it tips to the left, it is moved to the left.

Combined movements, or movements diagonal to these cardinal movements, can also be made when it is necessary to balance and ascend or descend at the same time, for the standard is mounted on a universal joint, so that it can be readily moved in any direction. Steering is done by the feet, which rest on a bar pivoted in the center and connected by wires to the rudder in the rear, like the steering arrangement in a single-oared shell.

The Farman biplane is controlled in much the same manner, but a lever at the right hand of the aviator takes the place of the small hand wheel control post of the Blériot; the motions are the same, however, but the left hand of the aviator is free to control the motor or hold on to one of the vertical posts.

Steering is done by the operator's feet, which rest on a pivoted cross-bar attached to the foot rest, as in the Blériot.

The beautiful Antoinette monoplane is controlled in quite a different manner, however, from any of the other flying machines, although the principle, of course, is the same. This aeroplane has two hand wheels, one placed on each side of the aviator, which rotate in the fore and aft plane. The right-hand wheel controls elevating and descending, and the left-hand wheel warps the wings. Steering is done by the feet, as is the universal custom in all of the foreign machines.

At this point it is interesting to consider whether it is a good practice to confide to the feet such an important function as steering, and also whether the shoulders and body of the operator are sensitive and quick enough to accomplish the movements necessary in delicate balancing, or whether the hands of the pilot should not be used to perform these delicate functions. The most popular types of French machines are all steered by the feet of the aviator and balanced by the hands, but the American type of machine is steered in almost every instance by the hand of the aviator and the balance is very generally accomplished by the movements of his shoulders or body.

Where American Machines Are Different

Why the American aeroplanes differ radically from the foreign machines in this point is hard to tell. The Curtiss, a typically American machine, and one copied more than any other by other builders, uses the shoulder yoke and the instinctive movements of the body for preserving the lateral stability or to balance the machine.

This lateral stability has always been the "bugbear" of flying-machine inventors, but Mr. Curtiss says it is as easy to become accustomed to guarding against falling over sideways as it is to prevent falling over forward or backward; you unconsciously do it when walking, or riding a bicycle, and it does not cause any great trouble there. Why can you not

learn the same thing in the operation of an aeroplane?

The Wright biplane is controlled by two levers, one at the left hand of the aviator is moved forward or backward to operate the rear horizontal control, for in their new type machine they have moved the original front control to the rear, where it acts in the same manner as the rear horizontal control of a monoplane for elevating and descending. At the left hand of the operator there is another lever which is practically a double lever, as its main portion is moved forward and backward to warp the wings, while the handle of this lever may be moved transversely to operate the vertical rudder planes in the rear.

A delicate combination of movements, both in the fore and aft and in the transverse planes, must be made by both the arm and the wrist to operate this lever, for in this machine, when the wings are warped, the theoretically increased resistance caused by the greater curvature given to the surface on one side over the theoretically decreased resistance on the other wing caused by flattening it out, may give a turning tendency to the whole machine which can be offset by turning the rear vertical surfaces in order to interpose an equal amount of resistance, which tends to keep the aeroplane on a straight course through the air.

On a two-passenger machine an extra seat is placed on the right of the aviator's seat, and a duplicate elevating and descending lever connected to the main lever is placed at the extreme right of the passenger seat. This enables each to operate the machine, except that the operations of the right and left hands are reversed.

No doubt two aviators will ascend and take "tricks at the wheel," as the pilot and aide in a long balloon journey are accustomed to do, eating and sleeping by turns. One of the foreign aviators has already made arrangements so that he can eat in his aeroplane, and on one occasion he has taken two meals while in the air. Mr. Henry Farman built a cabin on his machine to protect himself from the severity of the weather during his great flight for the Michelin Trophy, when he made a new world's record by

flying continuously for more than eight hours.

The Curtiss biplane is possibly the most natural of all the types to operate, for the movements of its controls are perfectly instinctive and so natural that the aviator, in a time of excitement, when he might possibly forget for a moment, is inclined to do the right thing and to operate the control levers in the correct way. A vertical hand wheel is placed directly in front of you as you sit on the seat of the machine. This wheel is grasped by both hands and is pulled back to cause the aeroplane to ascend and pushed forward if you wish to descend. If you turn the hand wheel around on its axis to the right, it turns the machine to the right. Turning it to the left turns the machine to the left, under normal conditions.

A "shoulder yoke," which is simply a swaying back with high arms, is hinged to the seat in such a manner that it can be moved by the aviator's shoulders toward the right or the left side. Wires extend from this shoulder yoke to the balancing planes hinged on each side of the aeroplane. When the machine tips up on the right side, the most natural movement for the aviator to make is to lean toward the high side, and this is the movement which must be made to bring the machine back to an even keel. The movement is reversed to counteract a tilt in the other direction; a pedal operated by the right foot stops the motor, and one operated by the left foot opens the throttle, accelerating its speed.

After examining all the various machines, and having chosen the one that you think is the best, go to a good aviation school or follow a good aviator and stick to him, remembering that "the only way to fly is to fly." "Drive a peg and then pull to it," is a favorite saying of Captain Baldwin, the father of American aeronauts and aviators.

The most important moment in the history of its development will come when a human life is saved by the aeroplane. It will then be hailed as the greatest blessing to mankind, and just as the wireless was taken to our hearts, so will the aeroplane and the aeronaut be honored and rewarded.



Photograph by Paul Thompson, N. Y.

BRESNAHAN IS INVALUABLE TO A PITCHER BECAUSE HE IS QUICK TO SEE SIGNS OF TIRING.

BASEBALL AS THE PLAYERS SEE IT

BY EDWARD LYELL FOX

Illustrated with Photographs

A THREE-HOUR work-day, netting a weekly wage of \$150 during the baseball months of the year; one hour's "work" a day, telling how the \$150 was made, yielding a weekly harvest of \$500 for the vaudeville months of the year; touring the country in private cars, attended by a heedful retinue of trainers and rubbers, the admired focal point of the United States of America, territories, and island possessions: that is the professional base-

ball player's existence from the viewpoint of the ardent fan who spends enthusiastic afternoons in the grandstand.

Working from 10 A.M. to 6 P.M., bringing in \$90 every seventh day for a half year; from 8 A.M. to 6 P.M., bringing perfect physical condition—no money—every mid-February to early April in the Southland training camps; all the late autumn and winter long plying any available vocation until the season opens; the discomforts of transient hotel life; the plague of a prying publicity and the bored focal point of nearly 8,000,000

fans: that is the professional baseball player from his own viewpoint.

An exaggeration? Pray tarry. Let us beckon cold statistics for the moment. Later we shall let the players tell their own story.

Roughly, there are five hundred players in the National and American Leagues. According to official statements their average salary is a trifle over \$2,000. Hardly averages up to \$150 a week, does it? And were the 5,000 players of some forty odd minor leagues to be rushed into action, your \$2,000 salary would be battered down about one half.

Also, patient one, before meeting the players, let us glance at their contracts. Your idols are bound hand and foot with yards of legal tape. Organized baseball has taken the contract method of self-security. We read: club owners can suspend without pay for violations of any rules; can drop players injured in a game after fifteen days; can release on ten days' notice; can sell to another club without consent; can refuse permission to play exhibition baseball, and during the "off season" forbid participation in indoor baseball, basket ball, football, etc. Further, it is provided that a player must report and train without pay and must allow the club owner \$30 for uniforms.

The Players Speak for Themselves

Is the vision still idyllic? No? Well, then, it is about time for the players, for these are the conditions under which they work. The facts are presented from a completely disinterested standpoint.

But what do the players themselves think of baseball? How do they look upon it as a profession? What do they think of the game itself—its many phases and possibilities? How do they regard themselves, team mates, managers, club owners, umpires? What is their position on hero worship as practiced by the fans? Surely they are best qualified to tell the story.

Ball players, as a rule, are modest. Removed from the diamond, they dislike to talk of their work. More willing are

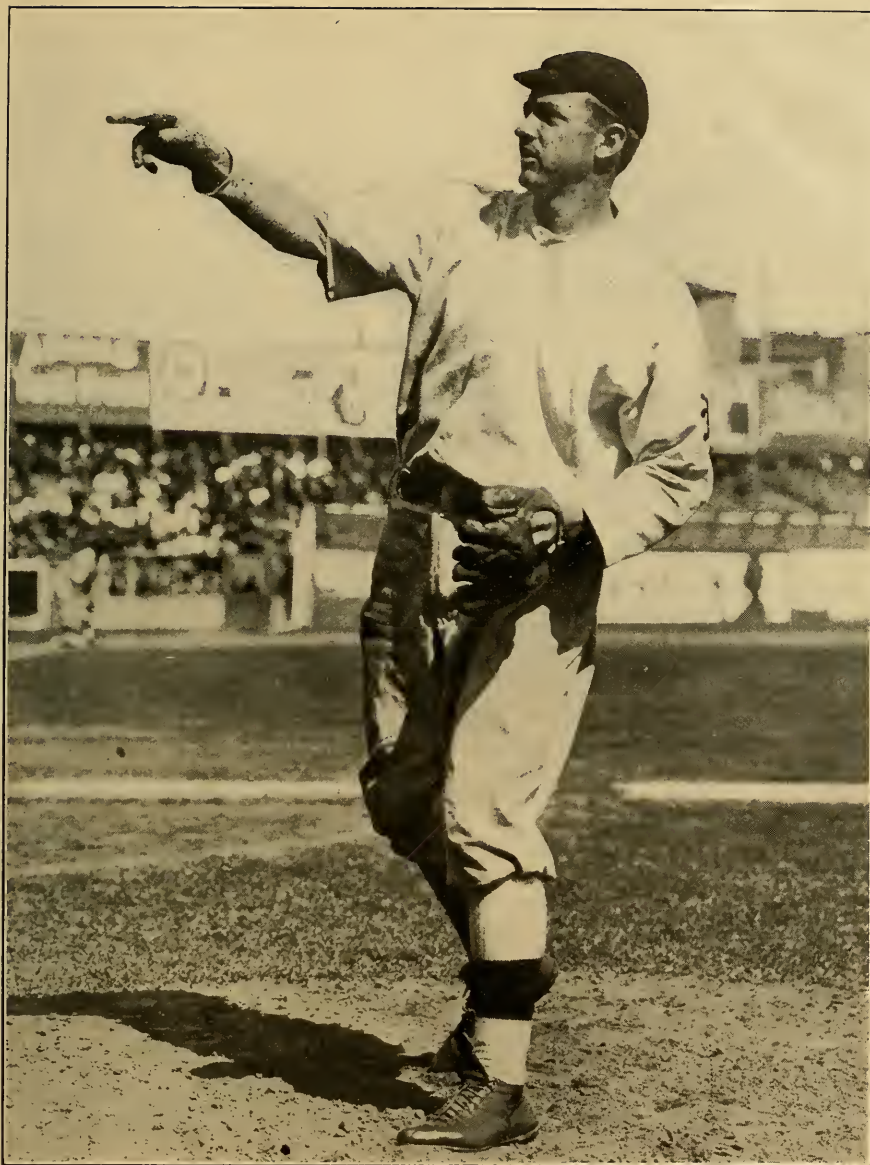
they to tell of some other man's playing. To praise is habitual with them. They rarely "knock" except on the playing field. Then "it's all in the game." In unguarded moments, however, some hitherto hidden opinion escapes and listeners are amazed.

For instance: the average fan's idea of Tyrus Raymond Cobb is that this same Cobb believes himself to be the greatest batter that baseball has produced. Wait!—Detroit is at bat. There is an infield hit and three runners are dancing on the baselines. A slender, sandy-haired figure is seen nearing the plate. It is Cobb and he whirls three heavy bats around and around, much like a Dervish. At the last moment he casts two aside and dances lightly into position. He turns to the bench and grins at his mates; he leers at the pitcher. Cobb's very appearance and conduct are an immediate menace.

There is a swift blurr of white as the ball leaves the pitcher's hand. Then comes a sharp ring and the outfielders scamper back to the fence. The three runners swing home and Cobb slides into third by the time the ball is returned to the infield. The first baseman calls a hasty conference. Play is resumed. The next batter raps a ball to the third baseman, who throws quickly in the direction of first.

It is a habit of Cobb's to feign scoring from third on any ground hit, so he pretends to dart for the plate as soon as the third baseman makes his throw. But the conference had evolved a trick to catch Cobb.

Back to third flies the ball, the first baseman not stopping to touch his bag. Seeing he is caught, and cannot regain third, Cobb breaks for home. A few swift strides and his slender frame shoots through the air. It is a long slide and a wall of dust screens the scene. Cobb's spikes barely scrape by the corner of the plate, but the umpire yells "Safe!" Thinking it had been a planned "steal home" the fans applaud steadily. Cobb slaps the dust from his uniform, sneers openly and calls: "Did you think you could get me on an old bush league trick!" And with more swagger than ever he struts back to the bench, know-



Photograph by Paul Thompson, N. Y.

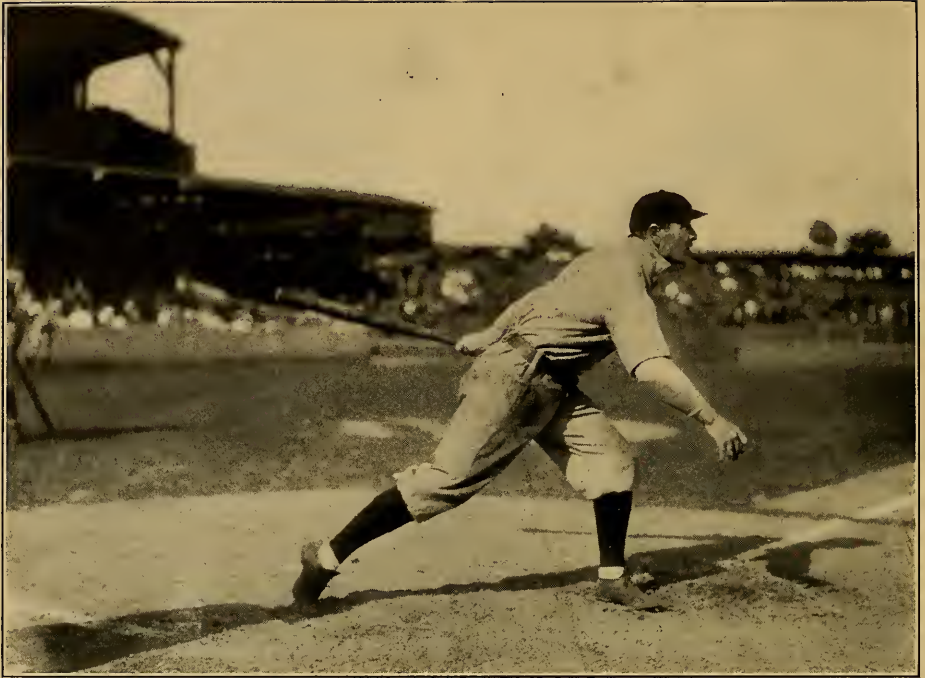
CHRISTY MATHEWSON SAYS: "KEEP OUT OF BASEBALL UNLESS YOU ARE SURE OF BEING A STAR."

ing he had almost been made to appear ridiculous before a great crowd.

Yet this same arrogant Cobb, removed from the excitement of the game, declared that Sam Crawford of Detroit was a greater batter than he! Cobb explained that he beat out many infield taps and bunts that Crawford would be

thrown out on. Also, Cobb claims that if Crawford were more ambitious every fan would come to rate him as the best of batters.

But here is the difference. If Crawford's batting slumps, he *waits* for his luck to change. If Cobb's batting slumps, he spends his mornings practicing at the



Photograph by Paul Thompson, N. Y.

“BASEBALL IS NO PLACE FOR THE QUITTER,” SAYS FRANK CHANCE.

ball park and *makes* his luck change. However, as far as clean-cut, “free” hitting is concerned, Cobb acknowledges Crawford’s superiority over all.

This is a great tribute, coming from the confident Cobb, whose quick eye and swift swing are dreaded by every American League pitcher. Walsh, the star of the Chicago White Sox pitching staff, opines that Cobb has not a weak spot as a batter. For a time Walsh thought that Cobb could not hit a low curve. Now he says that he can hit such a ball, but *not as hard* as the others. That is as far as they get—“not as hard.”

Johnson, whose pitching is Washington’s strongest asset, claims that the balls Cobb just “nips at” are the most dangerous. They deflect into slow rollers that the fleet Tyrus beats out easily. Johnson adds that he has had the same experience with Eddie Collins, the sensational second baseman of the Athletics. Most pitchers would rather have Cobb and Collins hit the ball hard than see them roll slow taps to the infield.

While speaking of Cobb—and Cobb

is synonymous with batting—it is pertinent to note that “Wild Bill” Donovan, Detroit’s veteran pitcher, says that good batters have no weak spots. He holds that the only way to fool men like Cobb, Collins, Speaker, Crawford, and Lajoie is to outguess them—to pitch them the opposite of the curve they have reasoned will be delivered.

Granted, then, that Cobb is rather a flashing star. But what does he think of the game? Permit an anecdote. During the winter Cobb sells automobiles in Atlanta. One day a prospective customer asked him: “How do you like baseball?”

“Great,” answered Tyrus quickly. “Detroit pays me \$9,000 a season. That’s more than any other business would have yielded me at my age. You say your son is a good ball player? Don’t hesitate a minute. Let him turn professional. Best thing in the world!”

So much for Cobb and his sweeping opinions. But let us meet Christy Mathewson, of the New York Giants. Mathewson has attained wider promi-

nence than Cobb. He has been called the greatest pitcher the world has ever seen. And do not the feats of a star pitcher live long after a batter's? Present-day fans readily recall Amos Rusie and compare him with Mathewson, but who remembers the name of a batter to parallel with Cobb?

Baseball has been good to Mathewson. It has made him comparatively well off—ever so much more so than Cobb, who has made thousands. How does Mathewson regard baseball? Has he Cobb's optimism and does he hold out the same glowing future to prospective entrants into the professional ranks?

We find Mathewson the antithesis of Cobb. He is tall and heavily built; Cobb is of medium height and slender. He talks carefully, quietly, and seldom; Cobb talks unreservedly, loudly, and often. Mathewson likes checkers; Cobb, automobiles. Somehow the men's temperaments foretell that their views will be opposite.

"Keep out of baseball unless you are sure of being a star!" is Mathewson's message to the younger generation, glowing with ambition for professional careers. Baseball is advisable as a career, Mathewson says, only if you are assured of being a much-sought-after player. He gives us his opinion that the average young man would be much better off as a bank clerk than as a ball player whose ability will not permit his entering the big leagues.

The average period of usefulness is ten years, points out Mathewson, and the ten years are the best of a man's life. Also, the average salary is such that it will not allow any great saving. From Mathewson's viewpoint it would appear that the average ball player throws away the best part of his life and has nothing to show when the throwing is ended. To bear out Mathewson, remember that we found the wonderful salary tale to be mythical so far as most players are concerned. Only the gods figure in the myths, and only Cobb, Wagner, Mathewson, and a chosen few others dwell on the baseball Olympus.

But Mathewson, naturally being satisfied with his own condition, is at least optimistic over the game itself. Like

Cobb, Mathewson is open in his admiration for a ball player. Cy Young, the twenty-one seasons' veteran, is Mathewson's pitching ideal. He calls him "the greatest of pitchers" and says that Young owes his success to being temperate in all things. Incidentally, Mathewson declares that the big league pitcher of to-day must have speed. The days of the slow-ball pitchers—Griffith, Mercer, Reidy, Rhodes, and Donohue—are no more.

Mathewson will not pitch unless his arm feels exactly right, and a thousand McGraws could not work otherwise. However, he declares that a pitcher should take his regular turn in the box once every four or five days, never more. Mathewson's *sang-froid* under heavy batting fire is remarkable, but it is not surprising to those who know the man. He realizes that confidence is everything and that pitching a baseball does not exempt from this rule.

"If Marquard regains this season the confidence that he had in Indianapolis," Mathewson told the writer recently, "he will not be behind any left-hand pitcher in the country."

Pitchers and Catchers

Of course, different pitchers have different ideas. Some of Mathewson's are interesting. He is a staunch believer in pitching to the same catcher in every game. He began to work well with Meyers last year and says that the Indian will be even better this season. Also, Mathewson says that he never tries for strike-outs unless the situation is critical, and that he lets the other eight men on the team play the game for him as much as possible.

Pitchers appreciate good catchers. Roger Bresnahan is invaluable to a pitcher because he is quick to see signs of tiring. Mathewson says that when the present St. Louis manager caught for the Giants he used to give fake signals when a pitcher began to weaken. The pitcher would shake his head negatively upon seeing Bresnahan's signs and thus have time to recover his poise.

Further complimenting catchers, Mathewson says that Archer, of Chicago, is

the best at throwing out ambitious base stealers. Another Cub he praises is Evers. According to Mathewson, Evers has a knack of "getting the other team's nerve." Upon reaching first base on a hit, Evers never fails to laugh or make some sarcastic remark. Unless a pitcher knows Evers he is apt to lose some of his carefully guarded temper.

How often do fans see young pitchers, who have been the sensations of the minor leagues, stumble and fall in fast company! Mathewson ventures a most probable explanation.

"I remember," said he, "when I pitched for Norfolk of the Virginia League. I was just out of college and nervous. I was wild and Portsmouth scored five runs in the first inning. The fans howled for me to be taken out. I thought that was exactly what Manager Smith would do, but he didn't. He slapped me on the shoulder and said: 'Christy, you have the stuff, but you're nervous. You'll come back next inning. If you don't, you stay in there if Portsmouth gets a hundred runs.' I might add that Portsmouth did not score another run. To Smith I owe my success."

So great is the desire of new pitchers to please, and so fearful are they that they have not the ability, that they fail. To this lack of confidence Mathewson attributes the burning out of minor league stars in major skies.

It was after a Chicago-Giants game last year. Tinker had won for the Cubs by pounding out a long hit against Mathewson. In the clubhouse Christy was asked: "Do you find Tinker hardest to pitch to?"

"Most certainly not," rejoined Mathewson. "Generally his long hits are due to the fact that the outfielders play in too close for him. The hardest men to pitch to in the National League are Wagner and Chance. Wagner is apt to get a base hit from any kind of a ball, and you have to put them over for Chance."

Yet the fans who hear the distorted tales from the dressing rooms imagine that Mathewson fears Tinker more than any other batter. And there are none so fickle as these fans. What do the players think of them?

It was in the clubhouse at the Polo Grounds, New York. The Giants had lost and were hurrying into their civilian clothes. Everything was confusion. The reek of liniment and alcohol filled the air. The players called loudly to one another. From the shower baths came the splashing of water and the virile slap of hands on muscular bodies.

"The bleachers gave you yours today," ventured an outfielder to the young pitcher who had been batted out of the box.

The recruit looked nervously to see if Manager McGraw was about.

"Don't mind 'em, young 'un," called Mathewson, pushing his big frame toward his locker. "Most of us think the fans are pests! They pay our salaries, but they don't own us."

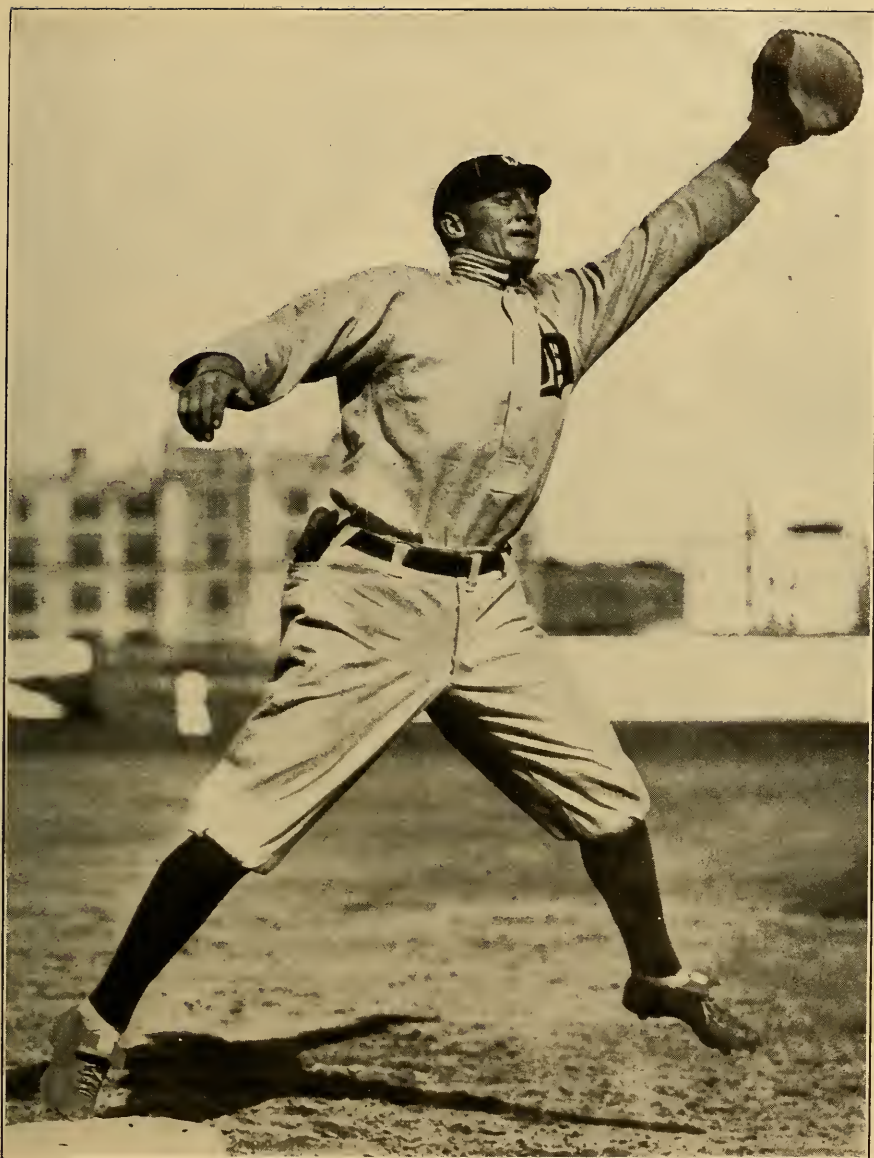
And Mathewson is not an exception. Most players are indifferent in the face of the greatest applause. Why? Let us view the fans through the glasses of John Peter—"Hans"—Wagner, Pittsburgh's phenomenal shortstop. In terse bromidian, he is ballyhooed—"The Greatest Player the game has known." This bores Wagner. If the truth be known, he dislikes the fans, for this stolid man of the powerfully bowed legs and massive shoulders dreads publicity.

As "Hans" Wagner Sees It

When the Pirates are home Wagner jumps into his automobile at Carnegie and drives to the ball park over the hill roads that lead into Pittsburgh. After the game he flees from the fans and chugs back to his little farm, his people, chickens, and dogs. Rarely will he talk on baseball; never of himself. One night, however, after the chickens had had been tucked away in their Carnegie cots, Wagner chatted with an old friend. With the liberty of long friendship, the visitor stepped suddenly on dangerous ground.

"John," said he, "do ball players pay any attention to the crowd?"

For the moment Wagner mulled in silence. He sat searching the sky, aglow with the flare of distant blast furnaces. Then, as if freeing his mind of a long incumbrance, he cried:



Photograph by Paul Thompson, N. Y.

TY COBB THINKS IT'S THE GREATEST THING IN THE WORLD TO BE A PROFESSIONAL BALL PLAYER.

"We let applause in one ear and out the other. The next day they roast you. This shows how foolish 'grandstand play' talk is. We never play for the 'grandstand,' for we don't want their applause when it comes."

It is said that Wagner never consented to a newspaper interview until late last season. His opinions on base-

ball, however, are frequently unleashed by close friends who at widely separated intervals have heard some laconic remark.

Wagner likes baseball. He believes it an excellent chance for a young man, provided the young man is of firm moral fiber. He harbors the anti-"good-fellow" idea to such an extent that those who

do not know him term him a grouch. His friends say he is big-hearted. His friends are right. To them Wagner is frank in his admiration of the game. As he says: "Something new is turning up every day. Always new and unthought-of situations develop and must be studied out. Playing never becomes a task."

Wagner is one of the few players who say that the much-abused club owners have made baseball a strong combination of sport and business, receiving the benefits of the former and barring commercialism from the playing field. He maintains that players would never receive the salaries they do were it not for the club owners and is a staunch pillar of the so-called "organized baseball."

Many players dislike Wagner. They take offense at his aloofness, mistaking an intensely phlegmatic temperament demanding quiet for sulkiness. All, however, are united in praising him as a master craftsman. Mordecai Brown, the Chicago pitcher, flatters Wagner perfectly. In so doing he practically expresses the opinion of every ball player.

Says Brown: "I have found Wagner's weaknesses as a batter. They are to give him a base on balls or to put a ball directly over the plate. He will be so surprised at a pitcher's audacity in doing the latter that he will be unable to swing at the ball."

A Player Who Loves the Fans

We have seen that two of baseball's exalted trio—Cobb, Mathewson, and Wagner—are not enamored of the fans. But perhaps Cobb, being a young player, has not had a chance to tire of applause and publicity. Possibly it is not fair to compare him with such hardened veterans as Mathewson and Wagner. Let us look a bit further before passing judgment. We shall select Charles Albert Bender, who helped to pitch Philadelphia's Athletics to a world's championship. Bender is an Indian, a Chippewa, and a veteran in major league baseball. Surely, with his experience and the indifference of his race, he does not grow enthusiastic over a great crowd. Yet Bender cannot play his best unless the fans overrun the stands. He loves

their applause and attentions. With them he is as popular as with his fellow players.

Frank Chance, the shrewd man-reading manager of the Chicago Cubs, watched Bender beat his team in the opening game of the world's series at Philadelphia last October. At his hotel that night Chance said: "That Indian was almost inhuman. The greater the tension, the better he pitched. He fairly reveled in the tumult of the stands and often laughed like a pleased boy. Always, however, there was that calm smile and baffling curves."

Here, at least, is one great pitcher who does not say "Pests!" when the fans are mentioned.

But how do ball players find the game itself? Is it work or play? Tommy Leach, the outfielder of the Pittsburgh Pirates, says that baseball is the hardest kind of work. Remember that Leach has been in the professional ranks fourteen years and these years have tarnished the glamour of youth. Older players than Leach, however, give interviews which begin with "I love baseball" and end with the same sentence. So Leach's opinion of the game must be weighed critically.

Leach was met one morning at a New York hotel. He was at breakfast, a surprising breakfast for so small a man. As an opening greeting Leach said:

"We ball players have to think fast, live fast, and die fast."

Sympathetic looks were in order and "eat fast" was added mentally to the sweeping sentence.

"Yes," continued the tiny athlete with the expressionless eyes, "I go to the ball park the way another man goes to the factory. Baseball shortens our lives. We are too active to stand the long rest that follows our retirement. Of course, I like to play ball, but only when I'm in the mood, and I'm not in the mood day in and day out. It's the hardest kind of work for me."

That afternoon Leach vexed some thirty thousand New York fans by a sensational running catch that choked the Giants' rally, but by an odd coincidence one of the defeated Giants gave Leach's "hard work" lament a terrific jolt. After

the last of the crowd had melted away, the players began to emerge. Larry Doyle, the Giants' captain, walked with a friend up the long runway to the elevated railroad. It was impossible not to overhear their conversation.

"Notice Leach this afternoon, Larry?" asked the friend. "He had a complete grouch."

"That's funny," laughed Doyle. "Why should a ball player look peeved? It's all play—the best kind of play. I'd

concerned. Collins is a cheery, unassuming person. Yet he is gifted with an alert bearing and quick mind that would hold a first glance and compel the question, "Who is that young fellow?" were he one of a group.

When Collins played ball at Columbia he asked Clarke Griffith, of the New York Americans, and later McGraw, of the Giants, for a tryout. They laughed at him. Later he repeated the question to Connie Mack of the Athletics. To-



Photograph by Paul Thompson, N. Y.

WAGNER DECLARES THAT "PLAYING NEVER BECOMES A TASK."

rather be out on that field than anywhere."

And, always smiling, Doyle smiled more broadly, perhaps thinking of his breaker-boy days in an Illinois coal-mine.

From many sources come the very prominent ball players. Lajoie was a cabman, Evers a \$4-a-week collar-factory employee, and Wagner jumped from a freight car to fill his first professional engagement. Also the colleges have contributed. Mathewson studied three years at Bucknell, and Eddie Collins, of the Athletics, was given an A.B. by Columbia University.

It is with star Collins that we are

day Griffith and McGraw would pay Mack well for Collins's release were it possible to buy him from the American League.

Like Doyle, Collins looks on baseball as a grand lark. He takes the lark seriously, however, and continually considers its possibilities. Collins is careful to study play, players, and teams. For a comparatively young recruit his observations have been made remarkably quickly and accurately. He has analyzed "inside baseball" and defines it in this way: "The harmonious working of nine men on a ball field in pursuit of victory."

Collins has specialized on batters.



Photograph by Paul Thompson, N. Y.

ONE OF HAL CHASE'S SPECIALTIES IS THE USE OF SIGNALS TO CONTROL THE WHOLE TEAM.

Generalizing, he says that they are born, not made. Specifically he points out a few of their peculiarities. For instance: Hartsel, Milan, Hooper, Turner, and others of diminutive stature let the next ball pass if the count is "strike one and ball three." On the other hand, Lajoie, Speaker, Lord, Murphy, Steinfeldt, Wagner, Mitchell, and Tinker generally swing.

Certain pitchers hold a voodoo sign over certain batters, according to Collins. Addie Joss, of Cleveland, used to have Cobb's measure, and Taylor, formerly of Chicago, Wagner's. Joss firmly believes that no matter how good a game he pitches he cannot beat the Athletics. This works both ways, however, for all Tom Hughes has to do to beat Cleveland is to throw down his glove in the pitcher's box. Collins says that Bender, of the Athletics, and Walsh, of the Chicago White Sox, are nervy in that they pitch a curve when the count is "three and two." As for Collins and the fans—he plays the same whether two or twenty thousand are in the stands.

Napoleon Lajoie, mentioned in the

same breath as Cobb when American League batters are spoken of, regards the fans as does Collins. He is indifferent, but not offensively so. He goes quietly about his tasks and indulges in none of the airy persiflage rather faddish with some star players. Everybody always had a good word for the big French Canadian. He is popular with fans, club owners, and players. Of Lajoie's major league debut there is an amusing incident.

"Does a curve ball bother you?" asked the Philadelphia manager.

"No, sir," said Lajoie, "only the ones I can't reach."

That remark was characteristic of Lajoie. He is quietly confident. Certain American League pitchers say he hits in a groove; that he swings powerfully and cannot reach a ball that goes "over the edges." Suffice it to say that Larry finished just a fraction of a point behind Cobb in the official batting averages.

Ball players find special phases to the game to interest them. Hal Chase, the new manager of the New York Ameri-

cans, is a firm believer in signals to control the play of the whole team. Evers, of the Cubs, is the most superstitious of ball players. Tinker of the same team claims that he has not been hit by a pitched ball since 1902, and—believe it or not—praises the umpiring system in the National League.

Kling, another Cub, says that an erring catcher can disorganize a team's game quicker than anyone else, and adds that "inside ball"—alertness on the defense, from his standpoint—won three pennants for his team. Brown, a fourth Cub, wants a rule giving the batter his base on three balls. Paskert, of Philadelphia, holds that Beecher, of Cincinnati, would be a better base stealer than Cobb or Collins if he knew the "fall-away" slide. And so it goes; they all have their fads and fancies.

Managers Chance and McGraw, in the National, and Mack and Jennings, in the American, are rated the highest. What do they think of baseball, and how do their players feel toward them? Chance left a dentist's practice for professional baseball. He is a worker, and says that any worker will find baseball profitable. "It's no place for the 'quitter,'" is a favorite remark of Chance. This seems to be an obsession with Chance, for in one afternoon he called three pitchers "yellow bush league gentlemen!" His sarcasm is bitter on the ball field, but his players like him. Chance leaves an incident behind instantly and forgets.

McGraw, of the Giants, is not sarcastic like Chance; he is personally abusive. Mathewson told the writer that

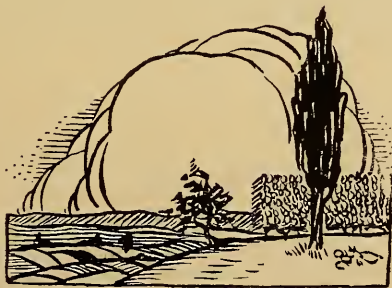
most of the Giants dislike McGraw because of his language to them. However, he added that they respected his ability and would do anything for him on the ball field.

Hughey Jennings, of Detroit, is a different type again. He has the fire of McGraw and the diplomacy of Chance. Jennings's players like him personally. They say he is never abusive. With Hughey it is a case of: "All right, old man—better next time"—"Yah! Yah! Here we are! Here's the run!"

But Connie Mack, the Athletics' pilot, is the most interesting. He lacks the sarcasm of Chance, the sneer of McGraw, and the nervous energy of Jennings. Yet his team won the world's championship. Always affable and courteous to his players, he is a stoic to strangers. He believes in the power of a smile and of kindness, and seeks the confidences of his men. They believe him the shrewdest of managers, which is not for us to dispute. He never shows any emotion when a game is in progress, yet the tension must be terrific. Only once did these suppressed feelings get the better of him. That was in the seventeenth inning of the Detroit-Athletics game that lost them the pennant in 1907.

Cobb won for Detroit with a home run, and Mack fell off the players' bench as Cobb dashed across the home plate. It is the only error he has made. Like Jennings he is fond of the fans and loves baseball. Chance and McGraw endure the fans, but it is their nature to *endure*.

How does it look from the player's viewpoint?



A LENGTH OF FILM

BY PERCY M. CUSHING

Illustrated with Photographs by the Author

GENERALLY speaking, $3\frac{1}{4} \times 5\frac{1}{2} + \text{greenhorn} = \text{trouble!}$ Of course it doesn't really make any difference whether it's $3\frac{1}{4}$ or 5 by 7, or any other size, just so long as it's a camera. The result is about the same. And our case was not the exception to prove the rule.

We fitted the above formula precisely, the camera and I. It was a $3\frac{1}{4}$ and I was, still am, and probably always will be, a greenhorn. And the result—That's exactly what most of them were, blanks and dashes or dashed blanks according to how sunny a disposition one has. Of course there were a few that didn't totally fizzle, but luck will play a part in most every game.

Maybe it was a rash decision of mine in the beginning. Why not illustrate my own stuff, I thought? What's the use of letting other chaps get the rakeoff that by all rights should belong to me? I'll get a camera and I'll make it pay for itself in two whacks. Why can't I make just as good pictures of wilderness expeditions out in the grove behind the house as other fellows can make in the real wilderness? I can, and I'll make 'em so clever that nobody'll ever dream they're phony.

Family counsel was adverse, but I was stubborn. I separated myself from the twenty perfectly good dollars and acquired a perfectly good camera, of the operation of which I was perfectly ignorant. But I was confident of my prowess, and I got a learned friend to explain "time" and "stop" and "focus" and a lot of other things which I have given up trying to master. Then I went in search of a victim for my baby efforts. I wanted a human being, for my infantile idea of nothing to photograph was a scene without person or persons in it. I think Sid was a willing "goat," because he had seen

no previous efforts of mine in photographer's art. In fact, there had been none. He is cracked about shooting, so I agreed to immortalize the scenes of field and cover.

It was long after the season had closed, but that didn't make any difference. We got George to go with us, and hiked to the wilds half a mile behind my house, where we decided to portray the wilderness and the lure of the double barrel.

George is a dog, or a near dog. He is a patriarch in our town. Presumably he is mostly setter. And he is fat and old, having much the appearance of a dog that has been in the river for a fortnight. Also he is timid and likes human society at close range, which characteristic was of great annoyance to us before we had finished.

"What we want to do," confided Sid earnestly in a tone of utter trust, "is to make some real good pictures—like those that A. B. Frost draws, with the atmosphere and all that in them. These guys who take pictures for the magazines don't know what they're about. Their work is wooden, lacks color, and looks about as real as though they had taken the photos in their back yards." And Sid swept the scant fringe of frost-stripped trees, over which the roof of my house leered insolently, with a "heart-of-the-wilderness" gesture.

Banishing the thought of houses and hedgerows from my mind, I agreed with him.

"Now," said he, "I'll get in the middle of that brush pile and when the bevy of quail flushes, I'll make a quick double, and you snap me in the act. There's nothing around here to give it away. That cluster of scrub pine over there looks natural and lonely, and we'll have a picture with a real kick in it."

Then Sid crawled to the brush heap, and pointed his gun, while I guessed at



“ PICTURES LIKE FROST DRAWS—WITH THE ATMOSPHERE, AND ALL THAT.”

the distance, set the focus, and tried to remember stop from time, with the result that I got it mixed and set the machine for a time exposure. Then I squeezed the bulb, and imagining I had taken the picture, walked away while the open shutter continued to let the world at large wander into the film.

Naturally enough when a few minutes

later I wound the next exposure on, that was also exposed as the shutter was still open. Of course I was not aware of this, so I posed Sid after my notion of a real live gunning picture with “action” in it.

“See that patch of swamp with the alders on the edge,” I said. “Well, that’s a likely place for turkeys. It looks

like Virginia, understand. We'll get a corker here, sharp negative, fine er—definition, wonderful um—depth.”

“Sure,” agreed Sid enthusiastically, “that’s the stuff all right. We got to have all those to make it look right. We’ll make the “pro” photogs. look like a bundle of field mice.”

I saw at once the scene for the picture. It was the most natural scene in the world, real and compelling.

“Now,” I said, “you crawl over to the edge of that boggy place and lie down on your stomach while I get the machine doped up.”

“Hey—why on my stomach?” demanded Sid. “What’s the use of that? Can’t you see that mud’s all wet?”

“Never mind,” I retorted scathingly. “Hasn’t a fellow got to be lying down when he’s calling turkeys? Remember you’re calling—that is, the guide is calling. The guide, d’ye see? He’s sitting behind that clump of bushes there, and don’t show in the picture. What you’re doing is slamming it to the turks! We want real life pictures, so hurry up and wallow down!”

With a bit of his enthusiasm gone, Sid proceeded, somewhat reluctantly, to prostrate himself in the mire. He preferred to be pictured standing up—it

seemed less undignified, he explained. I got my time set right this shot, swung my focus properly, and gave her a number 8 stop, for the sunlight was pretty good.

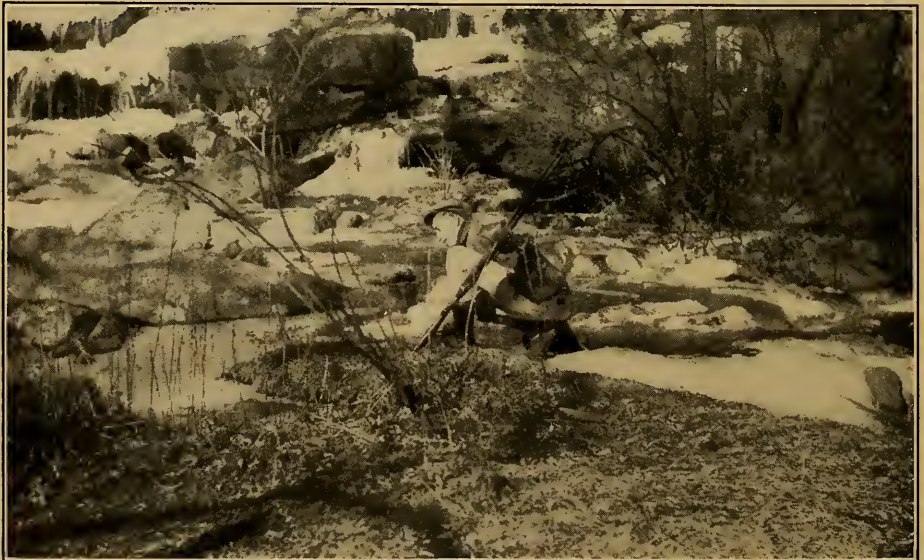
I am convinced that the picture would have been a good one, if it hadn’t been for that shutter being open. Of course, as it was, there wasn’t any picture at all. The film had been exposed, and when I squeezed the bulb it just closed the shutter, that’s all. Of course, I didn’t know this at the time. My wise camera friend doped it out afterwards for me.

“Gee!” said Sid, as he arose from the marsh, slightly placated as I extolled the charms of that picture to him, “I’ll bet that’s got atmosphere to it.”

And he was right, it had atmosphere. In fact it was all atmosphere. Just atmosphere and nothing else, as we found when it was developed.

We had better luck after that. I am able to present testimony to the fact, for the illustration of Sid taking a phony drink at the frozen waterfall from the snow-fed brook was number three.

“Say,” said Sid presently, “don’t I make a corkin’ subject for photographs? All those chaps in Frost’s drawings are tall, slim fellows, aren’t they? Well, they are, and there’s some satisfaction in



TAKING A ‘PHONY’ DRINK AT A FROZEN WATER-FALL.



“ROLL YOUR EYES, YOU IVORY HEAD!”

knowing that you'll look like something in a picture. I never could stand for photos of stub-legged, dumpy idiots.”

“All right,” I answered, “you're a dream, and here's a chance for a snappy little picture as ever you saw. That flat rock in the middle of the brook's the place to snap it. We'll make it a ducking picture. I'll get on top o' that old stump and photograph down so's the trees won't show, and it'll look as though it was out in open water.

“Skin out of that coat and onto the rock. Lie on your side and look as if a bunch of ducks were coming and you were waiting to slay 'em.”

Sid crawled out on the rock, slipping up to his knees in the icy brook by way of lending actual experience to the occasion, and hunched up like a drunken soldier.

“Punk,” I shouted at him. “You look like a bale of straw. Put action into your body. Look strained and tense. Who ever saw a duck shooter flopped up in a lack luster heap like that?”

Sid was pained and offended at this, coming as it did directly after his “good subject” oration.

“Huh! Like to see you do any better!” he grunted, at the same time sticking his leg out behind him, gripping his trusty gun frenziedly, concaving his back

like a bull terrier stretching itself, and staring into the distance at the monstrous flock of approaching and imaginary ducks.

“Not fierce enough,” I yelled at him. “Look ferocious, eager, primitive, terrible. Roll your eyes, you ivory head!”

And Sid rolled, as I cut him onto the film. Number four was another triumph, and it was an even money shot with failure.

It was along about this time that George butted into our efforts. No doubt he realized that we were rapidly approaching perfection and considered that we were worthy of attention at last. Or mayhap, like Sid, he thought he was a good subject.

At any rate, he had prowled about his business for the first hour, utterly ignoring our struggles. Now he became suddenly possessed with the desire to be immortalized. While I strove excitedly to get a good likeness of Sid eating his lunch by the rail fence, the ancient and swollen George cavorted stiffly in the way, until at last his very insistence, despite clods of earth and bad language hurled at him, woke the artistic sense within Sid's soul.

“Gad, man, what a mole-eyed dub you are! Can't you see the chance you've

been overlooking? Sling this old bundle of meat into the game. He's marked like a setter, and maybe the camera'll make him look as if he wasn't fresh from the corned-beef barrel. It don't seem to be unwilling to lie in most other matters."

The sagacity of Sid's suggestion was not to be denied, so I pounced on the idea.

"Fix him up right," I exclaimed. "Have him the faithful son of some big sire or other, with his nose in his master's hand at the end of the day."

"Or at lunch time," put in Sid, holding out a morsel of bread and calling softly: "Geordie, Geordie—here, Geordie, nice dog."

Instantly Geordie's interests seemed to take a new direction. I must not neglect to state that he was nearly blind and his nose was so dulled that he was incapable of scenting food unless it was crammed in his mouth. So he didn't learn about the free lunch until Sid rushed after him, grabbed him by the skin, and, hauling him into a fallen tree, shoved the bread under his nose. Then he wouldn't eat it, and, far from looking up with soulful eyes into the face of his master, he squatted terrified close to the ground and whimpered with all the pitiful aspects of senility.

At length, after much petting and encouragement intermingled with cheerful epithets, George was induced to sit on his rheumatic haunches before me, maintained there by a strangle hold upon him, while Sid juggled with the mysteries in my flattish oblong machine, under my direction. That he juggled them not wholly in vain is shown by the picture.

"Now we might as well use this old purp further," announced Sid, prodding the object of his designs in the side with the result that a hollow and swollen sound was given forth much like that a thumped watermelon emits. "We'll nail him in the act of pointing."

That was too much. "Pointing!" I choked. "That old ham pointing! Why, you clown, how can *that* thing point?"

"Geordie can point, can't he, Geordie? Nice Geordie! good pointer, Geordie!" muttered Sid amiably.

Then, slowly and covertly, he began to work away from the dog, circling

cautiously to get a position a few yards behind him, so that I could get a picture of them both. George stood perfectly still, except for his head which he turned slowly to follow Sid's detour.

"Nice Geordie! stand quiet, Geordie! Fine old Geordie!" continued my companion soothingly, meantime motioning me to get ready to catch the whole outfit with the kodak.

Carefully Sid worked around astern of the old dog, and Geordie's head followed him, though his body remained pointing exactly as we had placed it. At last Sid was almost in position and Geordie's neck was nearly twisted off.

"Got to do something to get his head around front," Sid gritted between his teeth.

"Throw a stick out ahead of him," I replied, not daring to look up from the finder.

With extreme care Sid began to bend down. He reached a rotten twig and raised his arm to fling it over Geordie's head. The move was fatal. With a senile yelp of pleasure, the miserable Geordie tried to follow the sideways motion of Sid's arm with his already distorted neck. The effort was too much for him. He reeled a second convulsively, then spun around and with wagging tail and foolish countenance dashed straight at Sid to get a grip on that stick.

In a desperate attempt to corral him before he turned clean around I snapped the bulb, but he was moving too fast for my twenty-fifth of a second exposure, and he galloped clean across the negative, a hazy, imbecilic dog with many legs.

"The darned old cuss," roared Sid. "Why in blazes couldn't he stand still? I'll fool him this time." And without more ado my partner dashed off through the brush, running in a circle which would bring him back to a point near where I stood. "I'll outrun the fool," shouted Sid, "and when I lap him, put the high speed on your blunderbuss and catch us both."

I saw at once that the scheme wasn't practical, but my shouts to that effect were lost on Sid who was wholly engrossed in doing a marathon about that unmarked circle of brush with the ancient George galloping stiff-legged at his



GEORDIE SQUATTED, TERRIFIED, CLOSE TO THE GROUND.

heels. It took three laps to convince Sid that though George might be enfeebled, he still had a fair sized sprint left in him.

"Now wouldn't that shatter your patience," puffed the "corkin' subject." "We're stuck."

"No, we're not," I retorted. "You stand still there, and I'll fix the brute."

Clutching Geordie in my arms I carried him ten paces away, set him down,

and intimidated him with threatened cuffs and kicks. He remained squatting close to earth. Then while I stayed near enough to have him still feel my influence, I instructed Sid to obtain a heavy stick, which he handed to me.

"Now, you go up close to him, so he won't beat it as I get back in position," I said. "When I heave this big club into the brush ahead of him, he'll prick



GEORDIE STARED STUPIDLY WHERE MY CLUB CRASHED INTO THE BRUSH.

up his ears and get interested. Then you point your gun, and I'll gather the field."

For some unknown reason the scheme worked. Instead of running or wallowing as, according to past performance, he should have done, George actually did arise from his recumbent pose and stare stupidly at the place where my club had landed with a crash in the brush, and I got a sort of a picture.

By this time the afternoon was getting well along. We made a few more frenzied shots at the unreliable George, and then with the daylight flying rapidly, we prepared to get reckless. We decided to try some time exposures. I had no tripod, but I found a stone fence and decided to make Sid famous by taking a nicely posed, though-you'd-never-dream-it, photo of him. He planted himself in position, leaned his gun against his side, and assumed a Balboa-discovering-the-Pacific attitude, one hand shading his eyes as he stared with tremendous intentness at the wonders that lay in the distance.

I fixed the camera on the stone wall, got Sid in the finder, stopped her down awfully fine, and opened the shutter.

"We want this sharp," I announced, "so I'll give it lots of time." Then I

discovered that I'd dropped my glove fifty yards back.

"I'll go get it, and by the time I get back, the exposure'll be about right, I guess. You stand still."

I was halfway to the lost glove when I heard a wild yell behind me, and turned just in time to see Sid dashing madly toward the camera, his face the picture of frenzied rage. The next instant there was a shrill yelp from George, and bang went the camera off the fence.

Sid was spluttering with wrath when I reached him. "What in all possessed's the matter—" I began.

"Matter—blazes—why, that blankety—can't you see, confound it? I was standing there when all of a sudden I saw that blamed—darn it all anyway." And Sid choked into incoherency.

It was some minutes before I could draw from him the information that the ancient George, approaching his second childhood, no doubt, had seen the small rubber bulb dangling from the camera, and—well, had gone up and taken hold of it. When Sid had discovered the reprehensible performance and had made a dash to prevent it, the feeble-minded old brute had been so scared that his mouth had clicked together and he had snapped the picture.

THE MASTER ROGUE

BY F. ST. MARS

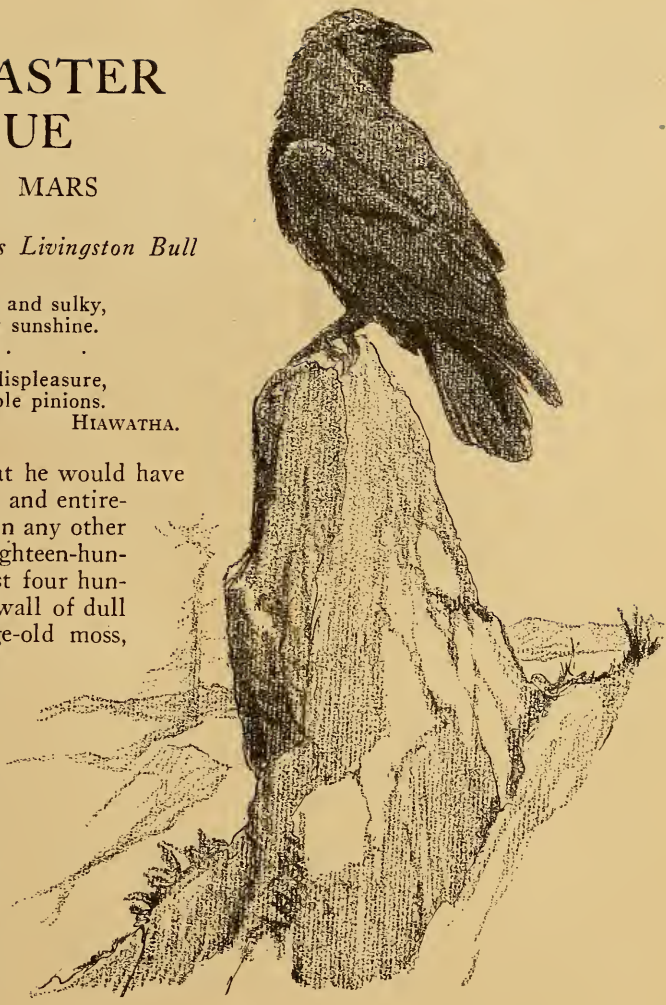
Illustrated by Charles Livingston Bull

And he left him, grim and sulky,
Sitting in the morning sunshine.

Croaking fiercely his displeasure,
Flapping his great sable pinions.

HIAWATHA.

BUT I protest that he would have been completely and entirely out of place in any other setting. Given an eighteen-hundred-foot ramp, the last four hundred feet atop a sheer wall of dull gray, bearded with age-old moss, riven and gashed and furrowed by the storms of a thousand years; given a river—a silver snake alive—crawling at bottom, fed by a dozen tiny silver threads, spangled with bursts and puffs of rainbow vapors where the waterfalls spouted and sent up all together a confused murmur like unto the murmur of an ants' city in a pinewood on a June day; given a black smudge of pine, a green splash of larch, a blotch of dull gold where the bracken lay, on the opposite slope; given a single kite sweeping the flank of a mile-long, dim ridge, half smothered in rain squalls; given a silence profound as the silence of the deep, accentuated and focused by the single strokes of an ax very far away, and given on the brow of the ridge a single fang of rock crowned atop with him, a black speck you could see miles away, a raven. Would you have had him otherwise?



A SINGLE FANG OF ROCK, CROWNED ATOP WITH HIM,
A BLACK SPECK YOU COULD SEE MILES AWAY.

Though motionless, he was concerned as to his mate, her nest. When, in these days of order—and collectors—you are an outlaw, when you are rare enough to be sought, and, more especially, when you wear the black livery which is the heritage of the crows and the badge of robbery, pillage, and murder, it behooves you to "look to your tents." His mate would a nest, and he would have her have a nest, but—there is many a slip 'twixt the egg and the chick, and well he knew it.

No man knew the age of that raven. No man knows the age of any raven. All

I know is that by any standard of age he was old. Yet, the age stopped at the name—always excepting wickedness, of course. In all else was he young, in his prime, keen, alert, watchful, confident, sure, and quite adequate—a force to be reckoned with by the wild folk of the place.

In dress he was slovenly; his wings hung, feathers were out of place. His beak was a coal-hammer, no less. His carriage was the carriage of the swash-buckler, and in the eye—the cruel, insolently humorous eye—the leer of evil, not without courage, made manifest.

Yes, he would nest. There was, apparently, no hurry; time for philosophic thought. Your wild folk, except possibly starlings, never hurry, by the way. All the same they get through more in a day than the average man does in a week.

At last he rose—it was like the lifting of a black thought—shook out his great wings to the accompaniment of the stiff rustling of feathers, and cast himself into the void. The rasp as those wings bit the air told of power. Yet there was nothing of the “gallery” in his flight. He flew to get there, and it was not till a howling, maniacal gust of wind swept down the mountainside upon him that one realized the strength of him. He was not concerned at all. He did not go tearing away like a blown leaf to windward, as the other birds did. He was not obliged to back and tack. He did not find need to hug the ground to make headway. He just kept straight on without concern, apparently also—but this can hardly have been the case—without trouble.

From time to time he did a strange thing—strange for so sober a flyer. He threw himself upon his back and allowed himself to fall in that position, stonewise, only to recover and beat forward again without hesitation—I had almost said without a smile.

Anon he came to a horrible place. The cliff appeared to have been cut off with a giant knife, and one looked over its face, two hundred feet sheer, into nothing. Here, one thought, he will build his nest, for it was a safe place—for a raven’s nest, I mean. But, no. He

went mad instead, or at least it appeared as if he did. He must needs choose a tree, a bare, wind-harried affair, standing some half-dozen yards from the cliff’s edge, and there start his nest. The madness came in in the fact that any good climber could reach it there, whereas on the only other ledge, half a hundred feet down the cliff’s face, he would have been safe from even the collectors’ agent.

Presently something said “Cruck! Cruck!” in a hollow voice that savored of the tomb, and his mate dropped, a black shadow, from the clouds. Then together they labored.

That was a mad nest building, because the cock-bird, for all his somber mien, found it necessary to dance a crazy dance from time to time, uttering the while dolorous ravings, and to cast himself back at the cliff’s edge, and laugh hollow croaks to think that, by consummate recovery and skill, he cheated the buzzards who hung expectant to see him scattered on the rocks below. Then, as if the picture were not sufficiently arresting, the sun must needs set behind them, and, igniting the sky aflame, turn both birds into coal devils, on a coal tree, performing contortions above a cliff of coal—all in silhouette against a silently raging furnace.

The dawning found them hard at it—purple goblins now, against a sky of perfect pink, floating on blue-gray and purple mists—for the nest building of the raven is no sparrow’s task. A wheelbarrow load of sticks alone, each stick tested separately for flaws, rot, and damp, comprise the outer works of the black one’s castle, and these, gathered singly, often from great distance, are not easy to collect.

About noon a speck—as it were an ant crawling up the opposite hill—appeared far below. Anon it stopped and was still—the ant had discovered a grain, perhaps. But it was no ant. It was a man, a collectors’ agent, which, though larger, was scarcely of greater worth than the ant he appeared to be. He was gazing through binoculars, prismatic binoculars to be exact, and when the nest came within their “field” he smiled.

The great black birds needed no



HIS MATE DROPPED, A BLACK SHADOW, FROM THE CLOUDS.

binoculars to show them this scourge in detail, and they smiled, too. I swear they did, or was it a passing cloud shadow that made them appear to smirk, or a gull skimming high overhead that laughed?

Day after day that antlike speck crawled aslant the opposite slope and leered a lustful leer through binoculars at the nest, and day after day one or other raven labored thereat, calling down maledictions on all collectors and their brood, and daily the nest grew from a notch to a bunch, from a bunch to a skeleton castle, and from that to a landmark. And the agent grinned—for he was very young, that agent. This was his first dealing with the king of the black fraternity.

On the other hand the ravens were very old. Now the raven is born a child of the devil. With the years his cunning and knowledge of evil increase, and the getting the better of him is likely to fall neither to the young nor to the head-

strong. No flies settle on your raven, if it please you.

Thus our collectors' agent forgot, or lacked the brains to notice, that, after a space, one bird only of the pair took part in this nest building. To him the one bird was just a raven, but, as a matter of fact, it was sometimes the cock and sometimes the hen—and many of the sticks used to make that nest were rotten. They would not stand a gale with the weight of a full-grown hen raven atop for ten minutes, to say nothing of the brood that should come.

Bird never did, nor ever will build nest with rotten sticks. The British Government's "Nitro Proof" test for guns is no more drastic than the test to which birds put each single component part of their nursery. Still the human scourge grinned the vacuous grin of the ignorant. Certainly that nest building was very late. Even he knew that it was full time for ravens to have laid all their eggs by now. Nevertheless he consoled

himself with the thought that here was the nest and here were the birds. Barring accidents, therefore, it was almost mathematically certain that here at the appointed time would be eggs also.

On the fifth day—or it may have been the seventh, I forget—our raven left his nest building about the hour of noon. He was aware, for one thing, of his good lady's restlessness and bad temper, and for another thing, of a voice within himself. It was a voice which with him, as with all birds, was rarely still—the voice of hunger. He would feed.

Now where on earth in all that wild scene should a respectable old gentleman turn his black beak to feed? He soared along at a great height over the wonderful landscape till he came to a wood of deep, restful green, all ashimmer in the sunshine and all astir with the restless wind that ran in following waves across its bosom. The wood was of oak, flung carpetwise across the shoulder of an am-

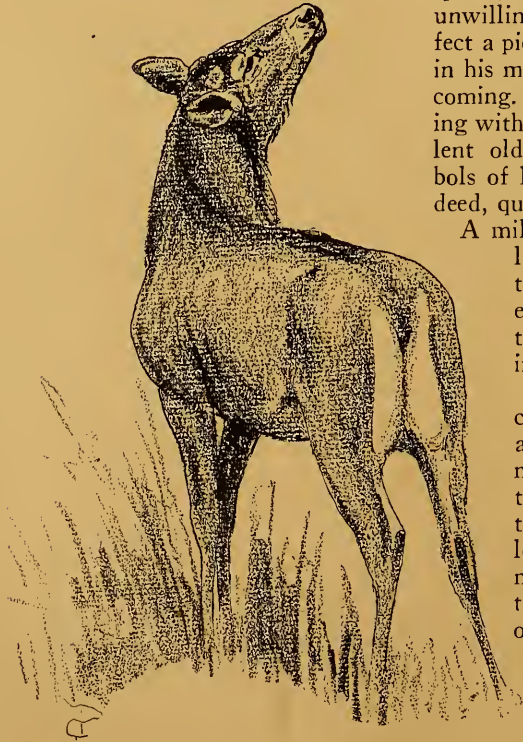


ple hill, and there were sun-washed spaces between the trees, fringed with the brittle bracken, guarded by delicate tracery of hawthorn, bearded with clinging briars, and dimpled and patched with lawns of pure green, where deer fed and rabbits nibbled warily—exactly as oaks love to have it.

Our raven hove to on a great bare limb on the edge of one of these peaceful spaces, quietly, unostentatiously, as if unwilling to break the peace of so perfect a picture. There was nothing at all in his manner to warn one of what was coming. He just beamed on the clearing with the complacent air of a benevolent old gentleman watching the gambols of his grandchildren. He had, indeed, quite a fatherly look, our raven.

A mile away, he knew, his wife, following his course, had dropped to a like scene, with one roving eye on the world in general and the other turned in his direction in case he needed help.

A buck—not horned now—came out into the naked sunlight and stared up at him for a moment before passing on. A thrush flew to the top of a hawthorn and told the world of his love that was assuredly born of melody, and a blackbird put him to shame with that lazy mastery of the perfect song which is all the blackbird's very own. A gay finch flaunted his gold against the sun on a white-thorn, and a single cock pheasant came out and posed for a bronze statue in the warm rays.



A BUCK—NOT HORNED NOW—CAME OUT INTO THE NAKED SUNLIGHT AND STARED UP AT HIM.

In the shadows under the low boughs there were hints of dim lamps coming and going, which marked the passage of the white rumps of the elusive roe deer, and once a gaunt dog-fox, tongue lolling, eyes agrin, came out to roll, but thought better of it and went away. Rabbits dotted the place everywhere; and, as they began to forget the coming of the raven, all the birds lifted up their voices—the midday hymn in this cathedral of a thousand pillars.

The raven looked on and seemed almost to beam his kindly approval of such innocent delight of the wood folk. One almost forgot the warning of his color as one beheld him at that moment, so peaceful and content his air.

Suddenly was silence. It was as if a finger had been laid on Nature's lips, and a whisper sighed through the glades breathing one word—"Silence!" But it was not silence the whisper said. It was "Death!" A swift shadow shot across the clearing and all was, as it were, crystallized. Nothing moved. Nothing spoke. Every bird and every small beast "froze," while the maker of that shadow, a hawk, clipper built, constructed on racing lines, sailed above, took a turn, sailed again, and slid on over the far trees.

He had seen nothing because nothing had moved. Dozens of birds—all prey to him—really came under that sheathed glance, but they were "frozen," and so he saw them not. Only man, it seems, possesses the power of eliminating the "frozen" wild folk from their harmonious surroundings, and not every man at that.

In a few minutes Nature spoke again, song poured forth, and all went about upon his or her business as before.

The raven waited on. His air was no less placid, no whit less innocent, than before, but he was aware of an increasing aching void in his innerds all the same. The ravens, however, have built up their success of species on the text: "He that believeth shall not make haste," and good reason had he to believe.

There is the patience of the cat waiting for a mouse, and there is the patience of the eagle motionless on its pinnacle, and there is another patience of the pike

waiting, head to stream, at the tail of the mill-race, but the patience of the vulture and the raven exceedeth all these. To the cat and the eagle and the pike is only the uncertainty of the chase, but to the vulture and the raven is the most certain thing of all—death.

Therefore they wait on, they believe and do not make haste, knowing that, in the end, all things must come to them. They have, as it were, the last word. Only man has upset their plans. He will neither die decently in the open, nor let them live. You will find, however, that wherever man does let them live, treating them as scavengers, they are the most numerous of all birds—the waiting game pays.

Fifteen slow, languorous minutes dropped by, and during that time our raven imitated very passably an image carved out of the very jet. Then something moved.

A rabbit came out into the clearing, and it was in trouble so that it could not refrain from giving a helpless, baby-like squeal. Instantly there was no living thing in the clearing, only the rabbit that dragged itself forward as one afflicted with paralysis, and the raven still as a pond.

Anon came another thing. Very long, and very low was this thing, so that to progress it moved in leaps, rippling over the grass snakily. It was brown as autumn leaves are brown, and its eyes shone red in a flat head, the shape of a wedge. The raven looked again and saw it was a stoat.

The rabbit made no effort to avert the death that followed. It dragged and squealed till the stoat fell upon it and delivered the fatal death bite of all the weasels, the swift severing of the vertebræ at the base of the skull.

For a few seconds after the murder the raven was aware of the stoat's beady eyes fixed upon himself. Then he was aware of their quick shifting to something else above, and at the same instant a bolt seemed to fall from the sky. The stoat did not so much go, as be gone. On a second was a stoat above a rabbit. On the next second the rabbit was still there, but there was no stoat, not so much as a hair of his tail. Only, in

his place stood a big buzzard, and the raven had no distinct recollection how on earth he got there, except that he must have had some connection with the falling of the bolt from the blue.

Up to this point, as you will perceive, the raven had taken no part in the play. Now, however, he spoke—it was the voice of the vaulted tomb—and announced his intention to claim his dues. The buzzard had its back turned to him at the moment, but that did not prevent it from yanking its head clean round and fixing him with its stabbing stare in that uncanny way peculiar to eagles and their allies.

Also it replied. Now the appearance of the buzzard is regal. One might almost mistake the bird for an eagle—when the eagle was not by. Therefore, when it replied in a thin, peevish mew that would have disgraced a three weeks' old kitten, one felt surprise. But the raven took no notice. He went down to the rabbit like a knight charging, beak held straight out as a lance in rest. And the buzzard—remembered an appointment. It had apparently no more heart than the rabbit it would eat.

Came later—the single croak must have called her—the raven's mate, and the two dined in their own peculiar way, which is not our way by any means.

It was an hour after that, when the afternoon had set in wet and squally, that we find them flying low over the shoulder of a grim, naked hill not a quarter of a mile from their nest. But they were not going to their nest. They went, instead, to a ghastly place. It was as if a Titanic shell had burst on the crest of the hill, rending and tearing out a gash two hundred feet deep.

The walls sloped outward, bulged horribly; the bottom was filled as to half its area by a bottomless pool—at least, the folk of those parts said it was bottomless—and it was tenanted entirely by a wind that sighed and sighed forever through a rift in the ramp of its sides, and by nothing else at all. There were, however, bones at the bottom among the strewn rocks on one side, so death, if not life, visited there. And the Gorge of Death called they this place.

The ravens shot over the giddy edge of the cliff, slid like black meteors down the sickening drop, and vanishing over the bulge before spoken of, exactly above the spot where the bones—they were the bones of lambs—lay one hundred feet beneath. And they did not return. Night came on, and they failed to show again.

If, however, any had been out at that stark hour when night pales to day one might have seen the cock raven beating heavily high overland to this spot, and he bore a burden, the leg of a lamb. No, he did not kill the lamb. He found it dead. I don't know how he came by the leg, though, without the rest.

For once he hurried, and literally toppled over that awful cliff, swept out in a hissing curve, and vanished down under.

Now, it was that morning that the collectors' agent chose to rob the ravens' nest. It had been completed some little while now, and he rarely came to the spot to watch without finding one or other bird about the place. He concluded there were eggs. You picture him, toiling up the slope from the valley below, growing from an ant to a fly, and from a fly to a beetle, and from a beetle to an irregular smudge half submerged in heather. All the world knew he was coming; those on the crest of the hill a mile above him were aware of his progress without looking. Any could say, pointing, with shut eyes: "He is here. He is there. Now he is by the old peat pool. Now he crosses the stream."

Indeed, who could not know? Were there not a dozen voices shouting it out to the tops of the immemorial hills? Now it was the curlew—the spirit of the waste—weaving space mazes and yelling lost yells; now it was a buzzard, a wheeling speck in the infinite, whispering "See-uu! See-uu!"; anon it would be a cock grouse, important and querulous, or a blue hare making a living streak of itself up to and over the brow, saying nothing at all, but speaking much in action, or possibly a golden plover, shocked and excitable, dashing about the sky, whistling mournfully. All spoke the same words, though in



NOW IT WAS THE CURLEW—THE SPIRIT OF THE WASTE—
WEAVING SPACE MAZES AND YELLING LOST YELLS.

many languages: "He comes. Man comes. To cover! To cover!"

A red fox, the last of the night hunters to go to lair, paused a moment to watch with sharp, cunning eyes the incarnation of his hatred stumbling two rifle shots below him; a restless stag detached himself from his surroundings and removed over the hill crest with cynical displeasure, and a bustling black cock—goodness and its lyre-tailed self know what it was doing there—got up with a shocking commotion and hurtled down into the valley bulletwise.

The hen raven peered over the edge of the nest, cocked her head on one side, eyed the marauder with her one unforgettable eye—she had lost the other over the matter of a slight miscalculation of gunshot range—and made a remark. The cock—he was sitting on a honey-colored cairn of boulders—replied in suitably obscene criticism of the man thing, and—I like to think of his doing this because it was so human in the light of

after events and proved him the born actor that he was—danced an unholy dance of rage. He lifted his wings, and with them half open above his back, executed—always looking at his toes—a sort of crazy Highland "fling."

Meanwhile the man climbed slowly, one eye on the nest, the other on the ground, till at last he was within eighty yards of the tree. Came then a rush as the hen raven bundled herself bodily up from the nest, and her mate joining her—you could hear the stiff rustle of their shadowing wings at that distance—hurled aloft, to swoop and croak awful things.

Presently they fetched up on a rock a couple of hundred yards off and watched the man fix his rope and put on his climbing irons beneath the tree. He was sure of his eggs now. Had he not beheld the hen bird sit tight till the very last moment?

They watched, and our raven was magnificent throughout. He became

rage made manifest. He tore up grass with his beak; he danced as on hot plates; he swooped at a crew of vulgar-mouthed jackdaws and all but slew one of the luckless footpads that he cut off from the flock; he soared up to the ultimate dim clouds because the shadow of a kestrel crossed his path and the little falcon, thinking to mock him with her more exquisite wing power, played about him as a terrier does a cow, till, in an unguarded moment, she came too near and failed to clear his streaking rush. She fell in consequence to earth. The fall had killed her, but it was not the fall that had all but cut her head from her shoulders.

The climbing of that tree was a slow and painful job. It was rotten as a *toadstool* in October. (Did you ever know raven build on a rotten tree, or rook on a rotten elm? No, nor I.) The collectors' agent should have known too, but he kept on. Times he swore as branch after branch snapped like a pistol shot under his grasp, and times he panted too hard to swear, by reason of the effort. Yet he never guessed. He just climbed.

At last he could put his hand over the edge of the nest—he was breathing hard now, and grinning a triumphant grin—could, with another hoist and an extra wriggle, feel within with the tips of his fingers, and—

At that moment the collectors' agent became aware of a sudden stillness. Not a thing stirred. The ravens were silent. No creature spoke on earth or in sky. His heart seemed to stand still. The smile was still on his face, parodied. He gave a mighty heave. A beetle in the nest might have seen his face as it peered over, set in a sickly grin. But the beetle was busy dodging the clutching fingers and vanished. The vacuous face of the grin remained, staring, staring, staring—the nest was empty. It had, as a matter of fact, never been anything else. And the ravens were gone. The collectors' agent discovered that when he looked round. They had disappeared, probably when he first noticed the sudden silence, and he—he was done—duped—had—fooled—bluffed. *The nest was a dummy*, and he had wasted

his time watching it for the major part of a month.

Then that collectors' agent descended from that tree as swiftly as might be, and upon the ground below he, in turn, danced his dance. Mad as the raven's dance was his, a grotesque and weird series of contortions, and as he danced, his clinched fists were raised above his head, even as the raven's wings had been, and he cursed those ravens by all the powers of darkness and by the devil, their master, and by a hundred and one other things as well.

But the ravens did not care—not they. They were sitting just under the bulging, unclimbable, leaning ramp of the side of the Gorge of Death a quarter of a mile away. On the edge of their nest sat they, a huge nest, strong and well made, tucked snugly into a perfect ledge, anchored on century-old ivy, and strengthened by years of perfecting here and there. No man could reach them here. Above was the bulging cliff, like a giant's breast, and below—a sheer hundred-foot drop to the surface of the bottomless pool, and Heaven alone knows how many feet drop below that. They did not care for such things. Why should they?

They were contemplating fondly as fine a brood of three healthy, lusty young ravens as ever opened their beaks to the rising sun for food on a spring morning. The last had only been hatched that day, but in due time the last flew. And in the autumn, when the winds howled, bringing the arctic wild fowl down in strings across a ragged sky, shepherds, going to their work of a morning, saw five great black ravens beating over the sublime, grim, blunt shoulders of the hills, and they would nod and grunt to themselves something about:

"I'm thinking the oold 'un's mighty fly. They've reared another muckle broodie of bairns there against the world an' a'."

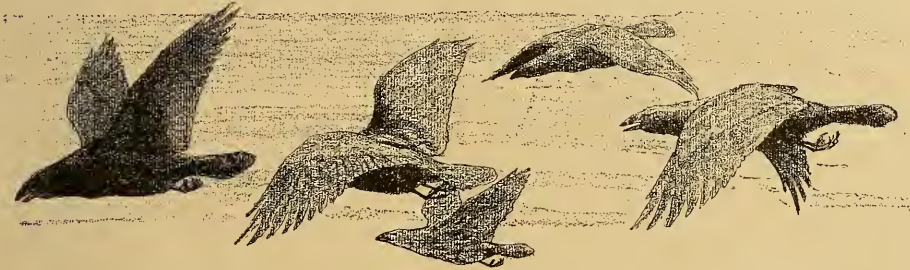
And the buzzards whom the collectors' agent had looted of their eggs before he departed weaved mazes in and out among the tattered reek of the clouds, mewing weak-hearted protests at the great black birds and wondering how they had done the trick. But the ravens

said no word. They raided, and they risked, and despoiled, and pillaged, and pirated after the immemorial custom of ravens all the world over, and they never told anybody their secret.

Only the ring ouzel—he who had nested by the bottomless pool, under the very robber's stronghold—knew, and he told me, what time an October gale flung him exhausted at midnight on my window sill some hundreds of miles south of the raven's home. I took him in, and, as he sat on the hearth rug—his jet form, a smeared patch on the red stuff, turned to ruby and all manner of "shot" colors beneath the blaze—alternately sipping whisky and milk from a

spoon and stretching his chilled wings to the blaze, while I dozed in the arm-chair, lulled by the howling storm, he told the tale to me as the price of his life. At least, I like to think he did—and yet—and yet—!

What would you? The hot room, the cold night, the storm without, the hour, the stillness above the storm—perhaps I dozed and it was a dream after all. Who knows? The ring ouzel does, but he is thousands of miles away now in tropical Africa, or wherever it is ring ouzels are pleased to winter. And probably I shall never see him again. And he will never be able to prove the truth of what I have said.



SAW FIVE GREAT BLACK RAVENS BEATING OVER THE SUBLIME,
GRIM, BLUNT SHOULDERS OF THE HILLS.

THE SCARLET TANAGER

MY earliest recollection of the scarlet tanager dates back to boyhood, to the woods not far from the place where "Uncle Tom" had his adventure with the wolves—an old, familiar story in the school readers twenty-five or thirty years ago. These woods that I speak of bordered Green River, and through their dense tangles the tanagers darted back and forth as if, as Thoreau says, they would ignite the leaves. It seemed then that these mighty woods could never be swept away. And what beauty was theirs! Beauty of song, of flower! Hundreds of tanagers where there is one now! Acres of brilliant cardinal flowers where now the earth is given to meaner weeds.

The tanager, because of his splendid plumage, is, like the cardinal, a prize for thoughtless and cruel hands. But fortunately for him he dwells in the most secluded places. True, now and again he comes near some quiet home and flutes his robinlike strain; but he was never a bird of the yard—he is too shy to love the crowded dwellings of men.

Sometimes, after a shower, the tanager, like the vireo, is at his best. And often, as twilight merges into night, he may be heard at the edge of the wood welcoming the first white star low in the west. Then his song seems to me a touching farewell to the dear woods that must soon pass away forever.

SOME BEARS

BY ARTHUR E. McFARLANE.



ALL the way from Lesser Slave Lake to the Crossing we had been listening to stories about Peace River bears. It was only a few years since one of them had clawed a twist of jerked moose meat, meant for the morrow's breakfast, from beneath the pillow of Monseigneur, the Bishop of Athabasca! Another, whom a "Company's man" under the warming influence of "permit" whisky had mistaken for a long-lost brother, had entered into it with such feeling that he had both returned the embrace and kept most of the man's clothes as affection's garland.

A third, coming suddenly upon a dog train, had left huskies and harness so knotted, balled together, and, as it were, interwoven, that only by repeated countings of heads and tails could their driver (upon his subsequent return) persuade himself that he had not eleven or twelve dogs, instead of the four with which he had started out.

And now we were, as it were, in their very lair. We had embarked on the steamer *Peace River*, the big stern-wheeler which was to take us from the Crossing to Fort Vermilion. We went for further bear information to Captain Gullion, her commander, and to John Sutherland, her Scotch engineer.

"How many would we be likely to see on the trip?" Speaking from general averages the captain put it at about twenty. Mr. Sutherland, being Scotch and conservative, would not guarantee more than twelve or fifteen. It was not the best season for bears.

"At what hour did they generally come out?"

"Well, for the most part not till after the second table had finished. (It was then about six.) But if we were in a hurry, of course, the pilot would blow the whistle any time."

"What would he blow the whistle for?"

"Why, to let them know that we were ready."

To josh the "munias"—the tender-foot—is laid upon every hardened Canuck north of 55° as a religious duty. And for a beginning this was very well indeed. Those of us who had brought out guns attempted to give the impression, while getting them into concealment again, that they belonged to some one else. And the first table followed captain and purser into dinner.

In the surrounding staterooms, the rest began to hang up shaving mirrors and get into deck shoes. On the forward deck there was a litter of magazines and a choice of steamer chairs. One luxurious member, who had discovered that the bath-room possessed steam-pipe connections, proceeded to lay himself out in the cleanly porcelain and indulge in a Turkish bath. This, too, eight days by trail and river north of Edmonton.

Meanwhile at the table the imparting of bear information continued earnestly. On the preceding trip, so far as the officers of the *Peace River* could conscientiously estimate, they had seen between twenty-five and thirty. These were, of course, only black and brown bears. But there were grizzlies (also cinnamons and silver tips) farther back toward the mountains.

The man in the Turkish bath began immediately and with clamor to speak for the grizzlies. All grizzlies coming aboard were to be sent in to him. And for his part he wanted the pilot to start blowing the whistle to call out the bears right away.

At that moment the whistle blew. The table applauded greatly. Evidently the steamer *Peace River* was the real thing.

But next moment, *whang!—bang!—*

from the deck house above our heads the pilot's 38.55 began to go.

And then another luxurious member with a cigarette and his heels on the rail found himself staring at a three-hundred-pound black bear chasing frantically through the red-willow bushes along shore, much as a large Newfoundland pup might make frenzied time along the inside of a garden fence under the excitement of a passing train!

It was as sudden as that. And the whistle was blowing for another before those concealed guns could be dragged feverishly out again. Save for a few enhancing touches demanded by the art of narration those "H. B. C." navigators had *not* been joshing. Ten minutes more, and we had seen a third full-grown bear get to cover, and a fourth! Every weapon in the party, from a "22," that shot only about half the distance to a 405 automatic express, later to be used against African elephants, was brought into play in the sulphurous half circle behind the forward rail. By sundown, of smoking shells you might have gathered up a dustpanful from the deck where the excited Nimrod had dropped them.

For two mornings and two evenings the shooting went on. We saw seventeen bears in all. We killed three—two black and one brown. And originally it was the intention to make this a hunting story. But it would not do. We killed those three bears in the water, swimming and defenseless. It was not sport. For days we had bear liver and haunch and tenderloin and "the juicy bear steaks," made gorily luscious to our youth by the pages of R. M. Bal-lantyne.

But all alike left a taste in the mouth. It was not sport. The half-breed deckhands who hung over the bows and made lines fast about the big clumsy bodies and then used the capstan to haul them aboard might quite as easily have killed those bears with axes, as in fact, on the Peace, it has often been done. There is an Alice-in-Wonderland effect about shooting bears between courses, in doing it from a steamer chair after laying down the latest magazine. But, as I remember Alice, there was good stuff in her, and I don't think she

would have smiled upon that sort of thing at all.

There is, however, some tale to be told of a river where in half as many hunting hours seventeen bears may be seen. Later we heard of seven being seen together, of twenty-eight passed in three hours, of more than seventy counted in a four-day voyage upstream. And we no longer doubted. If elsewhere upon this planet there is any such bear river, it should send in its post-office address at once.

The Peace is about as wide as the Hudson in the Catskills. It flows north-east from the Canadian Rockies to Lake Athabasca. And for five hundred and eighty miles, from above Hudson Hope to below Fort Vermilion, it is navigable. It offers, indeed, one of the longest uninterrupted stretches of steam navigation in America. Up in the foothills toward the Rockies there is still a famous grizzly country, which must be dealt with in some other place.

A Land of Game

From the Grande Prairie country, into which there has already begun a rush of wagoning homesteaders east to Hudson Bay, the land is one vast game preserve. Moose and caribou are equally plentiful, to say nothing of wild geese and swan and every kind of duck. The banks and islands of the Peace are for their part one varied and continuous berry patch. Berries, from the wild strawberry of June to the mild saskatoon of September, are the chosen fat producer of the black bear.

And therefore, from all the back trails and uplands in due season do the black bears descend. The Peace gets them all for a hundred miles around. Here and there, in the few places where the bluffs are bald, you can make out their beaten tracks like narrower cow paths. And everywhere you find their tunnels under the bushes.

They come down to feed in the cool beginning and end of the day and lie up in the spruce and poplar woods during the heat. They seem to have no quarrel with one another. From a single small island we routed three. Unless wounded,

or accompanied by cubs, they are little more dangerous than as many big, long-haired pigs. All they want is to fill themselves in peace. And, according to those who know, when a large, hungry "musqua" sits back on his hunkers and with a right and left cycle motion of his fore paws gathers the berry-bush tops to his mouth as to a kind of cutting-box, his chompings of gastronomic happiness keeping him from hearing even a stern-wheeler till it is all but on his beam.

But the whistle, between the Peace's hollow shores, starts echoes which in one gaping moment convince him that the Philistines are upon him from all sides at once. If he is feeding on an island, he makes a headlong rush for the mainland. If on the mainland, he will often plunge in and attempt to gain an imagined safety on the other side of the river. Hence the water shooting.

The bush Crees of the country take advantage of steamer and whistle for what summer bear hunting they are compelled to do. No Cree kills a bear at such a season for his hide. A peltry for which the Hudson's Bay Company or Revillon's would pay twelve dollars in March will not bring a dollar and a half in August. The skin is "unprime"; the hair will come away with the first combing. The summer killing is made solely for the meat and lard.

The Indian knows how little chance he has of getting his bear if he has to follow him through a mile of raspberry and saskatoon thickets. Accordingly, on almost every elbow along the river and, above all, opposite every big berry island, you can see the bare lodge poles of a tepee where a Cree with a hauled-up dugout has lain in wait for civilization to come to his assistance. The whistle brings out his bear and gives him the safe, deliberate water shot. His only care is to put the bullet through the head. A shot through the body would send the bear to the bottom. But, saying it again from an ill conscience, it is not sport.

On the Peace, the real sports in the bear-hunting business, those who are ready to take a chance with their fun, are four-footed. In March or April the bear has just come out or is still "denne'd up." His fur is at its best. If awake

he is on the keen edge both for food and trouble. And the hunting is done with dogs. A Cree bear-dog is, for lack of outward embellishment, *ne plus ultra* and *facile princeps*. He has no pedigree and he has no style. He even fights with his tail between his legs. But as all have borne witness who have watched him work, he knows his job.

The hunter takes the snowshoe trail with, it may be, five or six. But rarely are more than two of them "broken" dogs. The others are to get their breaking shortly and in the kind of school where one learns only once. Where a bear is "denne'd up," no matter how many feet of snow are covering him, his breath will always make a big, blue-ice blow-hole. A bear-dog can scent such a blow-hole for at least a mile.

Accordingly when the party has reached bear country the dogs will begin to "range." That is, they leave the trail and strike it again only after making half circles of a mile or more in radius. One "broken" dog will go to the right, the other to the left. Again and again they swing back across the trail, pick up the man, make their silent report, and swing out on the next half circle. But sooner or later a dog will not come back, and then the man calls in the remainder of the pack and in his turn leaves the trail. Unless the dog has met a ranging timber wolf—in which case, by the time the rest of the party arrive, that timber wolf will probably be eating him—there is a bear to be prodded out.

Breaking the Dogs

Now a bear has feelings about being roused before his regular hour, even as you and I. And when he has been awakened with a stick, he is very angry indeed. And here the green dogs have their first chance to go wrong. One of them may seek to show his mettle by thrusting his head into the blow-hole—and very likely have most of it taken off. Or when the bear has humped himself furiously out, another dog may make the mistake of attacking him in front.

So attacked, a bear will at once settle back upon his haunches. He will begin

to slap his hands to and fro with the seeming impotence of a fat man in hot weather making a last attempt to drive the flies away. And a black bear's general sloppiness of movement makes his slappings seem weak and without direction, too. As a matter of fact, when a dog is caught so once, there is rarely any occasion for him to be caught a second time.

But the dog that comes out of it only moderately damaged has taken the vital step in the business of his "breaking." He will forever afterwards have the clearest idea of a bear's fighting reach when he extends. He will have a score to settle with the whole bear family that will lead him to run for a week any time to get his revenge on one of them. And he will never again tackle a bear in front.

The "broken" bear-dog, one on each side, goes at the flanks. He knows that a bear has a more than Napoleonic aversion to attacking with his rear in jeopardy. The first nip, and his forward plunge ends in a frothing jerk to the right about and a gnashing settling down again. When he turns to the left, he gets it on the right. And he gets it on the right the instant he swings to the left again. It is not that the dogs are afraid. Not one of them but has his scars, and few of them live to be old. But it is their business to keep that bear where he is till the hunter can choose his shot.

A local trapper, Joe My-goose, was making the ten-mile round of his mink and marten snares, accompanied by his dogs but with no thought of bear whatever, when they flushed a grizzly. Joe My-goose was carrying a "22," shooting "shorts"—the sort of popgun that is used for prairie chicken. Not only that, but the first thing he did under the stress of the occasion was to get one of his snowshoes caught fast in a post-willow root.

Joe My-goose might well believe that his goose was cooked, but his dogs proved equal even to that. It took the great, rabidly whirling brute five minutes to make twice as many yards. The little popgun could only bleed him; it required more than fifty of the tiny shells to do the business. But they did

it in the end. For both dogs, it was their last hunting.

In the upper foothill valleys of the Peace there are still grizzlies. We saw none, but all the way down the river and back again we heard of them. And when they were hunted, at least in the great huntings of a generation ago, it was not the dogs that were the heroes. In the country between Fort St. John's and Fort Nelson there was a line of Indians and Metis who seem to have gone out and fought grizzlies, man against bear, as for a kind of peculiar, desperate glory. They were like ruder matadors seeking a far more perilous bullring. And their name and deeds are fast becoming legends of the river. There was the Thick Knee, Wahscoopi, who gave the challenge whenever the chance came, and Moskoskolah "who was scalped," and old Annoosi "who put his sign" on a bear, and most famous of all, the three brothers with a quartering of white in them, Francois, Jean-Baptiste, and Duncan Testawits.

The Knife for Grizzlies

Wahscoopi killed his grizzlies with the knife, though how he did it no one ever knew. According to some, he painted for it and danced, and when he had found a grizzly he "made medicine," that is, put a charm on him. It is certain that he used only the slight, eight-inch "buffalo-knife" such as you can still buy in the more remote Hudson's Bay Company posts to-day. And he came back with the claw-hands, which the admiring squaws sewed together, palm to palm, and made into firebags that Wahscoopi's fame might endure forever. If he did paint himself and dance and lay charms on the great beasts before he fought them, the sight must have been one worth going some distance to see.

Moskoskolah "who was scalped" was scalped by the grizzlies themselves, and therefore there must have been at least a shade of animus in his killings. Nevertheless, he took the chances which mark the heroic mind. With an old 28-bore, operated by the horrible untrustworthiness of the percussion cap, he made it a point of honor to kill with the ear shot.

With such a gun this meant that the grizzly must be within a distance in which, as he said, "he could make a little talk to him."

And to get the shot at all he had then to throw him one of his gauntlets, or even his buckskin jacket. A grizzly will always stoop for a moment to sniff of such things. And in that moment the lowered head gave Moskoskolah his line through the ear to the brain. When, in our generation, gilded white hunters from private cars are acquiring big-game reputations by killing grizzlies at the other side of canyons, it is well to recall these things.

Putting His "Sign" on Him

Annoosi did not put his "sign" on every bear he met. It happened only once, toward the end of his career, and it happened in this way. The great danger in the era before shell ammunition lay, of course, in getting your powder damp; even carrying it in moosehide did not guarantee you against that. And one day when old Annoosi was in the greatest need of dry powder, he found that his was damp. He clubbed his gun.

In the ponderous 28-bore the metal extended right back to the butt, which gave it weight for clubbing, and before he went down Annoosi succeeded in getting a right and left to the head. They marked the grizzly, and they appear to have had the gradually befogging effect of a pair of black eyes. For when Annoosi continued the fight on the ground in a furious rough and tumble, the bear gave up first. He broke grip and with chompings retired whence he had come.

For his part the old hunter was found soon enough to get him to the Company's post at St. John's and into hospital. In time he recovered, but his convalescence was filled with one thought only, of that grizzly. When he "went out" again, it was no satisfaction to him at all to notch up a succession of other grizzlies. He owed his score to the one which bore his sign. As Annoosi was plainly a good deal older after the encounter than he had been before, the thing might have ended badly had not a grizzly been killed and brought in to

the Hay River post which bore that sign beyond dispute. Both hunters and Company allowed it, and the bear-killing ancient could retire to his long slumber and sleep the sleep of a man who is no longer burdened under a weight of debt.

The brothers Testawits—Duncan still survives as the hoary headman on a Cree reserve near Peace River Crossing—were the sons of a bear-killer who was famous before them. And they made themselves worthy of their sire. One story, told with all simplicity by a Metis interpreter named Bourassa, must suffice to illustrate their psychology. One day Jean Baptiste went out to get a bear alone, when the meeting went against him. After a terrible mauling he was left apparently for dead, but the sound of his gun brought in the other two brothers and also a brother-in-law.

Duncan and the brother-in-law got Jean Baptiste down to the river and out on a raft. But François, who, as the teller of the story put it, "was bravest of all for bears," stayed behind to conclude the matter. Beating on the rocks and trees, he called upon that bear to come back and fight again with *him*. "Always a bear he come, too," explained the story-teller, "when a Testawits call like that." And when François Testawits had for some time been beating on trees and crying out insults and giving challenges which no bear could refuse and keep his caste, in the end that grizzly came. Then the challenger told him who he was, upon what mortal grounds the quarrel lay, threw down his gun, and killed him with his hunting knife.

Under the Rockies where the grizzly country and the black bear country overlap in a hard winter the grizzly is in a fearsome way something of a hunter himself. The big bear "dens up" when the snow comes, but he sleeps very fitfully, if at all. And he comes out almost daily to track up and down about his den. Naturalists have puzzled over this. One explanation might be that he is finding it a long time between meals. In any case he often leaves his den altogether and indulges in what is known

locally as a "walking winter." He may stop at the neighboring streams, break the ice if he can, and attempt to fish, though he rarely has anything to show for it but a coat of frozen snow.

Some Peace River hunters will tell you that he goes into the water with the idea of putting on this ice-coat, that it keeps him warm! But sooner or later a walking grizzly is almost certain to direct his march toward the blow-holes of black-bear land. And when he has found a blow-hole he goes to work to dig out his swarthy relative with the earnest matter-of-factness of a French pig digging out a truffle. The black bear is slow to grasp the situation at first, but when, getting the sleep out of his eyes, he does grasp it, he at least gives the grizzly a frightful grace before his meat.

Probably almost all those fights to the death between animals of different species that are reported in wood-lore, and looked upon with suspicion, are simply attempts of the one animal to eat the other. George Harvey, now of Lesser Slave Lake, was attached to the Hudson's Bay post over on Sturgeon when four Indians came in who had witnessed such an affair from the other side of a coulee, and at the end of it had been able to shoot the surviving grizzly. They brought in the skins in confirmation. Until they heard the story, the Company's people were in some doubt as to what the said skins were.

It will never be considered sport to dig out black bears so and to eat them without the office of cookery, but it is at least as honorable as to shoot them from a steamer chair. And in any case there is another way. Outfit at Edmonton. Make the three hundred and fifty miles to Peace River Crossing by stage and river steamer; there is a regular transportation line, with abundance of

small game all the way. And at the Crossing buy or hire a big Cree dug-out. A Cree dugout is no such rolling horse-trough as you see farther south, but the perfect product of the "crook knife."

Its lines are those of a canoe, it is as capacious as the birch bark, and it can be rendered perfectly safe by lashing to a stick of spruce for an outrigger. Then it will be merely a matter of going with a four-mile current through the most beautiful of countries, of stopping where you will, of camping on the beach by night, or of sleeping in your boat beneath the stars. And when you see a bear that you really want, you can go ashore and talk to him.

One spring night some wagon freighters were teaming south of the Landing, when one of them got off at a small creek to get a drink, slipped on the clay bank and came down straddling a huge black bear that was no doubt fishing for suckers.

"O' course," the teamster explained, "us fellers up in this country don't make no more account of bears than we do of hogs. But this lad, I reckoned he might be hostile along of havin' his fishin' spoiled like that. He got my boot-heel, too, gettin' up the bank. An' then I had to run to ketch my team."

"You ketched them," said one of his fellows: "and you didn't only ketch them. You finished about a mile an' a half ahead."

"Well," said the Marathoner, with some color, "I ain't denyin' it. For, once I seen the way he was takin' it, 'All right,' I says, 'just for that now, by gee, you're goin' to get a run for your money!'"

And just in this willingness to give the bear a run for his money lies the secret of shooting black bears with a good conscience.



BAD MEDICINE

BY HULBERT FOOTNER

Illustrated by R. W. Amick

CHAPTER III

The First Blow

FOR three weeks all went well at Moose River. The demeanor of the breeds changed, and they no longer showed Parson Dick any open animosity. A man of more worldly wisdom might have seen something still more ominous in the sudden change, but Dick was slow to believe evil; moreover, for the first time in his life, he was occupied with his own happiness.

Annis, with her subtler intuitions, was less deceived by the fair outside of things. In spite of his invariable friendliness and candor, her instincts were continually on guard against St. Pierre, and other things happened that made her thoughtful. Almost immediately after her arrival at Moose River Ralph had left for the fur-camp, and they had not seen him since. She learned that he had twice been into the settlement nevertheless. She also heard from the children she taught vague hints of gatherings of the breeds in St. Jean Bateese's cabin. She was keeping her suspicions to herself until she had something definite to go on.

Meanwhile Annis could not help but be happy too. Like most girls of spirit she had chafed at the narrow round of her life in a civilized land. She loved the North for its very difficulties and dangers. As to Dick, secure in his honesty and good intent, she let her heart go.

Dick was at the old woman's cabin every moment that his crowded days and nights could spare. The old woman took his visits oddly. Her first childish ebullition of jealousy had not passed like most of her pestuous impulses, but had settled into a sad and watchful distress. Annis and Dick, occupied with each other, scarcely noticed her.

Two days before Christmas the old woman's anxieties came to a head, and Dick's rosy bubble of happiness was pricked. She came to Dick's cabin unexpectedly and alone, full of a strange agitation that she tried in vain to mask. For a long while she chattered about small matters, unable to touch on what was nearest her heart. Dick let her rattle on, and she gathered courage.

"Parson Dick, I—I want to speak to you," she stammered at last.

"Yes?" he said encouragingly.

She did not immediately proceed. "It's hard to get it out," she faltered.

"What's the trouble, old woman?" he asked, in great concern for her distress.

"It's—it's Annis," she murmured.

"What about her?" he asked, sharply attentive.

"It seems to me you are falling in love with her."

Dick smiled. "Fathoms deep!" he said frankly.

"Under other circumstances there is no one in the world I would rather give her to," she said, "but—"

His face sobered. "What's the matter?" he asked anxiously.

She came close to him and took hold of the two lapels of his coat. "Dick, I want you to make me a promise," she begged.

"Anything in reason," he said, wholly mystified.

She searched his face imploringly. "Promise me you'll never ask my girl to marry you," she blurted out.

He fell back sharply. "I don't think you have any right to ask that," he said.

"Yes, I have. Yes, I have," she wailed, wringing her hands.

"I can't do it," he said firmly.

"You wouldn't leave the country?" she hazarded.

"My work is here," he said simply.

"But she loves it."

"So did I—eighteen years ago," said the old woman piteously. "I looked like her then, too."

Dick had no answer to that.

"Think of her, so pretty and graceful," she murmured, unconsciously clasping her hands. "Would you doom her to the life *I've* led?" She spread out her palms. "Look at me, Dick. And I'm only forty-four!"

The tears stole down the old woman's worn cheeks unrestrained. "You couldn't save her from the drudgery of the North," she went on; "year by year it would bend her back and hollow her cheeks—like mine. So long as I'm here she wouldn't be so badly off, but that is not for long. Eighteen years of it have broken me. Some night soon I'll be snuffed out—and then, my lambie! what would she do without a white woman near? Suppose she had to bear children; suppose you should fall sick? What would she do among these redskins?"

Tears overcame the old woman's speech. But Dick had heard enough. He couldn't answer her, because it was only what he had told himself in his cooler moments. For a while he struggled with himself—then he turned to her.

"You are right," he said in a dull voice. "I will not ask her to marry me. It is a promise."

The old woman seized his hand gratefully. "Dick, you *are* a kind of a hero, I do believe," she faltered.

On the following morning Dick turned up at the old woman's cabin by prearrangement to take Annis to sit with a convalescent child. The sickness in the settlement had not decreased, and Dick scarcely knew what it was to rest these days. This was the first time that Annis had been allowed to help with the physical side of Dick's work, and she was eager for the journey. But when she saw his changed face her heart sank.

Dick was in a wretched state of indecision. As soon as he saw her he knew he could not trust himself alone with her just then.

"I think—perhaps you should not come," he faltered at last.

Annis's face fell like a child's. "Why not?" she demanded

"The—the danger of infection," Dick stammered. "I suspect diphtheria."

"Why didn't you think of that before?" she demanded.

Dick had no answer ready. It would have been patent to a half-witted person that he was lying. That was bad enough, but the cool, impersonal manner he tried to adopt toward her—after what had passed between them—was infinitely worse. Annis retired into her shell and began to take off her things.

"Oh, very well," she said coldly.

Dick went miserably away alone.

Immediately after lunch, Annis, accompanied by two of her little dark-skinned protegés, set forth to decorate the church with evergreens. She had had a considerable measure of success with the native children. The sharp, half-savage little imps appealed to a strain of wildness in her own youth. They came from far and near to attend her Sunday-school—though it may be hazarded that the tea and cake she provided were a more potent attraction than the religious instruction.

Annis's heart was very sore against Dick. While there had been no spoken vows, their eyes had confessed to each other freely, and to have him suddenly adopt this remote air toward her was like a blow in the face. She puzzled endlessly as to what it might mean. She determined to punish him well for it; nevertheless the eagerness with which she set off for the church was largely due to the hope that she might see him there. She bore him a message from one of his patients.

The little mission dedicated to St. Barnabas was halfway between the old woman's cabin and the store, upward of three miles from each. It stood on the edge of a snowy plain facing the river, where the little whitewashed log chapel, with its yellow-painted cross, had a brave and solitary look like an outpost. At one side, within an inclosure of palings, a few white wooden slabs projected above the snow, bearing the names of children.

The main river trail, on its way to the store, wound around in front of the

church and struck into a growth of spruce that marched up to the confines of the churchyard. A lesser-used road branched off and, skirting among the trees, headed for the hills. Dick's house, which was also the hospital, was on the hither side of the church across the trail.

Annis's little companions were in full cry across the snow after a rabbit, and so it happened that, dragging a miniature dog-sledge, she came around the corner of the church alone and quietly. To her astonishment she saw St. Pierre on the steps, bending over and applying his ear to the keyhole. Aleck Whitebear stood below. Both men had their backs to her.

All Annis's fears recurred to her and her heart sank with a vague sense of impending danger. She felt that she stood a better chance of learning more by not betraying what she had already seen, so she retreated a little way and, calling to the children as an excuse to give warning of her approach, came into view again. St. Pierre was now approaching her, bland and obsequious. Aleck, with a curt nod, strolled off along the trail.

"This is a long way to come on foot, Miss Annis," said St. Pierre smoothly. "And it will be dark early."

"I have company," she said easily, "and I will be home before dark."

St. Pierre, observing her narrow glance, said coolly: "Aleck and I are prospecting for timber. We're going to thin out the spruce over yonder."

Annis looked at the church. She had a sense that some one was speaking within.

St. Pierre's eyes devoured her. "How fine you're looking!" he said ardently.

He wished to please her, but to Annis compliments from one of his color could hardly seem other than insolence. She waved the words aside. She was wondering what was the way to get the best of such a supple, devious character.

"Your coming up here has changed everything," he murmured.

Annis decided to try frankness on a chance. "Look here, Mr. Fraser," she said bluntly, "I'd gladly be friends with you, but you must deal squarely with me. I didn't come North to be flattered.

Why did you come to the church today?"

"The church?" he said sharply.

Annis pointed to his footprints leading back to the church steps.

"Oh!" said St. Pierre with a light shrug. "I heard voices in the church and I listened to see who it was. It's Parson Dick saying prayers. I thought I'd wait until he was through."

His readiness put Annis at a disadvantage. She did not believe him, but she let the matter drop. "If you really want to win my confidence—" she went on.

"Try me!" he put in eagerly.

"You are the cleverest man hereabout. Tell me what is behind this senseless opposition to Parson Dick?"

St. Pierre put on an expression of serious concern. "You exaggerate my cleverness," he said deprecatingly. "Besides, you forget the breeds are all in my debt; they're not taking me into their confidence just now."

Annis was not deceived by his glib answer. Honesty is not the way to take with him, she told herself.

St. Pierre favored her with an odd, walled glance. "However, I have my suspicions," he added.

"Well?" she asked sharply.

"I have heard vague hints of a movement among the natives—"

This confirmed Annis's own suspicions.

"I suspect Aleck Whitebear to be behind it. I was waiting for Parson Dick to drop a word of warning in his ear."

Annis looked at him incredulously.

"Still you don't believe me," he said with affected humility.

"Why should I?" asked Annis bluntly. "Aleck was with you just now."

"I keep my eye on him as much as I can," St. Pierre answered readily. After a pause he added: "I'll prove that I'm square with you. I'll put it down in black and white over my signature, and you can give it to Parson Dick yourself."

He scribbled rapidly in his note-book, and tearing out the leaf handed it to her. She read it attentively, and folding the paper, thrust it in her glove. He had written:

DEAR PARSON DICK:

I wanted to warn you against Aleck Whitebear. I don't know anything definite, but I'm pretty sure he's plotting mischief. A word to the wise is sufficient.

Your friend,

ST. PIERRE.

In writing this St. Pierre fancied he was acting from motives of policy; it is probable, however, that the desire to stand well in Annis's eyes affected his judgment somewhat.

"This seems to be in good faith," she said generously. "Please tell me exactly what you have learned."

St. Pierre talked at some length, without, however, she was quick to observe, telling her anything that she did not already know.

"If I've been unjust to you I'm sorry," she said, somewhat chilled.

"I'm more than repaid," he said with a bow.

With more compliments, in which Annis always fancied she detected a sneer, he left her. He betrayed, however, a genuine anxiety that she should get home before dark. Annis remembered that later and understood the cause of his anxiety. She promised to start within an hour.

As soon as St. Pierre was out of sight she turned quickly to the church to solve the mystery of what was going on within. Her two small companions, Tarse and Jeresis, were now at her heels.

Before she reached the door it was opened from within, and to her amazement her brother, that she thought many miles away, appeared on the threshold with Marya Sashermah hanging to his arm. The breed girl was gorgeous in a plaid skirt, a crimson satin waist, and a blue shawl. They came down the steps. Marya's mother followed with St. Jean Bateese, and other dark relatives brought up the rear.

The procession was self-explanatory. The sight of it affected Annis like a swift and unexpected blow. Recoiling dizzily, she clung to the palings. We often receive our worst shocks through the medium of trifles; Marya's crude finery was her worst offense to Annis's senses in the first moment. Her brother

linked forever to the vulgar savage!—the white girl's flesh revolted.

They were obliged to pass immediately in front of her. Ralph, at the sight of his sister, stared stiffly ahead of him, miserable, sullen, and ashamed. Marya cast down her eyes demurely. Mrs. Sashermah smiled triumphantly.

"Hah! your seester come to your wedding, M'rya! 'Ow kind!" she said mockingly.

Ralph turned on her furiously. "Hold your tongue!" he cried.

Tarse and Jeresis, dropping their evergreens, ran shrieking after the procession, pelting the bride with soft snow. Crying out in mock distress, Marya took to her heels with the children after her. Ralph followed stiffly and slowly. They all passed out of sight.

Annis stared blankly on the ground, while the meaning of what had happened slowly forced its way home to her. Here was a story to take home to the old woman, now happily preparing Ralph's Christmas dinner! This was the other side of the North, the hateful side. Annis shuddered and was conscious of a sudden longing for the comfort and shelter she had once despised.

She looked up and saw Parson Dick issuing from the church, his surplice under his arm. Her breast was already prepared for anger against him; it flamed up now, blind and unreasoning, reviving her forces. Dick's eyes fell under her blazing glance; he approached her, a mute appeal in his attitude.

"You blame me for this," he said in a low voice.

"You married them!" she cried.

"It was my duty."

She had no pity for his drawn, white face. "Your duty!" she cried passionately. "To give our name to a redskin! To degrade my brother for life!"

"Not necessarily degradation," he murmured.

"It's always so. You know it! Look at the others!"

"That is because of weakness in the man. These women are like children, easily swayed to good or evil."

Annis scornfully flung away. "Ah! don't preach at me!" she cried. "Preaching can't make it any less horrible!"

Dick began to pluck up spirit under her scorn. "That is the blind race prejudice you and I were going to work to overcome," he said quietly.

"We don't have to marry them to help them!"

"As long as we hold ourselves superior we'll never do any real good."

The quarrels of those who love are terribly bitter. Every word is dipped in gall. "Indeed," said Annis icily. "Do you intend marrying a breed yourself?"

Dick turned away, too much hurt to attempt to reply. The quietness of her voice made its bitterness much more dreadful to him. In her own pain she was merciless to his.

"You don't deny it," she pursued. "Really, your consistency is admirable! It will be interesting to see how the experiment works out in your case."

"I shall never marry," said Dick very low.

She scarcely heard. "Does my mother know?" she murmured.

Dick shook his head. "I knew nothing about this myself until they came here an hour ago to be married," he said. "I advised delay, but Ralph was sullen and defiant. He promised that your mother should not suffer want."

"How much are before-marriage promises worth?" Annis broke in scornfully.

"He threatened to go to Duncan McPhatter, the justice of the peace, to have it done. I cannot refuse my people the sacrament of marriage when they ask for it."

"Very well," said Annis; "as a priest I forgive you. As a man I never will."

Dick made no reply.

His silence further exasperated her. "Here's a rule for women," she taunted. "Never depend on a friend who's a priest first and a man afterwards."

"That's a cruel thrust," Dick said, "cruel, and unjust, and untrue!"

His new tone startled her a little, but she would not confess it to herself.

"You're wanted at Paul Zero's," she said coldly. "His wife has had a turn for the worse."

That was the way of their second parting that day. Annis had forgotten that she had a note for Dick in her glove.

CHAPTER IV

The Attack

WEARY and sore as from a physical beating, Annis nevertheless set to work decorating the church. Her pride would not allow her to forego what she had planned, merely because she had quarreled with Dick. As she and the children were gathering a fresh supply of evergreen, Joe Whitebear, the simple youth, came along the trail with his shambling dog-trot. Joe was among Annis's admirers. He pulled off his cap as she had taught him.

"Well, Joe," she said; "will you help us cut some branches?"

But he sat on a stump at the edge of the clearing with a curious air of obstinacy. "Joe wait here," he said.

"You'll get cold," said Annis.

"Joe warm his hands at big fire," he said mysteriously.

Annis, struck by the strange answer, approached him. "What big fire, Joe?" she asked.

He pointed to the church. "There," he said.

Annis recollected the ominous figures of St. Pierre and Aleck Whitebear at the church door, and the same fear again dragged at her heart. For a moment it failed her, and she shrank from hearing more. Surely I've borne enough, she thought. But presently her courage reasserted itself. The two smaller children were gazing at her hard—they were dangerously sharp.

"Tarse! Jeresis! find me a pretty little spruce tree. Run!" she cried briskly.

They set off.

"So they're going to build a fire in front of the church," she said naturally to Joe.

"*Nomoya*, inside," he said coolly.

She could not keep back a little cry of terror. Her hands stole to her breast to still the leaping of the tenant there.

"Red fire come out of chimney," pursued Joe with graphic gesticulation; "out of window, out of door, and eat up roof! Fire jump as high as high tree. Joe want to see."

"Who is going to make the fire, Joe?" she asked.

"Joe's father, Jean Bateese, Coquenoi-gan, Jim Mackenzie, Paul Zero—many men. Joe will help. Joe want to see big red fire!"

"They were fooling, Joe," she said.

"*N'moyal!*" he said quickly. Put Joe in little room so can't hear talk. Joe listen at the door. Joe pull up board in the floor and creep out. Joe want to see fire in the windows."

Hysteria clutched at Annis's throat, but she forced it back. "What did the men say?" she whispered.

"Aleck Whitebear say, 'Ralph Croome is marry M'rya. He one of us now. Now is time to burn church, and St. Pierre give more credit at the store.'"

"St. Pierre! was he there?" she asked quickly.

"*N'moya.* Aleck say burn church and white men never be our masters!"

"When will they make the fire, Joe?" she asked.

"When it get dark. Soon come."

Annis walked away, pressing her knuckles into her temples and trying to think. The horror of the past hour was nothing to this horror. This was what the breeds were planning, this was the truth about St. Pierre. She thought of the note. He meant to keep his own skin whole, too. She shuddered, aghast at such villainy and such cleverness. In the light of this revelation her anger against Dick evaporated like mist. To the thought of him she now turned like a refuge.

Tarse and Jeresis came running back with the little tree. She met them with a prompt smile.

"Beautiful!" she cried. "I will take it. Be off home with you now. It is getting dark. I will come soon."

They showed a disposition to rebel.

"Stop at the old woman's," she said. "Tell her I said you were each to have an outside cake."

They instantly set off, running and shrieking, after their wont. Joe was still sitting stolidly on the stump. Annis went to him swiftly.

"Joe, Parson Dick is at Paul Zero's. Run quick and say I want him!"

The boy scowled and sat tight.

"Please, *please*, Joe," she begged.

"Parson Dick stop fire," he said sul-

lenly. "Joe want to see fire come out of windows."

Annis tore open her coat. She had a gold pin at the throat of her dress. "See, Joe, this pretty, shiny brooch."

His eyes brightened. "Joe want," he said, holding out his hand.

"Bring Parson Dick and you shall have it!"

He got up. "Joe go quick," he said.

But Annis was attacked by fresh fears. She clung to the boy's sleeve in an agony of indecision. "Wait, Joe! Did they—did they talk angry talk?"

"Moch angry talk," said Joe stolidly. "Drink moch whisky. St. Pierre dig up two jugs."

"What did they say—about Parson Dick?"

"Moch curse Parson Dick. Aleck say to Hooliam: 'You wait outside Paul Zero's. When I give loon call twice you run in and say: 'Wah! Wah! the church she burning!' Parson Dick come run to put it out, I wait for him in the trees—'" Joe tapped the barrel of an imaginary gun significantly.

A low, terrified cry escaped from Annis.

"Aleck say: 'I throw Parson Dick in and burn him too!'" continued Joe unmoved. "Everybody say he fall in himself when try to put out fire.—Joe never see man burn. Joe bring him quick," he added.

"No! No!" she cried desperately.

"Joe want," he said, sulkily pointing to the brooch.

Tearing it out of her dress, she thrust it into his hands. "Stay with me," she urged. "Stay and see the big fire."

He stolidly resumed his seat on the stump. "Will fire jump as high as that spruce tree?" he asked.

"How can I tell?" she cried. "Joe, how far is it to Duncan McPhatter's?"

"Thirteen mile."

Annis silently wrung her hands.

"How much fire a man makes?" Joe suddenly demanded.

"Oh! I don't know!" she cried sharply.

"Joe think red man burn slow with plenty smoke lak poplar; white man burn bright lak spruce."

"Joe, don't speak of a man's burning,"

she implored. She struck her breast. "It hurts me here!"

"Joe lak to see a man burn," he iterated in his toneless voice.

Annis, forgetting him, walked back and forth with quick, uneven steps like a person in a fever. Her hands were clinched at her sides, her teeth set in her nether lip. "I must do it all myself," she murmured over and over; "I must do it all myself! God help me!"

The mysterious winter twilight descended on the land like the pallor that creeps into the faces of the dying. The spruce trees drew it about them like a gray woolen shroud; the great field of snow behind the church turned the color of ashes. Annis felt as if she must shriek if the awful silence endured much longer. It was the silence of under the earth, pressing on the brain like madness. When it was broken her heart leaped in her throat—it was only the sharp bark of a fox from across the river. Nearer, a coyote raised his quavering howl, and from the distant hills another answered like the wailing breath of an inhuman mourner.

At last, more dreadful than these sounds, Annis heard what she waited for, the uncouth chant of the Crees in the far distance. Nevertheless she felt a kind of relief—it was time to act.

The chant is always the same; there are no words to it. It begins on the shrillest note and falls slowly with strange lifts and pauses. It dies away to a hoarse murmur, and then as the breast of one among the singers contracts, is startlingly renewed on a howl. Under it, the maddening, humming drumming of the stick-kettle keeps time, now slow, now quickening, until the hearts of the singers are stirred to frenzy.

Annis ran into the church. Groping her way to the chancel, she wrapped Parson Dick's Bible in the altar cloth and brought it out. Joe eyed her disapprovingly.

"The book would not make good fire," she said.

She buried it in the snow around the corner of the palings and returned for the little communion service, which she

put beside it. Then Joe, who still sat on his stump, missed her in the gathering darkness and saw her no more. His fluttering mind, occupied with the thought of the coming fire, soon forgot her. The church door was closed.

The chant came nearer and nearer. Finally the motley crowd, including a few women, came straggling through the trees, chanting by fits and starts and making a confused noise of thick voices. Children of nature, their impressionable wits were hopelessly poisoned and scattered by the fumes of rank alcohol. Their lips hung loose; their eyes rolled in their heads. They paused irresolute in front of the church, quite as ready to go in and worship as they were to give it to the flames. Only Aleck Whitebear was grim and purposeful. The liquor he had drunk lit a deeper, slower fire. He brought up the rear like a keeper, with his moose rifle over his arm.

"Make a light!" he cried, as they came into the open.

Several pine torches flared up.

"Here's a man!" cried one.

"It's Simple Joe," said another.

Aleck angrily pushed his way through the crowd, and with a ringing blow knocked the boy sprawling off the stump. "Fool!" he cried. "Stay at home when I bid you!"

Some laughed foolishly. Some murmured. Aleck, indifferent to both, pushed his way to the church steps and faced them. Joe lay in the snow where he had fallen.

"Men!" cried Aleck, letting loose a pent-up fury of passion, "you see the white man's medicine house! There, he works his bad magic and makes our fur scarce, so we starve! He made the throat sickness in there; he carries it from house to house while he makes believe to cure."

In the present condition of the breeds no lie was too gross for them to swallow. They cried out hoarsely.

"Men!" cried Aleck with inconceivable fury—his face was suffused with black blood, his voice was hoarse, almost stifled with passion—"give his house to the fire and spoil his magic! Drive him back to his own country!



AS HE MOUNTED, THE DOOR WAS THROWN OPEN FROM WITHIN AND A WOMAN'S FIGURE, LIGHT-CLAD, BLOCKED THE WAY—SLENDER, MYSTICAL, COMMANDING.

We want no white man to tell us what to do. In with you! Thrust your torches under the seats! A jug of whisky to him who makes the first fire!"

Brandishing their torches, they rushed forward with angry, broken cries. Coquenoigan was the first to set foot on the steps. As he mounted, the door was opened from within and a woman's figure, light-clad, blocked the way—slender, mystical, commanding.

The effect on the breeds was like a hammerstroke. They hung for an instant, their faces frozen into shapes of horror, then of one accord, with short, brutish cries of fright, they turned tail. They were too frightened even to run; halting at a little distance, they pressed together like sheep, staring over their shoulders with wide, wild eyes. A woman started screaming hysterically.

Aleck was dismayed, too, but he stood his ground. He recovered himself in a moment and, picking up one of the sputtering torches, he held it up so that the light fell on her.

"Fools!" he cried to the breeds; "this is no walker of the night. This is only the old woman's daughter, the woman from outside. She is one of them. Will you let one of their women turn you back? In with you and let her look to herself!"

There was a woman in the crowd named Mary Trudeau, who hated Annis for reasons St. Pierre could have told. She was the next to recover from the panic and joined her voice to Aleck's in coarse vituperation. The men, ashamed of their fright, slowly returned toward the church, picking up their dropped torches on the way and relighting them. Aleck and Mary Trudeau never ceased to egg them on. Annis, watching them, silently bided her time. A great confidence filled her; was she not defending at the same time her lover and her faith? Had ever woman such a chance before? she asked herself.

Finally Coquenoigan made as if to mount again.

"Stand back!" she cried in a ringing voice. "This is the house of the Great Spirit and no man enters save with bare head and clean heart!"

Coquenoigan fell back. Simple Joe

where he lay on the ground raised his head at the sound of her voice and started to crawl toward her.

"What are you afraid of?" shouted Aleck. "She's no more than flesh and bone like us! I'll show you if she's proof against a bullet!" He raised his gun. "Go your way, woman, or burn with the church!"

Annis did not move. "I am not afraid of you," she said firmly.

Aleck with an oath took aim. Joe, leaping from the ground, held the muzzle of the gun to his own breast.

"You not 'urt 'er!" he cried shrilly.

Aleck cursed him and, snatching the gun away, aimed a blow with the stock at the boy's head, but his arm was held by St. Jean Bateese.

"Harm not the simple one," the old man said solemnly. "It makes bad medicine."

"He is my son," cried Aleck, thrusting the old man aside.

Others crowded around, however, and Aleck was obliged to lower his gun. "Get out of my reach," he said to the boy harshly.

Joe went to the church steps and crouched at Annis's feet. It was not without its effect on the superstitious breeds, who attached significance to every move of the half-witted boy.

Annis saw her chance. "Men, let me speak," she said simply.

"Yes, let her speak, let her work you to her will," cried Aleck furiously.

"She's a witch! She hates the people!" screamed Mary Trudeau.

Coquenoigan and others pressed forward again.

"If I speak anything but the truth let Aleck Whitebear shoot," Annis said boldly.

"Why do you wish to burn Parson Dick's church?" she cried, making her voice heard above all.

"He drove the fur away," several voices answered.

"What child's talk is this?" she cried, silencing them. "You know there was no rain last summer, the earth was dry, the leaves fell before their time, the grass burned. You know the rabbits and the little folk of the bush traveled east to the wet lands. Now when the

winter comes, the link and the fox must have food. They have gone east after the little beasts. What has Parson Dick to do with this?"

"He works his magic to be our master!" cried Coquenoigan.

"What is Parson Dick's medicine?" asked Annis quickly. "He teaches your children white man's letters—is *this* bad medicine? He shows your wives what to do when the children fall sick—is *this* bad medicine? His words to the men are, work hard and speak the truth—is *this* bad medicine?"

They were growing quiet. Not one had any answer to this.

"Parson Dick's little house is open to all who pass," continued Annis, pointing to it. "He shares his bread with those who have none. All day and all night he drives his dogs without resting himself to make the sick well, to speak good words to the sorrowful, to make peace between father and son. Is this the life of a bad man?"

Annis's voice hovered very tenderly over the name of her lover. To her woman's heart there was a blissful satisfaction in the thought that he had injured her and she was able to repay it—this way.

"When my boy and my girl have the throat fever, Parson Dick work with them, and they die," quavered St. Jean Bateese.

"Why did they die?" Annis instantly exclaimed. "Because St. Jean Bateese threw Parson Dick's bottle medicine out of the door. When they died, you ran, you were afraid of the fever. All but Parson Dick. He brought them to the church, he said a prayer over them, he buried them in holy ground. There they lie, St. Jean Bateese! Will you cover the graves of your children with the ashes of the church?"

She paused to give her words full effect. Old St. Jean wavered, then dropped his torch and stepped on it. A sweet sense of triumph began to steal into Annis's breast. The hulking Coquenoigan sneered at St. Jean's act. Annis whirled upon him.

"You, Coquenoigan!" she cried. "When they pulled you out of the river last summer you were as one dead! Your

mother cried and tore her dress. When Parson Dick came he said, 'Open the doors, this man is not dead!' And he worked with you till you breathed again. Would you strike at the man who gave you back your life?"

She paused again, searching in the crowd, now half hers. She was thankful for the good memory which had retained these stories of the country that stood her in such good part. Her eyes fell on Paul Zero; he was a man of influence among them; he seemed to be wavering.

"Where is Parson Dick now?" cried Annis. "At *your* house, Paul Zero, watching by your sick wife and bathing her head with snow. Will you burn his church while he is working for you in your own house?"

Paul Zero cast down his torch. "I will not burn the church," he cried.

"Not I! Not I!" cried others, following suit.

"I will then!" cried Aleck Whitebear furiously. "Get you home, you women creatures, and put your necks under the white man's yoke! I am a red man and I hate them! I will burn the church, and the man and the woman too!"

Again Annis remembered the paper in her glove. "You are a fool, Aleck Whitebear," she said coolly. "Will you hang yourself to make St. Pierre Fraser rich?"

He was sharply taken aback. "What do you mean?" he muttered.

"Who urged you on to this?" demanded Annis of the crowd. "Who gave you whisky to confuse your wits?"

"St. Pierre," several answered unconsciously.

"Then why isn't St. Pierre here?" she demanded. "Why doesn't he burn the church himself? I'll tell you. He's afraid to risk his neck! He sets you on to burn and kill while he stays safe in the store. When you hang for it, St. Pierre will make his profit!"

"It's a lie!" cried Aleck thickly. "St. Pierre is our friend!"

"He also signs himself Parson Dick's friend," said Annis. Spreading out the note, she offered it to him. "Read that," she commanded. "Hold him a light, some one."

Aleck studied the paper with a scowl. "Is it his?" demanded Annis. "You have often carried his orders."

Aleck lifted a face, puzzled and suspicious. "It is his," he muttered.

"You don't understand," said Annis. "I will explain. He gave it to me two hours ago for Parson Dick. If the church was burned, and Parson Dick hurt, St. Pierre would say to the police, 'It is not my fault. I warned him. I can prove it.'"

Aleck read the note again and quietly handed it back to Annis. He stood motionless, studying the ground. Deprived at one stroke of the stimulus of his anger, the man looked stricken and gray. His face slowly turned grim again. "It is not the first time," Annis heard him mutter. Finally he lifted his head.

"Pick up your torches," he said quietly. "Let us go back."

The breeds were not unwilling to obey.

The significance of the act was not lost on Annis. "If you burn the store, how will we eat?" she cried.

"We will not burn the store," said Aleck meaningly.

"You must not lay hands on St. Pierre," she urged. "You would hang, just the same. I know a better way."

"Speak!" they cried, wholly hers now.

"Joe, light the lamps in the church," she commanded. "Come in," she cried, throwing the door wide. "We will make a paper to the head traders. We will say St. Pierre gives us whisky and cheats us of our furs. Then you will make your crosses underneath, and I will send it outside. They will come and take St. Pierre away."

Clumsily pulling off their caps at the door, the men filed into the church. Annis brought up the rear, shivering with the cold, and half fainting from the reaction—nevertheless triumphant.

St. Pierre stood at the door of the store, biting his fingers impatiently and gazing toward the south for the red glare he expected to see in the sky. It did not appear, and in the end Mary Trudeau came running along the trail and told him what had happened.

St. Pierre listened to the story with his eyes bent on the ground and a bright spot burning on either yellow cheekbone. The effect of it on him was not what Mary expected. St. Pierre himself would have been at a loss to explain his state of mind. Instead of raging at the failure of his plans, they suddenly seemed to become of small moment to him beside a new desire. He felt a kind of exultation on hearing how Annis had thrown down the gauntlet to him. A great and overwhelming desire to possess her surged up in him, drowning every thought, every feeling he had known hitherto.

"Come back with me," cried Mary passionately. "Come back and kill her!"

St. Pierre laughed contemptuously and ignored her. He stood, thinking hard, his eyes contracted to two points of jet. Finally he threw his head back and looked at the sky.

"It will snow," he said. "Good!" He issued succinct commands. "Go to Sophie Fraser's cabin"—so St. Pierre termed his mother—"and bring her here to mind the store. I will be gone all night. I have drunk too much whisky for Christmas, you understand, and am put to bed."

"What must I do?" asked the woman.

St. Pierre debated a moment. "You must be sick," he said. "Send your brother for Parson Dick. Keep him with you till late."

"But Mary Zero is bad," she objected. "He will stay there."

"Never mind. You do as I bid you," he said coolly.

"You take your gun?" she asked with a leer.

"And hang myself with it?" he said contemptuously. "What do you take me for?"

While Mary was gone to get Sophie Fraser, St. Pierre crossed the clearing to St. Jean Bateese's empty shack, and coolly appropriated the old man's moose rifle from its stand in the corner. With gun, snowshoes, and roll of blankets, he presently set off in the direction of down river by the little-used back trail. As soon as he was out of sight of the houses he started to run.

(To be continued)

SADDLE AND CAMP IN THE ROCKIES

BY DILLON WALLACE

Illustrated with Photographs by the Author and S. N. Leek

THE TRAGEDY OF THE ELK

THE Jackson's Hole country—properly speaking, Jackson's Hole is a restricted, marshy space near Jackson village—is the winter range of the largest elk herds on the American continent. The whole valley, however, which for convenience I shall refer to as Jackson's Hole, includes an area approximately forty miles in length and perhaps ten miles in breadth, and the herds that accumulate here during early winter and remain until spring thaws free the mountains of snow and ice aggregate, at a conservative estimate, thirty thousand animals.

A considerable proportion of these, though by no means all of them, are Yellowstone Park elk, driven down from the higher altitude of the park, which lies at an average of some eight thousand to nine thousand feet above the sea, when the heavy snows to which the park is subject make winter feeding there impossible. Others of the elk summer in the Wyoming State game refuge, south of and adjoining the park, the remaining few on mountain ranges lying contiguous to Jackson's Hole.

It was my purpose in visiting Jackson's Hole to investigate on the ground the conditions prevailing here among the animals; to learn how far true were reports that great numbers starved each winter through lack of forage; and if it should seem that such conditions had not been overdrawn and that they actually existed, to learn the cause that led to the condition, in the hope that some remedy might be suggested.

That the country and the situation

may be understood, it should be explained that Jackson's Hole is hemmed in on all sides by rugged, precipitous mountain ranges, the most notable of which are the Tetons, to the west. It is a fertile basin, and the Snake River and several tributary creeks and brooks favor it with an abundance of water. Indeed it has one considerable marshy area so wet even in the driest season that it produces abundant grass without artificial irrigation.

Jackson's Hole lies at an altitude of approximately six thousand feet above the sea, and this high altitude confines its agricultural development mainly to hay and grain production, which makes it naturally a cattle and horse country, though sufficient of the hardier vegetables are grown for home consumption. Stock being the mainstay of the ranchmen, it is their custom to maintain as many cattle and horses as their ranches will support. The nearest railroad at present is ninety miles from Jackson, and during the winter there is but one outlet—over Teton Pass. According to the 1910 census the population of what is spoken of as the Jackson's Hole country totaled 889.

It was a Sunday near dinner time when I reached Jackson and registered at the little hotel. Saddled horses stood along the streets and the hotel office was crowded with ranchers and cowboys who had ridden in to spend the day, using the office as a general gathering place and clubroom.

After a very good dinner, at which elk meat was served, I joined the assemblage in the office, and spent the afternoon and evening smoking, listening,

and assimilating such information as I could relative to the attitude of the people toward the game situation, and the game situation here centers upon elk.

I had entered Jackson's Hole quietly. No one knew me, where I came from, or the purpose of my visit, though I realized that I was supposed to be a forest ranger. This suited my purpose, for forest rangers are so common hereabouts that I was permitted to sit unobserved in my corner, exchanging less than a dozen words with anyone, and thus had an unusual opportunity to learn much of local sentiment and to gather many hints to guide me in later investigation and inquiries.

Getting the Local Point of View

A young man, dressed in khaki and evidently not a native of the valley, had supper with us in the evening, and I learned that he was the Reverend Robert M. Beckett, an Episcopal clergyman stationed in Jackson. From him I obtained the names of leading guides and chief citizens of the country. One of the men mentioned by him, Mr. S. N. Leek, ranchman, ex-member of the State legislature, known as a big-game photographer, and particularly well known for his active efforts in the interests of game protection, I had already communicated with, earlier in the day, with a view to securing his coöperation. That evening I received a telephonic invitation, which I accepted, to visit him the following day at his ranch, that we might canvass the elk situation together.

Mr. Leek lives three miles below Jackson on his ranch of four hundred acres. He came to Jackson's Hole twenty-three years ago and was therefore among the first of the settlers and has ever since been intimately associated with its history and development.

During the succeeding days I saw much of the lower valley under Mr. Leek's guidance, and met and interviewed many of the people, following this with a complete view of the upper valley, and finally visiting the Gros Ventre region, where it is proposed to establish a game refuge and winter range. Here Leek and I pitched a tent, and re-

mained three nights, spending the days in the saddle riding over the surrounding mountains and valley.

In this tour I read the sickening story of the tragedy of the elk, written in bold characters on every field, on every hill and mountainside, and by every brook. It was the one subject of conversation, and the traveler through Jackson's Hole cannot avoid it.

At the point where I forded the Hoback the first indications of dead elk were seen, and all along the trail from the Hoback to the Gros Ventre were scattered bones and tufts of hair of animals that had starved. Bark-stripped willows and quaking aspens and twigs and limbs as large as one's fingers gnawed down by famished animals in vain attempt to find sustenance in dead sticks told the story of misery and suffering.

On the fields wherever I walked, and through the foothills, were the bones of innumerable elk that had perished within two years. At some points the bones literally lay in piles about bunches of willow with gnawed-off limbs and groves of quaking aspens stripped bare of bark.

Leek told me that there had been times when he could walk a half mile on the bodies of dead elk. Others reiterated this statement. One ranchman was prepared to make an affidavit that within a small area in the lower end of the Hole he had actually counted the bodies of sixteen hundred dead elk, in the spring of 1909. Another stated that when the snow of that spring melted two thousand bodies lay within a radius of one mile of his house. Another said that within a like radius at another point he had seen five thousand bodies.

Many other reputable ranchmen, in describing the awful stench arising in early summer from the putrefying bodies of dead animals, asserted that several families had been compelled temporarily to abandon their homes, made uninhabitable by the odor. Everyone told of the water in early summer slimy and reeking with decaying elk flesh, and made unwholesome for man or beast. One ranchman asserted that within a period of twenty years' residence in

Jackson's Hole he had seen upward of fifty thousand elk perish from starvation.

Let us look at the causes that lead to this condition. It is an unnatural condition, and the causes are easily traceable, though the remedies may not be so easily administered.

In the year 1872 Congress set aside the Yellowstone National Park, embracing an area of approximately thirty-six hun-

Thus was formed a great breeding ground for animals to which they could retreat, free from molestation by their old-time enemy the Indian, or their new and far more destructive enemy the white man.

The elk herds of Yellowstone Park and the contiguous country were large and their annual increase under normal conditions is about one-third annually.



THE SHADED PORTION IN THE CENTER OF THE MAP SHOWS THE WINTER REFUGE THAT WYOMING PROPOSES TO ESTABLISH FOR THE ELK.

dred square miles, and later very stringent regulations were put in force restricting the hunting of any kind or species of animal within its boundaries, save of predatory animals in very particular cases and under strict observation. This made of Yellowstone National Park an ideal game preserve and refuge, where, under military patrol, it is safe to say no poaching takes place.

As previously stated, their winter ranges in the park were limited to small and restricted areas, due to the high altitude of the park, its heavy snows, and severe winters. As the early snows began to deepen upon the mountains the herds sought lower levels, the overflow of the limited winter feeding grounds in the park drifted out and spread over ranges beyond its borders, those in the south

working their way across the Tetons into Idaho, into Jackson's Hole, along the Hoback, the Big Bend of the Green River, and down to the Red Desert. This wide spread of country supplied ample forage for them during the severe winter months. Those in the north worked from the park into available ranges in Montana, where forage was then also plentiful.

In time the Idaho ranges, the Red Desert and other outlying ranges were turned over by the Federal authorities to sheepmen, whose flocks swept and keep them swept clean of winter forage, until at length only Jackson's Hole remained, exceedingly insignificant and most inadequate, as compared with the one-time extensive and adequate winter ranges. Elk will starve on any range that sheep have grazed. Let us not forget the fact that with the elimination of winter ranges the elk were not proportionately reduced in numbers.

Keeping Out the Sheepmen

In Jackson's Hole nothing but the unyielding position of the settlers, who are determined that the animals shall not be robbed of this last range, has kept the sheepmen out. I have never visited a game country where the people were so unanimously game conservers, so keenly alive to the value of game and have individually sacrificed so much for its preservation as the people at Jackson's Hole.

Their method of excluding the sheepman was forcible and has been effective for a time at least. Not long ago the Federal authorities issued permits to a sheepman to graze the open range of Jackson's Hole, and the sheepman drifted several thousand sheep across Teton Pass. When he appeared with his flocks the settlers called an indignation meeting to devise ways and means of keeping him out.

A committee was appointed to wait upon him and advise him to leave quietly and at once. He told the committee that he was there by Federal license and intended to stay. The committee returned and reported, and another committee was appointed, supplied with ropes, and

instructed to see that no living sheepman or sheep continued longer than three days on the Jackson's Hole side of Teton Pass. The committeemen waited upon the sheepman and advised him and his herdsmen of their instructions and their intention of carrying out these instructions literally. The sheepman saw the point—and the rope—and discreetly departed.

Thus Jackson's Hole was reserved for the elk, not by government foresight, but by the active interference of the settlers, who realized that the only hope of preserving the animals from destruction was the exclusion of sheep from this last remaining range. Sheep would also have ruined the range for cattle.

Uncle Sam is, then, to a large degree, responsible for what we have thus far seen. He has bred animals in the summer, to turn them out in winter, without provision, to starve.

Let us look now at the part Wyoming plays in the situation. Very early Wyoming awoke to the fact that its wild game was one of the most valuable resources of the State and took wise and praiseworthy steps for its protection. It was one of the first, if not the first, of our States to require nonresident hunters to pay well for the privilege of hunting big game within its borders. At the cost of fifty dollars the nonresident might purchase a big game license allowing him to kill certain designated animals, including one elk, and upon the payment of an additional fifty dollars a second as a limit.

Laws were passed providing severe punishment for head and tusk hunters, the latter at one time invading the game fields and killing great numbers of bulls for the tusks alone and in no way utilizing the flesh. They were about the most unconscionable game killers, worse even than the old buffalo hunters who killed for hides, and contributed more than any other cause to the destruction of elk in regions where elk were once plentiful but are no longer found.

I have known a pair of tusks, within a year, to sell for forty dollars, and they were unmounted and just as taken from the animal. This is a strong incentive for unprincipled men to kill for tusks,

in defiance of law, where risk is not so great, and penalty not so severe, as in Wyoming.

The restrictions on nonresident hunters, aimed chiefly at pot hunters from Idaho and Montana, also had the effect intended and put an end to the indiscriminate slaughter that prevailed while nonresidents enjoyed the same privilege as residents. A limit of two elk was also placed, with a nominal license fee, upon resident hunters.

Under these restrictions the already large herds began to increase, and Wyoming saw great possibilities ahead. In his annual report of 1903, the State game warden said:

"If the State of Wyoming will properly husband its game and fish until the building of new railroads has made our mountain ranges and trout streams easily accessible, the annual revenue from these items of natural wealth will, if wisely managed, equal the income now derived from our domestic stock."

The State bent itself to this end in the most unreasonable and unbusinesslike manner imaginable. Instead of endeavoring to propagate elk in other regions, capable of supporting considerable herds, it concentrated its attention upon the already too large and starving herds which segregated each year in the Jackson's Hole country, bending its efforts to increase still further the numbers, but making no provision to feed or care for these animals in winter when their range was stripped of forage early in the season, as it has been for several years, through overfeeding.

As any lad in the country could have foreseen and foretold, this in the natural course of events led to a largely increased death rate. Previous even to this time (1903) the elk of this region had become so numerous as to starve in such alarming numbers that humanitarians had been led to suggest Federal interference. Referring to this, the State game warden took occasion to remark in his report of that year:

"It is to be hoped that our nonresident friends will allow us to demonstrate our ability to protect our own property."

The State's method of protecting its

own property was to create a new game refuge south of and adjoining Yellowstone Park, extending south from the south boundary of the park to the mouth of the Buffalo Fork of Snake River, and east from the Idaho-Wyoming State line to the head of the Yellowstone River, embracing approximately nine hundred square miles of territory. In this refuge, as in Yellowstone Park, many elk find summer range and breeding ground, as they always have; in addition to this, none of the elk, and none of the elk that invade the territory in their autumnal southward migration from the park, may be hunted during open season, and therefore hunting is practically limited to the territory lying between the refuge and the Gros Ventre and in the Gros Ventre region, thereby limiting the annual kill and increasing the animals on the already largely overstocked ranges.

And so conditions grew worse: fat, sleek thousands of elk surged into Jackson's Hole in early winter; a gaunt, spectral band, leaving hundreds upon hundreds of dead companions behind them, staggered back to the summer range in the spring, but on the whole the increase outnumbered the deaths.

Wyoming's Most Valuable Livestock

In 1908 the State game warden moved to assert in his annual report that "These elk are the most valuable livestock in Wyoming," and, continuing, suggested, "It is to be hoped that our legislature about to assemble will appreciate the importance of prompt action and take the requisite steps to secure a winter range while these animals are in prime condition."

The winter range suggested, which it was proposed to make also a game refuge, was the Gros Ventre River territory, thus adding to the prohibited hunting country practically the only unrestricted territory which these large herds now visit during the open hunting season. This proposition has not as yet been put through, largely because of the solid opposition of the residents of Jackson's Hole, who are too well aware, not only of its inadequacy to relieve the situation, but also of the absolute cer-

tainty that it would make matters even worse by practically putting a stop to shooting, and surely result in leaving those few annually killed, which is far below the yearly increase, to starve. The setting apart of this refuge, however, is still a live question.

I rode over this proposed new winter range, and it appealed to me as so palpably unfitted for the purpose that I could only wonder at the proposition. Everyone who knew the country here voiced this opinion. At present some five thousand elk attempt to winter on the Gros Ventre, but the mortality among them is tremendous.

The proposition to set aside this territory included the suggestion that the few ranchmen settled here could be induced to relinquish and abandon their homesteads for a gross sum of from \$40,000 to \$50,000 and that the State could then cut and stack the hay from the irrigated ranch meadows, to be fed to the animals as necessity demanded. It is probable that for a year or two this would carry the five thousand elk wintering there at present through the trying period in fairly good shape.

The proposed Gros Ventre refuge lies at a high altitude, however; its snows are deep, and the animals would have to be fed regularly in yards they would make for themselves; at most but a small part of the herds could be cared for here, while this new refuge would practically eliminate hunting and to that extent tend to increase the number of animals and make the problem of caring for them more difficult each winter.

Conservative approximate estimates of the elk in northwestern Wyoming place the number at 50,000. Those wintering in the Jackson's Hole country, between the Hoback and the Gros Ventre rivers, may be placed conservatively at 30,000. Snow lies so deep upon many sections of Jackson's Hole that herds are forced to segregate in various separate and limited areas that are more or less wind-swept, and forage therefore, to some extent, is uncovered and available while it lasts. Thus it will be seen that while the animals have between sixty and seventy acres per head on the summer range, when forage is green and plentiful, they

have less than an acre per head in the winter when forage is withered and of poorer quality than in the summer, and much more difficult to be reached.

By the middle of January the elk ordinarily have the range eaten pretty clean, and are then compelled to turn to coarse sticks and bark, which in the case of grazing animals such as elk possess small food value. The bark is even eaten from fence-rails. By February first the elk have grown gaunt, and many of them have fallen into a starving condition; presently the weaker ones are seen lying down, unable to regain their feet. Thus they remain one, two, and sometimes three or more days, until a merciful providence relieves their sufferings. Thenceforward this pitiful spectacle is constantly before the eyes of the settlers until spring thaws come and the famished creatures that have survived the period turn back again into the hills to regain strength and flesh in a season of plenty.

When the starving period begins the ranchmen pitch tents or make bivouacs near their haystacks, and to save the hay for their cattle are compelled to sleep by the stacks during the severest months of winter. Sometimes even then desperate elk charge the stacks and get some of the hay. It is necessary for the ranchmen to guard and protect the hay for their domestic stock, else the stock would starve. As stated previously, this is a stock country and livestock is the chief dependence of the ranchmen.

What the Ranchmen are Doing

Nevertheless many elk feed with domestic cattle, and tender-hearted ranchmen not infrequently put their stock on short allowance in order to donate, now and again, a bit of forage to desperate and starving elk. As an instance, Mr. Leek fed at his own expense twenty-one elk during the winter of 1910, and on several occasions animals forced their way into the barn where he stables his driving horses. It is customary for settlers when driving out to stuff as much hay into their sleighs as can conveniently be carried and distribute it to weaker animals in particularly pitiable condition which they pass along the road.



Photograph by S. N. Leck, Jackson, Wyo.
A FEW OF THE THIRTY THOUSAND ELK THAT GATHER IN THE FOUR HUNDRED SQUARE MILES OF JACKSON'S HOLE EVERY WINTER.



IDEAL ELK RANGE ALONG THE SNAKE RIVER IN WYOMING WHERE PRACTICALLY NONE OF THE ANIMALS ARE TO BE FOUND.

The winter of 1908-09 was an unusually hard winter here, and early in January, 1909, Jackson's Hole was stripped of forage. It is probable that the greater part of the herds would have perished but for the fact that ranchmen on their own initiative distributed twenty loads of hay daily to twenty thousand elk. This barely sufficed to keep the animals alive. The ranchmen, to be sure, were later recompensed by the State for the hay, but even so it was to their disadvantage to take it from their domestic stock, which they were compelled to put on exceedingly short allowance; and when they fed the hay they had no guarantee that they would be paid for it.

Referring to that season, the State game warden, in his annual report, says: "Not many grown elk died, but about fifteen per cent of the young ones perished. Had nothing been done to relieve the elk, a frightful loss would have been the result. The prompt action of the settlers in taking the initiative and beginning feeding operations, and the generosity of the legislature in providing funds, deserve the highest commendation."

The State game warden in his estimate of the elk that perished, is at wide

variance with every ranchman in Jackson's Hole. I personally interviewed many of the leading residents and obtained estimates from them of the proportion of the herds that perished, and the most conservative placed the number at not less than *seventy-five* per cent of the young, and *ten* per cent of the adult, elk. I had but one estimate as low as ten per cent of the latter, the majority agreeing that at least *fifteen* per cent of the grown animals perished.

Again, in February, 1910, many elk died of starvation in Jackson's Hole, but a fortunate thaw cleared the upper ranges in early March, and not nearly so many were lost as in 1909.

In spite of these lessons, which have been repeated winter after winter for several years, Wyoming has taken no steps to protect her animals. In the latter part of January of the present year (1911) elk had again begun to starve. At the time this is written famished elk are dying by hundreds in Jackson's Hole. Other hundreds lie in the snow too weak to rise, and there they will lie uncared for until a long-drawn out, torturing death relieves them. The snow was three feet deep on the level there this winter, and the outlook was for an even



THE BARREN SLOPES OF THE GROS VENTRE RANGE WHERE IT IS PROPOSED TO ESTABLISH A WINTER REFUGE FOR ELK.

more disastrous season than the terrible one of two years ago, when, but for the ranchers' prompt action, practically the whole herd would have perished. In a letter from S. N. Leek dated January 28, 1911, he says:

"Last night, coming down from Jackson, I passed over twenty calf elk lying by the road, none of them dead yet, but all will be within a few hours. While traveling in the road, where the snow is packed, they give out and drop down. We must drive around them with our teams, and those who pass throw out little bunches of hay to them. Some of them are seen lying with the hay before them, but too far gone to eat it. In a few hours, or days at most, those that are down now will be dead. What you saw last fall will not be a fourth of what you may see next spring. And still the great State of Wyoming and the Federal Government protect them on a summer range, averaging seventy acres to each animal, where all grazing of domestic stock is prohibited, and not one acre each is reserved for them for a winter range.

"I took a photograph from my barn last evening, showing probably fifty elk, part of them within the corral, and at

the time there were fifteen hundred head of elk within my field, all starving. I could feed a hundred or so, but did I commence I should soon have a thousand to feed, and I haven't the hay to feed that many. I feel almost like quitting and letting them all die, and have the worry over."

This, it will be remembered, was at the *beginning* of the starving season of the present year. A day or two after writing me the above letter, Leek wrote me again that he had canvassed Jackson's Hole to learn how much hay each ranchman could in safety spare from his needs for his domestic stock. Last summer was one of unusual drought, and Leek found *less than fifty tons of hay available for elk.*

Early in February the State legislature so far aroused itself from its indifference to the conditions as to vote an emergency fund of \$5,000 to relieve the elk. Had this been done last spring and hay purchased last summer, it would have gone far toward saving the elk, but with no hay obtainable at this late day it can be of no use. A meeting was called of all the settlers before this emergency fund was voted, to consider the feasibility of driving their cattle over Teton



Photograph by S. N. Leek, Jackson, Wyo.

DESPITE THE FACT THAT ELK ARE "THE MOST VALUABLE LIVESTOCK IN WYOMING," THEY ARE PERMITTED TO ROAM IN LARGE BANDS ON HILLS BARE OF FORAGE AND NO ATTEMPT IS MADE TO PROVIDE FOR THEM.



Photograph by S. N. Leeb, Jackson, Wyo.

RANCHMEN DRIVING INTO TOWN SOMETIMES CARRY A LITTLE HAY ON THEIR SLEDS TO FEED STARVING ELK FOUND ALONG THE ROAD.

Pass to Teton Basin in Idaho, where feed could be had for them, and distributing their hay to starving elk. To drive the stock in winter over this trail would be no small undertaking and would doubtless result in considerable loss of stock.

Let us summarize briefly Wyoming's responsibility for the condition: She began early in her statehood to work for the enlargement of herds already too numerous for available winter ranges. Not satisfied with the annual increase shown, she established an extensive refuge adjoining Yellowstone Park that the herds might grow as large as possible, in order to net her a large revenue when railroads open her game regions to sportsmen.

In spite of the fact that winter ranges are excessively overstocked, she proposes to establish still another refuge in the Gros Ventre. She makes no provision for winter feeding, though regularly every year thousands upon thousands of her elk are dying of starvation. She resents outside criticism, and proposed interference on the part of the Federal Government, on the ground that she is abundantly able to take care of her own property, though past and present conditions prove that she is utterly unable or unwilling to care for these migratory animals which she chooses to claim as her own the moment they enter her territory.

The Way Out

What is the remedy? No one wants to lose the last large herds of elk remaining to us if it is possible to save them. Humanity demands on the other hand that the herds be reduced in size if they cannot otherwise be provided for in winter, to a point where the limited ranges open to them will support them without undue suffering. The question is, then, can the present herds be kept in their entirety and provision be made against their suffering? I believe this is possible, though it would not seem wise to permit further increase, as the limit of numbers, in justice to them, appears to have been reached.

Though Wyoming claims absolute ownership of the elk within her borders

and puts her claims above those of the Federal Government, the elk, as well as all the ranges here in question, are within United States forest reserves, including Jackson's Hole. In view of the fact that Wyoming has asserted and reiterated that these elk are of greater economic value than all the domestic livestock in the State, and it is true that the elk are a source of considerable revenue to her, it seems but just that some part of the money brought into the State treasury through the elk should be used to guard them from suffering, particularly in the face of the further fact that it has been demonstrated that this is feasible. In view of her claims of ownership and her high valuation of the elk, the country at large is warranted in expecting her to act on ordinary business principles and to care for them just as any farmer would care for his stock, by feeding them in seasons when the ranges become inadequate to support them. Thus she might incidentally prove that she is "able to take care of her own property without outside interference."

Humanity demands that she do this, or in the event of her failure to do so that the Federal Government take possession of the herds. In another article I said that it was a question whether or not migrating animals passing from one State to another should not come under Federal control. This, of course, will be understood to refer to States in which national forest reserves are established, to animals passing from a reserve in one State to a reserve in another, and to the animals while within the boundaries of reserves. The elk here in question fall within the last classification, as they have never passed out of national forest reserves.

Feeding is not only possible but feasible, and Wyoming is only deterred from feeding because of the expense entailed, which would be comparatively small. During the haying season ranchmen in Jackson's Hole are willing to sell the State considerable quantities of hay at from four to five dollars per ton, and enough could be had at this price, economically dispensed, to carry the elk over the season of stress. It would be necessary to arrange with the ranchmen for



Photograph by S. N. Leck, Jackson, Wyo.

IF THE JACKSON'S HOLE RANCHMEN ATTEMPTED TO FEED ALL THE ELK THAT CROWD INTO THEIR PASTURES IN WINTER THEIR CATTLE AND HORSES WOULD STARVE.



GRIM MONUMENT TO THE HARD WINTERS OF JACKSON'S HOLE—A COMMON SIGHT THROUGHOUT THE DISTRICT.

the hay in summer, that they might have ample time to drive their cattle over the Teton Pass, or make other winter provision for them. It has been claimed that the ranchmen demanded of the State excessive prices for hay. I was assured that the price above named would be the limit of demand, and surely, with the average ruling price of hay elsewhere throughout the country about eighteen dollars a ton, five dollars cannot be characterized as excessive. Hay thus purchased could be held in reserve for time of need and would meet all requirements, but Wyoming has never put aside one ton of hay to meet an emergency certain to arise.

In my description of Jackson's Hole I referred to a marshy area supporting a good growth of grass. This area contains about three thousand acres and is easily good for at least one ton of hay per acre. The greater part of the marsh is owned by private individuals, but it could be acquired by the State by reimbursing the owners for the slight improvements they have made upon it. The hay thus obtained would cost the State very little and might be held as a reserve to meet emergencies.

While under normal and healthful conditions the annual increase among the

elk of northwestern Wyoming should be considerably greater than at present, it is, conservatively estimated, about five thousand. The total number of elk killed annually in the State averages one thousand. If the cost of present non-resident licenses was reduced from fifty dollars to twenty-five dollars, privileging the hunter to kill one elk, with an additional charge of twenty-five dollars for a second elk, it is probable that many more nonresident hunters would upon these reduced terms visit the State, with the result that an additional thousand elk would be killed.

This would in no case tend to reduce the size of present herds, but it would prevent an annual increase too large to control, which would result if wholesale starvation were stopped through feeding. It would produce to the State a revenue so considerable that even in her stingiest mood Wyoming might be moved to apply a small proportion of it to the purchase of sufficient hay to keep the elk in good condition through any ordinary, or, for that matter, extraordinary winter.

This proposition, I am aware, will be hailed with horror by those who object under any conditions to killing wild animals, but it is better to kill the elk than

to starve, and humanity here demands some such course. No stockman in the world would attempt to maintain a hundred steers on a range that would not support seventy.

On the other hand, Wyoming has considerable ranges in other sections of the State far understocked. Wherever this is the case a permanent close season should be established and maintained until the ranges are fairly well stocked. The idea of game protection is to stock ranges that are adapted to animals, but not overstock them, and when conditions warrant, to permit hunting, but not to so great an extent as to kill each year beyond the annual increase.

In view of the fact that Wyoming considers her elk of greater value than the domestic sheep now occupying the old desert ranges of the elk to the latter's exclusion, it is a pity that the Federal Government ever permitted the sheep to ruin the ranges. What shift the Federal authorities expected their Yellowstone Park elk to make when they did this is hard to imagine, if indeed they ever gave the park elk a thought.

No one understanding the true meaning of game preservation can be in the least in sympathy with the exclusion of settlers from territory for the sole purpose of propagating game. This would retard civilization, and no one wishes that. But if desert lands not adapted to settlement are more valuable as elk pasture than sheep pasture, as Wyoming has asserted, particularly when other and ample unoccupied ranges are open to sheep, humanity and good policy both demand that the elk ranges be reserved for elk.

Last year Wyoming took thirty-six domesticated elk from Jackson's Hole to the Big Horn refuge. This refuge would accommodate thousands, and the Medicine Bow range also offers admirable opportunity. The transportation of elk

has been proved by experiment to be perfectly feasible. In his report of 1907 the State game warden of Wyoming states:

"It has been well demonstrated that young elk may be captured in the Jackson's Hole country—in winter time—with cheapness and safety. They are enticed into inclosures by means of hay and fed until in suitable condition to move. In years past, when there were no restrictions upon the capture of game, I have known scores of young elk to be hauled ninety miles by wagon, and then shipped by rail to New York, with practically no resultant loss."

If the State of Wyoming is truly interested in the preservation and propagation of big game, as her State game warden has repeatedly asserted in his annual reports, she could, without expense and without appreciable loss to herself, permit other States to capture young elk that would otherwise starve, to stock adaptable ranges in these other States. The number to be captured and transported could be agreed upon, and it would be but just that the State receiving the elk give Wyoming a guarantee of a permanent closed season and of proper protection for the animals.

It is certainly up to Wyoming to take some steps toward the proper protection of her elk. If she does not do so promptly and continues to permit wholesale starving, the Federal authorities should take the matter in hand. If an individual were to treat one cow calf so cruelly as Wyoming annually treats thousands of elk, his neighbors would raise a howl of horror, and the humane societies would lose no time in setting legal machinery in motion to have him severely punished. How long will the Federal Government permit this condition to continue? What is Wyoming going to do about it? She can get the hay and she can feed the animals if she is disposed to do so.

(To be concluded)





A COYOTE HUNT IN FULL CHASE NEAR COLORADO SPRINGS.

COLORADO A NATIONAL PLAYGROUND

BY WILLIAM MACLEOD RAINE

Illustrated with Photographs

THE charm of Colorado to the tourist lies largely in its contrasts. The climate, the topography, above all the social and business activities, illustrate this continually. The pleasure seeker finds the highly developed civilization of the East set in a breezy Western environment, all its complexities and comforts in close proximity to the primitive outdoors inhabited by elk and Indians and cow-punchers.

The Centennial State might more aptly be known as the "Sunshine State," but since the charm of a place cannot be measured by statistics, it is inadequate to say that there are in each year three hundred and forty days in which the sun shines more or less and usually a great



POLO AT THE CHEYENNE MOUNTAIN COUNTRY CLUB.



IT IS NOT MEANT THAT MEN SHOULD ALWAYS BE HERDED INTO CITY CANYONS.

deal more than less. Combined with the dry, pure air of a mile-high altitude, this gives an invigoration that invites to outdoor life. The weather is subject to sudden variations of temperature, but the lack of humidity in the atmosphere robs these changes of their danger. The invalid, well wrapped up, sits out on his porch all day in zero weather and makes

the most of the pale wintry sunlight, knowing that the morrow is likely to be the first of a month of balmy springlike days.

Denver is just now (to be precise, February 15th), in the heart of her winter, but yesterday I played golf and to-day tennis. Motor cars flash past as I write and people are riding in open



HELPING THE STAGE GET UNDER WAY.



AN IDEAL SPOT FOR THE CASUAL TOURIST.

street cars with and without overcoats. The distant mountains are ribbed with snow furrows, deep among their two-mile-high summits the rotary plows are bucking their way through heavy drifts, but both here and there the sky wears its perennial blue. All told, there has not been more than a week this winter during which one could not have indulged comfortably in any outdoor sport.

"She sits forever in the sun," wrote Joaquin Miller of Denver, and he might almost as truly have said it of the State

at large. For away up in the mountain towns and mining camps where one travels on runners six months in the year and snowshoes are in brisk demand at the stores, where avalanches are the most dread menace to safety throughout the winter, the sunpour from the blue alternates with the storms that sweep across gulch and mountain. Over "park" and valley and plain alike this silvery light floods limpidly. This is one of the factors that go to make Colorado "more and more each day the playground of



FOUR-POUND RAINBOWS ARE NO STRANGERS IN THE MOUNTAIN STREAMS.

the entire Republic," as Colonel Roosevelt once said.

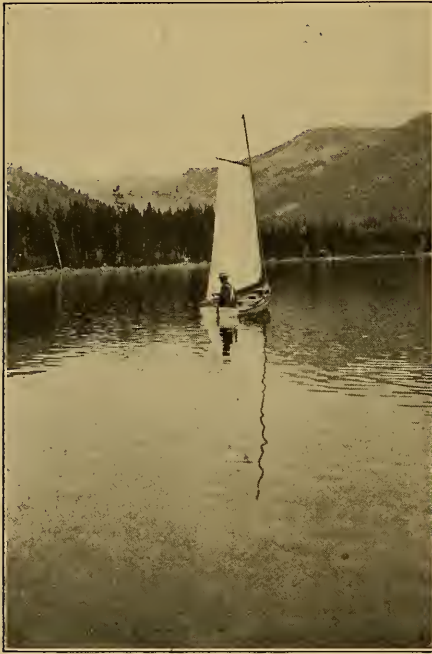
Denver is the gateway between the mountains and the plains. She sits tilted on a toboggan slide that stretches from the continental divide to the Missouri River, and from her radiate all the activities of the Rockies, whether of mines, sheep, cattle, agriculture, or manufactures. The miner who has "struck it rich" at Aspen or Leadville comes down to build a palatial home on Capitol Hill and finish his days at the Denver Club,

swapping stories with his fellows. Meanwhile his son goes to Harvard, drives a motor car along the very road where his father perhaps packed a prospector's outfit on his back, plays polo or rides to a "meet" to chase coyotes, and finds time besides to practice law or promote mines.

Colorado might be called the roof of the continent, the watershed whose great divide sends a hundred rivers down its eaves into the Atlantic and as many into the Pacific. More than forty peaks of the Rockies in this State rise higher than

14,000 feet, the best known and one of the least impressive of which is Pike's Peak, the first to strike the eye as one comes westward from the plains.

This region of dry, untempered atmosphere seems to defy distance. One may ride all day with a mountain landmark for a guide and find it at nightfall no perceptible foot nearer, though it has changed from blue to pink in the sunset



SAILING NEARLY TWO MILES ABOVE
SEA LEVEL.

glow and later to a velvet violet in the evening dusk and again to a purple haze that in the night blurs softly all detail. At Denver one may see a two-hundred-mile stretch of continuous mountain, from Pike's, which is eighty miles to the south, to great Long's, not far from the Wyoming line.

The Rocky Mountain plateau lacks many of the beauties familiar to those who come from the East. One misses the verdure, the delicate softness and coloring of Indian summer. There are comparatively few fine cloud effects and a very definite lack of perspective. These deficiencies are inevitable complements of an atmosphere so peculiarly dry and rare-

fied, but nature has her way of atoning by unexpected sweeps of light and shadow on the plains, by wonderful sunrises on keen, crisp mornings when the snowy mountains glow with a translucent pink, by exquisite hours of dusk touched to a mystical light that shimmers on the serrated range.

It was not meant in the divine scheme of things that men should always be herded into city canyons. The call of the wild will not be denied, nor the inherited instinct of the old barbaric days to get out and conquer the obstacles of nature. Tired and overcivilized humanity may find in Colorado a great many almost untrodden peaks, scores of virgin wilds that invite the intelligence of man to pit itself against the craft and cunning of wild game, and numberless streams heavily stocked with trout worthy any angler's skill.

If one desires to play less arduously he may settle into pleasant indolence in any one of a thousand picturesque resorts in the hills. Nearly every railroad in the State winds through gorges and climbs divides to many such. Platte Canyon is dotted with beautiful little parks where summer hotels and boarding houses nestle. Many people own their own homes and still others pitch tent casually on any level spot on the sunny hillside. The season for trout fishing opens the first of June, and from that time till the close of November a "fish train" is run every Saturday afternoon to carry business men at the week end to their families in the mountains.

The tourists center at Denver, Colorado Springs, and Glenwood Springs, each of these places having advantages not common to the others. From Denver start most of the celebrated one-day scenic trips, such as those over the Georgetown Loop, the "Switzerland" trail, the climb on the "Moffat Road" by a wonderful piece of engineering across the continental divide into the wilds of Routt County, and others of like nature. But by way of parenthesis it is necessary to add that "the Short Line" run to Cripple Creek, the famous gold camp, begins at Colorado Springs.

The business of this last-named city is to contribute to the enjoyment of life. It



AT COLORADO SPRINGS NATURE HAS HEATED THE POOL FOR THE BATHERS.



PITCH TENT CASUALLY ON THE SUNNY HILLSIDE.



THE NATURAL PARK OF A HUNDRED THOUSAND ACRES OF MEADOW, PASTURE, AND WOODLAND THAT THE EARL OF
DUNRAVEN FOUND.

contains among its residents a very large percentage of cultured Eastern people who came out originally for the health of some member of the family, but have stayed permanently because it is one of the most delightful of places in which to live. There is a great deal of riding, of driving, and of polo, for the electric atmosphere brings most people outdoors during the daytime, and during the season a great influx of travelers debouch from Colorado Springs to a hundred near-by points of interest. Cheyenne Canyon, Manitou, Pike's Peak, accessible by a cogwheel railroad, the Garden of the Gods with its curious and interesting rock formations; all these are in close enough proximity for picnicking purposes.

Glenwood Springs, which is deep in the heart of the Rockies, makes its claim on the traveler because of its large hot-spring bathing pool of medicinal properties, and because the best of fishing and hunting may be reached from here in a few hours of travel by train or horse or automobile.

There is no climbing in the Rockies that is dangerous to the experienced mountaineer, though the difficulty of the ascent varies in different cases. A ranchman told me not long ago that last summer he took his whole family, including three girls and a four-year-old child, to the summit of Mt. Sopris, gathering by the way twenty-seven kinds of wild flowers, including the columbine. Yet every year some venturesome climber pays the penalty of his carelessness with his life.

There is plenty of good climbing to be had around the Aspen-Leadville district, where Maroon, Pyramid, Snow Mass, the Mount of the Holy Cross, and Massive are only a few of many peaks at the summit of the continental divide. Or one may go farther south to where Mounts Harvard, Yale, and Princeton tower. But nowhere is it better than along the Front Range, from Grays, Torrey's, Rosalie, and Evans, just west of Denver, to Arapahoe and Long's farther north. If one has a fancy for studying glaciers he may find several of them here, notably Hallett's and Arapahoe, with all the accessories of moraine, boul-

der field, ice bridges, and crevasses. It is quite safe to say that any visitor will find peaks near enough wherever he may be staying with enough of danger and difficulty to whet his appetite for adventure.

Some one has put it on record that Long's Peak is one of the seven most difficult in the world. This is probably not true, but it certainly offers one of the most interesting climbs in the Rockies. There is the moraine, the boulder field, the ascent to the Keyhole with beautiful Estes Park stretching away from one's feet to the cordon of surrounding hills. Above there is a sheer rock wall to be circled by the narrowest of footpaths and a precipitous descent below, a stiff climb up the trough, another rock face to be negotiated, and the final clamber to the summit. The view has to be seen to be appreciated. Something of the mountain's stark height may be imagined when one remembers that a dropped stone will fall from one face a sheer two thousand feet and strike only once or twice before plunging into the black lake below. This is said to be the highest overhanging precipice in the world.

Park that an Englishman Found

Under the shadow of scarred Long's lies a natural park of a hundred thousand acres of meadow, pasture, and woodland. Thirty years ago an Englishman, hunting big game in the Rockies as he had hunted in every quarter of the globe, crossed the snow ridge and looked down into it. He saw that the range had as it were thrust out a great crooked arm and inclosed this natural garden within a barrier of mountains. Seeing, he coveted it for an immense estate and game preserve. The man was the Earl of Dunraven, and the place was Estes Park. He began at once to buy, and after he had obtained the best Colorado woke up and protested until the remainder was thrown open to the homesteader.

To-day Estes Park is a big playground with five large hotels and a number of smaller ones. Scattered through it are hundreds of summer homes set picturesquely among the pines and aspens. A fifty-foot boulevard bisects the Park and

offers a perfect road for driving and motoring. For the golfer there are no less than five courses, for the naturalist, numberless flowers, reaching to the very beds of perennial snow. The mountaineer may have his choice of many peaks, some of them within a day's journey of the Park with canyons not yet fully explored, and in these deep gorges the hunter may find deer, bear and mountain lion. The fisherman need only step to his front door and from the Big Thompson draw speckled rainbow trout for breakfast.

But though there is trout fishing all over the State, with a greater mileage of well-stocked streams than in any other State in the Union, when one speaks of the big fellows, the ten-pounders, he thinks of the Gunnison River. In like manner when one thinks big game he very likely has Routt County in his mind. Until lately shut off from the world by mountain ranges a railroad is now tunneling its way into this northwestern corner of the State.

Hunting in this region means leaving the railroads far behind, crossing mountains on roads cut in the rock, and sliding down hazardous grades with brakes set hard. It means lying in one's blankets before a camp fire with the deep starlit sky for a roof and all the wide outdoors of the shadowed peaks and the breeze-blown pines to wash petty troubles from the mind. It means also long days of heavy tramping, crowned by that moment of incomparable delight which follows a clean shot at the end of a perfect stalk.

Outside of railroad fare the cost of camping in the Rockies is inconsiderable. The first and last rule is to wear old clothes. A pair of flannel shirts, the usual underwear (if not too light, for the nights are often cold even in the summer), stout shoes, rubber hip-boots, soft hat, canvas leggings, serviceable gloves, sweater, mackintosh, and plenty of safety pins are the chief necessities in the way of wear for a man. A woman would do well to take an old golf suit with an extra skirt, some outing flannel shirt-waists, leggings, heavy-soled shoes, soft felt hat and wide-brimmed straw, and a jacket of some kind.

A party of eight who outfitted in Denver to go to Wagon Wheel Gap for a two months' trip found that the average cost a person for food was less than five dollars a month. My experience would justify this as a fair estimate—omitting the price of milk and eggs bought from neighboring ranches, since trout and game may be depended upon to supplement the bill of fare without cost. It is of course an entirely different matter if you stop at the large hotels. The expense then is on a par with that at other resorts the world over and the garb, the usual conventional wear, somewhat simplified.

Homes of an Earlier Civilization

One of the most interesting features of Colorado to visitors is the cliff ruins on the Mesa Verde. These were discovered twenty-five years ago and are the most extensive in the United States. The cliff dwelling region, which has recently been created into a National public park, covers seven hundred square miles. This district is a plateau, flat on top but cut into numberless gorges and canyons by the Mancos River and its tributaries. The Canyon of the Mancos is from one to two thousand feet deep, the river bed being bounded by long, steep slopes of disintegrated rock which culminate in lofty cliffs at the top towering far above the narrow thread of water.

All the more important types of ancient dwellings are represented here and reach their highest development. One of the most notable of these is the Cliff Palace, a ruin 425 feet long which is set in the cove of a rock face; another, the Spruce Tree House. The rooms are circular, oval, and rectangular. The round ones, called *estufas*, were evidently for religious purposes. In places these are three stories high. The masonry is of the highest type, the stones being dressed on the outside and laid with mortar. Into the walls of some of these old dwellings have been scratched and painted pictographs representing various epics of pre-historic life.

These old ruins are set in that picturesque corner of the State where liquid Spanish names anticipated our senseless

nomenclature; "down in the San Juan country," as the local phrase has it. Instead of such crude names as Dead Cow Creek we have the Rio Dolores, the Rio de los Animas. Mountains are *cordilleras*, and instead of being placarded with labels like Pike's and Clark's and Gray's they are San Miguel, Sangre de Cristo, and San Luis.

From the towns of this section—Ouray and Silverton and Rico—you may see any day a string of burros laden with supplies setting out for the hills where the prospector has staked his claim. These supplies are of every imaginable kind, and when the little animal is freighted with pans and picks and kegs not much of him is visible to the naked eye. Any kind of a trail is good enough for a burro. He can forage for a living on the bare hillside. No animal is stronger for his weight or more willing in his own gentle indolent fashion, which are some of the reasons why he is the pros-

pector's best friend and cheapest and safest means of transportation.

The great fact in Colorado's history during the past decade has been the development of agriculture. Time was—and not long distant either—when the farmer led an isolated life, but now the rural districts are in close touch with urban life. Farming under irrigation is intensive, population dense. The telephone, the interurban trolley, the rise in agricultural land values, the grade school, the automobile, the acquisition of scientific tools and machinery, coöperation; all these have veritably transformed the old-time farmer's life, at least in Colorado. The prosperous members of that class are among those who have the time and inclination to enjoy the advantages of their chosen State as a playground, no less than are the thousands who pour in every summer from other States to make the most of its sunshine, its sports, and its scenery.



KEEPING THE MOTOR'S LUNGS CLEAN

BY HAROLD WHITING SLAUSON

IF a man inhales dust, he coughs and thereby involuntarily clears out the air passages; when a motor breathes, the dirt and soot collect in its "lungs and throat" with each respiration until finally, if these organs are neglected, any undue exertion will cause it to puff and wheeze as badly as does a pug dog with the asthma. Under these conditions, the motor loses power and, no matter how perfect may have been its design, high efficiency cannot be obtained when its breathing apparatus is in need of cleaning. The remedy lies in the expenditure of a small amount of time and energy on the part of the owner or his chauffeur, for it is not necessary to turn

the car over to a professional repair man in order to have the valves cleaned.

It is not an easy matter to prescribe at just what intervals the valves of a four-cycle automobile motor should be cleaned, for the condition of these respiratory parts depends as much upon the nature of the gasoline mixture and the quality and amount of lubricating oil used as it does upon the distance that the car has been run. A car that is not kept in commission during the winter should have its valves attended to the first thing in the spring before any attempt is made to run the machine, and under some conditions of use, this operation should be repeated every month or so. The successful motor-car tourist who always

keeps the anatomy of his machine in the "pink of condition" will grind the valves at the end of every one or two thousand miles, even though the engine may appear to be absolutely free from lung trouble of any kind.

The frequent cleaning, or grinding, of valves is made necessary by the fact that some of the parts of the exhaust gases unite with the free, unburned carbon of the lubricating oil and with the dust in the air and form a deposit on the valves and their seats. Additions will gradually be made to this deposit, and the mass will finally become baked on so hard that grinding has been found to be the only method by which it can be entirely removed. The interposition of this carbonaceous deposit between the valve and its seat prevents the former from closing tightly and allows the compressed charge and the force of the explosion to escape before the proper time, thus reducing the power of the motor by the amount that the pressures have been decreased.

Where Attention is Necessary

As has been already stated, care on the part of the operator in regard to the quantity and quality of the lubricating oil used and the nature of the gasoline mixture admitted to the cylinders will reduce the liability of the formation of carbon deposit on the valves and seats, but the greatest precautions cannot obviate entirely the necessity for attention to this part of the motor. Even though no carbon should be formed, the heat of the exhaust gases would eventually corrode the valves and seats and cause small pit-marks to appear in their surfaces which only grinding would remove.

The temperature of these exhaust gases is generally in the neighborhood of 400° F., and as the valve itself cannot be water-cooled, even the best material from which it can be made will eventually show the effects of this continued application of heat to its surface. As the seat of the valve is generally a part of the cylinder casting, it can be water-jacketed and its temperature can thus be kept at a more nearly normal point, but

as the two surfaces are ground together, no discrimination can be made as to which has the greater amount of carbon deposit.

What has been said in regard to the effect of the high temperature of the gases on the valves applies only to those controlling admission to the exhaust pipe, for the intake valves are not exposed to this heat and are opened only to allow the introduction of the cool charge from the carburetor. Consequently, it is only the exhaust valves that will require frequent attention, but the intake valves should be ground at least once a year to obtain the best results from the motor. Whether one or both sets are ground, however, the methods to be pursued are the same, and the amount of work and time required depends entirely upon the condition of the valves; the amount of carbon deposit will vary in direct proportion with the length of time that the parts have been neglected. Consequently, it is much better to spend a few minutes each month, or each week, in grinding the valves, than it is to consume several hours once or twice a year—and then have a poorer-running car into the bargain.

In the efforts on the part of engine designers to make all parts accessible that are liable to require frequent attention, the valves have not been overlooked, and whether the motor is of the "T"-head, "L"-head, or valves-in-the-head type, each valve and its seat can be reached without disturbing other parts of the mechanism. The "T"-head type of motor has its intake and exhaust valves located on opposite sides of the cylinders, each set being operated by a separate cam shaft. The valves and seats are located in extensions, or pockets, cast with each cylinder and forming the top of the "T."

The valves are opened by being pushed up directly by their stems, and a heavy spring holds them closed when in a normal position. Directly above each valve is a large screw plug with a socket head into which can be introduced a special wrench. When this plug is unscrewed the valve can be reached, and if it has been previously loosened, it may be withdrawn entirely through this opening. To

loosen the valve, the spring that holds it closed should be compressed, and the pin, or wedge, forming the stop for this spring, may then be withdrawn from the valve stem.

The construction is the same in the "L"-head motor except that the valves are all located on one side of the cylinders and are operated by a single cam shaft. The method of removing the plugs and valves is identical, however, and whatever directions are to be followed for grinding the one type apply to the other as well. The usual type of horizontal double-opposed motor is designed with "L"-head cylinders and the valves are reached in the same manner as are the vertical engines already described—with the exception that the machine is approached from the side of the bonnet instead of from the top in order to reach the screw plugs.

Nearly all valves are beveled at an angle approximating forty-five degrees in order to fit a corresponding angle in the seat, and this portion of the valve proper is known as the "face." It may be that some soft carbon has collected on the face of the valve and on its seat, and this may be scraped off after the valve has been removed. A few drops of kerosene may serve to soften this deposit still further, but no matter how clean the valve can be made in this manner, it must always be ground before it is replaced permanently.

Under no conditions should a file ever be used on the face of the valve or its seat, and care should be taken not to scrape these surfaces with anything that would serve even to scratch the finest finish. Any foreign matter that cannot be wiped or scraped off with a flat blade must be removed by grinding.

After all the soft and loose foreign matter has been removed, the grinding material should be applied at several points along the surfaces of the valve face and its seat. This may consist either of pulverized emery, flint, or pumice stone, but the first-named has been found by the writer to give the best satisfaction under ordinary conditions. Whatever material is selected should be mixed with a sufficient amount of medium-weight lubricating oil to give the

substance the consistency of a thick paste that will serve to bind the particles together and enable the compound to adhere to the surfaces to be ground. Grinding compounds already prepared may be obtained at nearly any accessory dealer's, but many owners prefer to mix their own materials and thereby obtain exactly the desired consistency and combination that they have found to be best suited to their own particular needs.

When the valve has been replaced, with a generous amount of the grinding compound spread both upon its face and its seat, a broad-bladed screw-driver should be inserted in the slot that will be found in the top of the valve. The handle of the screw-driver should be placed between the palms of the hands, and by rubbing the latter back and forth a rotary motion in alternately opposite directions will be imparted to the valve. Too much pressure should not be applied to the valve, as its weight and that of the screw-driver will be nearly sufficient to give the proper cutting force, to the grinding material.

Make the Grinding Even

In order to prevent the same surfaces of the face and seat of the valve from coming into contact continuously on account of the rotation of the screw-driver through the same arc, thus grinding certain parts at the expense of others, the motion should be stopped frequently and a quarter or half turn imparted to the handle so that, when the turning is resumed, the valve will occupy a different position in relation to its seat. The valve should be lifted a short distance from its seat when this partial turn is taken, for in this manner the grinding material will be better distributed between the surfaces, and the dry balls of it that may have collected will be allowed to drop out.

Fresh grinding material should be placed on the surfaces occasionally, but care should be taken to see that none of the old compound finds its way into the cylinder, for in such an event it will be liable to score the walls and piston rings before it is finally discharged through the exhaust pipe.

It is probable that it would be rather awkward to operate the screw-driver as described above if it is desired to grind the valves of a horizontal motor, and in this case, an ordinary bit brace, such as carpenters use, may be employed by substituting a screw-driver shank for the ordinary bit. Turns in alternate directions should be given the same as though a screw-driver were used, and care should be taken not to exert too great a pressure upon the valve. If the valves of a vertical motor are in bad condition and require a great amount of grinding, the bit brace will be useful for the greater part of the work here as it will relieve the muscles of much of the strain that they would otherwise receive from the continued operation of the screw-driver.

When the emery, or other grinding substance, has been used until the face and seat of the valve are free from inequalities, pit marks, and foreign matter and seem to be as smooth and shiny as possible, a finer material should be employed with which to complete the grinding. Powdered glass mixed with oil forms a satisfactory preparation for the man who desires to compound his own material, and this should be used in the same manner as the coarser grinding substance.

This finer material is used merely to remove the marks and scratches left by the coarse compound and corresponds to the sandpaper finish given to a piece of wood already planed smooth. Consequently the major part of the grinding, the removal of the pit marks and corruptions, and the change of the angle of the face and seat so that a perfect fit will be obtained are all done with the emery powder, or whatever other coarse material may have been used.

When the motor leaves the factory, the valves are supposed to have been ground so that the angles of the face and the seat are exactly the same, thus providing for equal contact and tightness throughout the entire width of the surfaces. After continued use, however, the valve may have become so warped by the heat that the angle of its face will be changed and the surface of the contact with the seat will be reduced to

a line. This will not form as tight a valve as though the entire surface of both the face and seat were in contact, and it is one of the purposes of grinding to change the angle of the face or the seat so that the two surfaces will "register" perfectly.

After the surfaces have been ground smooth with the coarse material, a test should be made to determine whether these angles are correct and whether there is a *surface* or a *line* of contact between the seat and the face of the valve. In order to determine this accurately, six or eight pencil marks should be made across the face of the valve, perpendicular to its top. These marks will be readily discernible when the valve is held to the light, and they should be applied after the valve and its seat have been wiped clean of all grinding material.

If the valve is placed in position and given one or more complete turns, the portions of these lines that come in contact with the seat will be rubbed off. To indicate a perfect angle of contact, then, each line should be completely obliterated. If, however, only a certain portion of each line is rubbed off, it is evident that there is a line of contact, instead of a surface of contact, between the face and the seat of the valve, and the grinding with the coarse material should be continued.

Air- and Gasoline-Tight

After both the coarse and finished grindings have been completed—in the opinion of the inexperienced—the final test for tightness should be made, and it is probable that the amateur will be disappointed at first in the results of his labors. When the valve is in place and tightly closed, it should be made to hold gasoline—and it is astonishing through what an apparently infinitesimal opening the thin liquid can find its way.

To obtain the best results from the motor, its valves should be ground so accurately that none of them will even "sweat" gasoline when this test is applied, and a valve which allows the liquid to pass through in drops will certainly need additional and continued attention. As gasoline can find its way through

openings small enough to baffle even highly compressed air, a valve that is "gasoline-tight" may be assumed to be air-tight as well and this will furnish sufficient evidence that it has been properly ground.

Many motors now have the valves located in the head of the cylinders. The stems of such valves are pushed down when the valves are opened, and they are operated by rocker arms which serve to reverse the motion imparted by the cams. It is evident that, with the stem of the valve protruding up from the head of the cylinder, the action of the valve is reversed and it cannot be reached in the same manner as are those located in side pockets of the motor. In the valve-in-the-head type of motor, the valves operate in a separate, removable casting that contains the seat, and is screwed into the head of the cylinder. This is known as the valve "cage," and it must be removed before the valve itself can be withdrawn. Inasmuch as the valve and its seat are both contained in this one small cage, the grinding of such a valve is no more difficult than is the cleaning of the valves found in the motors of the "T"- or "L"-head type.

The valve and its cage may be taken to a light work bench, and by clamping the cage in a vise, the piece may be held rigidly in any position in which grinding is made most easy. If a miniature machine shop is operated in connection with the private garage, there will doubtless be a temptation to bring the drill press into play and use this for grinding the valves. This may be done, and much time and trouble will be saved, but the results will not be as satisfactory as though the alternately rotating motion that can be obtained with the use of a screw-driver or a bit brace in the hands were employed. The continued motion in the same direction tends to form grooves in the face of the valve and its seat, and for this reason an absolutely smooth surface cannot be obtained by the use of a press drill.

The grinding of valves of this type will be considerably facilitated if a light spring is used that will serve to keep the valve raised slightly from its seat when the pressure is removed. This spring

may be placed around the stem, resting at one end on the bottom of the cage and at the other against the bottom of the valve proper. The use of such a spring will eliminate the necessity of raising the valve each time it is desired to change its position and grind through a new arc.

Some valves that are in an unusually bad condition may require so much grinding that an appreciable change will be made in the location of the stem of each, due to the amount of material that has been ground from the face. This will have the same effect as though the stem of the valve were lengthened, and this may cause the push rod to strike the cam before the valve is entirely closed.

On every push rod, however, will be found a nut that serves as a joint by which to increase or lessen its length. This nut should be so adjusted after the installation of the valve that there is a barely perceptible amount of play between the cam or rocker arm and the stem of the valve when the latter is in its closed position. This is an adjustment that many an owner is liable to ignore, and he will then wonder why his motor still loses compression after the valves have been perfectly ground.

Although the tendency of modern design is to make all parts of a motor interchangeable, valves which have been ground can only fit those seats with which they were in contact when the grinding operation was in progress. If more than one valve is removed at a time, it is absolutely necessary to designate each valve and cage with prick punch marks that will serve to indicate to which cylinders they belong. A type of marking, different from that employed to designate the inlet valves, should be used for the exhaust valves, for in many motors these are similar in appearance and easily confused with each other.

Grinding the valves of his motor is only one of the odd jobs around the car that the owner or his chauffeur can attend to, and if more of this work was done "at home," there would be more satisfaction in running the automobile, as well as a great saving in the garage expense for the annual or monthly "overhauling" of the machine.

A MIXED BAG

THE WILY REDSKIN, JEFF AND THE GALLINIPPERS, A RECORD FLIGHT OF SNIPE, THE HARD LUCK OF A MEDICINE MAN, AND OTHER EFFORTS OF OUTDOOR MUNCHAUSENS

INJUN WAY

“IT was awful wet up here, in the north woods, once, about fifteen years ago. The rain had been raining for a week, and the trees leaked badly. If there’s a wetter place than the timber, when the trees leak, I never found it—especially when you’re out for fun and have got to get back to the office whether you’ve had your fun or not.

“It was *awful* wet, until we all woke up one morning wanting to smoke and discovered that we couldn’t. Even the fire couldn’t smoke, for it was out. And then, if it had been awful wet before, it was now awfully wetter.

“We didn’t mind about the fire. The weather had rained on it, was all; rained on it some way up from under, and the wood we had taken to bed with us, so as to keep it warm, felt like eels. That was how wet everything was: the wood we had taken to bed with us felt like eels, and alligators, and crowbars, and other cold, clammy stuff.

“But we didn’t mind about the fire; we wanted to smoke and we had no place to strike a match! A fireless breakfast, without a pipe! What do you think o’ that for sheer desolation, when you’re out after fun?

“Brown was the worst. He had quit smoking, until now when he found that he couldn’t smoke if he tried. He was perfectly rabid. After we had struck fizzy matches on everything in the lean-to, we started out to walk, because the camp seemed the wettest place of all. As we walked we sucked at cold, wet pipes, and Brown kept striking and scratching matches on the cold, wet landscape.

“The inside bark of trees? Naw; inside and outside were just alike, by this time. The inside of clothing, shoes, hats,

the surface of match boxes, Brown’s red head—naw! I tell you, the north woods were wet, wet, wet! That was a terrible fix.

“By and by we met a big Chippewa Injun. ‘How-do.’ ‘How-do.’ ‘Tobac?’ Yes, we had ‘tobac.’ We all had ‘tobac’—even Brown, who had quit smoking but had brought a few pounds along just to show that he didn’t care anything about the stuff. And we were powerful glad to accommodate the Indian. Half a dozen pouches were thrust at him. But he didn’t seem to see any joke and calmly stuffed his pipe.

“‘Match?’ Yes, we had matches; sure, we had matches—but not to burn. We thrust matches at him. ‘Better take a handful,’ advised Brown. ‘You’ll need ‘em!’ And at that, suddenly, the Injun sorter began to smile. He’d caught on. His eyes surveyed us and our smokeless pipes and our grinny faces, as we watched what he would do next—and if ever an Injun enjoyed himself, that Chippewa buck did.

“He worked very slowly, so as to make the taste last longer. He stuffed his old pipe some more and stowed the matches (except one) in his shirt somewhere and fiddled about; and we watched and nudged each other. After he’d monkeyed and couldn’t postpone the evil moment longer, he chose the wettest spot he could—which was the bed of a brook that was running past the trail. He stooped and fished out two small hard heads, mind you, out of the *water*.

“He kind of superficially wiped them off on his wet pants, and then like lightning he rubbed them together—fast and faster, as you’d rub the palms of your hands. Then, on one of those stones, taken right out of the brook, but now dried and warm by *friction*, he deliberately scratched a match; lit it, lit his

pipe, grandly tossed match and stones away, and stalked off, puffing."

E. L. S.

HAD HIS LIMITATIONS

IN the Grand River bottoms of northern Missouri there flourishes a brand of mosquito that makes the life of the catfish fisherman one long antic. He's a small, wiry, extremely persistent insect, that Grand River mosquito; he can and does penetrate the finest mesh of mosquito netting, he ignores peppermint lotions, and even attacks in the bright sunlight, something his tribe, as a rule, refrains from doing. But there's great catfish fishing in that stream, so we try to endure the mosquito drawback, year after year.

There are said to be persons whom a bee will not sting; I know of at least one man who didn't mind a mosquito sting, at any rate. His name was Jeff Martin, and the mosquito that spent time and honest effort boring into Jeff's epidermis had all his trouble for nothing. Jeff didn't mind it in the least. He displayed a certain pride in this fact, also.

"There's six or eight skeeters at work on your nose, Jeff," somebody'd remark. "Knock 'em off or smash 'em, man!"

"Huh!" he'd say. "That's nothing. Let 'em have their fun; don't hurt me any."

Jeff got a great deal of amusement out of watching the rest of us fighting the singing pests, the while he sat, stolidly indifferent to the swarming horde.

"Tell you what," he scoffed, one evening when they were worse than usual, "I'll bet anybody my new silk line against a fifty-cent piece I can strip off and lay right down on the sand bar there for half an hour and let 'em bite me without wiggling a finger."

"I'll take that," said Sam Crane promptly. "But if you make one squirm, you lose."

"Not a squirm, by dicky!" said Jeff. "They won't hurt me any."

He undressed, walked unconcernedly out, and laid himself on his stomach at full length on the warm sand, with his head pillowed on his fore arm. The mosquitoes settled in a black cloud on

his neck, back, and legs. Jeff sighed in apparent comfort and seemed about to take a nap. Ten, fifteen, twenty minutes passed. He hadn't moved a toe, although there wasn't a square inch of his body that wasn't being actively prospected by the hungry probers.

Then Sam warned us with a wink and, treading softly, secured a live ember from the camp fire, which same he carried stealthily between two sticks and, sneaking carefully down to where Jeff lay, dropped the hot coal in the hollow of his back.

Jeff didn't move for half a minute. Then he wriggled, lifted his head, and snorted as he slapped viciously at the offending object on his back.

"By dicky!" he grunted. "I don't mind skeeters, but I draw the line at gallinippers!"

E. F. H.

MEDICINE BAIT

OLD POP ROBERTSON, timber looker of the Helena Stave Works, sometimes finds the longing for the wilds too strong to resist. When such times come, he takes a vacation for a few months, trapping down some river in a shanty boat or skiff. He came dropping down the middle Mississippi, below St. Louis, trapping here and there in the hills and bottoms. Below Cape Buffalo Island a darky trapper watched his success with awe and envy.

One day Old Pop happened to find a bottle half full of liniment floating in an eddy. Having smelled it, he dropped it in his skiff. At his camp he found the darky.

"Sho!" the darky said, gazing at coons, possums, and mink in the white man's skiff. "What you all put on yo' bait, sah? I ain't ne'er cotched 'em thataway, no, sah!"

"Why," Pop exclaimed, "it's easy enough—here's some good medicine. Just you put five drops of that on your bait, and you'll be plumb satisfied, you surely will!"

The darky, beaming with delight and gratitude, took the bottle of liniment and departed.

"And what do you think," Old Pop

exploded in telling the story, "that black cuss caught twice as much fur as I did after that!"

R. S. S.

RECORD FOR SNIPE

"IT'S an awful thing to be hunted by the game you are hunting, especially when that game is nothing more formidable than snipe. Yet that's what happened to me," said the old coast gunner. "It was when I was a kid, and I'd been looking for yellow-legs down on a piece of cut meadow three miles from town, and I hadn't seen a bird all morning, when suddenly, out of the tail of my eye, I caught a flash of a little bunch of birds coming far in the distance.

"I squatted down in a bunch of bushes and waited, straining my eyes to keep them in view, and I didn't have any trouble doing it, either, for they came up faster than anything I've ever seen. In a minute they were black and big as a bunch of barns, and coming stronger every second. Then I saw that there was an awful big flock of them, and in a second more I began to feel creepy, for there were so many of them that they darkened all one side of the sky, and I could see nothing but flying wings as far as I could look around to the left.

"And all the time they kept bearing down closer, like a black thunder squall, and spreading farther across the sky in a terrible sweep, reaching from zenith to horizon, and more than halfway from north to south.

"At that I got actually scared. I saw that anything they passed over would be crushed by the weight of air their beating wings would force down on the earth. Scared half to death, I jumped up with a frightful yell and started to run, though I knew they'd soon overtake me.

"I ran as I never ran before, and all the time I kept looking over my shoulder and seeing that terrible flock in full chase. Mile after mile went by, and I was still alive, though most dead from exhaustion. I hit the outskirts of the village, tore down the main street, yelling to the people in the streets to fly for

their lives, dashed up the steps of my house, and sank exhausted on the threshold. Suddenly I felt something tickling the corner of my eyelid, and I put up my hand and wiped away a big mosquito that had got caught there and was buzzing to beat the band."

P. M. C.

FISHERMAN'S LUCK

THE corn-fed philosophers with their ironwood poles and old tomato cans in which to carry their bait indulge in many witticisms on the subject of us city fishermen; they deride our expensive paraphernalia—reels, rods, flies, landing nets, and creels—and smile knowingly when we speak of "whipping a pool."

Is there anything to spitting on the bait? Or a southerly wind? Or fish lures? No—but there's something in luck. Wait! I'll give you a specific instance.

The other day I went down to Uncle Andy Seller's for a few days' fishing. Uncle Andy lives on the West Fork of—well, the West Fork, anyway. He made great sport of my varied lot of tackle and accoutrements for the catching of fish.

"Leave all that stuff here at the house," he advised, "and dig you a few worms, put 'em in a can, take that old cane pole there under the smokehouse eave, and if you jerk when you get a bite I'll warrant you'll ketch a few fish. Otherwise—" he smiled that superior country smile.

"I'll risk these," I returned doggedly. "Just you wait and see."

It was the busy time on the farm, so I went alone. It was a fine, calm, sunny day; just a wee mite of a breeze stirring the trees—and it was from the south. Birds were chirping in the woods and the air was filled with the fragrance of the honey-locust blooms.

"Any fish," I said to myself, "any fish that wouldn't bite to-day would be a mighty poor specimen of his kind." And I whistled gayly as I trudged along.

I found a fine eddy just below a drift, where the current made a sort of back-sweep around a bend; seven feet of clear

water—a regular channel cat haven. I fitted an artificial grasshopper, set my float, reeled out twenty feet of line and cast directly where the swift current sliced the dead water. Half an hour later, I hadn't had a nibble. Then the hook caught on a snag or something; I coaxed it a little, but it wouldn't come. I didn't want to break a good line, so I set the pole, hoping the current might loosen the hook after a bit.

Having extra lines along, I then cut a willow pole, rigged a new outfit, and proceeded to fish that pool as well as others above and below it. Hours passed. No bites. I tried flies, minnows, spoons—my entire stock, to no avail. A live frog served no better. The afternoon lengthened. It was no use; I might as well have stayed at home and fished in the bath tub.

It was nearly sundown when I gave up hope and, tired and faint with hunger, started for Uncle Andy's. I be-thought me of my new rod which I'd left at the drift. When I got there it had disappeared. A careful search did not disclose its whereabouts. I expressed my opinion of West Fork fishing in no half-hearted manner, and struck out on the homeward path.

A quarter of a mile farther I overtook Mose. Mose is an ancient colored man who lives in the neighborhood. He has a reputed fondness for chicken, but be that as it may, Mose is a ducky of the old school. I noticed that he was carrying a string of fish that taxed his strength; at least twenty pounds, and fine ones, strung on a willow limb. I saw also that he was in possession of my lost rod, a fact that I immediately mentioned.

"You, Mose," I said, "what are you doing with my fishing rod? Aha, sir! I guess I caught you that time."

"Mah stahs, Marse Gawge!" he said. "How you scached me. I wuz jus' takin' it up to yo' Uncle Andy's fah you, sah. Yessah."

"Well, all right, Mose," I said, giving him the benefit of the doubt. "You've got a fine string there. How much for the lot?"

He scratched his head.

"A dollah an' fo' bits, Marse Gawge,"

he said finally. "Seein' it's you-all. An' that's moughty cheap, sah."

To be brief, I took them; I also cautioned him to secrecy. No one must know that I had bought fish from him—in return for which I made it a quarter extra.

"How'd you catch them, Mose?" I asked.

"Trot line," he said, promptly.

"Come, come, now," I parleyed.

"There's no hook marks in the mouth of a single one. How'd you catch them, Mose?"

He knew I wouldn't tell, so he confessed.

"That thah j'inted pole o' youahs," he said, "were a-settin' thah in the drift when I come along. I des'lowed I'd lift hit fo' fun. Hit wuz ketched on a wire, sah. An' on that thah wire wuz a big, nice slat trap, sah. An' in that thah trap wuz these heah ve'y fish, sah. Yessah. Thank yo', sah."

Lures, charms, signs of the zodiac? No! Fisherman's luck? Yes! I believe in it.

E. F. H.

A MEDICINE MAN'S ERROR

DEPUTY PIERCE was tied in an Arkansas River bend, when he heard voices in the night. Scores of men came dashing down to the river above him. Many carried torches. Some were leading dogs. Pierce, roused from his bed, felt for his rifle, and slipped all but one rope that moored his shanty boat to the bank.

"You always want to be ready to pull out anyhow!" Pierce explains.

Suddenly, from the river, came a low voice: "Pahdner! Pahdner! Will you he'p a feller?"

"Shore I will!" Pierce answered. "Come abohd!"

A man came swimming through the slack current and climbed up on the stern. He was white, and a moment later Pierce recognized him as an old friend out of the lower Mississippi.

"Theh's afteh me!" the man whispered, shuddering.

"We'd better drop out, then," Pierce said, casting loose. When two bends

and a reach or two had been left behind, the swimmer explained:

"I've had hard luck, deputy, yessuh. I was selling a line of medicines up theh —making a lot of money. But, you know, I got my labels mixed last time I made up some medicine. I sold some liniment for cough syrup, an' a lady and two babies is took bad, up theh. One's daid. Sho! I'd made fifty dollars, right theh!"

"You know," Pierce remarked after telling the Medicine Man's hard-luck story, "I felt plumb sorry for that man!"

R. S. S.

LARGE MOSQUITOES

WESTERNERS have an inexhaustible fund of stories about the verdancy of the Englishmen who come out West hunting. In justice to our British cousins I will insist that not more than three fourths of them have any foundation in fact. This one, however, is vouched for by a man whose word I would not dare contradict.

A certain British lordling visited north Idaho one year with the avowed purpose of killing a bear. He carried an immense double eight-bore elephant gun, which he was constantly boasting of having used with great execution in Africa. He employed a guide and pack outfit to carry him into the interior of the Clear-water Mountains, where he could kill his grizzly. The guide led him far away from the beaten path of hunters to an immense meadow near Pot Mountain, where a huge old Ephraim was known to use. Upon their arrival at the meadow evidences of the old bear's presence were seen.

It was agreed that they should arise very early in the morning, repair to the edge of the meadow, and each climb a tree where he could remain unseen until the bear came down to feed off the skunk cabbage leaves that grew along the border. The guide suggested to his employer that, as the mosquitoes were very bad, he had better draw a net over his head after he had ascended the tree.

They retired to rest and were astir at break of day. It was chill and a heavy

fog hung over the meadow when they reached it. The guide selected a large leaning willow that overlooked the open space and instructed the nobleman to climb it and hide himself securely among the branches. The Englishman shinned up the tree, dragging his artillery after him. It chanced that just below where he sat hung a nest of yellow jackets. The air being chill, the little insects were not disturbed. The knickerbockers of the hunter hung directly over the nest. The guide proceeded several hundred yards down the meadow and ascended another tree.

As the sun rose and it grew gradually warmer the yellow jackets got ready for business. The first business that offered was to remove one pair of offending English legs that were dangling beside their habitation. One enterprising jacket sauntered up and rammmed about five eighths of an inch of red-hot probe into the calf of the Englishman's leg. The Briton squirmed and slapped the striped gentleman into oblivion. In doing so he managed to irritate another that was perambulating around looking for a soft place to operate. The irritated one ceased his search and rammmed his feeler in where it was most handy. The scion of nobility kicked vigorously.

In about ten seconds the air was a yellow haze of indignant insects. They swarmed up and entered into the contest with great and unanimous interest. Wherever one struck he left his sign manual. The Englishman stood it as long as possible, then dropped his gun and scrambled down. Once on the earth he managed to shake off his attentive tormentors. When the commotion had subsided somewhat he crept back and secured his gun, then sought out his guide.

The guide saw him coming and climbed down. The Briton's face was a sight. Great red welts stood out all over it, like a man convalescing from the smallpox. He was tenderly rubbing the blotches as he approached.

"Blawst me, I thought I'd seen mosquitoes in Africa, don't ye know; but I say, they 'ave nothing there like these in this bloomin' country."

C. S. M.

THE RIGHT WAY WITH FISHING TACKLE

BY GEORGE M. JOHNSON

WHILE misuse or improper care of fishing tackle is perhaps not so necessarily attended by evil results as is the case with firearms, there is an opportunity for more attention here than many sportsmen deign to bestow. Though in these days a person need not pay high prices to secure a very good outfit, a moderate amount of care and attention will be richly repaid in the lengthened period of usefulness of the tackle, whatever may be its original cost.

Many anglers are becoming quite partial to steel rods, especially for bait casting, where the snappy spring of the metal article needs only to be seen to be appreciated. You may believe that a steel rod requires no care. Far from it. To secure the best service from such a rod, one must see to it that the water cannot get in its deadly work, and this is doubly essential if the rod is to be used in salt-water fishing.

The outer part is protected by the coat of enamel, to be sure, but how about the insides of the hollow joints? Salt water there—and some is bound to find its way in—will work disastrous results in short order. I used one steel rod through a number of seasons of salt-water fishing, and it had no more effect upon that rod than upon the mansard roof of a canvasback. I poured a generous amount of melted vaseline down the joints, and that was all there was to it; my rod was waterproofed within and without.

Watch for cracks in the outer enamel. If they occur, apply rod varnish or some variety of enamel at once, or the unprotected metal will soon rust and a fatal weakness be developed.

Wood rods, whether split bamboo, lancewood, or of whatever material, re-

quire some attention. After a season's use many of the silk wrappings will be peeling off, and this, of course, should be attended to, particularly if the rod is of split bamboo, for those frequent little circles of silk add much to its strength. To do a good job all the guides should be removed and the joints carefully scraped their entire length, until every particle of varnish is gone. This may be done with a knife blade or a bit of glass, but take pains not to scratch or mar the wood in any way.

When the rod is thus reduced to first principles, so to speak, wind with green and red silk; the final appearance will depend upon how conscientiously the rather tiresome operation of winding is done. See to it that some idea of symmetry is carried out in the winding, and you will feel well repaid for your labor. It is often a good plan to change the guides on the second joint and tips to the opposite side, for if the rod has any tendency to "set" this will do much toward straightening it by reversing the strain. After the guides and wrappings are all in place give a thin coat of rod varnish; let this dry and then give another, or more if necessary.

It frequently happens that the thin sheet of cork on the grip of a rod gives out after some seasons of use. If so, it is a simple matter to make a new grip by winding with stout fish line. Scrape off all shreds of cork and glue, give a coating of rod varnish, and wind very tightly before the varnish has had time to dry. Give another dose of varnish after the winding is finished. This style of grip is in every way as satisfactory as the cork grip and, if anything, adds to the appearance of the rod.

Any expensive wood rod should always be kept in an especially prepared form when not in use. Certain woods, notably lancewood, are quite apt to be-

come set after much using, while keeping the rod in a form will do a good deal to prevent this.

A good reel needs little attention, but a lack of that little care which is needed may ruin a fine reel in a very short time. This is especially true of casting reels, because of the terrific strain which is constantly put upon them. All good casting reels are provided with tiny oil caps which cover the bearings, and these should be kept well packed with grease. Vaseline is by all odds the best lubricant; lighter oils are all right while they last, but they burn out too quickly. Pack the caps with vaseline before each trip, and all will go well.

Only a Little Oiling Needed

That is the only lubrication necessary during the season, for the friction of the rapidly revolving spool generates heat which melts the vaseline, so that all the working parts of the reel receive a good dose of grease. If a reel is allowed to "run dry," a single afternoon's fishing may grind out the bearings until the spool is hopelessly out of alignment. The only remedy for that is a trip back to the factory for resetting. I have in mind one angler friend who invariably carries a little "one-drop oiler," with which he oils up from time to time when fishing. Such frequent oiling is, however, entirely unnecessary if the oil caps are packed with a fairly heavy grease.

Salt water is naturally much harder on a reel than fresh, though if the above-mentioned oiling programme is carried out the reel will be untouched by corrosion. I once received very satisfactory proof of this fact. The bearings of the reel in question, but no other part, had been well greased with vaseline; it was in constant use for several months, during which time it was literally soaked in salt water. At the end of the season I dissected the reel to see what condition it was in, and found not the slightest sign of any corrosive action. The vaseline had formed a thin film all over the inside and the salt water had absolutely no show.

Of course, no matter how carefully the reel is treated during the fishing sea-

son, it should be taken apart and given a thorough cleaning, as well as a fresh supply of lubricant for the next year before being laid aside for the winter. When fishing, the angler should see that the tiny screws which hold the reel together are kept tight. Also watch the little nut which secures the handle, or in the midst of some cast it may suddenly fly away to parts unknown, taking the handle with it.

How many of the anglers who kick because of the poor service they get from lines ever realize that this lamentable state of affairs is largely due to their own neglect? No line will last forever, but decent care will add surprisingly to its life. Casting lines wear out faster than any others, because of the constant friction of traveling back and forth through the guides at a rapid rate. If the bait-casting line is to render even tolerable service it must be given a fair chance.

Don't use a casting rod which is equipped with small and frequent guides; the line will be cut to pieces in almost no time. One of the first bait-casting rods I ever owned was actually provided with small snake guides! I used up a new line in a few hours' fishing, and then, profiting by the experience, replaced the snake guides with the ones which ought to have been there in the first place.

Whether the line is a bait or fly-casting line, it should always be thoroughly dried after using, for nothing is so ruinous to a fish line as to be put away in a water-soaked condition. If left on the reel the drying process is an exceedingly slow one; the result is a weak and rotten line, which may some time repay its owner's neglect by losing him a fine fish. The enameled or waterproofed fly line, when new, perhaps needs this attention to a less degree than does the bait-casting line, for it does not soak. Before long, however, kinks and cracks destroy the outside coating here and there so that the water finds a place of weakness where it may enter, and thence works its way along the inside.

The time to dry the line is immediately after use, on the actual fishing grounds if possible. Tie the line to any convenient object and then walk back,

allowing it to unspool until the entire length is in the open air; after a few moments reel in again. The drying may be done at home, the easiest method being simply to transfer the line to a large open reel made for the purpose. This lacking, wind the wet line about the top of a chair, the footposts of a bed, or anything else that offers.

Flies are short-lived objects at best, but it is unnecessary to lay in an entire fresh supply for every season. I wonder how many of even the best tackle houses, wholesale or retail, never put any of last year's flies upon the market. Of course, flies that have been used to any extent are hardly worth the effort of carrying over, but with those used little or not at all it is a different matter.

The usual procedure after the last trip of the season is to toss the book of flies into an old trunk, or even let it repose in the fishing coat, utterly forgotten until the next spring. An examination then will probably show that moths have found and appreciated the flies, much to their own—and the dealer's—profit. The only effort needed to avoid this is to pack the flies in some tight receptacle, with a few bits of camphor added to discourage the attentions of the ravenous moths. Next season, before using, carefully test each fly, rejecting all which show signs of weakness. The others will be fully as good as new ones from the store.

Leaders are closely associated with flies, and while it is hardly advisable to

carry any which have been used at all over from one season to another, those unused will last almost indefinitely. Before beginning to fish always test a leader by a heavier pull than any fish could give, and test only after the gut has been well soaked in water. Very good gut will often part under a comparatively light strain when dry, and the break is nine out of ten times at one of the knots—just tie a knot in a piece of dry snell and then pull.

When through the day's sport never leave the leaders to soak between the damp felt pads of the leader box, and never consign the leader to your book with the last cast of flies still attached. It takes but a minute to remove each fly and put it in its proper place; that is, with the other flies of the same pattern.

Aside from the mere financial saving which follows a moderate degree of care along this general line, another element enters with possibly a stronger appeal. How many times have you yourself, perchance, lost a goodly fish through the tackle's failing to make good? And how many of those times has that same failure been due to your own thoughtless neglect? A high price may insure high quality when the article leaves the dealer, but does not make it proof against misuse. After that four-pound trout has escaped through a false leader or line, it is small consolation for the disgruntled angler to reflect that a little care or foresight would have saved the magnificent fish.



IN THE WILDS OF A HOOSIER CREEK

BY RALPH H. GOODALE

Illustrated with Photographs by the Author

HERE were three of us—Scott and the Kid, of about twenty-five years, and the Elder, a stalwart youth of sixty. Being somewhat bleached and shopworn, we decided to follow the little Fawn River of northern Indiana from its source to its outlet into the St. Joseph River, in Michigan. It was to be an easy trip. As proof of our innocence, note our outfit. We had a heavy 12x12 tent, with poles; an 18-foot, flat-bottomed rowboat, of perverse disposition; many blankets; and a great variety of camping utensils.

"It's downstream," one of us said, "and we can carry a load." Judge later how that smiling and babylike stream fooled us!

We started on a Monday morning from Lake James in Steuben County. The first day's journey was easy. Upper Fawn River is crowded close on the map by small lakes, which cluster about it like purple grapes about their stem. The river led from one view to another of sunny hills and uplands and through channels whose banks were holding midsummer carnival. The Kid "lost his cud," as Scott elegantly put it, because he had to row the heavy boat against a head wind, but a good supper will restore anyone his cud, and all was contentment when we went to bed.

Our tent was pitched on the Orland milldam, just beside the village feed mill and electric plant. As we lay within, the tent-roof shone gray from the lights. The ground was hard. The vibrating roar of the machinery kept time to the aching of our bones. Scott and the Kid could not sleep, though for some reason they were ashamed to show it by rolling about to relieve themselves. At midnight

the mill became quiet, and the lights went out, but the ground was as hard as ever, or harder. Then a bullfrog in the pond began to count the seconds. At length the Kid could endure it no longer, but got up and began fumbling about for the lantern.

"Where are you going?" asked Scott. "After frogs. This is just the time for them."

So the two floated about the pond, cracked the lantern globe in the wet grass, and caught nothing.

"It must be almost morning," said Scott.

It was two o'clock. On the way to the tent the boys came across a tumble-down straw-stack, and Scott rolled himself into a hollow of it to rest his bones. The Kid followed his example with a weary sigh. They awoke with the dew on their hair, to find that the Elder had breakfast ready. He had slept soundly all night.

The creek below Orland was shallower and swifter, with fences innumerable and jealous farmers to watch them. We were surprised not to see more of the classic Hoosier swimmin' hole. Everything was comparatively wild, even the red heifers grazing on the marshes. There were many cranes, mudhens, and "shitepokes," the sight of which useless game aroused the Nimrod in Scott. He produced a Flobert and advanced to the slaughter, but at sight of his gaunt form and bare legs the birds always scattered.

At last a bird was killed—a red-winged blackbird. Scott laid the little thicket dandy on his back and found where the shot had spoiled his foppish red and black suit. "That's a darned shame!" he said, and the gun was not used again except for frogs.

At Greenfield Mills Scott bought a



SHALLOWS WERE FREQUENT AND MADE WADING NECESSARY.

spring chicken on faith and dressed it, saying that he would have a barbecue. This, with an enormous lump of ice, was added to our load.

Once launched again below the dam, we found that what we had begun to suspect was really true. The stream became rougher as it descended, and it descended very rapidly. Its temper grew worse with age. We were hurried over rolling pebbles and jammed against boulders. Then we nearly capsized under a bridge which we had not had time

to foresee. The tame Hoosier stream had disclosed Canadian blood, and was filled with rocks, sand bars, and eddies. When the shopworn amateurs realized this they rearranged themselves. The Elder settled his bulky form into the rear seat and pushed with a stick, while the younger men stood up and shoved desperately with the tent poles to keep in the current.

Did you ever ride a runaway elephant through the thick timber? It was like that. The boat resembled a skittish



THE ELDER WAS KEPT BUSY BAILING.

cow entered in a horse race. She pranced sideways, she refused to be guided, she tried to go through impossible openings. On tolerably long stretches she would develop some speed; then she would not be turned, but would run ashore and try to climb a bank. Where a canoe would have followed the channel gracefully and easily, the row-boat was determined to cut across the sand bars.

We seemed to have bidden a hasty good-bye to civilization. For many miles we did not see a fence, road, or field. The country became swampy and thickly overgrown with tall grasses and lowland trees, which crowded the banks and leaned far overhead. The shores were sometimes mere bogs, sometimes upright banks of red earth, with huge slabs splitting off and leaning to their fall into the river. It was strange to think of this luxurious and illegal swamp in the heart of a section noted for piety and rich farming land.

The stream rushed along over a sandy bottom—a thing for which I cannot account, unless the land is really hard, and the swamps are produced by springs. Heaps of logs and drift blockaded the

way, and willows grew horizontally out over the surface of the water. Many such a trunk we passed like circus riders at full speed, the boat going under, the passengers over. Once the Kid, standing in front, just managed to keep his end of the boat away from a leveled stump. But the stern swung neatly under it. The Elder, in the back seat, grasped the log with his arms. There was a short struggle, the boat passed on, and the Elder was left suspended, his feet dangling in the water.

But the Kid did not exult long. There came a sudden bend, with the usual pool at the turn. He threw his weight upon the pole, the pole entered the deep water, and so did the Kid. He explained, as he came aboard, that he was determined to reach bottom if he had to leave the boat to do it.

Shallows were frequent and made wading necessary. Much of the time was spent in running alongside to keep up with the boat, and hurriedly getting aboard when deep water came. We knew now that we were working hard. The sun shone hot, and hundreds of deer flies came for blood. We protected (and blinded) ourselves with veils of



WE PROTECTED (AND BLINDED) OURSELVES WITH VEILS OF MOSQUITO BAR.

mosquito bar, but nothing could protect our hands and sunburned legs.

Toward evening Scott shot a number of large bullfrogs—of which we always found plenty—and we determined to camp early. But there had been no fit place all afternoon, and the sun had set before we saw anything that looked like hard land. This was a gently sloping mound of several acres, with a clump of trees on the summit. It rose against the colorless west in a great, perfect curve, like the approach to a mansion—though who would live in this swampy and desolate waste? The little grove should have fronted a fairy dwelling, or held a smoking altar to Faunus. We climbed the wet bank with our outfit. The ground was black and miry and became more so until we reached the summit, where there was a mucky spring among the trees. The whole mound was of soft mud—the first springbog of our acquaintance.

Just before dark the river led suddenly out of the swamp among hills, where we made camp. Scott prepared to cook the chicken, trussing it over a hole in the ground and shoveling coals beneath. There was heat enough, surely,

to cook any spring chicken, but after a long time the fowl was still too tough for supper. Yet Scott did not lose heart. He kept up the fire, and even after we were abed would get up to shovel in more coals.

At midnight we were awakened by a heavy windstorm, and found our tent, which was not too securely pegged, tugging at every rope and pounding the ground with its poles. We sat down on the sodflap of the windward side to anchor the tent and held our place resignedly for an hour, while the floods descended as they did in Genesis and the water ran through in streams everywhere the cloth touched our backs. We were too tired to lose our temper. When it was over we rolled away from the damp ground and knew nothing more until late in the morning.

Scott arose first, found the hen still safe, and prepared to boil her. Give him time, he said, and he would succeed. Patience would win any lady or cook any chicken. So he boiled the hen until we were ready to leave—which was quite late, for we were tired. Then he left her for the turtles to eat, if they could. He wished, however, that we had had

more time, for she would have made a fine fry.

The river had become as languid as ourselves. It led us through a nondescript, borderless region of pond lilies and tangled channels—where turtle-shooting was good, though unsuccessful—till we came to the reposeful village of Fawn River. If ever I seek peace from politics, stiff collars, and the daily treadmill, let it be in this place! The mill pond is edged with willows, with a few fishermen who long ago determined never to stir again. About the crooked road which crosses the dam are a half dozen old houses, each with its ruined fence and its old-fashioned flowers. The water runs with a quiet roar through the mill race and under the deserted mill, as if it still had business there. It was a place hard to leave the next morning.

We attracted no attention, except from one very old man with a cane, who wondered why we made such a trip. When he learned where we were going he did not conceal his contempt.

"Y" can drive it in half a day," he said.

"But we are going by water."

"It's a damned crooked way to go."

Then he learned that we were not even fishing and gave us up in disgust. We gave him up, too, tore ourselves away, and soon made camp.

We tied the tent poles to trees for fear of a wind which did not come, and cooked a supper of potatoes and frog legs. Counting the market price of frogs, we were living on a millionaire diet that week. And better. For frogs, kept mewed for days awash in a tank, cooked on a steaming, black-hooded range, served in the polite and appetite-destroying atmosphere of a restaurant, under awe-inspiring silences and in a room stiff with tropical palms—what wonder they taste timid and homesick?

But eat of them while you sit by the stream where they have bellowed melodiously to the night; fry them over a flaring fire that makes the shadows dance, where their savor (this is essential) may mingle with the bubbling and smell of



THE RIVER HAD BECOME AS LANGUID AS OURSELVES.



AT SIGHT OF HIS GAUNT FORM AND BARE LEGS THE BIRDS
ALWAYS SCATTERED.

open-air cookery, and with the tang of hickory smoke; stretch your legs on the ground, lean your tired back against a tree, and feast. They are as sweet as is rest when a body is tired. Eat, then, and be a poet.

Our consciences had begun to trouble us, for we must be at home by Saturday, and this was Wednesday. So we slept earnestly that night and rowed earnestly the next day. The river went wild again after crossing another dam, and

we were again put on the defensive. Yet we were glad we had not brought a canoe. It was exhilarating to fight the mulish wishes of the heavy boat, to choose a channel far ahead for its wide course, and at the same time to avoid nearer obstacles. The boat did not follow her keel, having none. She went just as well sidewise as backward. The man in front kept up a constant call of "Rock on left—now! Log on right, stone on left, straight ahead! Now to

the right!" The very pigheadedness of our craft doubled the value of our trip.

But pleasures never hold their color. The constant countering with the stream became an old story, especially when barbed-wire fences appeared again. We were but tender amateurs, after all. The boat now began to leak badly, and the Elder, whose weight attracted the water to his end of the boat, was kept busy bailing. An oarlock had to be mended with wire from a passing fence. For dinner we found only a can of beans and a quarter loaf of bread; and who can keep a full temper with an empty stomach?

Then came the prince of mistakes. Pleasure seekers should not aim too far ahead, and yet we resolved to reach a certain village named Scott before we camped. At four o'clock we were shoving ahead doggedly and joylessly like farmhands stacking straw; at six we were poling even more vigorously, filled with the fire of an immense grouch; and by ten, when we had camped in a stubblefield near Scott, speech was dangerous. Plainly, a vacation of slavish toil was no vacation at all.

The day broke without a cloud. The air was chill and enlivening as in May. The river sparkled in the sunlight, swinging merrily past on its way to the St. Joseph. When we had emptied our lungs of sleep, we sat up and wondered at ourselves and our ill humor. What could there be in the world but hearty life and cheerfulness?

So we broke camp and that day reached Constantine, the end of our journey. The river for once lived up to its promises. It was now a considerable stream, swift and well-behaved, sometimes passing farm lands, some-

times running through long aisles walled close with the bright green of willows and poplars.

Once we saw a huge clump of yellow willows approaching and expected a mill. It had been a mill, indeed. The current through its ruined dam almost capsized us. But mill and woodwork and road were gone. Only the giant willows stood as they had in their youth, living monuments and faithful friends such as few mortal objects have or deserve.

The mill race at Constantine ran through the heart of the little town. We camped on Main Street, close by the creamery, where we bought milk for supper. The Elder sought the village gossips to announce that he had a boat for sale, while the Kid went downstream and dropped in a line, that we might not go home empty-handed. (We carried no fish home for all that.) Meanwhile, the boat was being inspected. All the time we were cooking supper visitors came, shook their heads, offered less than the price, and departed. At last it was sold to the shoemaker, and, in our gratitude, we gave him to boot a leaky lantern, fishworms, anchors, an opened can of condensed milk, a dime's worth of hard apples, and many other things for which we had no use.

After we had gone to bed a visitor aroused us to say that, after mature deliberation, he had decided to buy the boat. Being informed that he had deliberated too maturely, he left us. But another came, and others, all anxious to buy. The Kid could hardly be prevented from selling to each of them. Finally they were all gone. The boat pulled at its chain and rubbed gently against the bank; the water talked unintelligible things, and presently we were asleep.





PERHAPS IT NEVER LOOKS QUITE SO HOMELIKE AS IN WINTER.

MAKING NATURE HELP

BY ERNEST HAROLD BAYNES

Illustrated with Photographs

I THINK it was the two great hawks wheeling steadily against the blue above the pine woods which first attracted our attention; or perhaps it was the whiff of pine gum which was wafted to us on the warm air of the first real spring morning. At any rate, we were nature-lovers, my friend and I, and as we had been in the city for a whole day and two nights, we needed but a hint to make us sit down on an old stone wall by the side of Dudley Road, Newton Center, and try to forget that we were within seven miles of the State House in Boston.

It was only an overgrown old pasture that we were looking at—one of the

thousands to be seen up and down New England. In the foreground there were a few ancient apple trees with bluebirds hovering about them; behind and in the middle of the pasture a gray and battered barn with a phoebe on the end of the gable, and beyond, on rising ground, clumps of cedars, white pines, and other trees, leading the eye to denser woodland behind and above them. Away to the left was the old farmhouse on a knoll, and farther on a swamp, where a red-winged blackbird swayed among the alder catkins.

I remarked pessimistically that it would not be long before this interesting old place would be cut up into city lots



TO ALL INTENTS AND PURPOSES IN THE HEART OF THE MAINE WILDERNESS.

and covered with Mary Ann cottages, but my friend answered that he thought it had a brighter future, as it had just been bought by Frederick H. Kennard, the landscape architect, who planned to keep it intact and to make it his home.

Three years later I was again passing along Dudley Road, and I thought of that old pasture long before I came to it. I knew it would be changed and

wondered what its owner would have done to it. The old apple trees would be gone, I feared, and with them the bluebirds. There would be flower beds, of course, and I hoped they would be neither circular nor star-shaped, and that they would not contain coleus, cannas, geraniums, or other hot-house-bred fads of society.

Presently the old farm came into view,



THE PATH TO THE KITCHEN GARDEN HIDDEN IN THE WOODS.

and to my delight there were the apple trees, bluebirds and all. The battered barn had gone, but a phœbe was calling close at hand. Between two convenient trees at the roadside an entrance had been made, marked by simple stone walls and gateposts, up the sides of which vines and creepers were already beginning to climb.

From here could be seen just a glimpse

of the house, a quiet, unobtrusive, home-like building, well raised upon a knoll, but set low and fitting the land as if it had grown there. The tone and texture of its shingled roof and sides blended perfectly with the woods behind it and with the clumps of evergreen trees and shrubs which screened the greater part of it from view.

Since then I have had the privilege of

seeing this beautiful estate in detail, at all seasons of the year, and it is always interesting and satisfactory—always with pleasing surprises in reserve. As you pass up the broad sweep of the drive, your curiosity piqued by the glimpse you have had of the house, you find your interest heightened still further by the fact that the building now disappears entirely behind a group of white pines artfully left for this very purpose.

A moment later you get another surprise. Just beyond a well-made tennis court and to the left of the drive there is an opening in the woodland, and beyond, as the vista, in place of the old swamp which once occupied this site, a beautiful, well-drained lawn, surrounded by a great, wide border, full of hardy herbaceous flowers of every description. These are backed by masses of Florida dogwood, native rhododendrons, wild azaleas, shad bush, high bush blueberries, and other native shrubs, all planted naturally among the trees so that, in spite of the wonderful array of color, it is impossible for anyone to say, "Here is where Nature left off; here is where the landscape architect began."

Nature's Own Arrangement

There is no suggestion of a formal flower bed—just a wealth of bloom—a mass of loveliness, blending so subtly with the beauty of the natural landscape that it seems not to have been added to, but rather to have grown out of, the woodland behind it. And this impression grows upon you as you enter this same woodland by one of the many little paths or trails, and note in what a fairyland of flowers you find yourself.

Not only are many of the native flowers here in profusion, but thousands of hardy plants have been introduced, until the whole place is one great wild-flower garden. The larger undergrowth consists chiefly of bush blueberries, high and low, huckleberries, wild azaleas, shad bush, and dogwood, while beneath the pines the ground is carpeted with partridge berry, pyrolla, false Solomon's seal, prince's pine, bunch berry, and wild anemones.

Further back in the woods, where the

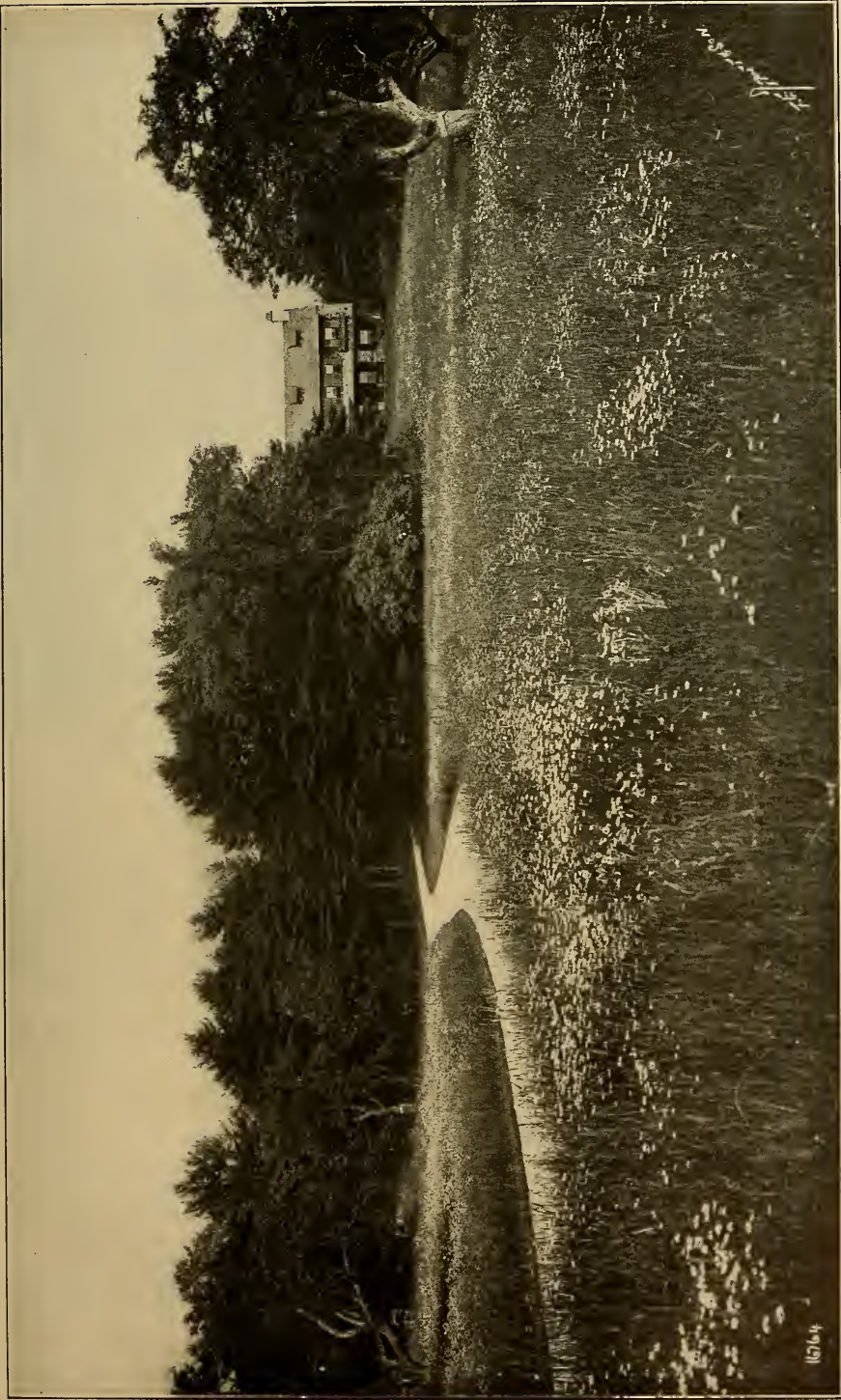
ground rises and the lichen-covered, gray rocks crop out above the dry soil, you will see in many places the forest floor aflame with the dancing bells of wild columbine or bright pink with the dainty blossoms of the prostrate phlox, introduced so artfully that no one could tell that they had not grown there always. In the lower portions of the woods the air is pungent with the odor of ferns. I never counted them, but there must be twenty kinds, in all their shades of delicate green, and not far away there are ladies' slippers, not a few, but hundreds of them, yellow and white and pink, and among them hundreds of lilies of the valley, wake robins and other trilliums, whether native or introduced you neither know nor care.

If now you wander back and follow the drive from the point where you left it to enter the woods, you will quickly round the group of old pines and come upon the house—simple, in perfect taste, in keeping with its surroundings and consequently beautiful. Though built by a well-known firm of architects, it had been designed by the owner and his wife, who planned it in the realization that a house is not, primarily, a thing to stare at, but a place to live in.

The lawn immediately about the house is cropped close, and in early spring it is abloom with thousands of varicolored crocuses, followed later by poet's narcissus, planted with a lavish hand. Beyond, the fields are undisturbed and until haying time the sunlight chases the soft shadows across broad acres of waving grass, purple clover, ox-eyed daisies, and golden buttercups.

Mr. Kennard's hobby is ornithology, and his love for and knowledge of birds are everywhere apparent. Among the barberry bushes near the house you will see an artistic food house for feathered guests, and sharp eyes can discover scores of inconspicuous bird houses fastened to the trees in woodland and orchard. And not the least of the delights experienced in walking through this estate is in seeing how heartily the birds accept the hospitality extended to them.

Some of the houses are occupied by bluebirds, others by chickadees, crested flycatchers, woodpeckers, and screech



A QUIET, UNOBTRUSIVE, HOMELIKE BUILDING, WELL RAISED UPON A KNOLL, BUT SET LOW AND FITTING THE LAND
AS IF IT HAD GROWN THERE.

(15)64



THE FLOWER GARDEN IN SPRING, SHOWING FOXGLOVES AND CAMPANULAS
IN BLOOM WITHOUT THE FORMAL AND FORBIDDING ARRANGEMENT
OF THE ORDINARY FLOWER BED.

owls, while a friendly phœbe shows her confidence in her host by resting on a ledge immediately over the front door. And in following the little trails through the woodland, you must be careful not to step upon the cunningly hidden nest of the oven bird, which flies up almost from beneath your feet, or upon the eggs of the ruffed grouse, which rises with a startling whirr and speeds like a brown cannon ball between the straight trunks of the pines. These nests are unknown even to the foxes, whose cubs play every afternoon upon a sunny knoll less than five hundred yards away.

There is a poultry yard, too, and a rabbit-warren for the children, and in a well-cultivated clearing in the woods a first-class kitchen garden, surrounded by a rustic, vine-covered fence and with rose-bushes, dahlias, and sweet peas here and there for interesting variety. But these things are hidden away and are not to be seen by the casual visitor.

And as you explore the wonders of this place, you become aware of the fact that although it is beautiful as seen from the road—although its quiet, dignified appearance is quite satisfying to every thoughtful passerby—its rarer beauties are not “on exhibition,” they are held in reserve for those to whom they have the deeper meaning, for those for whom they have associations, for those whose lives are spent among them and who will take the time to appreciate them. Primarily it is a home, not merely an address—an American home in the best sense.

Perhaps it never looks quite so home-like as in winter. I saw it once on a Christmas day. Icicles hung from the eaves and the sheeted pines and cedars stood everywhere on guard. Smoke was curling from the chimneys, evidence of the bright log fires within, and in spite of the low temperature outside, there was an air of solid comfort about the place. Sled tracks on a slippery path



FOXGLOVES, FERNS, AND WILD FLOWERS COVERING THE STEMS OF RHODODENDRONS AND FLORIDA DOGWOOD AND CLOAKING THE ARTIFICIALITY OF THE BEDS.

running down the lawn showed where the children had been amusing themselves, and now their laughing voices, mingled with the joyous barking of a deep-mouthed dog, guided me round to the back of the house and along a snowy path up into the woods beyond. A perfectly natural woodland path is this; the art it represents is too subtle for analysis, but somehow all at once I found myself out of sight of the house, clean away from civilization in fact, and in less than a hundred and fifty yards I was, to all intents and purposes, in the heart of the Maine wilderness.

All about were the straight trunks of pine trees heavily laden with snow and cracking with the frost, and in a little clearing a well-made open log camp, and in front of it a roaring fire, around which four active children, with red caps no redder than their own cheeks, were romping with a great St. Bernard dog, while a black cocker spaniel, all

out of breath, stood frantically wagging her stump of a tail as though to encourage as much as possible the sport she was quite too old and fat to indulge in herself. The floor of the camp was covered with shawls and rugs and cushions, and there were the older members of the family, with their friends, all sitting at their ease enjoying the fire and watching the children, the host himself rising from time to time to take a hand in the game or to throw another log upon the fire.

And the main point of it all is that here is a place which is satisfactory in every way and at all seasons of the year; a beautiful, interesting, and eminently homelike home, with all its natural beauties left where Nature put them, added to and enhanced along perfectly natural lines, all because a man who is a master of his profession has been able, for once at least, to do his work without being hampered by the crude ideas of laymen.

A CUT POLE

BY WARWICK S. CARPENTER

Illustrated with Photograph by the Author



ABOVE the shoulder of the hill protruded the battered crown of an old felt hat. It rose and fell unevenly to the careless swing of its wearer. Bits of the brim appeared, dropped back, reappeared, until a sag in the hill momentarily revealed that the brim actually existed by bits only. At the rough board steps which surmounted the rise it paused in indecision, faced squarely, and climbed over the top. From under its jagged shadow an eye cocked uncertainly at the weather, after which, from an informal seat upon the top step of the veranda, both eyes surveyed the horizon and the zenith.

"What you think she's goin' to do?"

"Rain, I guess."

"It'll be all right if the wind stays west."

As if in reassurance the long line of mountain ash trees west of the cottage stirred audibly and a moist breeze blew softly across the porch. Johnny sniffed slightly.

"Smells like it. I've been waitin' for it most three weeks." The storm stained felt tilted acutely while its owner noted the low, gray cloud banks struggling eastward against the morning sun. "All you got to do, to sit there readin'?"

"I've got to fill the wood box, get in the ice, and carry water."

"We can do that pretty quick."

"And there's nobody here to take care of the horse this noon."

"Turn him out in the road; what's the road for?"

"I'm sorry, Johnny, but my rod's busted. Broke the tip short off the other day. I'm afraid I can't go."

"Huh! Well, I suppose you city fellers *have* got to have a split bamboo. I got five hundred poles growin' down beside the first hole in the Stillwater that's

good enough for me. But I got a split bamboo, too, and you can use it."

"Where's your split bamboo? I've never seen it."

"Hid, down in Pine Valley. It's a good light one, too, but mebbe not enough varnish on it for you." Then, abruptly: "You see that dog eatin' grass? You better come, if you ain't afraid of gettin' wet. You don't need no line or reel, but you'll want some of them fancy flies with my split bamboo."

The dog settled it. While we rushed at the wood pile, the ice house, and the well, a certain little person with equal rapidity packed two bulging cloth lunch bags, found another old felt, scarcely more respectable, and waved good luck at us from the rail of the porch. As we turned down the Pine Valley trail the old horse in the middle of the road kicked up his heels in joyous abandon.

By gentle grades the trail drops down, five green-canopied, long-drawn, woodland miles, past the windings of the Redfield, giving hint of the state of the water below, then dry shod over the Lyman Lot brook, rumbling in its rocky channel under ground. We sat and lighted our pipes upon a log from behind which in early spring a bear rose up and said "Woof!" at Johnny.

"I didn't have nothin' but three fish hooks stuck in the band of my hat and didn't know whether to lay down my hand or bluff. But I see Mr. Bear didn't think he held much either, so I passed and let him say. He walked off proud-like about a rod and a half and turned into the brush, slow and easy. Then I yells at him. 'Hey, you,' I says, 'where're you goin'?' But he must have remembered somethin' awful sudden, 'cause he started like a shot out of a gun, and if he ain't found it by now, he's a hell of a long way off."



THE WOODS, THE WATER, PATIENCE, AND A "CUT POLE" SPELL PLEASURE.

In the middle of the trail beside the Little Pond brook lay one of Johnny's abandoned cut poles. One stumbles upon them everywhere within a radius of ten miles. From its notched extremity depended a couple of inches of broken line, eloquent of intolerance of knots.

"Perhaps I'd better take this," I suggested.

"It's most a mile and a half yet. If the windin' ain't too loose on the split bamboo, it'll be better."

"Why don't you fish with the bamboo, Johnny?"

"It balances too light for me; I'd ruther cut a new one."

The sun was long since vanquished, and now as we proceeded an occasional premonitory raindrop splashed audibly in the leaves overhead. But it was evidently to be a friendly shower, for no hush hung over the wilderness, and the business of the woods went on apace, always, except for brief rustlings and whiskings, beyond range of eye and ear, sensed rather than seen, throbbing, palpitating, and observant, retiring in needless panic until two eloquent, odorous fishermen passed by and the rumble of their voices died down along the trail. Presently floated up through the trees again the soft lisp of the Redfield where it merged into the Stillwater; then a glint of silver through thick alders.

"Here's your split bamboo," said Johnny, as he disappeared behind a huge hemlock, to step out again presently with the pole in one extended hand, the other hiding a doubtless distorted face behind the ragged old felt. I took it mechanically.

Yes, it *was* split—a shattered, battle-wrecked cane, gray from the rains of seasons, wound round and round against dissolution with the remnants of a knotted line. From its end depended another line, hook attached, the dried loop of a worm still impaled upon its rusty point.

From around the felt issued noises. Concentrating upon it with an effort, I beheld an eye wobbling unsteadily behind a hole in the crown.

"Johnny," I said, addressing the eye, "you win; didn't the stage leave a new box of those eighteen-carat cigars at the store last night?"

Johnny emerged grinning. "You bet it did." Whereupon, jackknife in hand, he cast about for a slim, straight birch.

Already the storm was upon us, beating loudly in the tree tops, penetrating slowly through the forest cover. Johnny was ready first and, lunch bag slung high about his neck, tobacco and matches under his hat, broke resolutely through the dense fringe of alders into the head of the first pool. There, waist deep, the thick raindrops stippling the level surface of the Stillwater, he called back to me, where I stood tightening the "windings" of the dilapidated cane, that ancient saw of the swimming hole: "It's rainin'; come on in or you'll get wet."

One cannot reach the Stillwater successfully except from the middle, so side by side we fished along, knee deep, then up to the armpits, occasionally clambering out, where swimming alone would have been possible, to push around through the dripping alders. There comes in the excellence of the cut pole. You gather the line in one hand, seize the pole by the smaller end, and go as fast as you will, letting the limber birch trail and wind behind without ever a thought of catching or breaking. Much saving of a part of speech and a general sweetening of disposition, *vide* Johnny.

But there is much more in a cut pole than this. No line threads through guides from end to end, to catch upon every projecting twig where the alders twine blindly above the surface of the water. A few turns of the pole wind the line at the tip, in place of a reel, and thus shortened it swings gently through the leafy maze and drops softly over the spot where trout lie thickest.

Immediately from perpendicular the line moves sideways. There is scant room for ceremony. But first must come the short, quick jerk which "hooks" him. Not every nibble is a bite, and then, with the resilient, silver-mounted vanity of the shops, the spring of the tip throws the shortened line and hook into the branches, where it swings over and over a limb, steadfastly withstands every vehement objurgation, and yields only to wading through the hopeful pool and untangling. In the cut pole is action enough, but less reaction.

Birch is most often used, alder is good, while some make great pretense of seeking out ash where it grows tallest and straightest under a thick cover. It is a particular merit of the cut pole, however, that it stands nearest at hand, and that restless person who sees a more promising clump on the farther side, straighter for the distance, but disappointing upon closer inspection, or looks for an ash of suitable size not far off, misses the most charming virtue of all. He had best carry a rod, or at least a store pole of the cane variety. If the latter, he may have most of the advantages of a cut pole, but must travel impeded or be obliged at times to go out of his way to pick up his expensive possession.

Accordingly, thought Johnny, a cane was not worth while, being only slightly lighter and not so supple as a cut pole. He intended, however, in some time of leisure, to cut a half dozen slender spruce saplings in a spot where they grow small at the base and high up among the surrounding trees for light, strip them of bark, and put them to season over the boiler in the sawmill. Light, slim, springy, and free of knots, they are the last word in cut poles. He did make one once, but hedgehogs ate it in its hiding place.

It was soon evident that the rain had not come early enough. No rise of water was apparent, and the crystal clearness revealed both the fish and us.

"I wish it had started in at daylight," sighed Johnny. "Guess we'll have to fool 'em."

At that he shuffled his feet gently in the sandy bottom of the stream. I followed suit. It's an old trick in the Stillwater, a shabby deception, certain to fool some of the trout all of the time, and all of the trout on any rainy day with a west wind. Our lines floated easily ahead in the current, the transparent water giving plain view of the wriggling worm, lone morsel, interesting only to small fry and tempting not at all the voracious feeders on a flood's bounty. Slowly and fanwise spread out from our feet the subaqueous stage-effect of high water. Alas for the imaginative *fontinalis*! Zip! went Johnny's line, and zip! followed mine.

"We got 'em goin'," breathed Johnny excitedly. "Keep a-kickin'."

We kicked faithfully and until our legs were weary. With each pause for rest we might as well have dropped into the water pail like Simple Simon, for all the fish we caught, but with each fresh appearance of the counterfeit flood they sallied out and bit savagely. However, let me not tax credulity now by telling the truth of that catch. This is not a fish story anyway, but concerns cut poles and the science of their handling.

Midway of the Stillwater we stopped for lunch, found our matches still dry, and built a small fire, before which we steamed comfortably. Then Johnny borrowed "one of them fancy flies" and tied it, *sans* leader, to his line. Have you ever tried to throw a fly with a cut pole, to get in all the delicate wrist motion of the true art? And did you succeed? Then you have the muscles and tendons of the forger of Zeus's armor.

The correct way of the cut pole is different. Just as a naughty boy dangles a rubber ball barely out of reach of a morose baby, until the suggestion becomes too strong and the baby reaches while the boy snatches, so Johnny dangled and skipped that fly about in a radius of two feet, up and down, back and across, just on the water, a little above, even a foot or two under, until patience, the patience of trout, wore out and they reached for it. But Johnny was not naughty. He let them reach it. Nevertheless he declined absolutely to play and swung them straight handward, whence they popped into his trailing, floating creel.

At times the Stillwater becomes restive and hurries precipitately over a hundred yards of steep descent. In such places it is not much more than a foot deep. The swift current parts cleanly around some rocks, splashes noisily over others, and paces the fisherman rapidly down the stretch to the next pool, at the head of which, if he displays his fly persistently, lie many possibilities. But Johnny always dallied unaccountably over the swift water. He dangled his fly behind each rock and dropped it through the thin mist of each miniature cascade.

"Johnny," I complained, at one of these fruitless interruptions of our progress, "come down here and help me fish this hole. I can't reach both sides of the stream at once."

"I'll tell you somethin'," said Johnny, confidentially, as he waded cautiously in; "every place where the water sprays over small rocks like that it makes a little rainbow. Then the flies see it, go for the bright color, get their wings wet, an' fall in. The trout learn that an' are layin' for 'em, an' that's where I fish."

"But I don't see that you get any."

"No, dammit, there ain't no sun to-day to make a rainbow."

We fly-fished the balance of the Still-water, until a break in the leaden clouds revealed the sun low sunk in the west. "We're all through," remarked Johnny,

"an' so's the rain. But I sure would sleep in these wet clothes to be here to-morrow mornin' early. The water'll be just right."

"Aren't you ever satisfied?"

"Well, mebbe."

We waded ashore and climbed heavily and dripping upon the bank. Squeezing the water from his soaking clothes, "I certainly am dry inside," reminded Johnny. "Also have you got a single dry match and some smoke in your hat?" I looked and found two.

Breaking his line short off, Johnny commenced winding it on a bit of a stick. "You can hide your split bamboo in the crack of that lightnin'-struck tree," he indicated. Then, between puffs, "Two of a kind," he chuckled, as the riven cane slipped into its resting place.



LAFITTE THE LAST OF THE BUCCANEERS

BY JOHN R. SPEARS

THE last recorded act of the old-time buccaneers who learned their trade under Morgan and his colleagues and successors in the Caribbean occurred in 1716. They had been outlawed for many years and had confined their depredations to small acts of piracy, but in 1714 the Spanish flota was driven ashore on the Florida coast where all the treasure-laden ships grounded in shoal water. In the course of the next two years the Spaniards had recovered some millions, but the old buccaneers learned that as the treasure was brought up by the divers it was stored in a shanty on the nearby shore where only sixty soldiers stood guard over it.

The amount thus carelessly heaped up on the beach was, of course, greatly exaggerated and the story fired such of

the old buccaneers as remained alive. Captain Henry Jennings was the man of enterprise who took the lead on this occasion. With two ships and three sloops, manned by his comrades, he sailed to the scene of the wreck, landed three hundred men, drove the Spaniards flying into the swamps, and carried off 350,000 pieces of eight. On the way home he fell in with a Spanish galleon that carried a rich cargo of merchandise besides 60,000 pieces of eight in coin.

So he brought back to Jamaica plunder worth more than 400,000 pieces of eight. He was prosecuted, of course, but for some reason proceedings were not instituted until the merchandise had been disposed of, and then Jennings and his merry thieves were allowed to sail away and disappear.

From 1716 on the merchants of other nations suffered more from robberies in-

flicted by Spanish coast guards than Spanish merchants did from any kind of high seas pirates, until after the year 1810, when a new and most interesting horde of buccaneers was originated in the West Indian and Gulf of Mexico waters.

It is a curious fact that the act of the American Congress suppressing the slave trade on January 1, 1808, gave life to the original enterprise from which these later buccaneers sprang. Consider the facts. The country was new. The Louisiana territory had been but recently acquired and it was developing by the most wonderful strides. The demand for labor had never been equal to what it was then, and the price of slaves rose until one fresh from the coast of Africa could be sold in the New Orleans market for as much as \$800 or \$1,000. At the same time ship loads of slaves were brought to Cuba and sold for \$300 a head. With such a margin smuggling was inevitable.

As the demand was greatest on the new lands along the Mississippi smuggling there had its greatest development. At first the smugglers bought their slaves in the Cuban markets, but they soon saw that the slave ships carried small crews, poorly armed, and that resolute men might easily take without price what they had theretofore purchased. In short the smugglers became buccaneers in a small way—they made "purchases" of the Spaniards by stroke of sword.

As a rendezvous from which to run slaves up the Mississippi the smugglers used Barataria Bay, lying southwest of New Orleans. It was protected from the gulf by an island (Grand Terre), that had trees on it high enough to conceal the masts of small vessels from the lookouts on passing cruisers, while communication with New Orleans was easily effected through the bayous. Moreover fish and game abounded in the region.

Of course all purchased supplies were obtained in New Orleans, and among these few were as interesting to this history as were the chains used when making up kaffles of slaves for transportation into the interior. For, beginning somewhere about the year 1810, the buc-

caneers patronized a blacksmith shop that stood on the north side of St. Philip Street, between Bourbon and Dauphine, that was owned by two brothers, Frenchmen from the Garonne, who were to have a great part in the buccaneering operations of the ensuing years—Jean and Pierre Lafitte.

These brothers might have been called gentlemen-blacksmiths—they owned slaves who pounded the iron. To them the stories of great profits and alluring adventures, which the smugglers told, proved to be irresistible. The shop was sold and while Pierre remained in the city to attend to the sale of the "purchases," Jean went afloat. He had been a privateer in the old country and had a taste for plunder.

A Gentleman-Adventurer

At this time Jean Lafitte was described as "a handsome man about six feet two inches in height and strongly built." He had "large hazel eyes, black hair, and he usually wore a mustache. His favorite dress was a species of green uniform with an otter skin cap which he wore a little over his right eye. . . . He was a good swordsman and an unerring shot." Under service conditions he carried two pistols in a sash and wore a cutlass. "He was gentlemanly in his deportment, of sober habits and very thoughtful." He spoke English and Spanish fluently, as well as his native language, and it is added that he was of a retiring disposition and "seldom smiled."

The might of this new element in the buccaneer business was immediately apparent. New Orleans was then a combination of an American frontier town and a West India port, it was full of venturesome souls of whom not a few had come to the town because of the activity of sheriffs in other towns. These flocked to the aid of Jean Lafitte. Within eighteen months a dozen brigantines, schooners, and polaccas made Barataria Bay their headquarters, and the crews addressed Jean Lafitte as "bosse."

A fort was built on Grand Terre and around it were erected a large number of thatched huts for the shelter of the crews

and the captured cargoes, and for the accommodation of a few merchants, and others who came to supply the wants of the sailors. An idea of the extent of the business done by the buccaneers is obtained from the official statement that four hundred slaves were sold at auction there in one day.

Of course the authorities took some action in the matter. Governor Claiborne issued proclamations and appealed to the legislature for authority to raise a company of militia that would "rescue Louisiana from the foul reproach" of harboring such "bandits." But the legislators postponed action because they were unwilling to interfere with an enterprise that was developing the resources of the valley and adding immensely to the private fortunes of their constituents. If the Spanish government could not protect its slave ships, Louisiana would not spend money to help her, nor would she aid the National Government to enforce the slave trade laws.

The efforts of the customs officials to enforce these laws proved ineffective and at times dangerous. On October 14, 1811, a customs inspector, named Walter Gilbert, with a posse, seized a quantity of merchandise from a gang of the smugglers. But before he could convey the goods to New Orleans Jean Lafitte overtook him, "grievously wounded" one of the posse, and recovered the goods. In a later fight Lafitte killed an inspector, named Stout, and dangerously wounded two others. In every fight Lafitte had with the authorities he won.

The fact that Lafitte was handling "merchandise" as early as 1811 shows that he was giving attention to other ships than slavers. Sheltered by the people to whom he sold goods at low prices Jean Lafitte and his gang enlarged their operations until "the whole adjacent coast was disquieted and kept in terror by pirates . . . who were time and again seen walking about openly in the streets of New Orleans. . . . Countless proofs of Lafitte's piracies, even against American shipping, were in the hands of the American government." So says Vincent Nolte, a merchant of New Orleans of that day.

The fact is that the Government was

just then so busy with the war of 1812 that much time passed before attention could be given to the buccaneers. In the meantime, however, a British naval expedition came to Baratavia. On September 3, 1814, the British sloop of war, *Sophia*, Captain Lockyer, anchored off Grand Terre, and the captain, with other officers, landed under a flag of truce. They offered Lafitte a captain's commission in the Royal Navy and \$30,000 in gold if he would join in an attack that was to be made upon New Orleans, while his followers were to be rewarded with large breadths of land as soon as Louisiana should come under the British crown. At the same time Lockyer declared that if this offer was refused he would return with ample force and utterly destroy the buccaneers and their settlement.

Not to Be Bought

Now it happened that while the British were at Grand Terre, the United States naval forces, under Commodore Patterson at New Orleans, were fitting out an expedition for the destruction of the buccaneer gang, and Lafitte knew all about the matter. But instead of joining the British the whole gang unanimately rejected the offers, and it was with difficulty that Lafitte kept his followers from sending Lockyer and the other officers to New Orleans as prisoners.

When Lockyer had left Grand Terre, Lafitte wrote all the facts he had obtained to Governor Claiborne and offered to bring all his forces to defend the city from the threatened attack. This offer was refused, and the expedition, under Commodore Patterson, descended upon Baratavia (September 16, 1814), where they captured six schooners, a brig, and a felucca that were without a flag, and two schooners that were under the flag of the Cartagenian Republic. Patterson's official report says that the buccaneers numbered between 800 and 1,000 men, but they made no resistance. Only a few were captured and among these Lafitte was not found. The settlement on Grand Terre was burned.

Thereafter Lafitte and his associates

remained in hiding until Packenham and the 10,000 British veterans had come to the swamps below New Orleans, and General Jackson "heard the women and children crying for terror in the streets." Then Lafitte hired United States District Attorney, John R. Grymes, to resign and take up the cause of the Baratarians, the price being \$35,000 in gold. Edward Livingston was employed in the same capacity, and the two appealed to General Jackson, who in his distress accepted the aid that the British had sought with bribes.

How the buccaneers manned the great guns in the battle of New Orleans and how the British veterans, who had been invincible on the fields of Europe were hurled back by the fire of these guns, need not be told here in detail. After the battle the buccaneers were pardoned for the good they had done, and some returned to lawful pursuits. But Jean Lafitte was not one of these. For with the end of the war of 1812 the opportunities of the buccaneers for preying upon peaceful commerce were suddenly broadened in remarkable fashion, and Lafitte was not a man who could resist the allurements of such conditions.

These new opportunities were found in the continuation of the war which the Spanish-American people were waging for independence. Since 1810 all the Spanish colonies on the continent, except Florida, had revolted. The new governments set up were most unstable, for the will of the popular military hero of the hour was the only law in either state or municipality. But any government was good enough for the purpose of the buccaneers of the day.

Previous to and during our war of 1812, Lafitte and his gang had been the only buccaneers afloat, but now, at the end of that war, the fleet was increased by many excellent armed ships. For the owners and captains of the privateers that had looted British commerce during our war were so much enamored of their manner of life that they could not be content to settle down to the arts of peaceful commerce. So they headed away for such Spanish-American ports as were in the hands of the insurgents, and in a day obtained papers as "patriot"

privateers. Then they went cruising as the two Barataria schooners under the Cartagenian flag had done.

No courts of admiralty were established for the trial of prizes. No bonds were exacted for the indemnity of ships that might be captured wrongfully. There was no restraint of any kind placed upon the commanders of these ships. By the treaty between Spain and the United States every such ship that was fitted out in the United States was a pirate and whenever one of them left an American port the captain was guilty of deliberate perjury. In short every one of these so-called privateers was a buccaneer, just as Morgan's ships were buccaneers. And the people of the United States looked upon them with much the same feeling that animated the people of Jamaica and Tortuga when Pierre le Grand and Roche Brazilliano first brought prizes to port.

Pirates Who Wandered Far

To give an account of all the known deeds of these buccaneers would require a volume, and it would be one of human interest, too. For instance, Capt. John D. Daniels, a Baltimore man, while cruising in the *Irresistible*, armed with fourteen 12-pounders, captured the Spanish war brig *Neyrada*, armed with eighteen 18-pounders and carrying a larger crew. The Spaniards lost thirty-eight men killed and twenty-two wounded; the *Irresistible* had one man wounded and none killed.

Four of the buccaneers went hunting prizes as far as the Philippines, and one, the *Argentina*, made captures near where Dewey destroyed the Spanish fleet in 1898. Among the buccaneers who captured much loot was Capt. James Chaytor. In 1817, while in command of the *Independencia del Sur*, he and Captain Barnes, of the *Mangoree*, captured two Spanish ships that with their cargo were estimated at \$701,980 by the Spanish minister to Washington. The two landed plunder worth \$290,000 at Norfolk, Va. In the previous year Chaytor captured a ship that had \$60,000 in coin on board.

Not to follow the details further, it

may be said that some of these buccaneers captured property that was worth millions in the aggregate. They blockaded Havana and Santiago for days at a stretch while Spanish warships of superior force were lying within.

But only the few had such good fortune as this. The many made no prizes that are remembered and when one of these unlucky ships had been a short time at sea without taking a Spanish prize the captain had to take some other prize or face a mutiny; and few of the buccaneer captains needed the incentive of a mutiny to make them take any ship that came within their power. Moreover their favorite expression when looting ships was "Dead cats don't mew."

Because of the ills that Americans had suffered at the hands of the Spaniards in earlier years this piracy was ignored by the American people as a whole for a surprising length of time. They simply refused to believe the facts even when American merchantmen disappeared—looted and sunk with all hands. But, as the outrages multiplied and the buccaneers became more impudent in their disregard for our port and customs laws, a time came when they were able to bring their captured property into the country—their only market—only by night and the devious methods of the smugglers, and then a new day dawned for Jean Lafitte.

The Gathering at Snake Island

Of Lafitte's doings immediately after the end of the War of 1812 little is known until 1817, when he was found in Charleston fitting out a buccaneer ship of the class described. From this port he went to the Gulf of Mexico, and on April 5, 1817, he was at Snake Island, Tex., where Galveston now stands, under most remarkable circumstances.

One Luis de Aury, a South American insurgent with a taste for service afloat, had gone to New Orleans to look into the conditions under which plunder could be marketed there. For at this time the honest merchants of the country were arousing the customs officials to some degree of activity, and the Amer-

ican courts had been deciding that Spanish ships captured by these buccaneers must be restored to their owners whenever found within the American jurisdiction.

After a brief time in New Orleans Aury saw that he might remedy this condition of affairs if a Spanish-American court of admiralty jurisdiction, which American courts would recognize, could be established in some location convenient for the buccaneer cruisers. To provide such a court Aury united with a Mexican named Herrera, who claimed to represent the Mexican insurgent government, went to Snake Island with a gang of buccaneers, and there, with Herrera as the presiding official, went through certain forms which he supposed would organize Texas as a state of the Mexican federation, giving the little settlement of tents and shanties they had built on the sand the dignity of a state capital, and then he elected himself governor of the new state. Naturally his first executive act was to appoint a justice and other officials of a court of admiralty.

This buccaneer state was organized in December, 1816. In the course of the winter many of the buccaneer cruisers brought in their prizes and they were condemned with as much regard for forms as the circumstances would permit. Then efforts were made to have the decisions of this court recognized by the courts of the United States, but here the buccaneers failed, and then on April 5, 1817, Aury left Snake Island and went to Amelia Island, Fla., where a Sir Gregor Macgregor, a Scotchman who had turned buccaneer, had tried to organize the two Floridas, East and West, as an independent nation.

When Aury sailed away from Snake Island, Jean Lafitte took possession, and straightway business began to boom. A fort was thrown up to guard the harbor. A brick house was built within the fort and to this Lafitte brought his family. Other houses were erected—a regular shanty town—for the use of ship chandlers, grocers, saloon keepers, and others who came to supply the wants of a buccaneer community such as had flourished at Baratavia.

In the meantime the news that the old "bosse" had opened a new nautical "fence" was carried around the West India waters, and the buccaneers who had prizes to sell squared away for Snake Island with studding sails on both sides in their eagerness to get there. They could not sell ships there—the bottom of the bay off Bolivar Island was at one time well covered with the remains of hulls that the buccaneers had burned—but they could get cash for cargoes either from Lafitte himself or from speculators he brought there. And, although Lafitte was usually to be found in the house within the fort, he owned a beautiful brig that had been a slaver (named the *Pride*), and went cruising in her occasionally to help on the boom.

The success of this "fence" was remarkable. So many slaves were brought there that Lafitte was obliged to sell them at a dollar a pound. Gold watches were seen there by the case and drygoods by the cargo. On occasion doubloons were as numerous as biscuit on the island, and the sounds of revelry were heard for miles down the gentle zephyrs. Within a year, more than a thousand buccaneers were making Snake Island their headquarters.

Of Jean Lafitte as "bosse" of this buccaneer community there are pictures enough. One of his captives named Jean Baptiste Marotte tried to hold out a box of gold watches at dividing time, and when detected he spit in Lafitte's face. Instead of killing the captain Lafitte challenged him to fight a duel—gave him a chance for his life. At the duelling ground—Pelican Island—Marotte weakened, whereupon Lafitte gave him a slap and a kick and let him go.

The crew of the *Pride*, having learned that the Spanish would pay them a large reward for her if delivered at Vera Cruz, planned a mutiny. Lafitte learned their plans but let them go ahead until they came aft in a body to clean out the cabin. But when they had battered in the cabin door he and his lieutenants shot six of them dead and ended all taste for mutinies in that community.

At one time a New England buccaneer, named William Brown, robbed a plantation in Louisiana of a number

of slaves, and brought them to Snake Island. The United States war schooner *Lynx*, Lieut. J. R. Madison, commanding, traced Brown to the "fence" and was sounding out a channel with a view to coming in and capturing the gang when Lafitte had Brown tried by a court martial and hanged for a piratical assault upon the United States. Then he gave Brown's companions to the *Lynx* for trial in the courts at New Orleans and Madison sailed away satisfied.

In the meantime Lafitte had tried to organize Texas as a state of the Mexican republic. With the aid of a band of Americans who camped on Galveston Bay while on their way to join the Mexican insurgents, he went through the forms of adopting a constitution and electing state officers, after which the governor appointed a justice of a court of admiralty and issued commissions to the buccaneer commanders. Lafitte used every effort, also, to get into communication with the Mexican insurgents in order to secure written recognition for his community, but was never able to do so because the Mexicans were at that time far in the interior. In fact he admitted in his letters that he never had any lawful government at Snake Island, and this fact is worth mention because one well-known historian labored hard to demonstrate that Lafitte was a smuggler merely.

Breaking the Buccaneers

But, while Lafitte was worried somewhat lest a naval force visit Snake Island as one had visited Amelia Island after Aury was established there, he continued "to hold down his claim," so to speak, and made a good bluff. The longer the buccaneers were left undisturbed on the island the more insolent they became in their disregard for public rights. In October, 1819, a buccaneer cruiser, called the *Bravo*, while off the mouth of the Mississippi with a prize in company, fired on a United States revenue cutter that thought to investigate her commission. But the *Bravo* was captured and in due time the captain and mate were hanged in spite of their Snake Island commis-

While the *Bravo's* crew awaited trial, three commissioners were sent by the United States Government to Snake Island to investigate the condition of affairs; for Lafitte's friends who had been buying \$800 slaves for a dollar a pound had done much to create a public belief that the settlement on Snake Island was a lawfully organized Mexican community, and the Washington authorities were in doubt about the matter. The commissioners found the condition of affairs herein described, and reported accordingly. Thereupon, at an early date in 1821, the war brig *Enterprise*, of glorious memory, was sent to Snake Island, under Capt. Lawrence Kearney, with orders to clear out the whole gang. Having found Kearney inflexible in the execution of orders, Lafitte placed his goods on the beautiful *Pride*, burned the entire settlement, and sailed away, heading to the southeast, where he disappeared in mists from which he never emerged.

One account says he died fighting the crew of a British warship that attacked the *Pride*. Another says he turned merchant and died at Silan, a small village near Merida, Yucatan. A third says he went to France where he lived in comfort to old age.

Whatever his ultimate fate it is certain that Jean Lafitte was, in some respects, the most remarkable buccaneer

known to history. The work of the old-time buccaneers was done in the days when, as a matter of governmental policy, there was "no peace beyond the line," while Lafitte, among the civilized people of the nineteenth century, built two different towns, at each of which he gathered a thousand men. They were men without a country, or a conscience, respect for law, or any hope in life beyond the gratification of lust and appetite. They knew well the exhilaration that comes to wild souls in deadly conflict, and defiance of law and authority was the chief feature of their chosen occupation. Yet Jean Lafitte ruled them. They spoke of him as "the old man." They addressed him as "bosse." They were his friends as well as his followers.

A silent man he, but by no means sullen or devoid of humor. When Governor Claiborne offered a reward of \$5,000 for his head, Lafitte offered \$50,000 for the head of the governor, and worded his advertisement in a way that set every reader, including the governor, laughing. A sly story or a flash of French saved many a blow, but when a blow was needed it came with crushing power. Though a pirate chief and guilty not only of the blood his sailors shed but of blood shed by his own hand, he was by no means lacking in some of the qualities that go to the making of a hero.





THE WORLD OF · · SPORT

THE LAW AND THE SPORTSMAN

IN view of the forward movement in game protection in most other parts of the country it is to be regretted that New York State should have appeared in so doubtful a rôle at the present session of the legislature. Two bills were introduced that, if passed, would have meant almost irreparable injury to legitimate sport. One was to permit the hounding of deer in the Adirondacks and the other to allow the spring shooting of ducks on Long Island. Both were defeated, but the latter passed the State senate and lacked only ten votes of success in the lower house.

That such a measure should have come so near to passage is an indication of a spirit in the New York legislature that should cause lovers of wild game great uneasiness. The arguments advanced in support of this bill were the old ones, familiar by long use. A duck killed in the spring is a dead duck and a dead duck only. So runs the argument.

This utterly ignores the fact that to kill birds at the beginning of the breeding season means a serious curtailment of the breeding for the year. It ignores also the fact that shooting conditions in the spring are, as a rule, less favorable to the birds than in the fall. The birds, wearied by the long flight from the Southern waters, are easier to approach. Added to this, the bad weather often prevalent in the spring drives them

closer inshore where they fall easy prey to the market gunner.

The fight is not over yet. The friends of the bill threaten to bring it up again and press it to passage. The whole force of market gunners is behind it.

This suggests a reasonable solution of the difficulty and one that has been offered at the present session. That is to prevent absolutely the sale of game within the State without regard to where it was shot. So long as it is permitted under any conditions whatever the evil is impossible to curb. A duck or a grouse killed in New Jersey or Pennsylvania looks no different from one killed in New York. Cut off the market and the market gunners will cease to agitate for a spring season, a larger bag limit, a longer fall season, or any of the other devious ways of whipping the devil around the stump.

The whole question resolves itself into one of common decency and good sportsmanship, on the part of lawmakers as well as hunters. The kind of gun used is not so important as the way it is used. The man behind the gun is the man to reach.

This magazine has taken a strong stand against the publishing of pictures of proud hunters posing before a long string of game with the gun that did the mischief held at a triumphant angle. It does everything in its power to inculcate decent standards of sport and the higher ethics of the game. Unfortunately, as far as the proselyting charac-

ter of our arguments is concerned, very few of our readers are in need of instruction on these points. We are sure that they are with us already in this cause, heart and soul.

It is the man who does not read this magazine—or any other—the man who hunts only to kill, who presses the trigger with one eye on the game and the other on the market, that is in need of conversion. In many cases the only lesson that he can understand is a stiff fine. Cut off the market demand, limit the bag and the season, and enforce the law to the letter. There is the remedy.

THE TRAGEDY OF THE ELK

MR. DILLON WALLACE'S article in another part of this issue places before us clearly the great danger that is threatening one of the noblest game animals on the American Continent. The buffalo and the antelope were gone before we took thought of what we were doing. The mountain sheep has traveled far on the road to extinction, and the few specimens that are left are only pitiful remnants of once noble bands.

These things we did in our blindness and ignorance. The evil was wrought in the proud belief that Uncle Sam not only had land enough to give us all a farm, but game enough to give us all a shot. We know better now. If this last great herd of elk is left to starve, we cannot plead ignorance or extenuating circumstances of need or opportunity. Our eyes are open and the remedy is in our own hands.

The first step is up to the State of Wyoming. There are ample ranges in other parts of the State that will never be good for anything else. The elk can be removed easily and placed on the new grounds.

If Wyoming will not act, let the Federal Government step in and transport some of the animals from the Yellowstone Park and its forest reserves to parks and reserves in other States. Whole counties in the Rockies have been swept bare of game that once supported their hundreds and thousands. The re-

sources are still there; only the game is gone.

It is not too late to save the day if we will only act at once. Stocking with deer, elk, moose, and even with sheep and antelope is not difficult and we could bring to now deserted mountain slopes and valleys the beautiful life that once filled them.

LAWS FOR THE FLYERS

THE birdmen have enjoyed the freedom of the air long enough.

Now they are to be licensed and tagged and lighted and limited and defined and otherwise dealt with according to the law. In two States, bills have been introduced bearing on the art of aviation and before these paragraphs appear may have become laws.

Connecticut was the first to take legislative notice of the rapid peopling of the atmosphere and the consequent need of regulation of the peoplers. The bill introduced in accordance with the Governor's message provided for a license fee of ten dollars and limited the operation of machines to those who had been approved by the superintendent of State police.

A substitute measure, offered by Mr. A. Holland Forbes, seems to be more comprehensive. Under the terms of the Forbes bill a flier may wander at will in the air over his own premises, but becomes a trespasser if he ventures into anyone else's air before he has been duly licensed. Under the theory on which real estate titles have been construed in times past the owner held from the center of the earth to the sky. Not even the State might "license" a trespasser, save as provided under the right of eminent domain. How about that true and tried theory now?

But to proceed: No aviator may secure a license who is under twenty-one years of age. Each machine must bear a registry number in figures not less than three feet in length.

In California they are not only proposing to require licenses and numbers, but also suggest the carrying of "at least four lights, one in the center of the ve-

hicle in front of the driver, one at the extreme rear, and one at each end of the lifting planes, these last two to be one red and one green, the red light to be placed at the end of the right plane and the green at the end of the left plane." Why alter the old-established usage of red light to port and green to starboard?

While we're about it, why not provide some extra inducement for hunting out and some specially interesting brand of punishment for the fools who shoot at balloons? These marksmen would at least provide valuable material for studies in criminal aberration.

"THE AMERICAN GOLFER"

AS played across the Atlantic, golf is fundamentally different from the British variety of the game. At bottom the game in America is a business. At bottom the game here is a pleasure, a relaxation, and a means of taking pleasant exercise. The American likes to satisfy himself as to who is the best player in the country, and to be eternally comparing the merits of the various performers. These comparisons and criticisms also are very harsh.

America is a land of championships—a happy hunting ground for the pot hunter. The continual playing of golf with an object does away with light-hearted and cheery matches and four-somes which form the main part of golf as it is played in the United Kingdom. Hence American golfers are for the most part serious-minded, haunted with the fear of losing the reputation they have gained in past competitions. Golf under this treatment soon loses its title to be called a game at all, and, so far from serving as a relaxation, it tends merely to an increased consumption of physical and mental energy. This being the case, it is not strange that the vast majority of good American players are comparatively idle men, or undergraduates at the various universities, who can give up their whole vacation to the exigencies of the American golfing spirit. (From the *Country Gentleman*, England.)

Some one once defined a lobster as a red fish that walks backward. To which

Huxley responded: "A lobster is not a fish, it is not red, and it does not walk backward. Otherwise the definition is correct."

ABOUT THE REVOLVER

WE hate to seem to be dwelling overmuch on matters in New York State, but it so happens that several points of acute interest to sportsmen generally are closely concerned with recent happenings in this State. For example, there is the bill to require each purchaser of a revolver to show a license permitting him to carry concealed weapons.

The theory is that such a measure will restrict the illegal use of this weapon. This is fine theorizing. The only unfortunate phase of the matter is that it does not accord with the reasonable probabilities. We have ample restriction of the carrying of concealed weapons at present. Yet this does not in the slightest disturb the man who wants a gun for an improper purpose.

The avenues of purchase are many. Would the proposed measure (still pending at the time this is written) affect in the slightest degree such improper purchase? It is impossible to believe that it would. The yeggman, the second-story worker, the strong-arm man would still find ways to buy their beloved six-shooters. The restriction would fall only upon the decent citizen who wants a revolver to carry with him into the woods, or to keep in the house for the protection of his women folks.

Keep the sale of firearms in the open under legitimate supervision and it is harmless. Drive it to cover, and the result will be to place the innocent more than ever at the mercy of the malevolent.

THE Aero Club has finally (temporarily?) awarded the Statue of Liberty prize to De Lesseps, the man who made the slowest time of any of the contestants. This leads us to conclude that the hare really finished first in his historic race with the tortoise, but was disqualified for fouling a mullein stalk on the second turn.

THE BOOKS WE READ

THE appeal of books of adventure is fundamental and universal. Watch the boy of twelve poring over his "Robinson Crusoe," "Treasure Island," or "Two Years Before the Mast." Literary subtleties, character studies, psychology, all are wasted on him. Ask him why he likes his books, and if he can give you any reason at all it will probably be because "there is something doing all the time."

But the real reason lies deeper. It is the primitive desire to discover how the stark man behaves when he finds himself in wilderness or desert with nothing but a knife, a gun, and his two bare hands. It is the old admiration for resourcefulness, for man's ability to stand upon his feet and play the game. The quickness with which a boy reacts to this conception is in a large measure a test of his own potential manhood. This is the appeal that such organizations as the Boy Scouts make and this will be a cold and cheerless world when the boys cease to rise to it.

BEING A GOOD SPORT

IF the writer were a good many years older than he really is and were preparing to depart this life in good spirit and with a proper benediction for all the good things that he would leave behind, he could think of no fitter message for the young men—and women—of to-morrow and all the days to come than just this: *Be a good sport*. That one slang phrase covers a very large and real philosophy of life.

In a sense, grin and bear it will serve, except that that is an emollient simply, a salve for wounds otherwise past curing. The good sport is the man who not only grins and bears defeat, but also endures triumph without too much grinning. He has no excuses and few explanations if he loses and forbears to rub it in when he wins. He pays his way and takes his share of the load, but beware of overloading. Righteous indignation is his and legitimate protest against the ills to which human flesh should not be heir.

He is sympathetic within reason over the real troubles of other people, but don't encroach on his with evils that exist only in your own mind. He is considerate of the weak and unfortunate in the game of life; in fact he is—or should be—a prominent member of the various handicapping committees that are striving in many ways and under various names to distribute the burdens of the world according to ability to bear.

Specifically he is the sort of man who always uses a light rod and gives the fish a chance. He quits when he has caught all he needs for the camp and is in no special hurry to empty the stream. He would scorn to shoot a duck on the water and one kill at long range is worth more to him than a dozen birds brought to bag where any novice could have knocked them down. He welcomes the long portage that tries his strength and skill and will do his full share of the camp work without a murmur. In other words, a good sport is the kind of a man that everybody would like to be and only a few are—all the time.

There is a story of two men who had been playing a round of golf. At the finish the man who had lost said in a dismal tone: "Confound it! if I hadn't sat up so late last night I wouldn't have felt so seedy and off my game this morning."

Whereat the other regarded him quizzically and drily remarked: "Do you know, I don't believe I've ever beaten a well man in my life."

A good sport wouldn't have laid himself open to any such thrust.

RUFFIANLY ROBINS

A CORRESPONDENT in Indiana informs us that a merchant in his town is suffering from the depredations of some unprincipled robins. The merchant is a keeper of bees, which fact the robins have discovered. The red-breasted brigands have also discovered that honey is pleasant to the taste and exceedingly easy to take.

To raid the hives requires a higher degree of courage than they possess.

Therefore they perch themselves in the trees over the hives and, waylaying the returning bees, rob them of their loads. Whether the honest little laborers are then permitted to go their way with warning not to look back or cry for help on peril of their lives deponent sayeth not.

A "ROYAL" HUNTER

THE following is the kaiser's bag of game for 1909 as taken from the columns of *Wild und Hund*, Germany:

"January 5-10th, on the Shorfheide, twenty stags; January 15th, Potsdam, one hundred and two pheasants, seventy-three rabbits; June 2d, Madlitz, six roebuck; September 22d to October 5th, Rominten, twenty-one stags; October 9-15th, Shorfheide, eighteen stags; November 12-13th, Letzlingen, ninety-one fallow buck, eleven wild boar; November 17-21st, Donaueschingen, one fal-

low buck, eighty-four foxes, one badger, three hares; November 24th, Neudeck, six hundred and sixteen pheasants, two hares, one nutcracker, one owl; November 26-27th, Pless, two bison, two stags, nine wild boar, four hundred and forty pheasants, two hares, one nutcracker; December 3-4th, Gohrde, fifteen stags, one brocket, four hinds, forty-nine wild boar—in all, 1,576 head.

"His majesty's total bag during his career as a sportsman is returned at 63,439 head, made up as follows: 1,860 stags, 90 hinds, 1,736 fallow buck, 98 does, 3,346 wild boar, 924 roebuck, 17,958 hares, 2,426 rabbits, 121 chamois, 342 foxes, 3 bears, 9 elk, 6 bison, 3 reindeer, 6 badgers, 1 martin, 108 capercaillie, 24 blackgame, 32,051 pheasants, 865 partridges, 95 grouse, 4 woodcock, 2 snipe, 87 duck, 2 guinea fowl, 826 herons and cormorants, 1 whale, 1 pike, 514 miscellaneous."

Some of us have killed more snipe anyhow.



NEWS OF THE OUTDOOR WORLD

Aviation

THE Aero Club of America awarded the Statue of Liberty prize to Count De Lesseps, March 14, John B. Moisant being disqualified for not having been one hour in continuous flight previous to starting, and Claude Grahame-White being disqualified for fouling a pylon with a wing-tip on landing. The decision has been protested by Grahame-White.

Louis Breguet made a new record for passenger-carrying at Douai, France, March 21, by taking up eleven passengers.

Lieutenant Foulois and Philip C. Parmelee flew 106 miles at Laredo, Texas, March 3, making a new record for a two-passenger flight.

Eugene Renaux won the Michelin prize of \$20,000, March 7, by flying from Paris to Clermont-Ferrand and alighting on the Puy de Dome, a distance of 260 miles. The summit of the Puy de Dome is 4,500 feet above sea level.

An over-sea flight of 124 miles, from Antibes on the Mediterranean coast to the island of Gorgona, was made by Lieutenant Bague, March 5.

M. Cei, a French aviator, was killed at Puteaux, March 28th, by a fall of over two thousand feet.

Lieutenant Erler, a German officer, carried a passenger from Hamburg to Bremen in a biplane, March 29th, at an average speed of fifty-seven miles an hour.

Pierre Nedrine, a French aviator, flew from Poitiers to Issy-les-Moulineaux, March 31st, 208 miles, at an average speed of over ninety miles an hour.

Fencing

INTERCOLLEGIATE fencing matches won during March were as follows: Columbia, 8-Yale, 1; Columbia, 7-Prince-

ton, 2; Yale, 8-Syracuse, 1; Cornell, 6-Pennsylvania, 3; Pennsylvania, 5-Columbia, 4; Columbia, 6 $\frac{1}{2}$ -Princeton, 2 $\frac{1}{2}$; Harvard, 6-Army, 3; Cornell, 5-Navy, 4; Navy, 8-Princeton, 1.

Joseph T. Shaw, of the Fencers' Club, won the Hammond gold medal in the three weapons tournament at the New York Athletic Club, March 22. His only defeat was by E. H. B. Myers with the duelling swords.

The New York Fencing Club defeated the Navy, 5-4, March 11.

Cornell won the intercollegiate fencing tournament in New York, April 1, with a total of thirty-five bouts won against thirty-four for the Army, twenty-two for the Navy, eighteen for Columbia, fourteen for Pennsylvania, and twelve for Harvard. The individual championship went to Ross of Cornell. This is the first time the tournament has been won by any other team than the Army or Navy.

Wrestling

INTERCOLLEGIATE wrestling matches during March resulted as follows: Penn. State, 4-Columbia, 1; Cornell, 5 $\frac{1}{2}$ -Pennsylvania, 4 $\frac{1}{2}$; Yale, 6-Columbia, 1; Penn. State, 4-Cornell, 3; Navy, 6-Columbia, 1; Princeton, 5-Pennsylvania, 1 (one draw); Yale, 5 $\frac{1}{2}$ -Princeton, 1 $\frac{1}{2}$; Cornell, 5-Columbia, 2; Pennsylvania, 3 $\frac{1}{2}$ -Princeton, 3 $\frac{1}{2}$.

Princeton won the intercollegiate championship, March 27th, with a score of seventeen points against Pennsylvania, eleven; Columbia, eleven; and Cornell, ten.

Basketball

INTERCOLLEGIATE basketball games played during March resulted as follows: Wesleyan, 19-Williams, 12; Cornell, 20-Yale, 17; Manhattan, 20-Cornell, 16; Wesleyan, 27-Dartmouth, 10.

Tufts College has abolished basketball on the ground of roughness, unhygienic character, and lack of support.

Miscellaneous

NEW records for relay swimming at 400 and 500 yards were made by the New York Athletic Club team, March 18. The new marks are 3 minutes 57 $\frac{3}{4}$ seconds, and 4 minutes 57 seconds, respectively, as against 4 minutes $\frac{3}{4}$ second and 5 minutes 2 $\frac{3}{4}$ seconds, former records.

The Intercollegiate individual swimming championship was won by Yale with three firsts and four seconds.

The New York Athletic Club swimming team won the A. A. U. relay championship, March 23.

W. C. Fownes, Jr., Oakmont, national amateur golf champion, won the annual club tournament at Pinehurst, N. C., March 18, 4 and 3.

It has been announced that the "Big Four" professional golfers, Braid, Vardon, Duncan, and Taylor, will compete in the American open championship this year.

James R. Hyde, South Shore Field Club, won the Florida amateur golf championship, March 13.

The Southern Cross Golf Trophy was won at Aiken, S. C., by E. M. Byers, Pittsburgh, March 24.

The English Lawn Tennis Association has decided to invite the winner of the first tie in the play for the Davis cup to play the second tie with England. The United States and South Africa have been drawn in the first preliminary.

The singles championship of the women's national indoor tennis tournament was won by Miss Marie Wagner, Hamilton Grange, March 9.

G. M. Church, a schoolboy from Tenafly, N. J., won the singles tennis championship of Florida, March 4.

The indoor amateur trapshooting tournament held at Madison Square Garden, N. Y., during the Sportsman's Show, was won by F. B. Stephenson, Crescent Athletic Club, with 96 out of a possible 100.

Harry W. Kahler, Highland Gun Club, Philadelphia, won the national amateur championship at clay pigeons, held at Travers Island, March 23-24, breaking 173 out of a possible 200.

A new record with a .22 caliber match pistol was made by A. P. Lane, Manhattan Rifle and Revolver Club, with a score of 240 out of a possible 250 at twenty yards.

In a trial trip on the *Solent*, March 24, Mackay Edgar's motorboat, *Maple Leaf III*, made a speed of 58 miles an hour.

Columbia defeated Yale in a revolver match, March 7th, by a score of 983 to 796 for five-man teams.

Rockliffe Magnet, Rockliffe Kennels, won the special prize offered for the best dog exhibited at the annual member's show of the Bulldog Breeders' Association of America, March 18th.

Syracuse defeated Michigan in an indoor track meet at Syracuse, March 18th, 43 to 34.

The New York relay team, composed of Dorland, Rosenberger, Sheppard, and Gissing won the intercity relay race at the Pastime Athletic Club games, against Boston and Philadelphia.

A world's record for a five-man team at duckpins was made at the Catonsville Country Club, Md., March 3d, with a score of 636.

The Bonds of Cleveland made a new world's five-man team bowling record of 2,896 in Buffalo, March 3d.

George Gray, Australia, made a new mark in English billiards at Southampton, Eng., March 2d, with a run of 1,576. The previous record was 1,240, held by Roberts.

Four world's automobile records in one race of a hundred miles were broken by Teddy Tetzlaff, Lozier, at Los Angeles, March 19th. The records were: Twenty-five miles, 18:22 $\frac{2}{5}$ —old record, 18:52; fifty miles, 36:35 $\frac{3}{4}$ —old record, 37:55 $\frac{3}{4}$; seventy miles, 54:50 $\frac{3}{4}$ —old record, 57:15 $\frac{3}{4}$; one hundred miles, 1:14:29 $\frac{1}{2}$ —old record, 1:16:21.

A new two-man bowling record was established at Buffalo, March 11th, by Kelsey and Johnson, of New Haven, with a score of 1,355. The old record was 1,318.

Two American Rhodes scholars scored in the Oxford-London Athletic Club games, March 11th, R. L. Lange, Oklahoma, hundred-yard dash, $10\frac{1}{2}$ seconds; and George E. Putnam, Kansas, hammer throw, 152 feet 9 inches.

Intercollegiate soccer was begun March 11th, Columbia defeating Haverford 1-0; Cornell and Columbia tied, March 25th, 1-1; Crescent Athletic Club defeated Yale, 4-1.

George V. Bonhag ran the 3,000 meters in $8:52\frac{2}{3}$, lowering the mark of 8:54 set by John Svanberg in Sweden several years ago.

In the preliminary bouts for the intercollegiate fencing contest the four teams to qualify were Army, Navy, Pennsylvania, and Cornell.

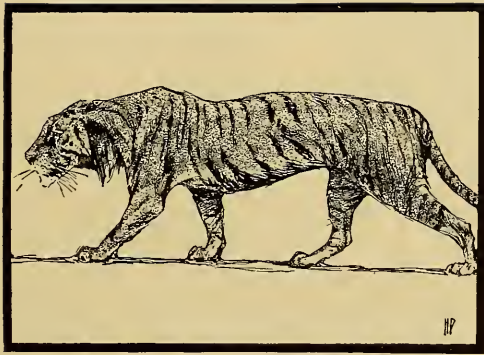
Intercollegiate baseball games played in March resulted as follows: Army, 3; Rutgers, 2; Columbia, 9; C. C. N. Y., 0; Pennsylvania, 18; Navy, 3; Ursinus, 2; Princeton, 1; Lafayette, 5; Elton, 3; Princeton, 19; N. Y. U., 5; Princeton, 11; Bowdoin, 1; Arvey, 7; Manhattan, 0; Pennsylvania, 3; Lehigh, 0; Amherst, 4; Virginia, 2.

C. M. Daniels won the A. A. U. championship 500-yard swim at St. Louis, March 31st, in 6 minutes $29\frac{1}{2}$ seconds. He also won the 220-yard championship at Pittsburg, March 28th, in $2:25\frac{2}{3}$.

Gilbert Nicholls won the gold medal in the eleventh annual North and South open golf championship at Pinehurst, March 27th.

Joseph West, London, Ont., won the individual bowling championship at Buffalo, March 17th, with a score of 694.







THE MOST DANGEROUS PART OF BEAR HUNTING IS THE TRACKING OF A WOUNDED BEAR INTO COVER.

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THE BROWN BEAR OF ALASKA

BY BELMORE BROWNE

Illustrated with Paintings and Drawings by the Author

MEN who have had the experience say that the king of sports is the hunting of man, and it stands to reason that they are right. The greater the intelligence and courage of the quarry, the greater the skill and courage needful to bring about its downfall. The Englishman points to the African buffalo and says, "Trail a wounded bull buffalo into tall grass, and you've got to keep an eye open—the beggar'll hunt you!" It is the quarry with this characteristic that furnishes the highest type of sport.

In all the length and breadth of the western hemisphere there are only two animals that can come under this head—the great Alaskan brown bear and the grizzly of the far Northwest. My reason for specializing on grizzlies of the Northwest is that there are no other hunting grounds left where these great beasts can still live out their lives as nature intended. The grizzly of the

main Rockies is not the "Monarch" of the old days, but a skulking, nocturnal beast, harried here and there by the encroachment of civilization. But in the northwestern mountains you can still find ranges where grizzlies in the blaze of day swing across the uplands five miles from timber line; and you may yet live to vacate a bear trail—as a friend of mine did—to let three surly bears have "the right of way."

But it is with the hunting of the Alaskan brown bear, the world's largest carnivore, that we are concerned. One is constantly reading of brown bears having been killed in the Rocky Mountains, but in these instances the term is used purely in the color sense, as the brown bear in question is not found outside of Alaska with the exception of Kamchatka. From a zoölogical standpoint the separation of the different species of brown bear has been, and still is, a difficult problem.

No one who is not familiar with the coast of Alaska can appreciate the huge

extent of that great land. You can study the southwestern coast for weeks from the deck of a steamer and your horizon will always end among range on range of grim blue mountains rolling backward into snow and mist. Untold thousands of bays and islands break the shores, until, were you to stretch the coast line straight, it would equal the circumference of the globe.

It is in this great wilderness of rugged mountain ranges that the different species of brown bears make their homes. Roughly, their range extends from a point not far south of Sitka, to Bering Sea. They are seldom found far from salt water, although they follow up some of the larger valleys, and in this way penetrate a good distance into the interior.

I have always, when following a bear, been conscious of a feeling that is hard to analyze; a feeling that I was not merely tracking an animal, but a personality as well. This strange feeling is partly due to the human actions and habits of these great beasts, and the more you see of bruin the more you become impressed with his intelligence. The following experience will serve to illustrate my meaning.

Several years ago an Aleute boy and

I spent the better part of a morning in stalking a large brown bear "cow" and two cubs. After taking infinite pains we succeeded in routing out two caribou without disturbing the bear family. The caribou were lying on a snow bank about fifty yards to leeward of our quarry, and it was necessary to make them move as they were lying in almost the exact spot that we wished to occupy.

The change of position safely executed, we rested our chins on a "nigger head" back of an alder bush and settled ourselves for an interesting vigil. The two yearlings were playing industriously as puppies play, and their legs looked disproportionately thin where the hair had been worn short by constant contact with the grass and brush. The great furry bulk of their mother showed through a small clump of stunted alders, and so far beneath them that only a faint murmur reached my ears the Bering Sea swells were pounding against the cliffs. How long we lay watching I will never know; the minutes flew; a keen wind that made us lie closer to the ground blew toward us from the bears.

The cubs still played about, but always, no matter how interested they were, giving their mother a wide berth. Once, when I first saw them, they rolled across the danger line, but as the old bear's paw drew back they fled to a safe distance, and when they resumed their interrupted game it was with noticeably subdued enthusiasm.

A mile beyond us the mountain side fell away to a brushy valley where our companions were hunting, and I smiled as I thought of how interested they would be in the scene that we were watching. And then, suddenly, it happened! How that great hulk of soft fur



SIDE VIEW OF HEAD OF ALASKAN BROWN BEAR.



HEAD OF ALASKAN BROWN BEAR.

could in an instant spring from sleep and land ten feet away, her tendons rigid as steel bands, I shall never understand. The playing yearlings were transformed in the twinkling of an eye into two agile forms that reached the protection of their mother's flank, at the same instant that the metallic whistle of her deep breaths reached my ears; and thus they were off, crashing downward through a tossing tangle of alders. I barely had time to clutch my rifle and send one 30.40 bullet after the big cow, before they were gone. For a minute we stood and looked at each other, and then John growled, "She didn't smell *us*—the wind's blowing a gale in our faces—I got one of the yearlings."

We found the yearling, and still farther down the hill I found the old bear dead, but the mystery of her mad plunge was not revealed until we reached camp. Stone and Larsen had started out to hunt the valley, and had wandered to a knoll at the foot of the mountain to study their hunting ground.

That slight trace of man scent carried by the gale along a mile of moun-

tain side had started the old bear on her rush for cover. But to this day John and I don't know how she told the yearlings.

What is even more impressive is the steadiness with which these animals will act while under fire. Should the average man be fired upon unexpectedly, the chances are that he would lose his head completely, and yet I have often seen these seemingly intelligent animals act with coolness and forethought under these conditions.

On one occasion four of us were breaking camp after a successful bear hunt. We had been hunting under the leadership of A. J. Stone for the American Museum of Natural History.

Back of our camp a steep talus slope ran up to the straight walls of a great rock peak. Suddenly we saw a large "cow" bear followed by two two-year-olds crossing the talus at the foot of the cliffs. One of our natives grabbed up his gun, but we yelled at him to let the bears go in peace, whereupon he pleaded with us to let him "hurry them up a little," and when we assented he opened fire.

The bears were about two hundred yards away and traveling in single file. They were moving cautiously across the steep rock slide and we expected to see an avalanche of bears and rocks as soon as they tried to run. As the first shot echoed along the cliffs they stopped and looked at us. Then they seemed to realize that the best thing to do was to keep on until they reached the edge of the talus, where some thickets of alders led continuously along the mountain. Without a second's hesitation they moved carefully forward. Larsen's bullets were throwing up puffs of powdered rock, but they marched slowly and carefully ahead, until the scree gave place to brush and grass, when they gave a few powerful bounds and disappeared from view.

Cubhood of the Bronx Giant

The brown bears hibernate during the cold Alaskan winters, and in their dens, down under the deep snow, their cubs are born. It seems unbelievable that the little round balls of fur can develop to the huge size that some of the brown bears attain; but a tiny cub, so small that a man can hold it in the hollow of his arm, will grow to weigh over one thousand pounds when he has attained his full bearhood.

In Bronx Park there is a large bear, the second largest, if not the largest, in captivity. Looking at the great beast one would be loath to believe that he had ever sprawled in a very mussed and disconsolate condition and howled his grief and sorrows to the mountain sides. He did, though, for John and I saw him. He was near the head of a snow-ringed canyon, where you could look down on Bering Sea as you can overlook the Hudson River from a Broadway skyscraper. The first time we saw him, he was successfully holding his own in a serious quarrel with his little sister, and the names that he called her reached our ears as we lay shivering in the snow far above them. His mother, a large, light-colored brown bear, ended the battle by rolling him head over heels with a gentle stroke of her great paw, and it was then that he lifted up his head and

howled until a blue glacier across the way threw back the echoes.

After a painfully exciting stalk I secured the old bear. The cub, who was destined to spend his days in Bronx Park, stood valiantly by his mother, and in the first meeting he nearly succeeded in annexing a part of John's overalls. John retired in good order, and we began a strategical move that drove the cub into a glacial stream.

He was helpless in the swift water, and I caught him behind his furry ears, and as I carried him dripping and kicking to the bank the mountains reëchoed to his grievances. We used our heavy wool socks to muzzle his mouth and paws, and then, after rolling him up in a pack strap, I swung him onto my back. I have never played a bagpipe, but I know just how it feels, for the cub howled every step of our long journey to camp!

The hibernating dens are usually situated high up among the most rugged mountains. It is in this bleak country of giant cliffs and overhanging ledges, when the shrieking blizzards throw down their mantles of deep snow, that bruin hunts out his winter home. Many of these dens are situated in regions of such barrenness that even in the summer time there is no vegetation.

In 1910, when we were relaying our Arctic equipment across the ice toward Mt. McKinley, we reached a desolate glacial amphitheater twenty miles from timber line, where there were several bear tracks leading toward the lowlands. One night Professor Parker, hearing a noise outside his tent, thought that it was one of our party returning from a distant relay camp, but receiving no answer to his welcoming hail, he fell asleep again.

The following morning the snow told us that his visitor was a large brown bear.

Many small incidents testify to the semi-human quality of the bear. On another occasion I found the tracks of a cow bear and two cubs that led through a deep canyon which headed in a group of snow-covered mountains on the coast of Bering Sea. The cubs' tracks looked ridiculously small beside



ON ONE OCCASION I SAW A LARGE COW DASH ACROSS A LITTLE SWALE IN PURSUIT
OF A SQUIRREL, WHILE HER CUBS REMAINED IN THE BACKGROUND,
ABSORBED IN THE CLOSE RACE.

the great impressions made by their mother's feet. While following the tracks, I found that the cubs had taken advantage of every bare spot, and had even stood on flat rocks in an attempt to get their tender feet out of the cold snow, very much after the fashion of small boys in the country who have shed their shoes and stockings early in the spring.

When the bears reach the lowlands they usually settle down in a brushy, well-watered valley at the head of a salmon river. Here the cubs play during the long, quiet, sunshiny hours, while their mother sits nearby looking out over the dim lowlands, or dozing in the dry grass.

As time passes they beat down trails and make beds in grassy glades. I remember one valley that had been the home of an old cow and a cub. The two bears had made a perfect network of trails, and I counted sixteen beds within a radius of a fifty yard circle. On hot days the old bears hunt out the snow slides at the heads of small canyons, and choosing one well hidden and surrounded with brush, they sprawl contentedly through the midday hours.

The cubs are weaned soon after they begin their active life. Then come their first lessons in living off the country. Small game runs riot at timber line during the short Alaskan summers; every grassy hollow harbors its colony of voles or field mice, and the willow thickets teem with ptarmigan. The cubs learn quickly, and, beginning with field mice and ptarmigan chicks, they soon follow their mothers to the open hills where they receive their first lessons in catching ground squirrels and marmots. I have hunted bear in the coast ranges where you could see mounds of earth on every hillside that had been thrown up by bears that had been digging for squirrels. The brown bear, however, do less digging than the grizzlies of the interior, probably because they depend more on their salmon fishing than the bears of the main ranges.

I have often seen holes where a grizzly had been digging out a marmot family that were large enough to shelter a man; and once, in a sleet storm south

of the Yukon headwaters, I took advantage of this strange type of shelter.

The bears do not depend entirely on digging to capture these agile little animals, but they catch them in the open among the brush and rock slides as well. It would seem an impossibility for an animal as large as a brown bear to catch an animal as small and active as a ground squirrel, but the big beasts are extremely quick, and they can strike a lightning blow with their broad paws. Several times in the North I have seen bears hunting these small spermophiles, and on one occasion I saw a large cow dash across a little swale in pursuit of a squirrel, while her cubs remained in the background, absorbed in the close race.

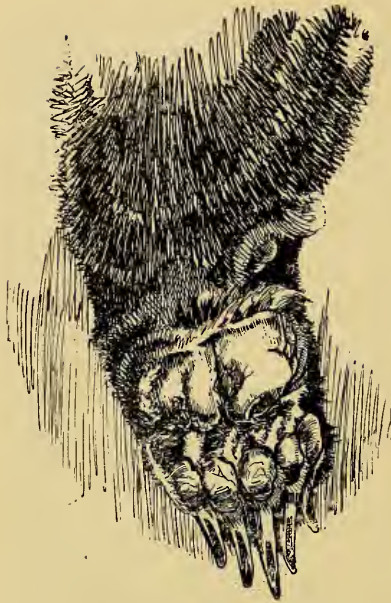
"Making a Noise Like a Squirrel"

The squirrels are well aware that the bears are their enemies, and this fact was impressed on my mind by a clever ruse used by an Indian in getting a meal. In bear hunting we often stayed away from camp for long periods, and we were always on the lookout for a chance to relieve our hunger. A fat ground squirrel well roasted makes a toothsome meal, and we never let a chance to catch one go by when we were in the hunting field. One day an Indian and I chased several squirrels into a small rock pile. I did my best to frighten them so that their chattering would betray their hiding places, but they would not make a sound. Finally my companion got down on his hands and knees, and placing his mouth close to a crack in the rocks, began to puff and blow like a rooting bear. An outburst of squirrel language followed his efforts, and we had no difficulty in locating and eventually catching several squirrels. I have repeated the same ruse successfully several times.

On the Bering Sea coast the bears have learned to plunder the seabird rookeries. We fed the cub that we caught with raw seagull's eggs in lieu of milk, and the little fellow thrived on the diet. Egging was one of our pleasantest pastimes. We would row out to a rocky island in our dory, and then each armed with a gunny sack



THE CUBS ARE BORN IN HIBERNATION AND GET THEIR FIRST TASTE OF THE COLD WORLD WITH THE COMING OF SPRING.



RIGHT FOREPAW OF ADULT BROWN BEAR, ALASKAN RANGE.

would clamber along the cliffs. The birds flew about us in great clouds; sea gulls, terns, mures, guillemots, nurselets, cormorants, puffins, and eider ducks, and our bags would soon be filled.

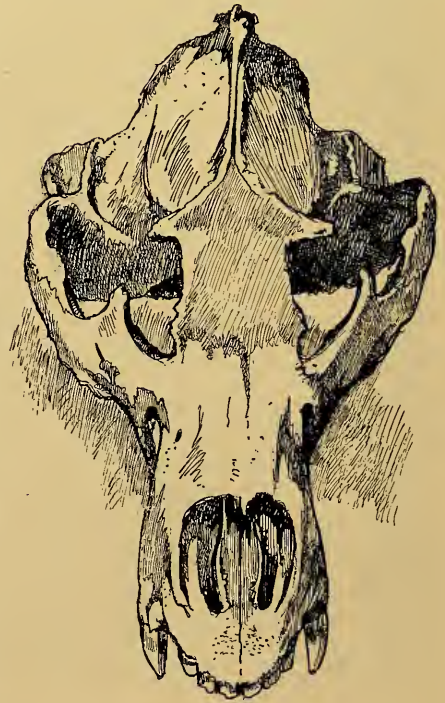
Climbing among the crags in the clear northern sunlight was a constant delight. To the south stretched the great barrier of snow-smothered peaks, rolling down to brown foothills that looked like giant bear skins thrown down at random; while between the towering walls the Bering Sea breakers shot up in great spouts of foam. Sometimes we used a rope in reaching the isolated nesting ledges, and there was a wild joy in swinging out into space where you could look down between your feet to the spouting surf below. As an undertone to the thunder of the sea, the moaning of the wind and the mighty seabird chorus blended into deep, haunting music. So strong is this spell that long afterwards, on hearing the deep notes of an organ reverberating through a cathedral my thoughts flashed back to Bering Sea, and I saw again the surf-torn cliffs and seabird legions.

Near one of our camps was a bay

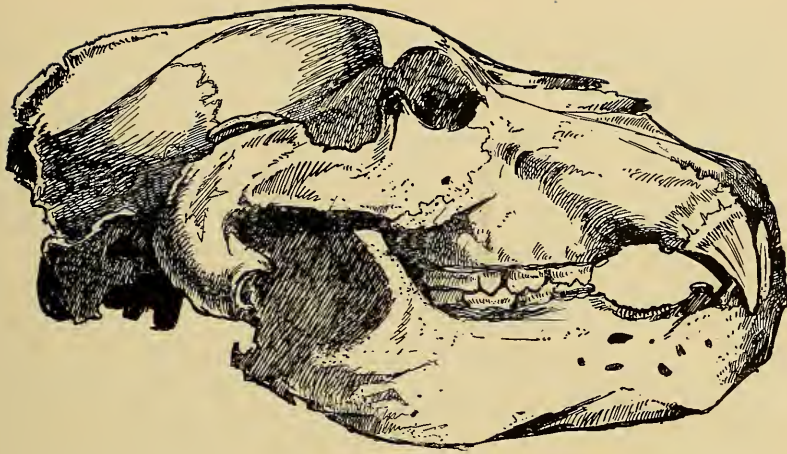
where thousands of gulls congregated, and periodically they would join in a chorus of wild cries, which in that desolate spot sounded for all the world like the yells that arise from the bleachers at a baseball game. We always spoke of these gulls as "the fans," and as the wild din broke the silence of our camp one of the men would say, "Some feller's knocked out another home run!"

As the short summer passes, the brown bears work their way toward the salmon rivers, and when the silver legions come threshing up from the sea their heaven is at hand. Their trails follow the banks and here and there as you travel along you will see a few fish bones where a giant "king salmon" has gone to make a brown bear's breakfast. Alongside the pools and riffles the banks are broken down where bears have slid clumsily to the shingle below, but when it comes to fishing they need no teachers, as the remains of salmon on the banks will testify.

Usually they fish in the shallow riffles



SKULL OF ALASKAN BROWN BEAR, SHOWING RELATIVE SMALLNESS OF BRAIN.



BROWN BEAR FROM COOK'S INLET, ALASKA, SHOWING GREAT STRENGTH OF JAWS AND TEETH.

above a deep pool. The salmon gather in large schools in the deep water, and a few at a time attempt the passage of the shallows. They will wriggle over riffles where there is scarcely enough water to cover the pebbles, and as they thresh their way upward the waiting bear tosses them to the bank with a quick stroke of his curved claws. I have watched a bear during her fishing operations, but I was unable to approach close enough to follow her movements clearly. An examination of the spot later showed that she had seated herself in the shallows and waited patiently for the salmon to come to her.

Salmon are often trapped in pools by the falling of the water, and they can be seen moving through the clear water. These pools advertise themselves to the four winds by their strong fish smell, and usually there is a well-beaten bear trail around the pool, although I have rarely seen evidences of salmon having been caught by bears under these conditions, as they remain in the deep water.

After the salmon have gone, and the higher peaks are taking on their fresh winter snow, comes the bears' dessert time. Then the hills are covered with berries and the ground in places looks like a purple carpet. It is then that you can see bears, like grazing oxen, rolling across the bare hills above timber line.

They are taking on fat for their long winter sleep, and as the cold weather comes on their pelage grows long and silky.

I know of no finer sight than that of a large bear swinging easily across the hills, his new coat rippling over his great muscles with the sheen of satin. It is at this time, when the frost is biting deeper night by night, and the snow begins to creep downward toward the valleys, that bear hunting becomes the king of sports.

Much has been written about the ferocity of the Alaskan brown bear, but modern inventions in firearms are unfortunately reducing the bear's chances to a minimum. In the old days of flint and percussion caps the brown bear was in reality the monarch of all he surveyed, and the single-handed killing of a large specimen was a feat to boast of. White-haired Russians have told me of the days when they stood aside to let the bears pass by, and of how they gathered into parties when they went hunting. An aged Aleute told me of his hiding behind a boulder, while "the father of all bears," nearly blind from age, lumbered past him within a few feet. When I asked him why he did not shoot, he answered, "Because I had only one gun."

In these days, when men talk knowingly of muzzle velocity and seldom

raise their sights, there should be little chance of danger, but accidents do happen. For a good many years I have kept a list of the authentic cases where men have been attacked by Alaskan bears. A study of this list is of interest, as it shows that in almost every case the cause is carelessness.

The only deaths that have come under my notice were of natives, and in two of these cases the victim had become panic-stricken and thrown away his gun. In the rough Alaskan wilderness a man is constantly on the lookout for good traveling, and it is natural that he should avail himself of the trails that bears have made through the long grass and alder thickets. In following these, a man will occasionally stumble on top of a brown bear, and if the animal in question should prove to be a cow with cubs there is liable to be a row.

Where Coolness Paid

Fred Printz, while engineering a pack train toward Mt. McKinley, came to close quarters with a brown bear with cubs. He was unarmed except for a hand axe with which he was chopping trail. The bear charged him and reared up within striking distance. Printz stood his ground, refraining from using his axe for fear that it would slip from his hand. After looking him over for a while the bear slowly turned and left him. There is not a shadow of a doubt that if Printz had lost his head and struck her he would have paid for the blow with his life.

A case where carelessness played an important rôle occurred on Cook's Inlet. A prospector shot a large brown bear that was followed by two young cubs. After the bear had rolled downhill into an alder thicket, he took it for granted that she was dead and attempted to catch one of the cubs. While he was in pursuit of the active little ones the old bear, who had been only wounded, dragged herself some distance from the spot where she had fallen, and the cubs, circling, led the unwary man within reach of the waiting demon. A frightful struggle ensued. The man was literally clawed and chewed to pieces, and but for his

great courage and strength and the fact that the bear expired from the original wound, he would have been killed. This accident illustrates the danger of leaving a wounded bear without first making sure that it can do no damage.

A case of a bear attacking a man that came under my personal knowledge is remarkable chiefly for the complicated series of happenings that led up to the final scene.

Russel W. Porter (who was the topographer of the Baldwin-Zeigler Polar Expedition) and I were camped high up in the Alaskan Range. We were both members of the 1906 Mt. McKinley Expedition, and were doing some topographical work while waiting for our pack train to join us, for an advance up the Yentna River. We had spent our first night at timber line in a struggle with a deluge of rain. At times the shrieking wind threatened to destroy our tent, but finally dawn broke and the growling of the storm rolled eastward across the ranges. As I was lighting a fire to dry our drenched clothing, I saw a brown bear and a cub cross an opening in the valley far below us. With a word of explanation to Porter I picked up my rifle and started down hill. As long as I was above the bear I had no trouble in following her movements, and I immediately formed a plan to intercept her. She was plowing slowly up the valley through the rain drenched grass. The glades were bright with wild flowers that glistened after their bath and away below me the whole mammoth sweep of the Susitna Valley lay steaming under the morning sun.

As soon as I reached the alder thickets the bear was lost to view, and from time to time I would raise myself a few feet by placing my foot in the fork of an alder bush. At last, while standing on one of these insecure platforms, I caught a glimpse of her tawny back as she moved parallel to me. She was about sixty yards away, but I could not shoot as I was clinging to the bush with one hand.

Dropping to the ground, I moved forward, every nerve on the alert as I reached the spot where I expected to



IN THE WORK OF EXPLORATION ONE FREQUENTLY MEETS BRUIN MOVING ABOUT HIS (OR HER) DAILY AFFAIRS.

see her. After waiting for some time, I decided that she had made a bed for the day in a dense thicket that stretched across the valley, and I ascended a little knoll to gain a better view. While I was standing here, uncertain of my next move, I heard a faint hail from Porter, but I could not catch his words.

As I could overlook the thicket I fired my gun, knowing that when the bear left the brush I would have an open shot. To my surprise nothing happened, so I turned and ran for high ground in hope of seeing her, but she had gone. On reaching camp I found that Porter had seen more of the bear than I had, as she had run up the mountain side on discovering me and almost blundered into our camp. She had then turned into a small gully and, driving the cub before her, disappeared near the top of the mountain. After a comfortable breakfast Porter started toward the mountain summit, with his theodolite in a heavy leather case strapped on his shoulders. I busied myself with the camp chores and dried our wet dunnage.

I was aroused some time later by the noise of twigs breaking on the downhill side of our camp, and suddenly Porter appeared, moving slowly up hill. As soon as I could get a good view of him, I realized that something serious had happened. His face and hands were scratched and his clothes showed the effect of contact with the rough mountain side. As soon as he caught his breath he gave me his story. He had reached the top of the mountain and had finished his topographical work. A narrow, snow-covered ridge joined the peak he was on to the main ridge. Following the ridge, he encountered the tracks of the bear and her cub, but, thinking that they had long since left the locality, he moved forward. Suddenly, on ascending a knoll on the ridge, he saw the old bear and the cub below him, and without a moment's warning she charged.

Porter was in a desperate position. He was unarmed and weighted down with his heavy theodolite; the bear was a large beast and aroused to a pitch of savage anger in the defense of her cub. He turned at once and ran rapidly along

the ridge until he reached a spot where the bear was hidden by an intervening hillock. He had about concluded that she had given up the chase, when to his horror her great form rose against the skyline and plunged down the hill on his tracks. Once more he was forced to flee, and this time he turned directly down hill, sliding over the snow, rolling and plunging through thickets of alder, until bruised and exhausted he reached the valley.

The whole adventure could not have happened more disastrously for Porter if it had been carefully planned. In the first place, the bear had been thoroughly frightened on discovering that I was pursuing her. On blundering into our camp she was driven to desperation, and on reaching the top of the mountain the cub had collapsed as I discovered later by the tracks in the snow. Porter's final appearance, when she and the cub were cornered on the narrow ridge, was the last straw. She undoubtedly thought that his presence was part of a well executed campaign against herself and her cub.

Where the Odds are on the Bear

The most dangerous part of bear hunting is the tracking of a wounded bear into dense cover. The Alaskan alder thickets are exceedingly difficult to penetrate. They grow in dense masses, and the twisted branches are tangled in indescribable confusion, through which the long Alaskan grass forces its way. A bear can move at will through the tangle where it would require five minutes of strenuous work for a man to travel fifty feet. In following a bear under these conditions it is advisable to keep as close to the ground as possible, as the grass and leaves are denser a few feet above the earth. One can usually locate a wounded bear by its labored breathing, and once located, the hunter by using great care can approach until the bear's form shows dimly through the branches. Sometimes, however, when the brush is unusually thick, the hunter may approach within a few feet of his quarry without knowing it.

An experience of this kind happened to me in 1906. Edward Barrill was my companion. We were prospecting for a horse trail through the heart of the Alaskan Range. In our wanderings we pushed through a high, cloud-swept pass, and lying on our stomachs on the green "sheep grass," looked down on the Kuskoquim hills.

It was the wildest and ruggedest country that either of us had ever penetrated, and it was the first time on record that anyone had crossed the Alaskan Range between Mt. McKinley and Keechatna Pass.

While we were moving upward above a deep canyon that we had ascended, we saw a large brown bear moving along the mountain side below us. We were badly in need of fresh meat, so I started downward to intercept him. Barrill was unarmed, but he came along to "see the show." I waited for the bear on a steep hillside, and when he came into view his great, dark hulk stood out in strong relief against the blue haze of the valley. At the first shot he rose to his hind legs and a second shot under the shoulder sent him crashing downward through the alders. Below me was a little knoll which commanded the whole hillside. From this view point we could see that bruin had rolled into a jungle of alders that was broken by great glacial boulders.

I knew that when I reached the spot I would not be able to see about me, so I asked Barrill to direct me from his coign of vantage. The bear's trail showed plainly until I reached the masses of brush and rock, where it disappeared. I moved forward with the greatest difficulty. Glacial erratics, weighing many tons, had been scattered about by a glacier long since dead, and the grim wildness of the spot made a fitting background for a bear killing. At last, I found arterial blood and, following it through the dense brush, came to fault in the shadow of an upright shaft of rock. Not a sound broke the stillness, and knowing that the bear was hard hit and close at hand, I decided that he was dead. I therefore called to Barrill and asked him if I was on the right track, and he answered that the

bear ought to be close to the spot where I was crouching.

I had just raised my gun to crawl farther when I heard a slight noise and, turning quickly, I saw a great brown head rising slowly through the leaves about eight feet away. The bear did not utter a sound, and his small eyes gazed steadily into mine as I pushed my gun through the branches and fired.

He rolled a short distance down the mountain side and when I reached him he was dead. Since then I have understood why so many accidents have occurred in tracking wounded bears, for while I was close enough to touch him with a fishing rod I was unable to see him among the tangle of brown rocks and branches.

Barrill soon joined me, and while we were preparing to skin our prize we made an interesting discovery; the bear's chest and belly were a patchwork of fresh scars. Some of the ugly wounds had festered and the great beast was in a pitiful state. As he would have weighed in the neighborhood of seven hundred pounds, the bear that had inflicted the wounds must have been a powerful adversary.

In the work of exploration one frequently meets bruin moving in a leisurely way about his daily affairs, and many pictures come back to me of days when, traveling with pack trains or under the straining tump-line, we would stumble unexpectedly on these monarchs of the wilderness. The novelty of these meetings never wears off, and bruin's retreat is always accompanied by a chorus of wild whoops.

A Comedy, But—

The most amusing adventure of this kind that I remember occurred in the Alaskan Range. A brown bear and I divided the leading part between us, and we were ably supported by a large company that made up for their lack of training by their remarkable enthusiasm and lung power. The scene was set on a grassy mountain side twenty-five miles south of Mt. McKinley, and the jagged peaks of the Tokosha Mountains formed the background.

The comedy opened with the discovery of a brown bear by the main company, which was led by Prof. Herschel Parker and Dr. F. A. Cook. They had no arms but their ice axes which, on the whole, are little suited to bear-hunting. They at once began shouting to attract my attention, as I was about four hundred yards ahead of them and had in my possession a high-power pistol. This weapon of ill omen was a patent arm, covered with complicated safety stops and full of ingenious machinery. It was guaranteed to shoot a whole broadside in one second, and was sighted up to a mile—if it had been sighted for a ten-foot range it would have suited my purpose better. I was carrying it for Professor Parker and had had no practice with it.

When I heard the shouts of the main party I accepted the leading rôle and, starting toward them, soon discovered the bear. I was on a grassy hill, and the bear, unconscious of the excitement he was causing, was digging at a squirrel burrow in a little ravine between me and my friends. Close to him was a granite boulder and, selecting this rock for a blind, I began the stalk. I could see my companions—six in number—sitting in an interested line, and a thrill of pride swept over me as I thought of the large audience that would witness my triumph.

Everything went splendidly—at first; I reached the rock without alarming the bear, and on looking up I saw him busily at work not more than fifteen feet away. Without losing a moment I aimed my infernal machine at his shoulder and pulled the trigger. Nothing happened! From this point on to the curtain of the farce the bear held the center of the stage. I was so close to him that I was afraid to move away for fear that he would show a disposition to join me. So I sat down back of the rock and tried a rapid repair act on my pistol.

The bear meanwhile had discovered my companions, who, realizing that something had gone wrong, began to execute a song and dance with the idea of

distracting the bear's attention. Their plan succeeded, for he left his digging and stalked past me in plain view, and sitting down began to study my companions, turning his head from side to side. He was now directly between me and my party. Luckily for them, I had removed the magazine during my repairing occupations, or I might have added homicide to my other sins.

Then the bear turned around and saw me. I have never received a look of such intense disgust and aversion as the one he gave me. I sat in as apologetic an attitude as I could, with the pistol in one hand and the magazine in the other. After giving me a thoughtful examination, he turned slowly, the hair on his back standing in a stiff ridge, and stalked away. As soon as I was sure that he was leaving, I returned to my repairing and succeeded in driving the loosened magazine home. The gun went off like a bunch of firecrackers, and the bear, wild with terror at the noise, dashed downward toward my companions. They began to take immediate notice, and for a few minutes there was a sound of shouting and a dizzy blend of figures mixed in with leaping bears, until silence settled among the hills. Whether they were afraid of my pistol or the bear I will never know, for I wisely decided to let the matter rest—I had had excitement enough for one day.

Just a word as to the coloring of the brown bears. No rule holds good in this case. Their color ranges from the darkest chocolate brown to a light creamy yellow. Their underparts, however, are darker than their backs, and the gray-tipped hair that is partially responsible for the grizzly's name is lacking. As zoölogists are led more by the internal bone structure than by the color of the hide in determining the different species, it is practically impossible for a hunter to tell one species from another. One fact, however, remains undisputed—that the hunting of the great plantigrades among Alaska's rugged mountain ranges is as good a sport as the world has to offer.

PHOTOGRAPHY'S DEBT TO THE TREETOPS

BY CHARLES PHELPS CUSHING

Illustrated with Photographs by the Author

THE more delight the photographer takes in his work the better the picture—if only he will add gray matter in proportion to enthusiasm. One of the best recipes for taking better outdoor photographs this month than in the preceding is to think of each object or mass that shows in the range finder or on the ground glass as something *alive*, which is working to help tell the story or suggest an emotion, to balance a “composition” or to add a touch of the decorative.

By moving the position of the camera you can select, reject, rebuild, or adorn a picture or further emphasize its point of highest interest. There should be nothing formidable in the suggestions of that word “composition”; defined in simplest terms it is merely the art of arranging the elements of a picture in the most effective manner. It is as much a necessity for the outdoor photographer as for the landscape painter.

Don't laugh at the idea until you have tried it. Particularly, see what can be done by experimenting with treetops, for in composing outdoor photographs nothing is more important than a knowledge of some of the pictorial uses of branches and leaves.

First to mind flashes the remembrance of how useful the treetops are in a composition as borders. Every collection of outdoor prints is crowded with examples. A step farther is the use of treetops to balance a lopsided arrangement of lines or masses. Often enough the photographer, even in the beginning, gratefully includes in his arrangement of details a graceful limb, a mass of leaves, or the tips of some branches, exulting to see that they add a touch of art interest to what otherwise would be

classified by artists as “merely descriptive.”

Often enough a little leaf-edged corner of a house will stand for the subtle spirit of a place of twenty acres—and in a fashion infinitely more effective than a panorama. When they happen to be in a mood for confessions, photographers may add to this that in some instances a frame of tree trunks and leaves was the only way to save the situation when a more inclusive picture wasn't possible without the use of a wide-angle lens. As another intensely practical service, treetops often save a photograph by acting as screens to shut off the sight of something ugly or out of character. Set up the tripod where foliage is between the eye of the camera and that obtrusive red barn and an attractive picture is made possible.

But if the true proportions of the debt of outdoor photography to the treetops were to be suggested, in every sentence of this preface there ought to be a mention of the value of foliage foregrounds. Every day of the photographer's experience drives home harder the lesson of the foreground's tremendous importance in his art.

Some one may now be asking: “If foregrounds and treetop borders contribute so much as accessories, why shouldn't treetops by themselves furnish complete designs?” Eagerly would I carry that idea to its logical conclusion, for the answer to the query is an emphatic, “They do!” In the branches of evergreens the photographer may find many a design that looks like a Japanese print. In treetops of the deciduous sort he may find suggestions of the art types of a score of other schools, some of these designs so complicated—or so beautifully simple—that they are worth a rather careful study.



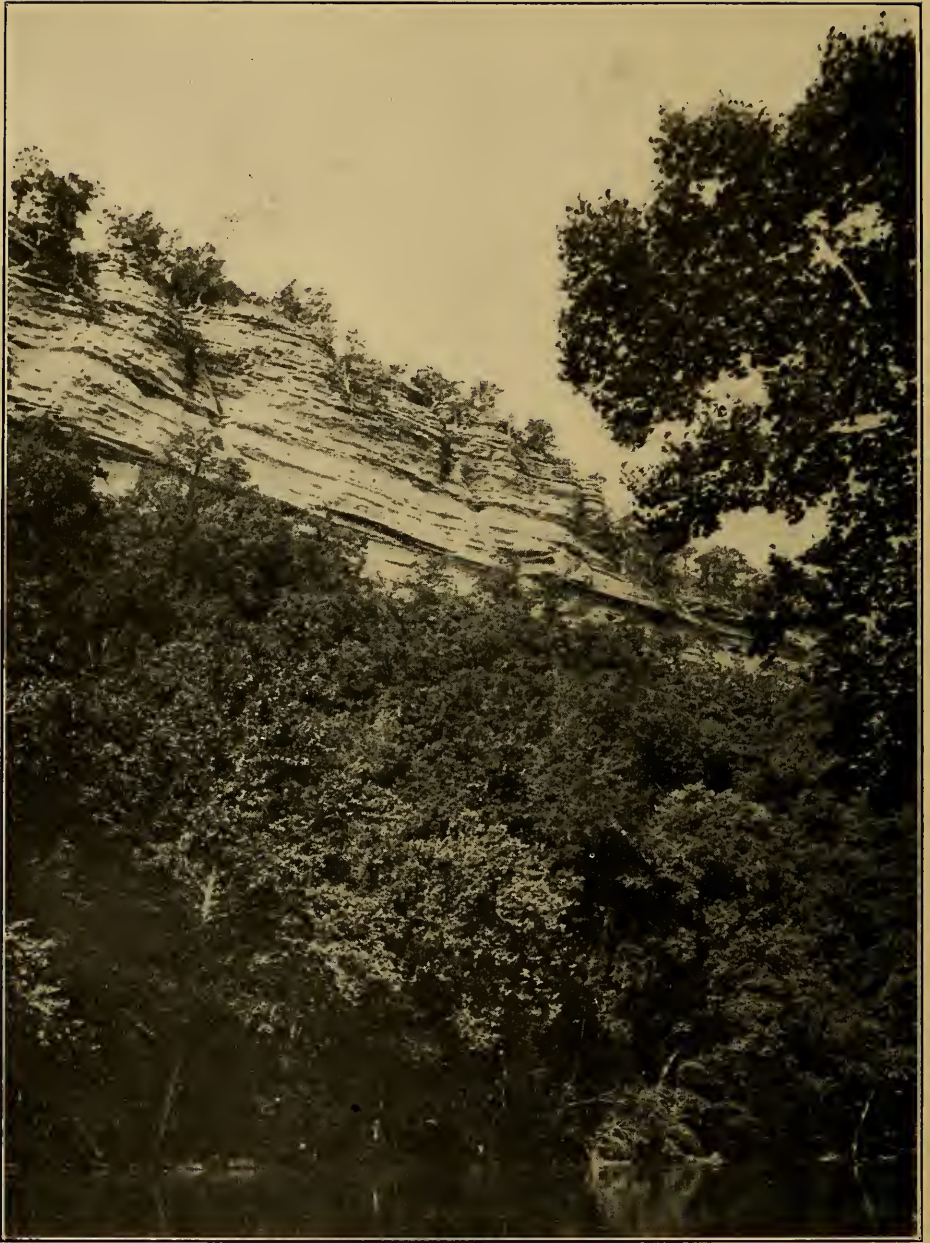
BRANCHES AND TREE TRUNKS FRAME THE WHOLE PICTURE, IN THIS VIEW OF
LIBERTY HALL, PHILADELPHIA.

It is evident enough that they add greatly to the atmosphere and general impression, but it is not so plain that they have come to the aid of a photographer whose traveling equipment did not include a wide angle lens.



FRAMING THE PICTURE.

The value of leaves and branches for borders has been given a more general recognition than any other of outdoor photography's array of advantages. In the example above, the picture maker was trying to center attention on the stark and forlorn trunks left standing after a forest fire. To add a touch of the decorative and to relieve the picture from some of the disheartening gauntness of the dead trees, he had only to include a leafy border and in the foreground the tips of some weeds.



BALANCING THE PICTURE.

An intensely practical service that is not well appreciated is the work treetops may do in a picture as elements of balance. In this view of an Ozark river bank, the lines all started at the left of the page and converged toward the right. Something was required to save the picture from lopsidedness. A treetop on the bank where the photographer was standing was used to balance the composition. Necessarily, the detail in the leaves became silhouette in the print, for the exposure required for water and cliff was insufficient for objects so close.



LIFE IN THE SHORE.

Less than half of the beauty of a lake or a river is in the water. The larger part lives in the treetops or the cliffs or the reeds along the shore. Divide the honors between water and land and the chances of recording in a photograph the real character of the place are doubled. In the instance of this shallow, inland lake, a panorama looking outward from shore always fails to suggest the real feeling of the spot.



THE REAL INTEREST OF PANORAMAS.

In every picture of this or any other set of outdoor photographs it might be easy to show the importance of the foreground. Yet nowhere is foreground interest of more use than in panoramas. The human eye, with the keen stimulus of imagination, sees more in the panorama than really exists. It appreciates how many miles of distance lie between the blue hills and the purple, and the thought of storing that sight away in a box makes the heart beat double time. The eye of the camera often sees only some narrow ribbons of shade laid down upon a broad and otherwise blank film. To aid the dull imagination of a lens, nothing is more effective than something placed in the immediate foreground to furnish an additional tonal value.

You have noticed in photographs or at the moving picture theaters how a single peanut man or an old woman with a cart of apples can enliven the whole vista of a quiet street; or that a wagon at a distance of a hundred feet appears to be jogging along lonesomely, while the same object at twenty or twenty-five feet will fill the scene with vivid life and motion. The same thing holds good in the woods. Set up your tripod where a bush, a clump of flowers, a picturesque stump, or some treetops are close to the lens, and the background will draw power and reality from the impression made by the interest of the foreground.

The picture here reproduced is a general view of Hahatonka, Camden City, Missouri, which may soon become a state park. It is said to be the only district in the Middle West where the rainbow trout has been propagated with success.



COVER THE DECORATION OF BRANCHES IN THE UPPER RIGHT HAND CORNER.
HOW MUCH OF THE INTEREST OF THE PICTURE REMAINS?



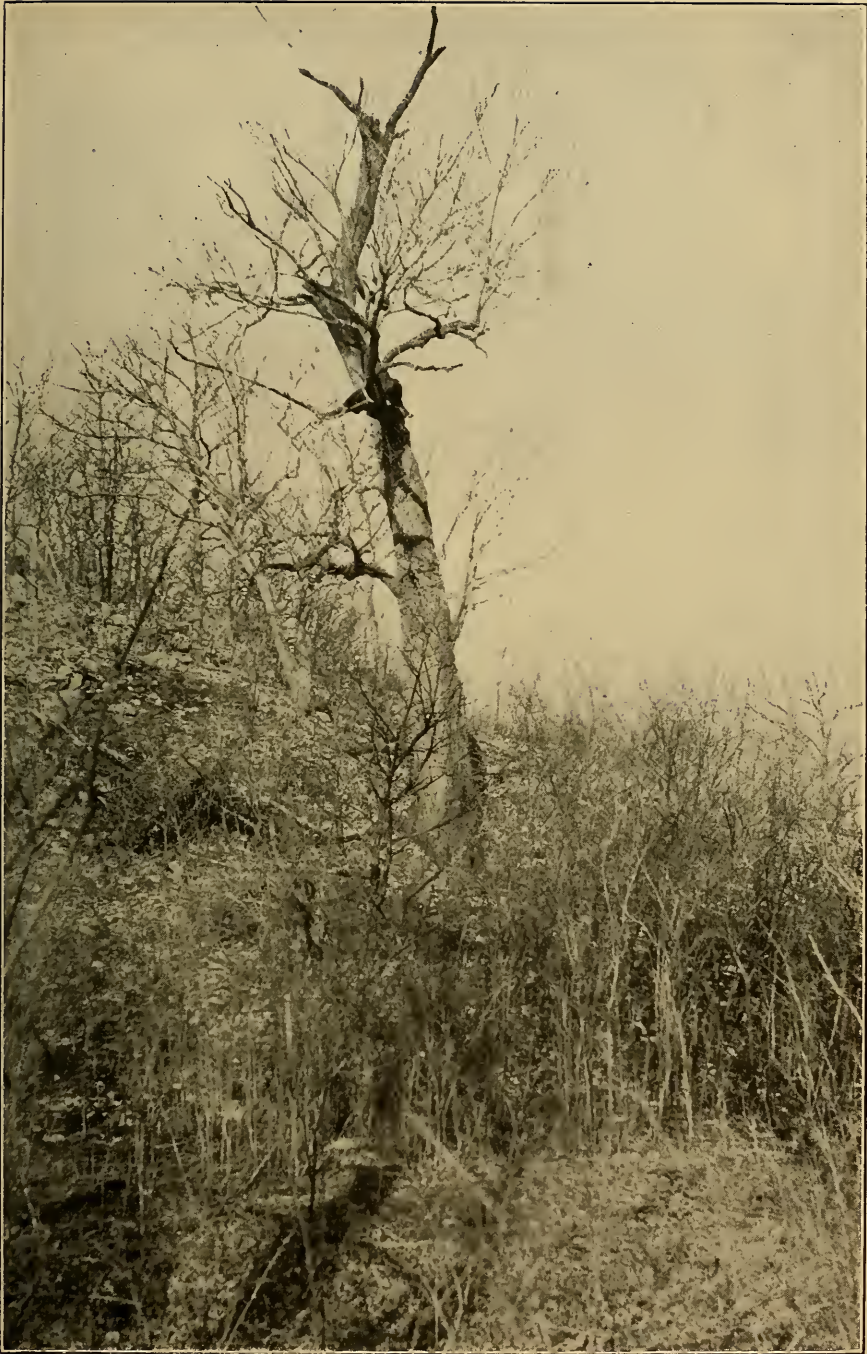
IN TAKING PHOTOGRAPHS AT AN UPWARD SLANT USE THE RISING AND SLIDING FRONT TO COMPENSATE FOR THE SLANT AND REDUCE THE LENS APERTURE TO AVOID OVEREXPOSURE.



AN EXAMPLE OF NATURE'S EVERYDAY WORK IN TREETOP DESIGNS.



A MORE COMPLICATED EXAMPLE OF WORK BY THE SAME RESOURCEFUL DESIGNER.



BEAUTY IN TREETOPS UNADORNED.

The poetic belief that a leafless tree is a thing of melancholy has blinded many photographers to the beauty of unadorned branches. If this tree were three-quarters hidden with leaves, it would look much like ten thousand other green awnings for picnic parties. But in winter nakedness it has something appealing and individual, something almost dramatic.

FOR THE SHORT, LIGHT TRIP

BY WARWICK S. CARPENTER

Photographs by the Author



F “rods and reels and traces” sang the poet, and at his inspiration we hear again the creak of harness and our shoulders long for the pull of the pack. That hard portage, the biggest load we ever toted, was over the trail of “proved desire and known delight” and the struggle itself was good. Nevertheless, it was a struggle and gave little chance for anything but the grind. The short trip, with a light, well-organized outfit, is of a different order. Head up and foot free, one then travels jauntily, with an eye for all the moods and changes of the woods.

To be sure, one may go with a tin cup and a jackknife, but that is ultra-refinement and unnecessary on the score of weight. On the side of comfort it is not to be considered. There is a middle ground, where the cooking outfit will consist of a small, light frying pan, about six inches in diameter, a small mixing pan of about six inches diameter, another pan for a kettle, to nest into the mixing pan, a large tin cup, made to order, five inches in diameter and two and one half inches high, nesting into the pans, and a plate, knife, fork, and desert spoon. All of these may be picked up at any hardware store, at a cost, including the specially made cup, of not much over a dollar.

The pans, being pressed from one piece and seamless, make excellent kettles, and they are so shallow that water will boil quickly in them, if they are set over coals raked from the fire. Double bail handles crossing at right angles can easily be attached to the pan used for a kettle by punching nail holes under the rim and using pieces of heavy wire for the bails. Insert the ends into the holes

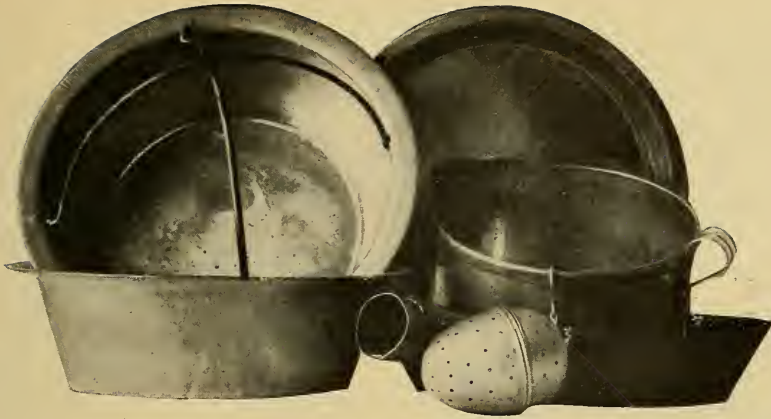
from the *inside*, to avoid the rim, and bend them over on the outside to prevent pulling out. The pan is so shallow that it will be unstable with only a single bail.

If you have no frying pan with detachable handle, it will be convenient to cut the handle off to about two inches in length and rivet to the stub a sheet iron cylinder, about one inch in diameter, into which a long stick may be inserted. It is unnecessary to carry a larger, heavier frying pan. My own weighs just four ounces and is quite large enough for two or even more persons.

A little weight and space can also be saved on the plate. Get one six inches in diameter instead of the usual eight and three quarters. It will pack easier and add the finishing touch to this home-made, baby-grand camp outfit.

The logic of the large cup is that it combines teapot and cup in one. Just set it over some coals until the water boils and then drop in a pinch of tea, or better, use a tea ball. The joints, of course, should be well made and double seamed. Incidentally, when off for a day's tramp with a cold lunch of sandwiches, take the cup, a little tea, and some sugar. The entire lunch will carry inside the cup, and in the middle of the day, beside a small cheery fire, you will readily agree with your friend, Oliver Holmes, on the ideal beverage.

You may have your own ideas about grub for short trips, but here are mine: Bacon, corn pone, tea, rice, erbswurst, sugar, salt, pepper. To make the corn pone, I mix at home, before starting, one quart of *yellow, granulated* corn meal, one pint of white flour, one half cup of sugar, one teaspoonful of salt, four teaspoonsful of baking powder. In camp



THIS IS ALL YOU NEED FOR A SHORT TRIP AND IT WEIGHS ONLY
A TRIFLE OVER A POUND.

it should be mixed in the pan to make a fairly heavy batter and allowed to stand for a few minutes before frying, so that it becomes light and puffy. It should then be dropped by spoonfuls, *without further stirring*, into the hot, greased pan and not turned *until the top has begun to set*. The bacon grease takes the place of butter.

If less water is used, the entire mixing may be put in the frying pan at once, baked from the bottom up over coals until the top has set and then turned. It makes delicious johnny cake. Try rolling the trout in a little of the dry mixture.

Erbswurst is the pea meal sausage of the German army. It is nearly a perfect food, containing meat, meal, and vegetables, and makes the most appetizing and sustaining camp soup. At the end of a rainy day it reduces cooking to its lowest terms. You simply boil it for a few minutes. If erbswurst is not obtainable, mix equal parts of bean meal and pea meal, and salt and pepper to taste. If you are not rushed for time, boil with it, in camp, a little finely chopped bacon. Many a time a light weight soup of this sort will justify itself, but in going real light, it can be dispensed with, together with the cereal and one of the pans.

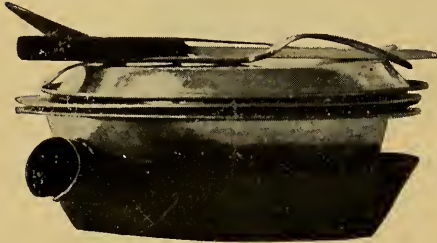
Take matches in a push top tin can. Some tobacco cans are excellent for this. The foods should, of course, be packed

in cloth bags against accident. Save old sugar and salt sacks for this. There should also be a cloth bag to receive the entire nested cooking outfit. It holds the utensils compactly and keeps the blanket from becoming sooty.

There remains to provide a small, serviceable hatchet, a blanket, a pack cloth, a sweater, and personal toilet articles. A dish cloth and towel are also to be remembered. Presumably you will have a hunting or fish knife for slicing bacon. The pack cloth will have little strain, and accordingly waterproof silk will be ideal, but any light, waterproof canvas will do. To make a good shelter, it should be about six by eight feet in size. It can be eliminated, however, and the chance of rain risked.

The easiest way to carry such a small outfit is in the blanket roll. Fold the blanket so that it is about five feet square, then place the bag containing the cooking outfit and part of the grub on one side, about a foot from the corner, and the sweater and balance of the grub about a foot from the other corner on the same side. Next fold over at each end the spare foot of blanket and roll the whole affair tightly. About this, roll the pack cloth. Secure at the middle and half way to each end with string, or better, with tapes or straps. Fasten the ends tightly with a slip knot, leaving long ends to the string for tying together the ends of the roll.

A special harness for the blanket roll will be better than a string or straps, because all in one piece. It can be made of heavy tape or webbing. It should be attached to the roll so that all knots and the long connecting strip come on the outside, away from the shoulder. The short-handled hatchet can be car-



THE BABY GRAND READY TO PACK IN THE BLANKET ROLL

ried either on the belt or in the roll itself. Much weight on the belt becomes uncomfortable unless one is in constant training.

In the following summarized check list of this outfit, the articles which may be dispensed with are italicized. Obviously it is a tolerably complete equipment, and even extended trips may be made by merely increasing the quantity of food carried. Exclusive of food, the weight of the entire pack is about thirteen pounds. Food for three days will weigh ten pounds. This is on the basis of one person. For others add a knife, fork, spoon, cup, and plate each and multiply the grub stake.

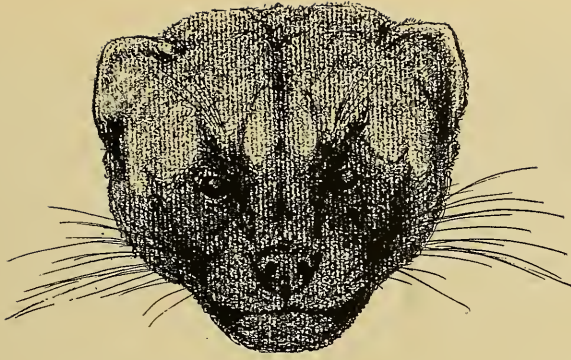
Check List with Food for One Person for Three Days

Frying pan	}	2 pounds.
Mixing pan		
<i>Kettle pan</i>		
<i>Tea ball</i>		
Large cup		
Plate		
<i>Knife</i>		
Fork		
Dessert spoon		
Hunting knife		
Bacon	2	pounds.
Corn pone	4	"
Tea	$\frac{1}{4}$	pound.
<i>Rice or other cereal</i>	2	pounds.
<i>Erbswurst</i>	$\frac{1}{4}$	pound.
Sugar	1	"
Salt		
Pepper		
Hatchet	1	$\frac{1}{2}$ pounds.
<i>Dish towel</i>	} Use moss and sand	
Dish cloth		
Soap	}	2 $\frac{1}{2}$ pounds.
Matches		
Sweater		
Personal toilet articles		
Blanket	5	"
<i>Pack cloth</i>	2	"
Ties for blanket roll.		

When off on a one-day trip the entire cooking outfit, with plates, knives, forks, and spoons for six persons and uncooked food for one lunch, can easily be carried in an ordinary canvas haversack. The cup, which holds a quart, can then serve as teapot, and smaller tin cups can be nested inside it.

The "talking points" of the Baby Grand are that it is very light, very shallow and compact and hence easy to pack, homemade, and inexpensive, and—the real test—adequate.





THE SAINT

BY F. ST. MARS

Illustrated by Charles Livingston Bull

“Be as one who knoweth and yet holdeth his tongue.”

BARTLET swears he had nothing to do with it, and MacGregor says nothing at all, and Brown, the animal tamer of Benchell’s Menagerie, whistles when you ask him about it. Nevertheless, as Blatant Hardway, Esq., pointed out, the facts looked very fishy, very fishy, indeed.

The facts of the case are odd—Benchell’s Menagerie went to the town of Aberdath by road. In his cage in the last van of the procession was “the Saint.” Somewhere, as near as might be, at the point where the road to Aberdath runs for two miles through the demi-semi-strictly preserved moor and forest known as Glenskye, the property of Blatant Hardway, Esq. (acquired by mortgage, by the way), the Saint escaped, got out of his cage and ran away into the gathering night, and no one knew anything about it till after the arrival at Aberdath, when Brown, red in the face and perspiring, ran to Benchell with the broken lock of the Saint’s cage in his hands and winged words in his mouth.

It was evident that the jolting of the cart—it was a vile road—or the teeth of the Saint, or both had broken the lock.

“But where?” roared Benchell. “It’s not the ’ow of it, Brown, it’s the where?”

“God knows,” said Brown. “An’ somebody else will before mornin’, if I knows the Saint.”

Then a vision of the Saint careering across Scotland on his own seemed to strike both men together. Benchell put his hand over his mouth and went away, and Brown put his hand over his mouth and his handkerchief in it and went the other way.

There was no attempt made to recapture the Saint. He was entered in the books of the menagerie as “Sold,” nor was anyone living enlightened further on the matter either then or thereafter.

Now Hardway’s Glenskye marched with Bartlet’s Glenask moor, and the two were rivals for the record game bag for all Northern Scotland, and Smythe, Hardway’s head keeper, had that season, by means which are said to have been crooked, enticed the bulk of Bartlet’s birds over the border with the result that Glenskye beat its own record bag and Glenask was nowhere. Naturally Macgregor, who was Bartlet’s head keeper, had sworn vengeance.

These things happened before the looming of Benchell and his menagerie upon the horizon. Now, where Hardway makes his point is this: his man,



AT THE END OF A TEN-FOOT CLEFT OF ROCK TWO FEET ABOVE A PERFECTLY
INSANE WATERFALL WITH A FIFTY-FOOT DROP.

Smythe, had seen MacGregor and Brown in deep conversation in the private, or back, parlor of an obscure local "pub" shortly before closing time, and MacGregor was plying Brown with many and wonderful drinks—drinks quite beyond Mac's power to pay for. That was at 10.30 P.M., and at 4 P.M., or as near as may be, on the following evening the Saint escaped.

So far all seems clear. What followed was not so clear, for obvious reasons. Smythe certainly knows spots and dashes of it, as it were. The whole real story, however, is locked up in the secret history of the wild, whence, because of one or two services rendered to wild folk, I got it—it came to me, you understand. The merlin, smallest of falcons; he told me some of it that time I warned him of danger; the "father of cunning," the old gray fox, added more when I freed him one day from a trap, and "wise one," the long-eared owl, filled in what the others had left out when I lay observing nature in a pine wood during the long, scented stillness of a moonlit night.

You picture the Saint putting all the yards between himself and Benchell and all his works that was possible. Anyone not knowing him might have mistaken him for a "Teddy" bear with a much worn, disreputable mop of a tail added. Tail and head pointed at the ground; the back arched like the back of pussy when she spots a dog; the feet were set down flat like hands, or bears' feet; there was a glint of longish white claws, and they rattled on stones; the coat of rusty brown-black looked as if it were being shed, only that was its permanent state; the gait of him was his own, none others shared it, it was an out-at-heels, disreputable, part gallop, part trot, part anything you please, and the whole appearance of him was of the shades shady. This one saw as he removed.

Then, after a certain time, he stopped and looked round, and one saw his face, and—! It was not a face of this earth at all. It was the face of a nightmare, a very bad nightmare, the visage of a strayed fiend who never ought to have been allowed above ground at all, even by night. Black it was and with a dog-like snout; lips raised in an evil leer

just enough to hint at the steely fangs beneath; a low, brutal brow, and eyes as of tiny coals smoldering, in which lurked all the hate of all the wild folk against man concentrated into one brain, and something else, not hate, but a knowledge and cunning which it is not right for any beast to possess.

To be quite exact, he was a wolverene, or glutton, from Russia, a beast of the weasel tribe, though not in the least like a weasel, being in size and in looks halfway between a bear and a badger. Thus the Saint as he appeared on the surface. Comes now that part of him which lay beneath the surface.

He stopped, he looked round, he scratched, and then with a growl at nothing in particular—or it may have been some memory of Brown—he hurried on. The flame of the setting sun smoldered and went out; a pale moon peeped wonderingly over a rocky ridge; the bats wove delicate, mazy patterns against the white moon's face; the last grouse had ceased to crow, the last blackcock had gone back to the frowning woods; a stag roared suddenly, bursting, as it were, the heavy silences of the place, and another, farther up the mountain side, answered, coughing hoarsely, and although the first stag was himself hidden behind a clump of heather, you could see the funneled steam of his breath shoot out from the cover as he roared.

After a time the Saint came to a pool and stopped short. It was not the almost sacred beauty of the place that held him; not the frosted silver pool set deep in purple ramparts; not the sight of the old gray mountain fox, a beautifully molded form thrown in silhouette against the frosted silver; nor the roebuck which stood at gaze on a rock higher up so that just his antlered head was ringed by the moon—mounted, as it were, against the moon.

None of these things gave him pause. The scent of grouse asleep held him rigid—a family of grouse, full-feathered and ready for shooting. Then the Saint moved from place to place very quickly, and there were horrible sounds as of flutterings and bird cries of "Murder!" Marvelously quick were the movements

of the Saint for so clumsy looking a beast—a bound here, a slash there, a crunch somewhere else, and then silence. The grouse had gone, all but four. Those four remained, blasted from life almost before they knew it.

The fox, after the first bound of alarm, turned and viewed the thicket whence came the sounds of murder by night. Vermin were scarce on Glen-skye by reason of many traps. He came to the conclusion, therefore, that this must be the work of a polecat that had wandered down from the mountains. He would investigate. Who cared for a polecat? Besides, one might bully him out of his own "kill."

You know the rules of the stalk as laid down in fox-lore; how you must crawl belly-flat, how you must place each foot down separately and without noise, and how you must use every stone, every bush, every blade of grass ever to screen you? Well, the old gray fox did all this, and yet, when with infinite caution he had got to within a yard of the new animal and cautiously peered from cover, he—fell backward and went away in a hurry.

He found the Saint open-mouthed and terrible in a setting of corpses and feathers. The Saint was quite ready for him, was expecting him, had, in fact, been cognizant of the stalk from the very first. No wonder the fox went away. It is not every day one comes across beasts that can foresee the stalk of foxes.

The Saint fed the first good feed he had tasted since Fate in the shape of a trap had taken him from his native wilds of Russia half a year ago. Then he drank, cleaned from head to heel—even he could not disobey this, the strictest of nature's laws—and ambled off. A dozen pairs of furtive eyes watched him go, a dozen alert, moist muzzles came and sniffed inquiringly at his tracks after his passing, for in the wild there are always those that watch and are never seen. But the Saint, what did he care? Few he knew could face him in open combat, and in cunning none at all.

He moved slightly uphill, our wol-verene, to the roughest places, the most ghostly gorges, the most bristly thickets, the blackest pines, the most frown-

ing cliffs, the angriest streams that leaped half their course in clean drops and galloped the rest. He prowled here by instinct I suppose, for he could not have known that here alone he would have a fair working chance to survive in the days to come, nor that this was the wildest spot on all the moors.

He was now in the heart of the most strictly preserved estate in Scotland. Only a stray stag was shot here occasionally, for the grouse was king, the blackcock his Heir Apparent, the capercaillie his Prime Minister, the pheasant Governor of the Lower Levels, and the gay mallard and gayer teal Pages in Waiting. There were also rabbits.

Vermin here were scarcer than strawberries in winter. There were, as we have seen, a few patriarchs at the game, but the great majority found many inducements to stay away. The Saint discovered one of these inducements as he shambled his own particular shamble through the glens. Then the trouble began.

Suddenly, without any reason that you could see, the Saint's fur sat up all along his back, and he sat down on his ragged tail. His snout pointed straight at the ground like an accusing finger and there was a look in his eyes that was distinctly dangerous. To the human eye he appeared to be snatching at gnats. Nothing in the way of danger could lie along the soft carpet of moss that formed his path. So said his eyes also, but his nose told another story. His nose spelled out the ominous word "steel."

Presently you see him walking in infinitely cautious circles round this spot. Then, having marked the danger point, he started to dig swiftly and angrily. He dug with the air of one not altogether new to this game, and at the end of the dig was a chain, and at the end of the chain was a steel trap, jaws set ready for work, the whole contrivance most artfully concealed beneath the innocent carpet of moss.

Then was seen in what manner the Saint differed from all other beasts. The dragging of the trap out of its hiding place by the chain had sprung it, and the cruel, metallic snap of its jaws was the signal for a kind of madness on the

part of the Saint. He became in appearance more fiendish than ever, and he gave himself up to venting fury upon that trap in a human and ghastly manner. Then he carried it two hundred yards away and *hid* it past all hope of finding in the bowels of a hollow tree—*hid* it, I said, he who was only an animal.

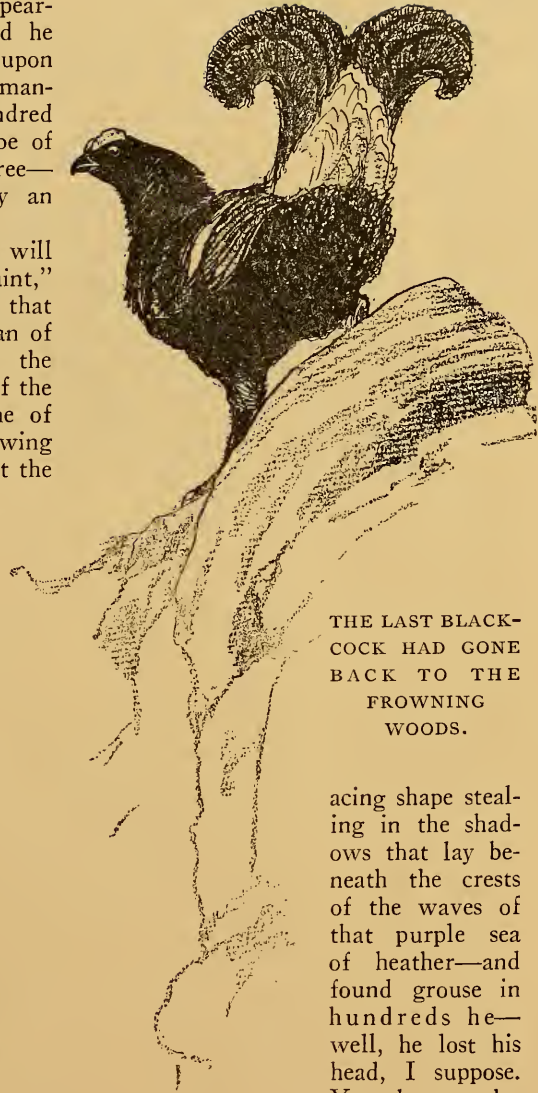
"God knows, and some one else will by morning, if I know the Saint," Brown had said, and that showed that the animal tamer was at least a man of discernment. Deeper and deeper the wolverene slouched into the heart of the preserve, and his progress was one of marvelous actions. Carefully following the track of that keeper who had set the first trap, he unearthed others—goodness and his extraordinary self know how he discovered them—to the number of twelve.

Each of these he pulled up, "threw," carried off, and hid. In the case of one trap, he found a miserable stoat therein. Him he killed and partly consumed, leaving the remainder of the carcass as an insolent reminder to any whom it might concern that he, the Saint, had passed that way.

Thence he passed—always ascending slowly, through ranked and serried larch, or black cathedrals of stately pine—to the level of the upper moors. This was the big beat, the grand beat, the place where Blatant Hardway, Esq., and his friends, shooting from butts, were wont to make their record one day's bag for all Northern Scotland.

You will understand that in Russia one eats, as one lives, under more than one restriction—and the wolverene had come, not willingly, from Russia. Famine to him was something more than a name merely. He had met famine face to face. So had all his fellow wild folk of those parts, and that made them both scarce and wary.

If he wanted a meal, and he was of that tribe who live under a curse of eternally wanting meals, he had to work for it. Therefore, when he issued out upon the high moor—a long, squat, men-



THE LAST BLACK-
COCK HAD GONE
BACK TO THE
FROWNING
WOODS.

acing shape stealing in the shadows that lay beneath the crests of the waves of that purple sea of heather—and found grouse in hundreds he—well, he lost his head, I suppose. You know the feeling that comes

over a schoolboy who finds himself let loose in a pastry shop, or of a man who after years of poverty finds himself suddenly wealthy? Something of that feeling must have assailed the Saint at that sight of a hunting ground, the fatness of which was beyond his wildest ideas.

There is no official return to show the extent of the damage done by that one beast on the high moor in that single night between midnight and an hour before dawn. That he gorged to repletion and continued slaying after gorging simply for the love of the thing is evident.

Not that the wolverene is exactly an agile beast, as agility is counted in the wild, but the grouse were so pampered, so fat, so spoiled by the fostering of man that it was mere child's work for a hardened hunter like himself to slay and slay and go on slaying till morning.

The fox speaks of a vision of him red-eyed, red-fanged, threatening, gliding and darting with unexpected swiftness among the twisted heather stems; the long-eared owl tells of how he alone counted ten grouse lying dead and uneaten in the path of the Saint; and the merlin has it that he beheld the keeper next dawn pick up five more, and goodness knows how many others were overlooked.

But though mad for the time being, the Saint was no fool. An hour before dawn found no Saint, or rather it found him at the bottom of an all but impassable gorge, at the end of a ten-foot cleft of rock two feet above a perfectly insane waterfall with a fifty-foot drop, and a pool of, for all I know, more than fifty-foot depth below. The hanging rainbow vapor of the fall hid the cleft entirely, the gnarled roots of a single towering Scotch fir had rent him an obscure back passage in case his exit in front were cut off, and in order that any pursuer should not find all this too easy, it was necessary to make at least four, and possibly five, giddy leaps from rock to rock above the maniacal waters to get to the cleft.

All that day the Saint slept, lulled by the roar of the fall and the ceaseless chatter of moving waters, while sapphire dragon flies with ruby eyes passed and passed again above him, the dainty, white-fronted dippers played in and out all round him, and an occasional sullen, echoing splash told where some monster steel-blue salmon, wide-gilled, hook-jawed, firm-sided, fresh run from the sea, was attempting the passage of the falls.

From time to time a flock of grouse burst with a whirl of wings overhead, to drop out of sight over the opposite wall of honey-colored rock. Once it was no grouse, but a raking form that went by, flying with that slashing window that is the mark of the peregrine falcon all the world over; once, too, a

single snipe came and—for reasons alone known to itself—hovered exactly above the fall, calling, calling, and once with a mighty rush of wings and a huge flurry and commotion a great cock capercaillie went sailing majestically by.

From the fall of darkness for upward of an hour the bats as they wheeled and swerved, caught sight of the steady glare of two eyes at the edge of the cleft. That was all—just the eyes unmoving, inscrutable, and indescribably malignant. That was the Saint taking his bearings. He was no fool. He knew that his was no life to expose recklessly and that such as he are not allowed to make even one mistake. Hence this motionless sitting just within the cleft, this frigid watching, this keen listening, this testing and analyzing of every scent riding on the air currents. Had a man moved, had a man drawn a loud breath even in that vicinity, the Saint would have known it.

Then a cloud slid across the moon, and as its shadow passed across the cleft and on, something, it seemed just the least suspicion of a deeper shadow, passed with it—or was it imagination? Anyway, when the cloud shadow had gone—and that was in almost the same time as a man would take to hold a deep breath—there was no longer the steady glow of those burning coals within the cleft. There was nothing at all, the place was empty, and—the Saint was shambling downhill through dense cover a hundred yards away.

I do not pretend to know how he got there, this beast of evasive daring. He was just there—one moment in his den, the next drifting, drifting, a shadow among a dozen shadows, in and out over the mottled floor of moss, between the crawling stems of age-old heather—downhill to the still and stately gloom of the woods.

Once within the cathedral silence of the columned aisles the beast paused. There was a fine smell of pines in the air and pine needles crunched underfoot. Far above him the wind was singing a romping song to itself among the tops of the trees. It sounded like the far-away dirge of surf trampling on a sandy shore. There was no other sound.



HE CARRIED IT TWO HUNDRED YARDS AWAY AND HID IT PAST ALL HOPE OF FINDING IN THE BOWELS OF A HOLLOW TREE.

Suddenly dim stars floated in the spaces between the grained boles: twin lights swung from trunk to trunk. There was a whisper as of fairy feet flitting. One could, in that hour and setting, have believed anything, believed even that he had surprised the fairies of the place at their gambols. But they were no fairies. The moonlight said so.

Twenty yards away it was pleased to weave a patch of silver tracery shining through the branched roof, and a brown form trotted—trotted, I say, drifted light as a wisp of smoke across it. Instantly, without one second's pause, the Saint had projected himself, swift as a bolt, across the intervening space, but he was met by a tearing blow on the face, and the beast that he had sprung at was not there. It was—it had been—a roebuck. None but the roe could have executed that stealthy flitting and that perfect rebuff and evasion. Of all the deer, none could have acted with such agility and—this was the miracle—such coolness.

Then it was that our wolverene revealed his true colors, and one saw that men had not christened him the Saint for nothing. With blood streaming down his diabolical face, he raged and

tore like a thing possessed of a devil. He growled, he gibbered, he snarled, he rolled, he tore up the earth with his long white claws, he ran round in circles, he bit up dead branches, and finally he set off at a canter upon a tour of destruction that was to live in the memory of the keepers of Glenskye.

It is on record that on that short night he discovered, "threw," wrenched up, and hid no less than sixteen traps which had been set for vermin; killed in sheer wanton lust of slaughter not less than three rabbits, six grouse, and, in the lower woods, four low-roosting pheasants, and finally ended by pursuing a hare into a sheepfold and then terrifying those woolly ones to such an extent that they broke away and fled four miles across the moors. He must have attacked the sheep, too, for more than one bore ugly wounds on the flank, such wounds as his steely jaws alone could inflict—though it was put down to the account of poachers' dogs, as the traps which vanished were put down to the door of poachers. A shepherd's dog, a collie, discovered him at this gentle pastime at two in the morning, and started in to rout the pillager, but he was himself routed, and returned to his

master at 2.09 A.M., a ghastly and wrecked horror.

The day that followed found the Saint hidden in his nearly impregnable lair. He slept the sleep of the wild folk, which is at the same time the deepest and lightest of sleep. Rain storms chased one another across the face of the moor, black clouds piled up and toppled and tore, and men prowled all-whither. They were keepers, four men with worried looking faces, for which fact there was no wonder.

Smythe was in a state bordering upon insanity. His moors were being ruined, his woods were being spoiled, and, worst of all, his high moor, his daisy, his shoot of shoots, was, so far as the grouse were concerned, going to the dogs. Nor was that all; the absence of traps was giving the vermin a chance, there were already signs of an increase of the banned ones. Finally, as if this were not enough, that old ruffian MacGregor would buttonhole him when and wherever it happened to be the most inconvenient—in front of Blatant Hardway for choice—and complain of the fact that the vermin from Glenskye were spreading all over his moors.

"Can ye no trap, mon? Can ye no trap? It's awfu'. Yon high moor o' yours 's just crawlin' varmin'," cried old Mac, and Smythe choked.

Hardway cursed Smythe, and Smythe cursed the keepers, and the keepers having nobody to curse, patrolled them with loaded guns, by night as well as day, it being thought that poachers stole the traps and their dogs did the rest of the damage. It was even suspected that old Mac had these poachers in pay, for it was an open secret among the men that Smythe had, by laying trails of dainty foods and oils and by paying shepherds to let their dogs run free on Glenask and keep them "at heel" on Glenskye, ruined the shooting on the former to the glory of the latter in the previous season.

The burning orbs of the Saint saw these men pass and repass, their forms silhouetted against the sky line when the moon got up over the hills that night, and he trebled his caution accordingly. It was fully an hour and a half after dark when he sallied upon his raid that

night. As before, he was out and away long before the keenest watcher could have realized it. He trailed the patrols, watched them from the heart of the thickets, drew circles round them and examined them from every point of view.

Finally, he lured one of their dogs on his trail till, a quarter of a mile away from any help, he turned and rent the unfortunate one and sent it howling to its master, carved scientifically past all recognition. Moreover, as if that did not satisfy, he unearthed the keepers' suppers hidden in a hollow tree, scattered them broadcast, and hid what he could not scatter—aye, even to the flask of "th' wee drappie" hid he the things. Then he retired to the serried larch woods and dined serenely off blackcock, picking, mind you, only the daintiest portion of each bird, as the disunited corpses next day attested.

Any stranger who had visited Glenskye in the days that followed that night would have declared the land to be in a state of war. There was no peace in the place at all, though there was silence—that silence which discovers waiting men armed with loaded guns behind thickets, that silence which comes from the knowledge of being continually under observation of at least one pair of binoculars had Glenskye. And by night there were ceaseless patrols also. In those days it was certain death for any dog not holding an official position to be found upon the shooting estate of friend Hardway, and little better for a strange man.

Nevertheless, the position became in nowise less strained at all. In fact, it was evident from the clouded brow of Hardway and the fierce desperation written upon the face of Smythe that something very terrible would happen soon. It must. There was no hope for it.

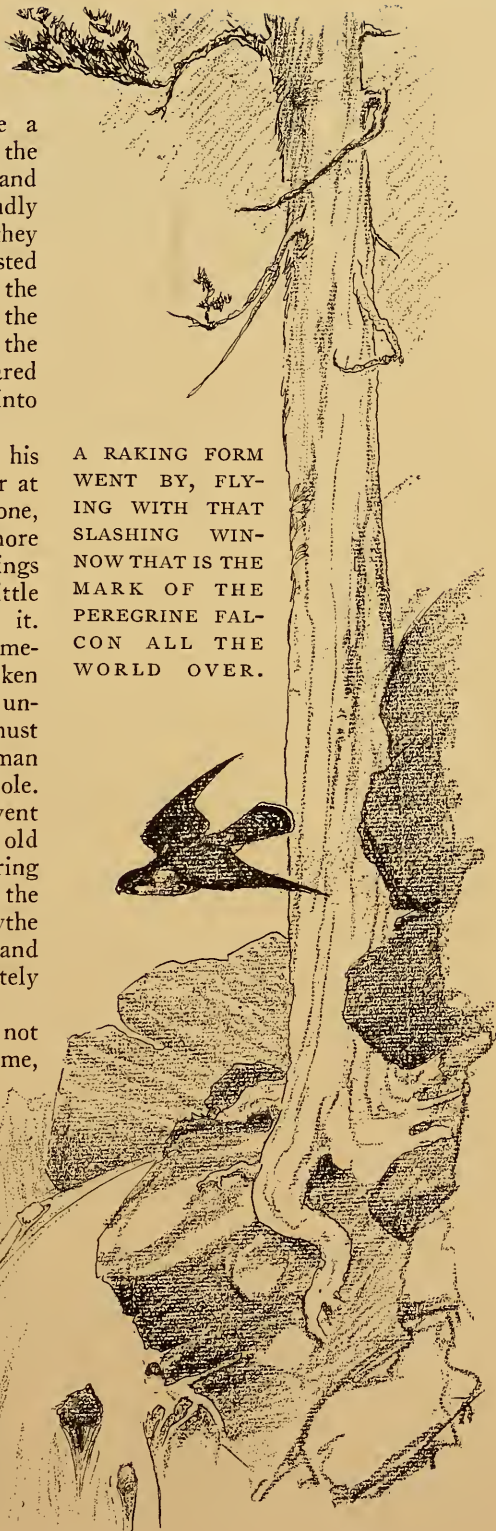
Meanwhile nobody—and there were, with local police, not more than thirty watchers armed variously, to say nothing of dogs of terrible and murderous aspect—did anything, nobody saw anything, nobody heard anything. It was as if the land were under a spell, as if the spirits of all the poachers that had ever in days past visited Glenskye had

chosen that time to rise from their graves and visit it again.

Traps continued to saunter apparently into spook land; coveys of grouse, which to-day were a wondrous fine sight in the face of the sun, were to-morrow a scattered and panic-stricken remnant fleeing blindly from the death in the night that they could not see; pheasants which roosted carelessly low one night roosted in the other world the next, and even the great, pompous capercailzie cocks, the pride and glory of Glenskye, appeared to be slowly dissolving, like vapor into the deadly nights.

Nor was that all. A keeper left his gun in a locked hut on the high moor at sundown, and by sunrise it had gone, walked into the darkness and no more returned, and half a dozen other things—game bags, sticks, traps, and little things of that sort—had gone with it. Here, however, there was at least something to go upon. A Thing had broken in at the back of the hut, and this, unless it had been a dog or a badger, must certainly have been a boy. No man could have crawled through that hole. Then it is on record that Smythe went temporarily but completely mad, and old Mac ceased suddenly from sauntering up and down the boundary, mocking the while in a loud voice, because Smythe had run after him with a loaded gun and an under keeper hanging desperately round his waist.

From this you will perceive that not at this time, and possibly at no time, was the presence of the Saint suspected, or even hinted at. Probably not a man there knew that such a beast existed *in any part of the world*, let alone here in the grouse's holy of holies. It was always the same theme, the same quest, poachers must do the stealing and their dogs the killing, and thus, partly because of his unparalleled caution, partly because of his marked nocturnal habits, his immense fighting powers,



A RAKING FORM
WENT BY, FLY-
ING WITH THAT
SLASHING WIN-
NOW THAT IS THE
MARK OF THE
PEREGRINE FAL-
CON ALL THE
WORLD OVER.



A COLLIE STARTED IN TO ROUT THE PILLAGER, BUT HE WAS HIMSELF ROUTED.

and, above all, his uncanny—I had almost said human—knowledge and cunning, the Saint might for all I know have continued filibustering at Glenskye to this day had he been content.

Unfortunately, however, as happened to Alexander, he sighed for other worlds to conquer. He had done every conceivable sort of harm that he could do to Glenskye, had “knocked the stuffing out of the place,” in fact, and was now prompted—possibly by the devil his master—to extend his sphere of influence. Then calamity descended upon him.

It was on the seventeenth night after his escape, a night of tearing wind, racing clouds, bursts and spatters of rain, and velvet blackness, that the Saint evacuated the cleft, and removed, at his indescribable slouch, over the hills. Something of that restless nomad spirit which afflicts all the weasel tribe must have come upon him in that hour, I think.

For a moment he paused on the edge of the heather and hesitated. He shook himself with a swirl of flying wet and sniffed the hammering gale. Whither? He had all the compass to choose from, but fate had turned her face from him at last. He shambled off westward, and westward lay Glenask, and, what was the main point, old MacGregor—but how was he to know that?

Once, on his way, he heard men whis-

pering and knew by the taint in the air that they were not ten yards off; these were keepers lying in wait for him, had they known it, but they never knew. Once, too, he “froze” at the vibration of footsteps—man’s assuredly, for they were too clumsy for any beasts—and as he “froze” Smythe’s dog, following at his master’s heels, growled suddenly and checked. Smythe stopped, rooted. The Saint was still as a tree. Then Smythe said something low and quick, and the dog sprang with a roar.

Followed a whirl in the inky void, a quick and horrible growling, a rush of smothered snarlings, a yell from the dog, and silence. The dog came back with a three-inch gash on his shoulder, and the Saint went away in a hurry because both barrels of Smythe’s gun had sent quite a number of shot singing and whining at his heels. But Smythe never saw him. He only heard the rustle of his passage.

When the Saint struck Glenask things happened. He was hungry, he was angry, and here was a moor full of game; a close-trapped place where Hardway’s harried ones had found shelter. No need was there for his marvelous hunting knowledge, a single bound scooped up one grouse, and a second, lightning quick as the covey rose, slashed down a second.

Later, his hunger appeased, he turned

to the cooling of his anger. From far away, on the gale, came the sound of a thing that was in trouble, so that it could not refrain from yelling. Him the Saint stalked, and the stalk ended in a trapped stoat, which swiftly, with the wolverene's assistance, became a dead stoat. The rest was easy; needed only to trail MacGregor, who had set that trap, and every trap on that part of the moor—ten in all—was successfully dealt with after his own gentle and peculiar fashion. After that he moved down to Mac's cottage itself, where he spent the rest of that night, mocking at the chained dogs, sampling the blood of Mac's fowls, and generally stirring things up.

Next dawning Mac's flaming beard, thrust in at the fowl shed door, fairly bristled at the sight of the butcher's shop that was within.

"Ach," said Mac. "I'm thinking he's coome."

Then Mac fetched his rifle, cast loose four beagles, flung them once round the fowl house, and in five minutes was toiling, panting, up the glen in the wake of as fine a burst of hound music as ever wakened the echoes in the hills on a misty morning.

The Saint heard the din from the bowels of a hollow tree in a pine wood,

and bared glistening fangs superciliously. It was a new discord to him. It might mean anything, or nothing. Anyway, he was in good hiding—he would sleep. But the riot increased until, with a crash, it broke round his tree—broke and raged and surged again. Then it ceased.

* The wolverene was full awake now. He was, as nearly as could be, alarmed, and for good reason. Mac was chopping down the tree. Ignominiously he turned him out of the crashing trunk, turned him out blinking into blinding sun, to fight for his life; with his back against another tree, in a flash, he faced the hounds. He had to. There was nothing else for it. Followed a barlike gleam as the sun glinted along a rifle barrel, a tiny stab of flame, a sharp, short report, and the Saint stiffened all over, drew himself up to his full height, leaped straight at the pack, and fell in mid-leap—dead.

Silently Mac buried him, and silently he went home. He said nothing about the matter to anyone and has continued to say nothing ever since. You ask him to-day what is a wolverene? He will simply answer:

"Now ye'll understand I'm in no sense paid to study natural heestory."

And that is all.

ROUTE SKETCHING

BY HORACE KEPHART

With Sketch Maps by the Author



AMONG the pleasures of life in a wild country I count first the thrill of exploring new ground. "Something hidden: go and find it!" He who does not respond to that mainspring is out of order—his works need looking into.

Of course, the whole earth has been rambled over by somebody before our time; but it suffices one of us to bore into some wild region that is unknown to himself, unknown to his companions,

and which never has been mapped in detail.

I used to go hunting, every fall, with two or three comrades who felt as I did about such matters. We never hired a guide. On arriving at a blank spot we would spend the first day or two ascouting. We would scatter, scour the country, and then, around the camp fire at night, we would describe, in turn, what we had found.

Verbal reports, such as these, are more entertaining than useful. The crudest sort of a sketch on paper would have

taught us much more. By combining our route sketches we might have produced a serviceable map of the country for miles around. I wish we had made such maps. I would love to pore over them in these later years.

We thought that route sketching would take too much time and trouble. That was a mistake. Anybody who can read a compass and draw lines of direction can make a practical route sketch without losing more than twenty-five per cent of a steady jog. The only instruments and materials needed are a pocket compass, a watch, a lead pencil, and a notebook, or a bit of paper tacked on a piece of thin board.

As examples, I give here a couple of sketches showing, respectively, the backwoods half of the wagon road and the over-mountain trail to "the last house up Deep Creek," where I abide. I made these, while still new to the country, without losing more than half an hour from regular marching time. First, I walked into the railroad station, sketching the trail as I went. The next day I returned by wagon, mapping the road and the creek, without once checking the horses.

My rough sketches were made in a vest-pocket memorandum book that was quadrille ruled. My compass has a dial of only $1\frac{1}{8}$ inch, which is very small for such work, but handy, since I can wear it in a leather wrist strap buckled around my left wrist. This is the best way for a woodsman to carry a compass: it is never in the way, yet always right under his eye when needed. To orient the instrument, it may be slipped out of its guard in a second or two.

Considering that the country here is rough and so densely timbered that there are few outlooks, I was pleased to find that my "closures" required very little "humoring in," as a surveyor would say.

In sketching a route, it is convenient, though not necessary, to use paper ruled in little squares. Any dealer in drafting instruments can supply cross-section paper ruled ten lines to the inch. A piece of such paper, about 7 x 10 inches, should be tacked on a thin board and carried in the hand. If this is too cum-

bersome, use a notebook and, when you come to an edge of the paper, begin again on a fresh page.

At the start, take the bearings by compass of some object that you can see in advance. Then jog along, at customary stride, counting every other pace (right foot) as you go. To count every pace would be needlessly wearisome. Drop a pebble in your pocket for every hundred double paces. When the object you sighted is reached, mark it on the paper, draw a line from the starting point corresponding to the course, number this first stop "1," and note on the margin the number of paces from 0 to 1. Then take a fresh bearing, if the course shifts, and continue in the same way. (See Fig. 1.)

The conventional surveyor's pace is thirty inches. I do not believe in altering one's normal pace to an arbitrary standard. That is unnatural, fatiguing, and cannot be kept up on a long march. Walk at your customary stride back and forth over a measured distance, and average the result. Do this over fairly level ground, and then up and down steep places, learning to make allowances.

In my own case I find that my normal pace, on a steady march over fair road, is thirty-three inches, and the cadence one hundred steps to the minute. This would be 1,920 paces to the mile. Allowing for ordinarily uneven ground, I figure on 2,000 paces to the mile, which is eighty-eight yards to the hundred paces, and three miles an hour. This happens to be convenient in plotting, for, when mapping on a scale of two inches to the mile, as in Fig. 2, each of the $\frac{1}{10}$ inch squares on my cross-section paper represents exactly eighty-eight yards, or one hundred paces of 31.68 inches.

In the wilderness, where roads are generally bad, if there are any at all, the distance traversed is of less consequence than the time taken to cover it. So, in sketching a route for some other person's guidance, it is important to give a time table from point to point. Your estimates of distance may be faulty, but your watch can be relied on.

Time measurements also are good

enough for open country and fairly straight courses, where it is not necessary to count paces in order to keep the bearings correct.

In thickets, swamps, blow-downs, steeps, and other places so rough that one can neither pace steadily nor judge distance by time, he must estimate by eye alone. This should seldom be done for intervals of over one hundred yards.

Pedometers for automatically registering paces are of no use in the wilderness, since they record every step taken, regardless of whether it is in the course or not.

The paces of saddle animals can be determined by test, both at walk and trot. The pace of a horse is almost as uniform as that of a man. A mule's gait is still steadier and the stride more even.

Floating down a river of fairly regular current, one may estimate distances pretty closely by keeping his boat in mid-stream and timing it from point to point.

My sketches show how landmarks are noted along the route. In the wild and uninhabited country beyond our house I would have noted old camp grounds, splash dams, gaps, bad thickets, cliffs, etc., in a similar way. Where the forest and contours are of uniform character it may be well to establish, here and there, some artificial landmarks, by which anyone following the sketch map can make sure of his position. I seldom blaze a tree for this purpose, because blazes are everlasting and may cause trouble in years to come. It is wiser to pile a few stones in a peculiar way, and note them on the map, or bend over a couple of bushes, and cut them half through, so that they lean in a certain direction.

It seldom pays to try to show contours on a mere route sketch. The timetable of actual marching, in connection with the plotted route, shows plainly enough where the going is slow. It is a mistake to encumber a sketch map with details that are of no use in pointing the way or verifying a location.

Written notes will help anyone who is to follow the route. The examples here

printed were made for a friend who wanted to visit me, but who could not foretell, a day in advance, when he could get away from business. I sent him the following letter:

MY DEAR ANDY:

There are two ways to our place. One is a wagon road over which a team can haul one thousand pounds when Jupiter isn't pluviating. There are eighteen fords in the last six miles. The creek is impassable for a few hours after a smart rain. Ford 10 ("the deep ford") always wets a wagon bed. Ford 12, at the Perry gap, is dangerous when there is ice. No footbridge between Hunnicut's and McCracken's, nor any habitation.

The other way is by trail across the mountain from Hunnicut's. This is always practicable for a mountain-bred horse or mule with light pack, but he must do some sliding down from either the McCracken gap or the Pullback.

Send a nickel coin (not stamps) to The Director, U. S. Geological Survey, Washington, D. C., for the Cowes sheet of the U. S. topographical survey. This sheet takes in Bryson City, N. C. (our railroad station) and the Deep Creek country north to Jenkins's, where my sketch map begins. It is accurate, and all the guide you need up to that point. It is joined on the north by the Mt. Guyot sheet, which is worthless— whoever depends on it for the country between Clingman Dome and Mt. Guyot will get lost. Nearly all of the minor details on this latter sheet are fictitious, and some of the greater landmarks (peaks of 5,000 to 6,000 feet) are miles astray.

Trail at Hunnicut's stable swerves sharply to the right, up a steep bank, and thence onward goes through thick forest. At McCracken gap our fork of the trail is marked by a small oak, with burl at height of your head, blazed last year with a cross, and pencil-marked with arrow. The trail to Indian Creek and the Cherokee reserve on Lufty is much fainter than ours.

Observe that a mere route sketch is only intended to show the way from one point to another, and tell the user where he is at any stage of the journey. Hence it need not be mathematically accurate, and hence it can be made swiftly, with crude instruments. Mapping proper is much slower work. Still, a very useful and practical map of a region several miles square can be made in a few days by one man, combining his route sketches, provided he takes a little more pains in locating a few prominent landmarks as "controls."

FOR BED AND BOARD

BY LLOYD ROBERTS

I WAS out of regular work and barely meeting my expenses by picking up any odd jobs that came along. So when an official of the Canada Eastern sent word that he wanted a man to mend the guard pier above the railway bridge, I gladly reported for duty. I was told to hire an assistant and rush the work through, for it was then the last week in March, and if the ice began to run before the repairs were made there was a good chance of the pier being entirely demolished.

That same day Jimmy Briggs and I collected the necessary tools and material and started in. The pier I'm referring to stands near the middle of the river, about fifty yards above the drawspan and unconnected with anything but the bottom gravel. To get to it, then, we were forced to sloop across a quarter mile of wet ice, which was already honeycombed with seams and cracks—some as wide as your foot. Sleds and pedestrians had given up using the river as a highway, for though the ice was nearly three feet thick, the melting snows and rains had swollen the river until it was too big for its jacket and there was an open stretch of water ten or twelve feet wide skirting both shores.

We bridged this gap with a plank, and had to do the same thing at the pier, where the ice had shrunk back and left a circular patch of black, eddying currents, like a moat around a castle. We found that the last freshet had played havoc with the upper side of that pier, tearing the sheets of iron from the two-by-four deals as if the half-inch metal had been paper and crushing the woodwork into splinters. It wasn't very difficult work, as long as we took care not to lose our footing and slide into that black hole beneath us.

We hooked a twelve-foot ladder to the top and began at the bottom of the slope, which was about as steep as an ordinary

roof. First we cut away the broken deals and spiked new ones in their place. Then we riveted on the iron plates.

Men, crossing the bridge just below, used to stop and watch us, and after we'd been there a week or more one fellow shouted that we'd better move lively or the ice would catch us. But we weren't afraid of that. The surface seemed as firm as ever, though the water kept rising and widening the gap about the base of the pier. A few days later, however, we heard that the ice was moving in the upper reaches and a jam had formed at Savage Island, ten miles above the town. That spurred us on, for we didn't relish the idea of being marooned on our artificial island.

By the seventh of April we were within a couple of days of the end of the job. It had been raining all that morning, and when we returned to work after lunch we noticed that the river was coming up faster than ever. Half of our new plates were submerged and the patch of open water around the pier was boiling like a pot on a hot stove. It had become quite a ticklish performance to cross that narrow plank, with the promise of death beneath the ice if you lost your balance. The sun came out warm and cheery as I mounted the ladder and gained the top of the pier.

"We'll be through by to-morrow night," I called to Jimmy, stooping to pick up the sledgehammer.

He had just stepped on the bottom rung and his face was level with my feet, when I saw it suddenly go white. Then he swung round shouting, "Come on, Roy, the ice's moving!" and went over the plank on the run.

I dropped the hammer to follow him, but it was too late. His flight had dislodged the bridge, and he had scarcely left it before it slipped into the water and was dragged from sight. At the same time the pier seemed to glide up

river, due to the ice starting down, of course, and the air became filled with a dull, grinding roar, deep and ominous.

I knew I was in a bad fix, but for the moment all my anxiety was for Jimmy. He was racing as hard as he could go for the draw-span, over a surface that bucked and gaped and closed again, and each second I thought he was a goner, only to see him clear a fissure or dodge some up-thrusting, jagged blade of glittering ice in the nick of time. If he had lost his head or his foot had slipped, nothing on earth could have saved him. But at last he made the bridge, and with a desperate spring succeeded in catching the lowest girder with his hands and drawing himself up. Then I straightway forgot him, and everyone else for that matter, in the fight for my own existence.

The noise had increased to a confusing, deafening bedlam. The main volume was like heavy surf or a continuous roll of thunder, interspersed with an irregular fusillade of small-arms, while close around me rose a dry, rustling whisper as the smaller particles of ice grated with each other and the pier.

On every side and as far up river as I could see there was not a patch of open water as big as your fist; just ice and more ice, in all shapes and sizes, charging down as fast as the torrent could drive them, until I grew dizzy and bewildered and sought to rest my eyes by turning again to the solid bridge below. But it too seemed to have motion and was rushing upon me, each of its sharp, knifelike piers hurtling huge blocks to either side as it plowed a wide furrow in this frozen field. I felt as if I were in a dory in the track of a fleet of Dreadnoughts.

The one stationary object was my small refuge, and even it was trembling under the terrific onslaughts. Not being wedge-shaped, it could not cleave a way as readily as the piers it protected, and the cakes would drive nearly to the summit before they would lose their balance and topple back among their fellows. Each moment I expected one to succeed in its efforts and come tumbling upon me, and needless to say I stood as near the back of that pier as I could get.

I remembered how previous freshets had thrust huge blocks to the top, where the receding waters had left them to withstand the rot of rain and sun for weeks after the last vestige of ice had disappeared from the river, but I prayed that the flood would be lower this spring. It was a vain hope. Glancing over the edge, I saw that the waters had been rising fast—so fast, indeed, that a particular log I had noticed a couple of feet above the surface that very morning was no longer visible.

I gazed desperately toward the distant shores and saw people collecting on the banks, others running toward me on the bridge. But what could they do? I was caught like a rat on a sinking ship, with not even a chance to swim for it. How I envied Jimmy at that moment!

Then what I was dreading suddenly happened. A huge pan of ice struck the pier squarely and glided up until it stood like a thick, gleaming wall seven feet above the top. For one sickening moment it poised there, its stupendous weight combating the pressure of the currents, and then it lurched sideways and toppled into the river with such an impact that I was showered with slop-ice and spray. It was a close call for me, and after that I watched the charging ice-pack with painful interest.

The smaller chunks didn't concern me, for they would slew and tumble back every time; but anything the size of a dinner-table or larger had a likely chance of riding me down. In the next fifteen minutes at least half a dozen came perilously near gaining the deck, only to lose their balance and be shouldered aside in clumsy impotence by those behind.

But always the water was rising and my chances were growing proportionately less. The pier was scarcely five feet above the surface now and the ice was skidding up the iron slope with little difficulty. Even the average-sized hunks were topping my refuge and forming a ragged mound along the edge, and at last I knew it was only a matter of seconds before a big one came over and swept me off into the grinding jaws.

I guess a man's brain works quicker than usual when he's in a tight place. Anyway, when I saw a monster bearing

directly for me and knew something had to be done, I did it. The top of the pier is not planked over like the four sides, but is laid with logs spiked about three feet apart and parallel to the river. My idea was to lie on the broken rocks between two of them and let the ice pass over me. There was no time to weigh the possible risks.

A shudder ran through the pier, and as a huge, yellowish-green slab rose high above my head, hung motionless an instant, and crashed forward, I threw myself into my niche. The light was immediately blotted out, while a souse of icy water drenched me to the skin. There was not over three inches of space between my nose and the bottom of the cake, and its damp breath froze my blood. The timbers shook and creaked beneath its tons of weight until I feared they might spread or give way. Well, they didn't!

It seemed to me as if that pan was a whole glacier, it took so long to pass. But in reality it was only a few seconds before the sunlight blazed into my eyes again and I heard the roar of the mass spilling back among its fellows. I was exultant over the success of my ruse and sprang to my feet and waved a hand at the crowd on the bridge. Faintly above the uproar I could hear them cheer their sympathy and encouragement.

But my triumph was short-lived. The river had risen so that my refuge was no higher above the surface than the top logs of a lumber raft, and even the smallest chunks were scaling the slope and stacking themselves on the glistening white mound along the upper end. As for the huskier lumps, they would cut clean through the pile like a knife through cheese and come skating for my legs in a way that kept me jumping and prevented me feeling the cold. I also had to heave overboard any that lodged in my nook, and altogether I had a pretty lively time of it.

It was some minutes before another big pan struck the pier just right. I watched it cave over the edge of the plates, crush and grind the opposing barrier to powder, and, with its dripping wings stretching far out on either side and its center resting on the five

timbers, swoop back at me like some ponderous monster of a nightmare. I had barely time to shrink into my crevice before it gained the spot where I'd been standing.

Again came the gloom, the trickle of icy water, and the terrifying coldness of its breath. But because of its great weight it moved more slowly than the first had done and I became aware that the rumbling roar of its passage was sinking lower and lower. Then, to my horror, the noise ceased entirely and, lifting my hand, I found that the block was motionless. My cave had become a prison!

I can't begin to describe my sensations—they were too awful. Imagine if you can how *you'd* feel to be buried under tons of solid ice in a space no bigger than a grave! I couldn't turn over or even move a limb more than a few inches, while the bitter water continued to drain over me and the sharp rocks dug into my back. For a full minute all my strength was needed to control my brain, which was trying to fly off the handle and turn me into a hysterical idiot.

"Keep cool now, Roy," I said to myself over and over. "There's no good in losing your nerve. Keep still and trust in the Almighty."

And after a while I quieted down and began to weigh my chances of escape. I couldn't burrow out, for there was too much small ice blocking the crevice, even if I had had room to try; only a derrick or a jack-screw could have lifted the roof. My one hope lay in another ice-pan coming to my rescue and ramming this one off, and it would be just as likely to land on top of it and double the thickness of my ceiling. All the time the pier was shaking and creaking; a dull, heavy booming, like a distant water-fall, filled my ears, and a muddy glimmer penetrated to my cell.

I have no knowledge of the minutes—maybe hours—I lay there waiting, just waiting and praying, for the torture to mind and body, combined with the numbing cold, was lulling me into a sort of stupor, before I became aware that my right hand was resting in water. I moved my fingers and found that it was an inch or more deep over the shale.

That meant just one thing; the river had gained the top of the pier, and my prison was to be my tomb!

You would think that would have stirred me, but it didn't. I was done with worrying and pretty indifferent as to whether I lived or died. "Drowning isn't so bad," I told myself, "and it will soon be over with."

I remember thinking in a dull sort of way of my wife and children and the trouble they would have to get along without me, and hoped they would collect my last week's wages all right. Finally I got too sleepy to think of anything, and I guess my heart was coming to a standstill.

Anyway I wasn't aware that my roof had begun to move until I was aroused by the pain of the sun striking fiercely in my eyes. Bewildered and surprised, I put my hands on the two logs and dragged myself into a sitting posture and stared stupidly at the blue sky and the glistening rush of ice-cakes that were almost on a level with my chin. As I realized my position, the instinct of self-preservation asserted itself once more. I staggered to my feet, resolved to die in the open, if I must.

The mound was still growing and falling and the small blocks driving

through and filling up the crevices behind. I stepped from the water onto the logs, which appeared to be floating stationary in the midst of this white confusion and prepared for a last desperate effort.

Almost immediately another monster smashed down the rampart and came at me. Just at the right moment I threw myself face downward upon its slippery back and dug my fingers into a crack. I felt the mass cross the timbers, dip and crash overboard again, while a wave of water and slob-ice flooded my body, cutting my hands and face and almost tearing me loose. Then everything about me became steady and motionless and I knew I had become a part of that racing navy of ice-cakes.

Well, I might have floated down river until I had died of cold and exhaustion and my body have found a grave in the Bay of Fundy, for I had no more strength to help myself. But there was one point where they could intercept me, and that was at the bridge. The water was now within four feet of the lower girders, and as I passed beneath I was dimly conscious of strong hands clutching my clothing and of being dragged from my clammy raft. Then—I guess I must have fainted.



TROLLING AND TROLLING TACKLE

BY SAMUEL G. CAMP

IT goes without saying that trolling is a method of angling not particularly favored by the sportsman skilled in the use of the fly- or bait-casting rod. Regarded solely as a sporting proposition, the method is admittedly inferior to fly- or bait-casting; primarily it lacks action; secondarily there is little chance for initiative on the part of the angler; however, the fact remains that almost any time—when skilfully done—trolling produces “results,” sometimes even when other ways of fishing have failed dismally.

Nor should it be understood that trolling is an angling method utterly independent of “know how” and a certain degree of skill for ultimate success. There is surely far more to the game than casually and merely dragging some sort of a bait behind your boat or canoe in the fond hope that some sort of a fish may accidentally or otherwise strike it or be struck by it. The fact that this happy-go-lucky sort of trolling—chiefly practiced with a “hand line” by the one-day picknicker and other fishermen who are not anglers—is the kind most frequently observed does not alter the further fact that the method may be followed in a sportsmanlike way, with good tackle, and with satisfactory results, both sportwise and otherwise.

Often, as above suggested, trolling is the only successful way of going after certain game fish. This may be due to temporary conditions of wind, weather, or water, or possibly to the habits of the fish sought. In midsummer fairly deep trolling is the most resultful way of taking the black bass, either large- or small-mouthed. Usually at this time bait- or fly-casting for bass is not very successful. As a general rule the bass are in the deeper portions of lake and river and are feeding mostly at night. Obviously sur-

face fishing, casting either fly or artificial lure, is not apt to prove very killing.

Early in the morning and from sundown until dark—throughout the night, indeed, if you care for night fishing—the bait- and fly-caster may find fair sport, but during the daytime the odds are many in favor of the troller. This is almost equally true of the pickerel. For the lake trout deep-trolling is the only practicable method at any time. Latterly bait-casting has been very successfully done for muscalonge, but trolling still remains the most general and possibly successful way of taking this game fish.

In running water and, under the most favorable conditions, in lacustrine waters, the landlocked salmon rises to the fly; the larger specimens and the majority of them are, however, taken by trolling. Many large brook trout, too, are annually taken by trollers in the deeper parts of lakes inhabited by *fontinalis*. It would seem, then, viewing the matter without prejudice and not from the viewpoint of the fly-casting purist or the bait-casting fanatic, that trolling is an angling method worthy of the angler's most careful consideration as to the proper tackle and the most probably successful ways and means.

Beginning, of course, with the black bass, since by far the greater number of anglers will in all likelihood be interested in the best tackle and trolling methods for our most democratic game fish, it may be said that the rods formerly known as “trolling rods” have been largely superseded for trolling purposes by the modern short bait-casting rod. Emphatically the short rod is the most efficient and permanently satisfactory tool for the troller for black bass, since it is capable of handling the long line customarily used and also the somewhat

weighty bait without danger of strain and resultant "set."

It would seem best to say at once that a fine fly-rod should never be used to any considerable extent for trolling. In almost all forms of trolling, under normal conditions, a long line is necessitated for the simple reason that your boat passes over the ground ultimately fished by the trailing bait and there must obviously be a certain lapse of time for things to "get settled"; while, of course, this does not apply to trolling deep, as for "lakers," still in deep-trolling a long line is clearly necessary.

The continual drag of a lengthy, water-soaked line will "set" a fly-rod as sure as fate, no matter how well constructed or of what degree of strength and resilience. Of course, the better the rod the longer it will resist the strain; eventually, however, the result will be the same with the best of fly-rods as with the cheap and nasty one—a lovely broken-backed appearance and a new rod "next spring." While it is true that, properly gone about, a set rod may be straightened, it is also true that once the resilience of the rod has been affected in this manner the rod will again become set in the same way with half the amount of use given it in the first place.

The longer bait-casting rods, such as the "Henshall," will also in time become decidedly warped from the strain of trolling. The short bait-casting rod, from five and a half to six feet, has additionally, aside from little liability to strain, other advantages for trolling purposes. As an instance, getting out the long line requisite for resultful trolling is always a difficult job for the angler who goes out alone; handling oars or paddle in addition to rod and line, particularly in a swift river current or when there is a strong and contrary wind over the lake, results in a situation wherein the "lonesome" troller could advantageously use four hands.

The use of a bait-casting rod properly rigged for casting, provided the angler is even passably skilful in casting, will obviate all this; it is necessary only when you wish to get out the line to make a cast, to throw the click or drag on the reel, place your rod conveniently

to hand in case of a strike—the rod-*rest* furnished by the tackle dealers is a good scheme—and resume oars or paddle.

If used exclusively for trolling, the rod may well be of bethabara or green-heart, and even the lancewood rod, if not too whippy, is serviceable in this sort of angling. However, if casting is to be done as well as trolling, and in any event if you wish a rod of the best possible material, select a six-strip split-bamboo—and do not practice false economy in the matter. Remember that in the long run the most expensive split-cane rods are far the cheapest.

Whether of solid wood or split-bamboo the rod should have German silver reel-seat and ferules, and either German silver or bronzed steel guides with apertures of sufficient diameter to permit the line to run out freely when casting or paying out the line by hand from the reel. Agate hand- and tip-guides are not only ornamental but extremely useful; they save a very appreciable amount of line-wear—a factor of due importance in view of the cost of good casting lines—allow the line to run out with less friction and, as a consequence, increase the angler's average distance by a number of feet.

About Reel and Line

In the matter of the reel and line to use when trolling it depends upon how you intend to go about it. If you are to troll for the most part without the aid of a guide or friend at the oars or paddle, your best plan is to use a quadruple casting reel and a fine caliber silk bait-casting line, so that you may, as above suggested, get out your line initially by casting. If, on the other hand, you are to have the help of a boatman, or if you do not know how to cast, select a double-multiplying reel, as this has more winding-in power than a quadruple reel, and an enameled or oiled silk line of size F or G, fifty to seventy-five yards in length.

For black bass trolling, the artificial bait-casting baits are now very largely used, and may be relied upon for success under normal angling conditions. Particularly useful to the man who does much trolling alone are the various forms of floating baits since, if using a lure of

this sort, there is no danger of becoming fouled on the bottom if for any reason the progress of the boat is delayed.

The wooden minnows make first-class trolling baits—use one which spins easily as otherwise you will be compelled to row or paddle too fast for comfort or resultful trolling in order to keep the spinners in motion. Also the light-weight spoons and single-hook spinners, in the smaller sizes and preferably without swivels, used with some of the well-known flies for black bass such as the coachman, both royal and plain, Parmachene belle, oriole, Montreal, etc., are generally dependable.

The Best Bait

Of natural baits the lake "shiner" is usually the best, although at times frogs are far and away the most successful—generally when other lures, both natural and artificial, are entirely unnoticed by the bass. Broadly speaking the black bass is decidedly catholic in its tastes, taking everything from a "garden huckle" to a six-inch wooden minnow, but as a rule the bass is finicky, and at a certain time desires only a certain form of food; for instance when they are taking frogs well the minnow is generally quite useless, and when a floating bait is taken with regularity an underwater lure is often good for nothing.

The tackle used for black bass will do for pickerel and pike, although where the fish average large it is well to use a slightly heavier line. In any event, when trolling for these sweet-water sharks use a short, fine leader of steel or phosphor bronze. The writer has already discussed deep-trolling for lake trout in a former article. Trolling with flies for landlocked salmon, brook trout, and black bass should be gone about differently in the matter of tackle.

Undoubtedly no angler with a fair idea regarding the eternal fitness of things would care to use a short bait-casting rod when trolling with flies. In view of the fact that the weight of a cast of flies is negligible, and that one may well use an enamel line of the smallest practicable caliber, size G, in this form of trolling, and also that if due care is

taken the line may be shortened somewhat, the fly-rod may be used and, indeed, should be preferred. Trolling with flies is hardly real fly-fishing, notwithstanding which the tackle should be practically the same.

The worth of an ounce of prevention is well-known, and to lessen the liability of damage to your fly-rod through the strain of trolling, it is well to have the rod fitted with an independent handle. If the rod is thus made, one may from time to time while fishing turn the handle so as to relieve the rod from a constant strain in one direction. It seems hardly necessary to say that a featherweight fly-rod should not be used for trolling. A ten-foot, six and a half or seven-ounce rod is best adapted for the purpose.

For lake trolling for any game fish larger flies should be used than those customarily employed for casting in either lake or river. For black bass the best sizes are from 1 to 2-0 inclusive; for brook trout and landlocked salmon use sizes 6 to 2. The flies should not be tied to gut but either eyed or with gut loops. For trolling it is best to use a double multiplying reel, although to the fly-caster who plays the game strictly according to Hoyle—and that is the only way to play it—a multiplier of any sort always seems out of place on a fly-rod. Leaders must be of good length and best quality, and rather heavier than for fly-casting; it is sometimes a good plan to pinch one or two split-shot on the leader in order to get down to the fish.

For small-mouthed black bass and brook trout troll at the inlet or outlet of the lake, over rocky shoals and bars, and in the heat of summer over the spring-holes. For large-mouthed black bass, pike, pickerel, and muscalonge, fish always close to or right in the weeds. Use a bait with the fewest possible number of hooks in order to avoid fouling constantly in the weeds. Flies for black bass may be had with "weedless" guards of hair or metal.

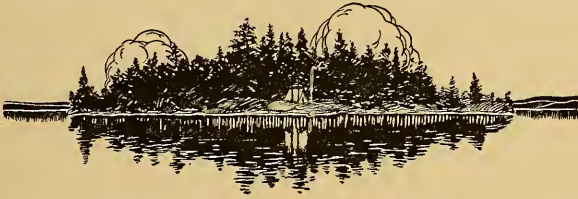
It is always well to avoid using a longer line than is absolutely necessary for good fishing; if a canoe is used you may use a shorter line than when trolling from the average row-boat—the canoe,

if skilfully paddled, creates far less disturbance in the water. Have your paddler or oarsman maintain an even pace just fast enough to keep the bait playing along nicely at the proper depth.

The course of the boat should never be changed abruptly as this causes the bait to hunt bottom at once; rather, make the turns in a wide semi-circle. The landing net should be used by the oarsman who, also, when a fish is struck should as soon as possible work the boat into deep water, at the same time so

handling the craft that the angler may not be handicapped for room in playing his fish.

In trolling much depends upon the skill of the man at the oars or paddle. If you are wise and seriously out for results you will go it alone rather than with someone with little fishing experience. The mere fact that you yourself are to do all the fishing does not alter the case—the tenderfoot will see to it that your luck is strictly of the sort called “fisherman’s.”



BAD MEDICINE

BY HULBERT FOOTNER

Illustrated by R. W. Amick

CHAPTER V

In the Old Woman's Cabin

WITH the coming of darkness on Christmas eve, the temperature rose and, as St. Pierre had foretold, snow began to fall—large flakes dropping silently in a calm, clinging to the spruce boughs, and like the hand of Time smoothing the edges of all things. Within her cabin the old woman scampered about preparing supper for her two children. Ralph she expected from the fur camp to spend Christmas with her. As she worked she hummed cheerfully to herself, and often broke into inconsequential speech in the hurrying, toneless voice of those whose lonely hearts force them to talk to themselves.

The shelf over the mantel as she put the lamp down started a new train of thought. She felt of the edge with her fingers.

“The tack holes are still here,” she murmured wistfully. “He won’t be hanging up his stocking this year. Poor mannie! there was always little enough to put in it!—Well, they grow up!”

It was a typical Northern interior, the rafters crouching low and the tiny windows and doors queerly out of plumb. Unlike most of the shacks, this had an inner room. On one side there was a rough fireplace, a cook stove on the other. The furniture was all home-made—Ralph’s bed in the corner, the cupboards, the table, and the old woman’s quaint slab-sided rocker by the fire. Empty boxes served for seats at the table.

From the inner room the old woman brought a white tablecloth, last relic of her civilized housekeeping. Spreading it, she smoothed out the creases with loving palms, and stood off to observe the effect.

“Now you ought to have a cut-glass bowl in the middle filled with roses,” she murmured, “spicy pink ones. Ah, roses!” she sighed. “Will I ever see them

again?—and silver knives and forks and a chiny teapot!”

With one of her quick impulses she darted into the bedroom again, and presently reappeared with the silver and the bottles from Annis’s dressing case. She placed them about the table, and, standing off, clasped her hands at the sight.

“Silver and glass and white linen!” she murmured ecstatically—then, with the comical break in her voice: “Bessie Croomie, I believe you’d be glad to die, so you had nice things of your own for a little while first!”

The old woman’s wistful fairy tales always took the same trend—going home! She sat herself down at the end of the table.

“Annis, there,” she went on, pointing to her right, “in her pretty party dress; Ralph at the head of the table in a white choker and dickey; yourself in a black silk that would stand alone, and not knowing any more than the man in the moon what was coming on the table! Asparagus and scalloped oysters and ice cream and strawberries—and not have to fix a bit of it yourself! Ralph would say: ‘What shall we do to-night, girls? Shall it be “East Lynne” or “Uncle Tom’s Cabin?”’”

The latch on the door was lifted, and the old woman jumped like a child caught in the pantry. She swept up the silver articles and ran quickly into the bedroom.

Annis came in powdered with snow to her eyelashes. She fought back weariness and languor, and the drive home had put color in her cheeks. Her mother could never have guessed from the look of her what had just happened at the church.

The old woman returned with the elaborately unconscious air of the same guilty child. At sight of the snow her face changed.

“Snowing!” she cried, anxiously. “Bless my soul! I had no idea! Do you realize what lost in the snow is up here, child?”

“I wasn’t alone,” said Annis. “Aleck Whitebear carried me on his sledge.”

The old woman frowned. “That surly bear!”

“Perhaps you’ll find him better after this,” Annis said.

The old woman was above all hospitable. “Anyway, he should have stopped,” she said.

“He wants to make Duncan McPhatter’s for supper,” Annis said. “He’s starting for the fort to-morrow.”

“Traveling on Christmas Day!” exclaimed the old woman. “What for?”

Annis looked at her mother’s worn face and quickly decided not to distress her with the news of what had happened. “I don’t know,” she said, carelessly.

“Did you hear anything of Ralph?” asked the old woman, anxiously.

Neither could Annis nerve herself to tell that story yet. She shook her head.

“The snow may keep him until to-morrow,” the old woman said. “But he’ll surely come early. Perhaps he’s had luck, a silver fox, or, as long as we’re wishing, why not a black one! That would cure all our troubles at once!”

This was almost too much for Annis. She swallowed a great lump that rose in her tired throat.

“What is a black fox worth?” she asked.

“The last one brought four hundred skins,” her mother said. “It sold for twelve hundred in London.”

“What foolish people there are in the world,” said Annis.

“Meanwhile we’ll have our supper,” said the old woman, brightly. “Would you put on your pretty party dress?” she asked wistfully. “I just love to look at it!”

While Annis was dressing there was a knock at the door. “Come in, Parson Dick!” cried the old woman instantly.

It was Dick. He looked done up, but he forced a smile for the old woman. “How did you know?” he asked, as he beat the snow out of his cap.

“You’re the only one who knocks,” she said. “It’s the custom to walk in.”

“I know,” he said, “but surely a white woman’s house—”

“Bless your heart, they don’t think of that! When I’m not presentable you may be sure I’m in my own room. I have a lock on that door. The outer

door has none, and this room is always at the service of travelers."

He refused to take off his things.

"Man! when *do* you eat and sleep!" she cried impatiently.

"The fact is," he said diffidently, "I came to see if I could take you along with me."

"What! Christmas eve!" cried the old woman, promptly flying into one of her innocent rages.

Parson Dick let her talk herself out. "Hooliam Trudeau came for me to see his sister," he said, when he had a chance. "And Mary Zero's fever will reach its crisis during the night."

"Mary Zero;" cried the old woman, working herself into a fine passion. "You have the face to ask me to sit up with her! The impudent fat brown hussy! She mocks me to my face!"

Dick let the tirade run its course. He was beginning to learn how to manage the old woman. When she paused for breath he made a move toward the door.

"What are you going to do now?" she demanded sharply.

"Perhaps I can get Mrs. Sashermah," he suggested innocently.

"The very thing!" cried the old woman scornfully. "Sashermah knows as much about nursing as my cow!"

"She's the only one I can reach."

"Thought you asked me to go!"

"You said you wouldn't."

"Can't I blow off steam? Here, bring the grub box from under the cupboard and put it on the table. The children will be hungry—but they'll be well scrubbed first, I promise you!"

"Old woman, you're an angel!" cried Dick.

"Angel fiddlesticks!" she said scornfully. "Nice piece of heavenly furniture *I'd* make!"

When it was packed, Parson Dick carried the grub box out and put it on the sledge. When he came back it was to be struck dumb by the door. The old woman was getting ready within and the room was empty except for Annis, standing in the center, illuminating the dingy place like the good fairy in the first act of a pantomime. She wore a pink dress that seemed to him to be

woven of rose petals, and her bare neck and arms were softer and lovelier still. Her hair was twisted up cunningly, and a pink fillet showed through its folds. Dick stood against the door with parted lips and wide, rapt eyes, like a man who sees a vision and scarcely dares breathe for fear of dissipating it.

Annis's heart was sore against him, and she felt a wicked little pleasure in tantalizing him with her beauty.

"How lovely you are!" he murmured.

"Nonsense!" she said coldly. "This is only a little dancing dress!"

"It's a symbol," he said dreamily, "a symbol of all one lacks and longs for up here."

"I didn't think you were so frivolous," she said.

"To be sure," he said dryly. "You picture me as a kind of abstraction of a man. You said as much."

"I'm sorry for what I said this afternoon," she said stiffly.

There was a silence between them. In spite of herself Annis began to soften. He looked so brave and clean and manly after the unspeakable St. Pierre! Moreover, she had done him a great service, saved his life perhaps, and you cannot continue to hate a person you have saved. Dick was no more than two years older than she, and his face was streaked with the lines of anxiety and weariness, his young eyes dwelt on her, craving rest and laughter—and love! Much as she wished to, she could not steel her breast against that look.

Dick, with a sigh, dragged his eyes away from her and tried to talk of ordinary things. "You stayed late at the church," he said.

Pride forbade Annis to tell him anything of what had happened there. "I was delayed," she said evasively.

"What good magic did you succeed in working?" he asked.

"Who has been talking to you?" she asked quickly.

"No one. But before I left Zero's Paul came in. He was always one of the surliest, you know, but he shook my hand, was anxious to be friendly. It seemed he had been to the church—I never could get him there."

"I just talked to them," said Annis. "Afterwards I played the organ."

"I wish you'd teach me the trick," he said.

They were silent again. Such silences work powerfully upon a generous, impulsive nature such as Annis's. After all, Dick was more to her than the brother she had not seen all her life, who had repulsed her affectionate advances. Annis began to burn to make up to him for her cruel gibes earlier in the day.

"Parson Dick, how long is it since you've been to bed?" she suddenly asked.

"Only three nights," he said lightly. "I've had naps."

"You must rest," she said.

"I'm all right."

Annis could stand it no longer. She stood up straight and looked him in the eye like a brave boy confessing a fault. "Parson Dick, I'm truly sorry for what I said this afternoon. Of course you only did your duty. I wish to be friends again."

The hard tense lines of his face broke up. His eyes beamed. "Annis!" he cried joyfully.

But halfway to her he stopped, lamely took the hand she offered, dropped it and turned away, looking wearier and grayer than ever. Annis, with a little catch in her breath, wondered why he did not take her in his arms. The mystery about his conduct was as impenetrable as ever.

The old woman had a thousand last directions to give. As she and Parson Dick were at the door Annis thought of staying in the lonely shack four miles from a neighbor, and of St. Pierre, and her heart failed her a little.

"Mother, couldn't I come, too?" she asked wistfully.

"Mercy, no! It's a typhus case!" said the old woman. "Besides, Ralph may be home."

Annis and Dick exchanged a look.

"You're not afraid, are you, my pet?" asked the old woman anxiously. "Nothing ever happens in the North but freezing, you know, and there are two cords of wood cut."

"I am not afraid," said Annis proudly.

CHAPTER VI

The Visitor

WHEN she was left alone Annis reasoned calmly with her fears and put them down. She had a little revolver which she kept in the bottom of her trunk, because she had found that revolvers as a means of personal defense were ridiculed in the North. But she got it now, and loading it, slipped it in the bosom of her dress and felt better. She decided to eat her supper and go to bed, so she did not change the pink dress, merely wrapping a shawl about her shoulders.

The silence was the hardest thing to bear—it brought to mind the awful, ilimitable wastes of snow lying between her and the land of homes. Any sudden crackling of the fire made her jump in spite of herself. She left the kettle on the front of the stove because its cheerful humming comforted her. She marveled that her mother had endured this for eighteen years and kept sane.

Less than an hour after they had gone, as she rose to put the things away, the outer door opened and St. Pierre Fraser stepped across the threshold. Annis put down her plate very quietly and drew the shawl closer about her shoulders. She was not surprised, she had vaguely expected him, but not so soon. At the sight of him her uncertain terrors fled.

"Now I shall have my work cut out for me," she thought, and her spirits actually rose. Some of her confidence was the result of inexperience and she trusted implicitly to moral force, overlooking the dangerous physical odds against her.

St. Pierre stood his snowshoes by the door and dropped his roll of blankets beside them. He came forward with a mask over his glittering eyes and his thin lips wreathed in the pleasantest of smiles. Annis, watching him, was forced to confess that he was handsome and graceful in his lithe way. A savage dress would have become him better.

"Excuse me for forgetting to knock," he said smoothly. "We get out of the way of it up here."

"It does not matter," said Annis.

She was anxious to placate him, but she could not take the hand he offered—that was too much for flesh and blood. She looked elsewhere.

He forced her to notice it. "Won't you shake hands?" he said with an admirable frank smile. "It's the custom up here."

"It's not my custom," said Annis quietly.

He shrugged his shoulders without ceasing to smile.

"Sit down and eat," said Annis politely. "Everything is on the table. I will get you a plate."

St. Pierre declined. "I had supper at the store," he said.

Annis coolly set about clearing the table. For all their friendly conversation, she had none the less a sense of a deadly enemy there in the room, waiting to spring on her if she betrayed the slightest weakness. And there was no help from the outside to be looked for. She marked the bread knife as she put it on the shelf. It was ground to a long, slender point. It might be useful later. She had a stout heart.

"How does it happen that you are left alone on Christmas eve?" asked St. Pierre ingratiatingly, "and dressed as if for a party?"

"I am not alone," said Annis quickly. "My mother is in her room." This was a tactical error.

St. Pierre rose lazily. "That so?" he said. "I wanted to speak to her."

"She's asleep," said Annis. "Do not waken her."

"Why, it's no more than eight o'clock!"

"She is not well."

St. Pierre sat down. "It's this business about Ralph, I suppose," he said feelingly. "Heaven knows I did what I could to prevent it, but Parson Dick was determined. He means well, but his religious theories work the very devil up here!"

"Let us not talk about that," said Annis quietly.

"There you go!" he said with his air of humble, humorous frankness. "The more I try to please you, the harder I get turned down!"

"Don't try to please me so much and I'll be better pleased," she said.

"What am I to understand by that?" asked St. Pierre sharply.

"Be downright and outspoken with me, as if I were a man," said Annis.

St. Pierre began to tire of his play acting. His lip curled. "Like Parson Dick, eh? After his work to-day is he still your model of a man?"

"Now, you are insulting," she said quietly.

St. Pierre sprang up. "What do you want?" he said, snarling. "I come in a friendly spirit, and you with your high and mighty air, treating me like the dirt beneath your feet, throwing your parson in my teeth!"

"I have not mentioned Parson Dick," she said.

St. Pierre had come expecting to find her aroused against Dick. Reading the contrary in her eyes, his savage jealousy flamed out. "The white-livered priest! I hate him!" he cried, striking the table. "There's frankness for you!"

A chill struck to Annis's heart. He must be very sure of himself to let the truth come out, she thought, but she kept her colors flying. With a level look at him, she turned and walked to the door of her room without hurrying. St. Pierre could not meet her eyes, but with a glide like a panther he reached the door as soon as she, and as her hand fell on the latch, his hand closed over it.

Wrenching free, she fell back a step. St. Pierre commanded the door.

"How dare you!" murmured Annis, trembling a little with indignation.

St. Pierre's eyes bolted, but he stood his ground. "Don't go—yet," he said mockingly. "Let's have a little of your frank conversation. That was a smart trick you played me this afternoon with your petition to my employers."

Annis was silent.

"You see I know," he went on. "I know everything up here. I knew when Aleck started for the Fort with the paper—and I had him stopped."

He showed her the very paper—the flyleaf of a hymn book, hurriedly scrawled. He tore it up with a laugh and tossed the pieces in the air.

Annis's heart contracted. What had happened to Aleck, she thought. "What did you come here for?" she demanded.

"I came because a woman—a pretty woman—defied me," he said with mocking insolence. "She must be humbled!"

"You've been drinking!" said Annis scornfully. "Let me go to my mother."

St. Pierre turned quickly and beat upon the bedroom door. "Old woman! Old woman!" he cried. "Is it possible she's not there?" he said with affected surprise. "Is it possible that the lady who recommended me to be frank could have been lying herself?" His tone changed. "What's the use? I met the old woman on the way to Paul Zero's."

A gleam of hope appeared in Annis's eyes.

He observed it. "Saw her, I should say," he amended. "She didn't see me; we won't be interrupted."

There was something unspeakably horrible to Annis in his furtive eyes, which could not rest on hers, even while he threatened her. "Let me go to my room," she said proudly.

St. Pierre drew out the key and, pocketing it, mockingly threw the door wide. "Certainly," he said, sauntering across the room.

Annis, as cool as he, turned and went back to the table. "Very well," she said.

"What's the use," he said at last. "You can't escape me, Annis. There isn't a living soul within four miles, and no chance of rescue before morning. I offer you an honorable surrender."

"What do you mean by that?" she demanded.

"Cast in your lot with mine!"

Annis's eyes flashed.

St. Pierre could not quite face her down. He scowled. "Softly," he said. "You're not exactly in a position to be scornful." He resumed his bantering tone. "Perhaps you want to be courted—I never bent to a woman yet—but I'll court you!"

He dared to gaze at her at last. His expression changed. For the moment his hard eyes had the stricken look of a genuine passion. "You are worthy of a man!" he said hoarsely. "When I heard how you bent the poor breeds to your

will, I laughed. There is the woman for me, I cried. I'll stake my life to get her!"

He approached her a little. She scornfully stood her ground. "You and I together!" he went on swiftly; "what couldn't we do! Here is an empire waiting for you in the North! I know you better than the others do, you love to rule the breeds—call it educating them if you like—well, come with me, and you shall queen it under the eyes of the stupid government!"

"Do I understand you are offering to marry me?" asked Annis a little unsteadily.

"Sure," he said. "I'll take care of you. I haven't been trading whisky all these years for nothing. I'm rich. And you shall know what it is to be mated to a man!"

"And if I refuse?" she murmured.

"I'll take you anyway," he said. "I'll carry you to-night to the Beaver Indian village. The people will do anything these days for a little pork and flour. I'll be back in the store before morning, and all tracks covered by the snow. Later I'll have you taken to the Death River country, where no white man has ever been."

"I would soon be found," said Annis confidently.

"Not right away," said St. Pierre. "Sooner or later, of course—but then"—he smiled evilly—"you wouldn't leave me."

Annis shuddered. There is always one way to protect myself, she thought, her hand stealing inside the bosom of her dress.

"Well, what do you say?" he demanded.

"Go!" she said coldly.

St. Pierre smiled, with narrowed eyes. "It will be the sweeter to tame you," he murmured. He approached her slowly, like some cat animal, and purring: "How pretty you are when your eyes flash—Annis!"

He put out his hand to her. Annis drew the revolver. "Keep your distance," she said sharply.

He fell back in surprise. "Armed, eh?"



Robert del Rio

HE WRENCHED THE DOOR SUDDENLY OPEN, AND SEIZING HER IN HIS ARMS
DRAGGED HER OUT, UTTERING PEAL UPON PEAL OF MOCKING,
DEVILISH LAUGHTER.

The ancient arrogance of the race surged up in Annis's blood. Her eyes glowed like living embers. "Go, breed!" she cried. "How dare you talk of mastering one of white blood! What can you understand of the nature of white men? Go back to your own people!"

St. Pierre cringed.

"Give me the key to my room and go," commanded Annis.

He sparred for time, affecting humility. He begged her pardon. "If I go quietly, you won't inform on me?" he whined.

Like young people generally, Annis exulted too soon. "Not if you behave yourself hereafter," she said scornfully. "Give me the key."

He hung his head and held it out on the palm of his right hand. She approached him, covering him with the revolver and watching his face narrowly. In order to take the key it was necessary for one instant to glance at his hand. Like a flash he flung up his left hand, knocking the revolver out of her grasp. It exploded and the bullet went through the roof. St. Pierre pounced on the weapon where it fell. He kept the key also.

"Now, my girl, what will you do?" he said coolly. "You see the supremacy of white blood is largely a matter of bullets."

Annis stared at him, white and desperate. St. Pierre rolled a cigarette. "Get your things," he said.

Annis suddenly recollected the bread knife with the thin, sharp blade. She flew to the shelf. He saw the knife and instantly divined her intention.

"Stop, for God's sake!" he cried.

"You'll never get me now!" she cried wildly.

With the point at her breast, her hand was arrested by the ring of the key on the table, where he tossed it. The breed had turned as yellow as new saddle leather.

"I know damned well you'd do it," he murmured.

"I shall not trust you again," she said warily.

He retired to the farthest corner of

the room and turned his back. Annis picked up the key and, keeping the point of the knife at her breast, backed to the door of her room.

At the sound of the latch as it fell behind her, St. Pierre whirled about and glided silently to the door. He bent his head and heard her working at the key-hole inside. He guessed she must have put down the knife. He wrenched the door suddenly open and, seizing her in his arms, dragged her out, uttering peal upon peal of mocking, devilish laughter.

"So sorry! . . . Made a mistake! . . . Gave you the key to my place instead! . . . I've got you—you pretty—pretty Annis!"

Waves of a shuddering, sick weakness surged over Annis and she could struggle no more. She closed her eyes, and with the whole force of her soul prayed that this might be death. Surely a merciful God would not require her to go on living after—

The sinewy arms around her suddenly relaxed, and St. Pierre with one of his swift glides was at the other side of the room, crouching and gazing, not at her, but at the door, with savage eyes and lips drawn back over his fangs.

Annis, too dazed for the moment to understand what had happened, swayed and clung to the wall behind her. Then from far off she heard the yelping of dogs and afterwards the chiming of bells. Unspeakable relief flooded her breast. The sounds rapidly drew nearer.

"It's Parson Dick," snarled St. Pierre. "I know his dogs." He approached her threateningly. "Remember, I have the gun," he said. "If you tell him a word of what has happened, I will shoot him dead before your eyes!"

CHAPTER VII

The Two Men

WHEN Parson Dick entered the old woman's cabin he found Annis pale but steady, and St. Pierre as ever, friendly and talkative. Dick was surprised to find him there,

but, knowing nothing of the events of the afternoon, was unsuspecting. The old woman's was a popular stopping place.

"Mary Zero is dead," he said gravely. "They let her escape from the house in her delirium. The old woman insisted on going on to Trudeau's, and sent me back to sleep."

Annis quietly set about getting his supper. Her eyes scarcely ever left St. Pierre. The breed made a cigarette and, lighting it, dropped carelessly in the old woman's chair by the fire. His sleepy eyes were aware of the slightest moves of the other two. Dick, sitting at the table, had his back to St. Pierre. To Annis the situation was like one of those dreams where one walks amid unnameable horrors with an insane calmness. There they sat, the three of them, talking quietly—with murder and worse keeping them company. Her nerves were stretched like violin strings.

Dick had not been long in the cabin before he sensed that something was wrong. The very air was charged with it. He discovered a strange shadow in Annis's face that had not been there before, and he realized that St. Pierre was too affable, too anxious to please.

"Don't wait on me," he said to Annis gently. "You're tired."

The touch of kindness almost unnerved the overwrought girl. She stood, struggling with mounting sobs. Both men rose. St. Pierre, keeping his back partly turned to Dick, half drew the revolver from his pocket. A catastrophe hung by a hair. Annis saw St. Pierre's act and with a desperate effort forced back the sobs.

"Yes, I'm tired," she said quietly. "But it's nothing."

St. Pierre sat down. "Miss Croome should go to bed," he said in his silkiest tones.

Dick frowned. He did not relish suggestions to Annis from that quarter. Annis observed his gathering suspicions and was torn in an agony of indecision. On the one hand, how could she leave Dick at the other man's mercy? On the other hand, if she remained in the room it was plain there would be an explosion

within five minutes. She finally decided to go; she did not believe St. Pierre would dare shoot down Dick in cold blood, and from behind her door she could at least listen to all that occurred. But first she must find a way of warning Dick.

"I'll go directly," she said carelessly.

St. Pierre glanced at her in sheer admiration of her coolness.

Annis sat at the other end of the table from Dick. "About to-morrow—" she began in an ordinary voice, and went on to tell him in detail about the plans for the Sunday-school celebration.

There was not a word in it to arouse St. Pierre's suspicions, but Dick instantly guessed that she was sparring for time, because he knew already all that she was telling him. As she talked, she picked up a fork idly and made marks on the tablecloth. Dick, without seeming to, followed her hands. She was printing the word: "Watch!" Beneath it in five strokes she indicated a revolver.

Dick's face turned grim. He glanced at her to show that he understood, and looked from her to the door of the inner room to tell her she was better there. Annis, with a sigh of relief, got up and, bidding them both good night, went in, closing the door after her.

St. Pierre, finding it impossible to draw Dick into conversation, coolly proceeded to spread his bed before the fire. With a sharp glance at Dick, he put the straps from around his blankets in his pocket. Blowing out the lamp, he rolled up, and in a few minutes was breathing as in deep sleep.

Dick pulled the old woman's rocking chair up to the stove and sat there smoking. He had not been in bed for three nights, he had just come in from a long run, and the food and the warm room had the inevitable effect. A delicious, overpowering numbness crept over him. He shook himself and brought his mind to Annis and her danger.

Imperious Nature was not to be denied. Sleep seized on his faculties as irresistible as death. For an hour he fought it, walking up and down ceaselessly and ever and again opening the outer door to breathe the cold air. He stag-

gered as he walked and sometimes slept, but never ceased to struggle. At length, feeling better, he permitted himself to sit down only long enough to fill his pipe. The instant his limbs relaxed in the chair, his head rolled forward on his chest and the pipe clattered to the floor.

With a bound, St. Pierre was at Annis's door, locking it. The key was ready in his hand. Back at Dick's chair immediately, he bound him fast with the straps he had saved for that. Dick struggled silently and impotently.

St. Pierre stood back, rolling a cigarette. "Well, Parson Dick! Wide awake again, eh?" he drawled, with cool, devilish malignity. "I'll put you to sleep directly. Damned awkward, your turning up when you did. I'll have to put her to sleep now—why?—to account for your corpse, my man. You see, this is *her* gun. I'll leave it in her hand—you catch the idea?"

"As for me," he went on, "I went to bed drunk this evening, and there I will be found in the morning when the awful news is brought—all tracks covered by the snow!" He threw the cigarette into the fireplace. "Are you ready? Here's a message to take with you"—he drew himself up with the incurable braggadocio of his race—"Let the white man beware how he despises his step-brothers!"

St. Pierre raised the revolver.

From the inner room came a wild cry. "St. Pierre! Help! St. Pierre!"

His extended arm wavered and fell. In his own way he loved that voice.

The cries were repeated. "St. Pierre! Come! Come!"

St. Pierre went swiftly to the door and, unlocking it, threw it wide. He could see nothing in the dark interior. Revolver in hand he stepped warily over the threshold.

Within, Annis had her back against the wall in line with the door. As St. Pierre entered, she hooked her arm around his neck and, exerting a man's strength, jerked him reeling into the room. Before he recovered his balance she was outside. She slammed the door on him and locked it.

Almost instantly there was a crash

of breaking glass within. "He's out by the window," she gasped. Running across the room, she caught up the pail of water in the fireplace and dashed the contents hissing on the fire. The room was plunged in total darkness.

Annis groped her way back to Dick and, drawing the knife from her belt, sawed frantically at his bonds.

"Drop to the floor," she whispered when he was free.

But Dick picked up the chair to which he had been bound and stationed himself by the door.

Waiting in the dark, they heard the latch click and the door swung slowly open, letting in a breath of sweet, cold air. Dick brought down his chair with a crash on the floor, but St. Pierre had retreated. They sensed the outline of his crouching body against the snow.

St. Pierre fired through the doorway in the direction whence the chair had fallen. Dick dropped to the floor like a log. Annis's heart failed her then; she screamed in wild distress; she caught up the knife—but her hand was seized by a strong, warm one.

"That was to bring him in," Dick whispered. She understood and continued to cry out.

Inch by inch, St. Pierre snaked his lithe body over the door sill. Dick could see him. He waited until he was well within and then dropped silently on his back.

Instantly the room was in an uproar. They rolled and thrashed from wall to wall. The revolver was discharged once more. The table went over with a crash, the stovepipe rattled down, and the stove emptied its expiring embers on the floor. There were sudden, appalling pauses when only the hissing breath of the two adversaries could be heard.

Dick cried for a light, and Annis with shaking hands found the matches and the lamp. It seemed like an age to her before she got it lighted—it was perhaps forty-five seconds. Before the light flamed up, the struggle ceased, and the men were dreadfully quiet. Holding up the lamp, Annis turned, dreading to see the man she loved wounded and over-

come. A sob of relief escaped her. Dick was planted squarely between St. Pierre's shoulders and Dick had the revolver.

Dick bound St. Pierre beyond the possibility of escape and dragged him into the inner room, that they might be relieved of his presence. St. Pierre made no move nor sound during this.

For Annis the inevitable reaction set in, and now that the danger was over, she trembled on the verge of collapse. She waited in the outer room deathly white and shaking piteously. As Dick came back to her she thought: "Surely, now, he cannot help but take me."

Dick was transformed by the fight. All his weariness was gone; his step was light and his eyes shone like a boy's. He, too, was thinking: "She's mine! I've won her fairly!" and his promise was forgotten.

But Annis, standing there utterly foredone with weariness, had a startling look of her mother. Dick remembered and stopped dead. The thought fell

like a heavy hand on his heart: "This is what the North does to women!"

Annis raised her face to his. "You have saved me," she murmured. She picked up his hand and would have carried it to her lips, had he not snatched it away.

"You mustn't! You mustn't!" he cried in a kind of horror. "It was you who saved me. I should be at your feet."

Annis turned away, hurt and shamed beyond the power of replying. It was as if she had held up her heart to him in her two hands and he had pushed it away. She lay down on the bed without speaking and turned her face to the wall.

The devil kept Dick company by the stove, ceaselessly whispering: "You have only to put out your hand and she is yours." To which Dick answered over and over, like a dull scholar painfully committing his lesson to memory: "She is young; she'll get over it. I have promised. I have promised."

(To be concluded)

SADDLE AND CAMP IN THE ROCKIES

BY DILLON WALLACE

Illustrated with Photographs by the Author and S. N. Leek

THE END OF THE TRAIL



ALL night rain fell steadily and it did not cease until mid-forenoon on the day following my arrival at Booth's Ferry. Then the sun broke through the clouds to look upon a drenched world. Booth and Rogers warned me that it would be foolhardy to venture into the canyon with the treacherous "Blue Trail" wet and slippery, as it necessarily was so soon after the storm, and hearkening to their advice I remained the day with them.

Rogers was an old prospector who had followed elusive fortune all his life

as the donkey followed the wisp of hay held before its nose. Booth was a typical Rocky Mountain prospector, miner, hunter, and trapper. Fifteen years before my visit he had established his ferry and built his cabin at the lower end of the Grand Canyon of the Snake. Since then he has hunted and trapped in this and the Canyon of John Day's River, which flows into the Snake near the ferry. During the summer he and Rogers operate the ferry and work a salt mine up Star Valley, which Booth discovered some years ago.

Booth's cabin stands at the foot of a high, barren mountain which rises well

above timber line. Sometimes mountain sheep are to be seen on this mountain from the cabin door. Some fifty, the remnant of a once large flock, inhabit the heights. Each year the huntsman's rifle, however, is diminishing the number, and very shortly they will be exterminated. These are the most available sheep for the people of Afton and the other settlements of Star Valley, and the few settlers in the valley below the canyon depend almost wholly upon wild game—chiefly elk, but occasionally sheep—to supply their tables with meat. It is usual for settlers to corn sufficient elk meat to carry them over the summer.

Their Last March

During the first years that Booth lived here a herd of about fifteen hundred elk passed down the canyon each autumn, on their way to their winter range in the Snake River valley below, and regularly returned in the spring to their summer ranges in higher altitudes. When the settler came with his repeating rifle the herd began noticeably to diminish with each annual migration, until five years ago its last remnant, numbering eighty-eight, passed out of the canyon, and no member of it ever returned.

Booth observed and counted these eighty-eight when they came down the canyon, and his curiosity led him to inquire their fate. He learned definitely where ranchmen had killed eighty-six of them. The other two apparently escaped, but no elk have since come out of the canyon or been seen upon the ancient elk range in the valley.

The rain at our level had been snow in the higher altitudes. The weather turned cold and the morning was crisp with frost when I turned into the canyon to resume my journey. The sun shone brilliantly, and the atmosphere possessed to a high degree that tonic, transparent quality so characteristic of Rocky Mountain regions. These conditions combined to make the day ideal.

While now and again the trail dropped down close to the water, for the most part it hung upon the edge of a steep bank or well-nigh perpendicular

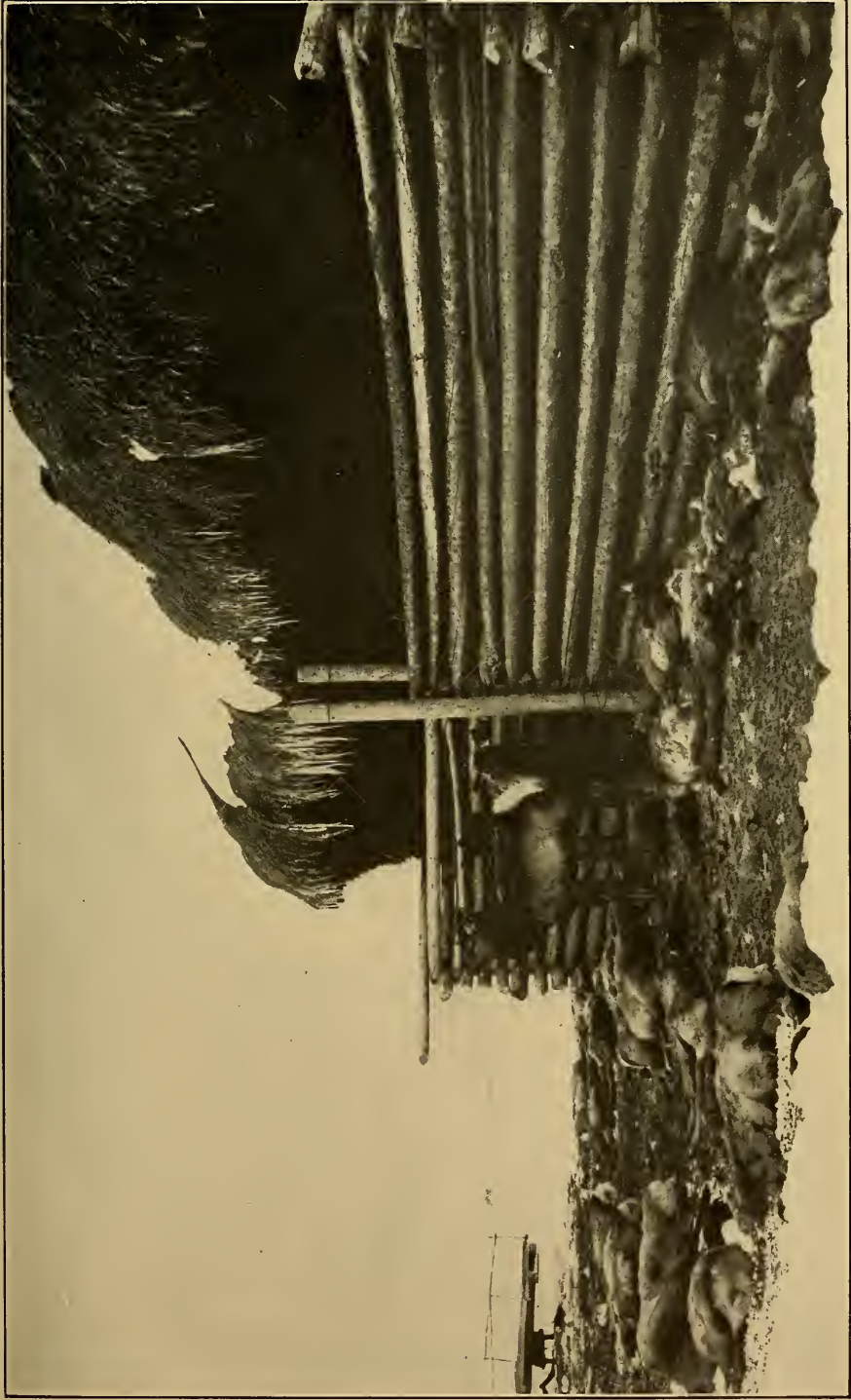
cliff several hundred feet above the rushing river. It was not, however, in any sense a dangerous trail for one using ordinary caution, and I found it from end to end of the canyon well-beaten and in good condition. Once I met a cowboy drifting some cattle down the canyon, and had to find foothold for the horses at the edge of the trail and wait for them to pass me single file.

My bivouac that night, at the edge of the pines on a level spot above the Blue Trail, I recall as one of the most delightful of my journey. The atmosphere was sweet with the odor of pines; below me the singing river sparkled in the starlight; around me rose high canyon walls, dark with clinging timber and fringed at the top with pine trees standing out in silhouette where sky and canyon rim met. A cozy, cheerful camp fire gave material comfort, for the night was cold.

The Grand Canyon of the Snake is peculiarly attractive, and its wild and primitive grandeur makes it one of the most inspiring and lovely bits of country in this whole region. The river holds an abundance of trout, and I can recall no more ideal spot, comparatively easy of access, than this, for a camper's and angler's holiday.

Above my night's bivouac I passed an abandoned placer miner's cabin, not far beyond forded the river, and presently came upon the little log cabin of Jack Davis, an old placer miner who has lived here alone, washing gravel, for more than twenty years. For months at a time no human being passes his way, and he was very glad to see me. He lives on fish and game mainly, supplemented, when he has them—and that is not always by any means—by bacon and flour, which he packs fifty miles on his back. His claim has never yielded him more than a scant living, but with the miner's never-failing optimism he expects some day to "strike it rich."

All the gravel along the Snake, even high up on the mountain sides, the length of the canyon, is filled with flake gold. One can find "color" anywhere, but the flakes are too light to separate from the gravel by any known process. Now and again Jack finds a small nug-



Photograph by S. N. Leck, Jackson, Wyo.

SHOWING HOW WYOMING ELK SUFFERED AND DIED AND THE LIVE ONES STOOD ON THE DEAD TO REACH THE HAY.
SEVENTY ELK DIED AROUND THIS HAY CRIB ALONE LAST WINTER.

get, however, sufficient to keep his courage and hope alive. And so he will continue digging and working until life goes out. A chance passer-by will some day find his poor old body in the canyon, where he and his hopes have died together. He is now seventy-seven years of age.

Old Jack was frying bacon when I dismounted and stopped for a quarter hour's chat with him. He urged me to join him at dinner. It was twelve o'clock, he said, "by the sun," and I "better stop." My watch verified his guess, but I excused myself on the plea of short days and the necessity of taking advantage of all the daylight to travel. I was well aware that he had little enough for himself to eat, without entertaining strangers, and it would have insulted his sense of hospitality had I even suggested using my own provisions, for Jack Davis is a remnant of the early Western frontier.

My trail carried me thence to the fording of the Hoback, the lower winter range of the great elk herds that congregate along the Snake River valley, through Jackson's Hole, to the Gros Ventre. Descending thence into Jackson's Hole, once the resort of horse thieves and bad men, now the home of peaceful, thriving ranchmen, one night was spent at Cheney, which from its appearance on the map I expected to find a settlement, but which proved to be a single ranch, and the following morning I rode into the village of Jackson.

Several days were spent in Jackson's Hole, while investigating the elk conditions described in *THE OUTING MAGAZINE* for May. Here S. N. Leek, a ranchman, one of the early settlers, joined me, and together we proceeded to the Gros Ventre valley, pitching our tent by the river, at a point where a precipitous mountain rose opposite. Here we were encamped for three nights.

As previously stated, this is the upper winter range of the Jackson's Hole country, and here, as in the lower valley, though to a smaller extent for fewer elk winter here than there, we found the remains of many animals that had perished. Leek found one old head with a sixty-three-inch spread and measuring

sixty inches along the outside of the horn, not a record head, but close to the largest bona fide head extant, for it must be remembered that some of those that at one time passed as record heads of enormous proportions had been patched.

This, too, is a good mountain-sheep country, and several are killed each year on Sheep Mountain, on the mountain opposite our camp, and on others of the higher peaks nearby. Indeed, an old buck came down to the river not more than four hundred yards below us while we were camped there.

In a previous article I stated that Wyoming probably has five hundred of the approximately seven thousand sheep remaining in the United States. This is, let me say, a liberal estimate. The actual number doubtless falls somewhat short of it.

Wyoming and Her Sheep

Of these five hundred, one hundred inhabit the Tetons. On the west side of the Tetons domestic sheep are invading the lower edge of the mountain-sheep range, with the result that scab has appeared among the latter. There is no question that the mountain sheep have been infected, but how far the infection has spread among them it is at present hard to say. It is not hard, however, to prophesy the result.

The number of mountain sheep killed each year by hunters in Wyoming is considerably in excess of the increase, and with the Teton sheep infected with scab, what will be the result unless hunting is very promptly prohibited in Wyoming?

What is Wyoming doing? Letting the hunting go merrily on, while she concentrates her efforts upon overstocking with elk an already largely overstocked range and giving little or no attention to her mountain sheep. The fact is that unless Wyoming very promptly establishes a permanent closed season on mountain sheep, as Colorado has done, she will have no sheep to protect.

Formerly there were considerable numbers of antelope in northwestern Wyoming. Though the warning was



THE CABIN OF CHARLES NEIL, THE TRAPPER IN BUFFALO FORK.

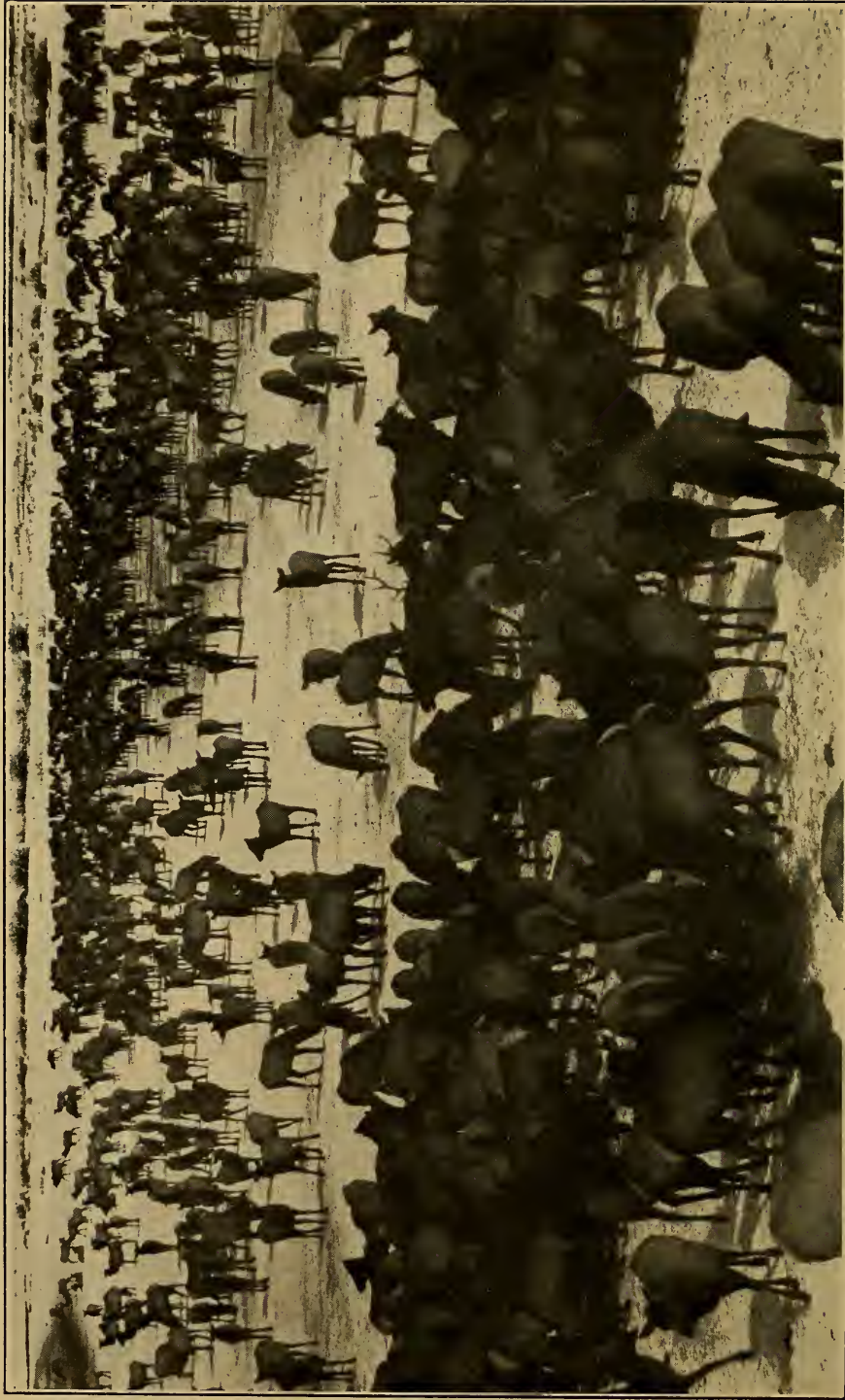
sounded that they were rapidly decreasing in numbers, hunting was permitted until 1909, and as a result antelope have practically disappeared from northwestern Wyoming. This is what is certain to happen to her sheep.

What is known as the Gros Ventre "slide" is situated some two miles above the place where we were camped. This is a section of mountain perhaps

one mile wide and extending up the mountainside five miles, which is gradually changing its positions and sliding down toward the river gorge. The first movement was noticed in 1907, and though the mountainside is sliding too slowly to be noticeable to the naked eye, save by the constant rolling of pebbles, or the trickling of gravel upon slopes, the area affected now has the appearance



ANTELOPE FEEDING ON THE ALFALFA FIELD IN THE PARK AT GARDINER, MONTANA.



Photograph by S. N. Leek, Jackson, Wyo.

HERD OF ELK BEING FED NEAR JACKSON, WYOMING; ESTIMATED AT 2,250, NEARLY ALL COWS. BEAR IN MIND THAT FOR EVERY THREE ELK SHOWN HERE ONE HAD PERISHED WHEN THIS PHOTOGRAPH WAS TAKEN IN MIDWINTER.

of having been shaken by a terrific earthquake. Trees have been rolled under; crevasses fifteen feet deep have opened; high pressure ridges have formed; in level places ponds have been filled and other ponds formed; and the Gros Ventre River, at the foot of the slide, has been pushed out of its old channel and against the base of a precipitous mountain opposite.

The slide is indeed pushing against this other mountain, gradually raising the river and forming a lake above, where none formerly existed. Above the river gorge, formed by the slide on one side and the mountain on the other, is a large basin, and the prospect is that this basin will ultimately become a lake of considerable proportions. The river is very muddy below the slide, and one morning while we were camped there we found it had fallen nearly three inches, the result of a large body of earth having been pushed into it by the slide.

My route lay down the Gros Ventre to Slate Creek, thence up Slate Creek, over Mt. Leidy ridge past Leidy Lake, down to Spread Creek, over another ridge past Lilly Lake to the Buffalo Fork, and thence northward through the Wyoming game refuge to Yellowstone National Park, which I was to enter at Snake River station and traverse its width northward to Gardiner, Montana.

Leek kept me company to Mt. Leidy. Beyond a maze of fallen timber on the slope of Mt. Leidy he turned back, to return to his camp on the Gros Ventre, while I rose to the summit of the pass, covered with the snow of recent storms. The last reach of the ascent was abrupt and there was no trail to follow, but once at the top I was treated to a magnificent panoramic view of the valley I had just left.

Far beneath me the silver thread of Slate Creek wound down to join the Gros Ventre. Beyond the Gros Ventre rose Sheep Mountain with other mountains and ranges beyond, in a mighty tumbled mass, some of them, like Mt. Leidy, where I stood, partially covered with fir and the summits of all white with snow.

On the opposite side of the ridge I dropped down past Lake Leidy, a beau-

tiful bit of water romantically situated among the fir-clad peaks. In the descent from Leidy Lake to Spread Creek were the tracks of a large band of elk, chiefly cows and calves, with unmistakable signs that the animals had been driven. The tracks were fresh—not above a few hours old. That evening I was startled by the bugle call of an elk. It startled me, for this was late in the season for bulls to be bugling.

The weather was growing cold. Spread Creek, where the water was not too swift, froze hard that night, and the earth became like flint. My course carried me down the creek for some distance, over a low ridge, and thence across the North Branch of Spread Creek, which I reached during the following forenoon. I aimed to come out at Lilly Lake—which is, in fact, only a small pond—thence cross another ridge, make past a butte Leek had described to me, and strike for a ford of the Buffalo, on the opposite side of which is an old military road which leads into the direct route to the southern entrance of Yellowstone Park.

A "Dude Outfit"

In emerging from the timber to descend into the gorge of the North Branch, I descried some tents on a hill opposite and to the right. Upon riding up to them I found it to be the camp of Roy McBride, a Jackson's Hole guide who with three assistants had an Englishman and his wife on a hunting trip—a "dude outfit," as one of the men put it.

Travelers here are classified as "dudes," "sage brushers" or "rough necks." Anyone who travels or hunts with a guide is a "dude," no matter how rough or unkempt his personal appearance. Those who travel with wagons on beaten roads, camping in more or less comfort, with the paraphernalia they are able to carry in this way, are "sage brushers." A horseback traveler, doing his own cooking and camp work, unassisted by a guide, and in fact roughing it in the true sense, is a "rough neck"—that is, one traveling as the people of the country travel. They

do not consider that a man is roughing it who has a guide to care for him and his camp equipment, nor one who travels by wagon on beaten roads. This classification extends over Yellowstone Park as well as the surrounding region.

McBride's "dudes" were a Mr. and Mrs. Henderson, who had come from England to secure elk trophies. I was introduced to them, and accepted McBride's invitation to remain to dinner. Mr. Henderson, as well as others of the party, informed me that they had seen soldiers from the camp on Slate Creek firing indiscriminately into herds of cow and calf elk, and were certain some of the cows had been killed. McBride had no doubt the animals whose tracks I had seen between Leidy Lake and Spread Creek had been driven by soldiers.

It was mid-afternoon when I remounted and turned past Lilly Lake, riding now in forest, now in open, with no definite trail but taking the general direction in which, according to my map, the Buffalo Fork lay. Once crossing a knoll I discovered some elk feeding in a hollow. I swung behind another knoll, and unobserved approached within fifty yards of them before they saw me. Then one of them raised its head, took a good look at me, surprise and wonder in his eyes, and with the whole bunch broke for the cover of nearby timber.

A Night Camp

This was shortly before sunset, and when darkness came I had not yet made out my landmark, the butte. A strong west wind had sprung up, and the evening grew raw. I had hoped to make Buffalo Fork before camping, and rode a full hour after dark. The woods were so thick, however, that it was difficult to pick a route in the darkness, and when at length I came upon a grassy, open hollow I unpacked in the lee of the timber skirting it and turned the horses loose to graze.

I rarely troubled to pitch my tent, and a fire made the shelter of the trees so comfortable that after supper and a pipe I rolled in my blanket under the sky. Snow on my face roused me during the night, and I drew my poncho over

me, not to awaken until dawn. Five inches of snow covered me, and I made coffee that morning from melted snow.

Saddling and packing was scarcely accomplished when the storm resumed and the snow fell so thick that I could scarcely see a hundred yards. Shortly after starting I crossed two elk tracks, and the track of a big timber wolf, doubtless following the elk, but I saw nothing of the animals. It is said that wolves are increasing rapidly in numbers in the game refuge just north of this, where all hunting is prohibited.

Presently the snow ceased, the clouds scattered, and the sun broke out with blinding, dazzling brilliancy. At my feet, and below the snow line, lay the valley of the Buffalo, beyond it the timbered stretches of the State game reserve, to the westward through a purple haze the majestic Tetons, raising their jagged peaks high above the surrounding landscape.

The snow balled on the horses' feet, causing them to slip and slide badly in the descent to the valley, and I was glad to reach bare ground again. They had been on short rations before, and the night's snow had covered the grass so deeply that their breakfast had been light that morning. Therefore when I came to the cabin of Charles Neil, an old trapper, shortly after fording the Buffalo, and learned he had oats and hay, I halted for the day.

Neil has been a fur trapper for more than thirty years and for the early season had a good showing of fall pelts, indicating that some fur-bearing animals still survive here. Mink and muskrat pelts were chief among his catch.

The road northward to Yellowstone Park was through a romantic and picturesque region. To the left lay the Tetons, rising bleak and rugged, their glacier stubs gleaming white in the sunlight, and the atmosphere bore the perfume of the pine and fir forest spreading far away in every direction.

This is a magnificent game cover and refuge. It is the sanctuary of Wyoming's moose, numbering now about four hundred. While any considerable number of elk would starve here in the winter, it is an ideal winter as well as



WITHIN THE SHELTER OF SOME FRIENDLY BUSH THE STARVING ELK LIE FOR DAYS, TOO WEAK TO RISE, TILL DEATH RELIEVES THEIR SUFFERING.

Photograph by S. N. Leek, Jackson, Wyo.

summer range for moose and deer, both of which are browsing animals, while the elk normally is not. In connection with Yellowstone Park it offers a wide area of protection to bear, fur-bearing animals, and game herds. A great many beaver are breeding here.

The close season on moose will end in Wyoming in 1912, unless it is extended, and it is hardly to be supposed that the legislature will do otherwise than extend it, for one year's hunting would put a setback upon the moose that would spoil the work of years.

There is some poaching on the refuge, but not a great deal. Two weeks before I passed through it, an army wagon was overturned on a rough bit of road. A mounted lieutenant, with two soldiers, escorted the wagon. A forest ranger, happening along, dismounted to assist the driver and soldiers in righting the wagon, and what was his surprise to discover in the cargo which had rolled out upon the ground the head and part of the carcass of a freshly killed moose. The forest ranger put the lieutenant and his men under arrest, and when they were haled before a magistrate it developed that the lieutenant was already under bond to appear in answer to a charge of killing ducks within the prohibited bounds of the refuge.

At three o'clock on the day after leaving Neil's cabin on the Buffalo, I reined up before the Snake River soldiers' station, at the entrance to Yellowstone Park.

The Park's season for travelers was closed and red tape held me at Snake River station until the midday after my arrival. I was anxious to cross the high altitude as quickly as possible for heavy snows were now to be expected. Winter had already set in. That morning the thermometer at the station registered 22° of frost, and any day was likely to dawn with a blizzard. The ground was covered with snow of a previous storm when I crossed the continental divide on the afternoon I left Snake River station, and ice did not melt there even at midday.

The expected snow began on the morning of my third day in the Park and fell pretty steadily for a day and

a half. Hayden Valley was very bleak, with snow blowing thick in my face, and the wind cold and penetrating. Once or twice I met mounted troopers, and north of the Yellowstone Canyon several freighters with wagon loads of material for the new hotel at the canyon. Otherwise the Park was quite deserted save by the regular details of soldiers at the stations, where I halted to register, and some emigrants bound for Alberta, who were encamped for the night at Norris Basin, when I passed there. Few animals were to be seen. Once I saw a bear, once a fearless coyote trotted for a mile or two in front of me, innumerable waterfowl lined the Yellowstone River, and beyond Norris Basin I encountered several deer.

Between Norris and Mammoth Hot Springs I met government scouts McBride and Brown, and we dismounted to light a fire and discuss for an hour the game situation, and particularly the condition of Park game.

Once I halted to extinguish a blaze, started doubtless by transportation company teamsters who had stopped here for luncheon and had failed to scatter their fire. The wind had carried the embers to the edge of a mass of dead fallen timber, and but for my opportune passing considerable destruction would have resulted.

Into Yellowstone Park

It was dusk when I reached Mammoth Hot Springs. The sky was heavily clouded, and when I entered the canyon below the Springs darkness was so intense I could not see Heart's ears from my seat in the saddle. The river roared at my side, but was wholly invisible, and I had to depend upon the instinct of the horses to keep the road. When I dropped during the afternoon below 7,500 feet altitude I had left the snow behind, and here the footing was dry and hard and traveling, therefore, even in the heavy darkness, quite free from danger.

At eight o'clock I reached the Park gate, only to find it closed. A soldier on guard at the station declined to open it and permit me to pass, on the ground that it was against orders to open the



A LAKE FORMED BY THE GROS VENTRE SLIDE WHERE DEBRIS IS DAMMING THE RIVER. THE BASIN SHOWN HERE IS DOUBTLESS DESTINED TO BECOME A LAKE.

gate after seven o'clock. Some argument, however, persuaded him that it was quite right to do so in this instance, and half an hour later Heart and Button were feeding in a comfortable stable in Gardiner, and I was enjoying my supper at a hotel.

Here I fell in with Deputy Game Wardens P. W. Nelson and Henry Ferguson, who had just brought in a poacher charged with killing moose. The next morning, in company with Nelson, I crossed into the Park to view some immense stacks of hay that had been standing here, unused and rotting, for years, with the bones of elk that had starved to death the previous winter scattered about the stacks. I mounted late in the afternoon, and the following evening, after dark, rode into Fridlay in a snow squall. The next afternoon I saddled Button, left Heart to rest in a stable, and rode north to see Henry Lambert, one-time guide, rancher, and pioneer, whose ranch lies twenty miles from Fridlay. I had been directed to turn into the first lane to the right, after passing a small church, and to follow the lane up a canyon. It was dusk when I passed the church and found the first lane, and dark before I reached the canyon. The lane road had petered out into a path, and when I entered the

canyon there was no indication that it was inhabited. Neither trail nor surroundings could be seen, and I turned back to make inquiries at a cottage near the church. A clerical-looking individual answered my knock.

"Can you direct me," I inquired, "to Henry Lambert's ranch?"

"I can direct you, sir," said he, "but Mr. Lambert's ranch would be difficult to find at night unless you are quite familiar with the country."

"I've never been here before."

"Then, sir, you could scarcely hope to find the ranch in the darkness with any directions I might give you."

"Could I get accommodations for the night for myself and pony, with you or probably at some ranch?"

"No one here, sir, accommodates strangers at night."

At this juncture a gruff voice within shouted: "He kin bunk with me."

"One of my neighbors, who is paying me a call," said the clerical gentleman, "offers you accommodations, sir, with him."

A tall, powerfully built man joined us. He was rough in appearance, and a real frontier type.

"Yep," said he, "I'm bachin' over here. Glad t' have you."

As we walked over, and I led Button,

to a little log cabin not far away, I inquired, "Are you one of the dominie's parishioners?"

"What's them?" he asked.

"Do you attend his church?"

"Nope. Don't go to no church. I ain't much on churches and religion."

When Button was made snug we entered the cabin, and I stood in the door while he lighted a bit of rag floating in oil in a tin dish. The weird flicker displayed a very filthy room with a cook stove in which a wood fire burned.

"Now make yourself 't home," he exclaimed. "Mighty glad to have you come. I get plumb lonesome here sometimes. That's why I was over t' th' preacher's. I reckon you'd like a cup of coffee," he continued, immersing a finger in a tomato can on the stove to test the temperature of the coffee it contained. "Set up t' th' table and have a bite."

A Pleasant Evening with Bill

With a finger he wiped the stale grounds from an enameled cup, filled it with coffee, set out some bread, and I accepted his hospitality. Bill, he told me, was his name, and Bill, to say the least, was as eccentric as he was hospitable. We sat until midnight, while he related blood-curdling tales of personal experiences and adventures with Indians and wild animals.

"Why," said Bill, waving his arms in wild gestures, "maybe you wouldn't believe it, but I've spent a hull year t' a slap out on th' plains killing buffalo fer hides, without ever clappin' eyes on a petticoat."

I had brought neither blanket nor baggage from Fridlay, and my bed that night was under the same dirty quilts with Bill, upon a dirty mattress on the floor alongside the stove. Bill talked in his sleep, waved his arms, and now and again gave mighty kicks, but on the whole I slept fairly well.

At dawn I fed Button, and when he had eaten, bade my friend Bill adieu, with thanks, and in due course reached Lambert's ranch, where Mr. and Mrs. Lambert gave me a true Western greeting and I enjoyed a breakfast of fried

grouse, with home-made jelly. When I told them where I had spent the night, Mrs. Lambert held up her hands in horror and exclaimed:

"Of all places! With crazy Bill! Why, he escaped from an asylum not long ago, and he's hiding up there. He's a lunatic!"

"Never mind," said I, "Bill took me, a stranger, into his cabin and gave me the best he had—and told me some good yarns."

In my article last month, discussing the elk situation in Jackson's Hole, it was stated that a large part of the elk wintering there are Yellowstone Park elk. It was stated at the same time that large numbers of Park elk also winter in Montana, north of the Park. Mr. Amos Hague, of Fridlay, who perhaps more than any one else on the Montana side has been active in efforts to better the condition of the animals, had written me that they were starving in great numbers every winter on depleted ranges. Every one whom I interviewed—hunters, guides, game wardens, and park scouts—confirmed this statement, and all traced it to the one cause—overstocking the ranges with domestic sheep. This has resulted not only in the destruction of thousands of elk, but of large numbers of the park antelope as well.

The situation is this: north of Yellowstone Park and adjoining it lie the Gallatin and Absaroka National Forest Reserves. In these reserves, as in all other national reserves, the federal authorities permit domestic sheep to range, and here graft plays a large part in admitting the sheep in excessive numbers.

A sheep man wishing to take in a flock of sheep makes application for license for a stated number of animals. The sheep man "sees" the forest ranger patrolling the district which it is desired to enter, and the ranger, his conscience having been duly quieted, reports that there is ample pasturage for an estimated number of sheep always in excess of the number for which the sheep man has asked license. The license is duly granted, and on the strength of it usually a greater number of sheep than



Photograph by S. N. Leek, Jackson, Wyo.

THE SETTLERS IN JACKSON'S HOLE DID WHAT THEY COULD TO FEED THE ELK LAST WINTER, BUT THERE WERE TOO MANY ELK AND THE HAY WAS TOO SCANTY.



ONE OF MR. WALLACE'S CAMPS IN YELLOWSTONE NATIONAL PARK.

the license calls for are run in, and not infrequently a friend's sheep as well.

The result can easily be imagined. The range is stripped utterly, before snow falls, of every vestige of grass and small browse, and when the elk and antelope come down from the Park nothing remains for them to eat and they starve by thousands.

It is unbelievable that a Christian nation would permit, to say nothing of being responsible for, such a condition as exists. Our government is nurturing wild animals during the summer in Yellowstone National Park, on ample ranges, and in winter turning them loose, without provision, to starve. The snow becomes so deep in the Park that it is utterly impossible for any considerable number of animals to winter there, and those that do remain throughout the winter fare badly.

Humanity cries out against this utterly heartless course. It makes me heart-sick now to remember what I saw in Jackson's Hole. Every one wants to see the animals preserved if they can be provided for. No one wants to see them preserved, however, through one season only to be starved to death the next. If they cannot be provided for, let us kill them in the name of mercy, as a ranchman kills steers he cannot feed, and be done with it once and for all.

If this were the only unoccupied public range where domestic sheep could graze, it might be argued that the sheep are of greater value to the country than wild animals. But this is not the case. There are thousands of square miles of unoccupied public ranges elsewhere where the sheep barons might take their flocks, and leave these ranges to the animals to which they belong, and this without the slightest loss to the country at large. But it would inconvenience the sheep barons to do this, and the federal authorities with the utmost docility have surrendered everything to these sheep men.

In the spring of the present year (1911) the carcasses of more than one thousand elk that had starved to death during the last winter lay along the Yellowstone River within a distance of twenty-one miles north of Gardiner. I have been unable at the time of writing this to get even an approximate estimate of the large number of animals that perished during the winter east of the Yellowstone and north of the Park, but the starvation rate was horrible. Reports from the western part of Gallatin County and in Madison County, west to the Madison River, including the territory north of Henry Lake in Idaho, west and northwest of the Park, show that immense numbers of animals

starved to death throughout this whole region between January, 1911, and the opening of spring.

In spite of this, previous to April first permits had been granted to sheep men to graze forty thousand sheep this summer (1911) on the Gallatin National Forest Reserve. Doubtless many additional licenses have since been issued.

Hague and others have been working for several years to have the government take steps to exclude sheep from an ample range contiguous to the Park. On the fourth of March of the present year Governor Norris of Montana signed a bill creating what is to be known as the Gallatin County Game Preserve, its special object being to provide a winter range for the Yellowstone National Park elk moving northward from the Park. The Federal Government will of course exclude sheep from this preserve in which Montana prohibits hunting. But it is a vastly insufficient area, extending but four miles northward from the Park boundary and but twenty miles in length. It is, however, a step in the right direction, but it must be extended considerably to be of any great value in preventing wholesale winter starvation.

There is absolutely no excuse for permitting sheep to denude this territory. Plenty of other unoccupied range will accommodate all the sheep that are here and many thousands more. Let the sheep, in the name of good policy, economy, and humanity, be excluded from the territory here suggested, and as soon as the range has an opportunity to rejuvenate, the elk situation will be relieved and the animals will show vast improvement.

Mention was made of rotting hay in the Park, near Gardiner, with bones of starved elk lying around the stacks. This hay was cut and stacked for the wild animals in seasons of stress. The park superintendent conceived the notion that if feeding were begun the animals would cease to forage for themselves. A considerable number of antelope and elk are drawn to this spot by alfalfa fields. When in the winter the alfalfa was so far eaten off that the animals could no

longer exist upon it, cavalrymen were detailed to drive them away. The efforts of the cavalrymen were futile, and many of the animals remained. Then the superintendent said, "Let them starve, but don't feed the hay." And within the view of Gardiner homes several elk starved to death around the hay stacks.

Perhaps there is no man connected with Yellowstone National Park who knows more about the Park animals and their general condition than Scout McBride. He informed me that failure to feed distressed antelope caused many to leave the Park in winter for distant ranges, in search of food, and that few of those that left ever returned. He was certain that failure to feed the hay at Gardiner had thus caused the loss of a great many antelope.

In this connection he advocates the cutting and stacking of hay at various points in the Park where it grows in abundance, to be fed the antelope in winter. He told me that several thousand tons of hay could thus be put up at nominal cost to the Government.

It is to be hoped that the present superintendent will hearken to the advice of Scout McBride and others who have made a lifelong study of the situation, and that he will take such steps as lie in his power for animal preservation.

One word should be said as to the destruction of animals by sheep herders. Every man of them is armed, and in season or out of season they live on fresh game. They kill whenever opportunity offers, and this is not seldom. They are the worst game poachers of the whole region, and the wardens admit that it is practically impossible to catch them in the act.

My horseback journey of nearly two thousand miles ended at Friday. Button had been with me, serving as saddle or pack pony over the whole journey, and Heart from the Cibicue in Arizona. They had earned a rest, and I turned them out on a ranch and parted from them with regret, as one parts from old and tried companions of the camp and trail.

(The End)

SHEPPARD, KING OF MIDDLE-DISTANCE RUNNERS

BY HERBERT REED

MARTIN SHERIDAN and Sparrow Robertson, the veteran trainer, starter, and track builder, who has seen the champions of the cinder path come and go, and has an uncanny faculty of predicting just when they are due to go, were examining one day a curious bit of photographic trickery. The camera man had taken two negatives of Melvin W. Sheppard, the brainiest middle distance runner the world has ever seen, and by combining the results in a single print had evolved a picture of the champion defeating himself in a terrific finish.

"That," said Sheridan, "is the only way he can be licked—there's only one thing on two feet that can whip Shep these days, and that is Shep himself."

As a matter of cold fact, and with all due deference to men who have beaten him indoors and out, this remarkable runner wins and loses—suffers his share of defeat and disappointment—but only his own lack of condition can bring about disaster at his pet distances, and this very lack of condition almost always results from a stubborn display of the very courage that has helped to earn his wonderful string of victories. He fights illness as he fights to the tape, and by calling constantly upon his wonderful fund of reserve vitality too often bankrupts it before going to the mark. The quality that has made him famous from Canada to Australasia has cost him many a race. It is in this one matter alone that his judgment deserts him, for when fit he has what is called the genius of pace and is as dangerous against the watch as he is from the back mark in a handicap race.

When the Irish-American Athletic Club athlete is at his best he is unbeatable at any distance from and including a quarter to a mile, and above the quar-

ter he is faster than was Lon Myers. He knows more to-day about pace and racing than Myers ever did, and although he has been handled by the best trainers in the country, he has been largely self-taught. Sheppard is the last word in that theory of athletics that is based on the command "know thyself." He has made a study of his own running—began it when a boy of eighteen. There is no form of running that he has not tried. He began as a sprinter, and as a boy was a capable cross-country performer.

But there was one thing he could not learn, and Sheppard was the first to realize it. Born a sprinter, with a turn of speed—two or three in one race if necessary—beyond the powers of all but the very best hundred and furlong men, and endowed with the courage of the two-miler, Sheppard knew that he could never learn the sprinter's start. To-day he is still slow off the mark, heartrendingly slow. The start was not in him, but the finish was, and Sheppard knew it.

He chose his distances by a process of elimination, until he found himself, never to go wrong again. I like to think that Sheppard learned from football to some extent the lessons that he apparently has never forgotten. He began athletics early—soon after he left his father's farm at Almonessen Lake, N. J., to settle in Philadelphia—and he tried football as a starter. The middle distance champion played end on the eleven of the Preston Athletic Club of Philadelphia, a team that won every game for three years and was not scored upon. The pluck that comes of such an experience is valuable in any form of sport—notably in the stretch of a hard race—and this, with his natural sprinting ability, is the foundation of his running career.

Slow starter though he was, he began to make things hum on the track when



Photograph by Paul Thompson, N. Y.

SHEPPARD BREASTING THE TAPE IN THE FINALS OF THE 1,500 METER IN THE LONDON OLYMPIC GAMES—"THE GREATEST RACE OF HIS CAREER."

he entered the Brown preparatory school, and he was a nine days' wonder long before the average runner has mastered the groundwork of the game. Sheppard and the late J. B. Taylor, the Pennsylvania negro runner against whose name is still set the intercollegiate quarter-mile record, were schoolboys together. Oddly enough, in those days Sheppard was the better at the quarter and Taylor was master at the half, a distance that is now Sheppard's masterpiece.

In after years when he was at his best, Taylor said of his old school friend:

"If he would only really train for the quarter I couldn't beat one side of him," another tribute to the versatility of the keen-thinking-runner, who in spite of his supremacy at the half and from the half to a thousand yards, has done two miles in 9 mins. 30 secs., and can still defeat any but the top-notchers at six miles:

Sheppard's records at many distances

would occupy more space than can be accorded them here, from the time he made his first appearance wearing the winged fist in 1906, twice in five weeks breaking the mile record for any athlete in training at that time, to the sunny July day last year when he ran 1,000 yards in 2 mins. 12 2-5 secs., clipping 3-5 of a second from Lon Myers's mark of twenty-nine years' standing—a record at once the hope and despair of every champion in all that period. But it is not the performance and the resulting figure that count in a study of this man and his work so much as a scrutiny of his carefully laid plans, the plans of a man who knows himself so thoroughly that he can run at once against a big and straggling field, with all of hindrance and overturn of judgment that that implies, and against the chronometer that will not wait and reckes nothing of accidents by the way.

Breaking Records in a Race

Great runners like Wendell Baker, Maxwell W. Long, and Lon Myers have in the past chosen to make their record trials against the watch and with a free track and timers stationed at various points to cry out the time, but on the day when the ex-Philadelphian ran one of the most remarkable races of his career, he chose to set sail for the record against a big field of long mark men and without any specially assigned pace-makers to carry him along. Some said it was a display of "nerve," but those who knew Sheppard realized that it was confidence in his own powers of a very solid sort.

Sheppard mapped out his race with the utmost care and with the serene confidence that he could run not within a fifth of a second, but exactly, to his schedule. He planned to run the first quarter in 54 seconds, and the half in 1 min. 55 secs. He finished the quarter in fourth position and on the tick of the flying watch-hand, and practically ran the half in the appointed time.

But here an accident occurred. His last stride would have carried him over the mark in exactly 1:55, and no one knew it better than Sheppard, but just

as he was making his last stride one of the long-mark men quit the race and clumsily tried to leave the track by crossing in front of the man who was out for the record. Sheppard was jostled just enough to steal a second from him, and this, too, he knew without a word from the timer.

It remained now for the burst of speed to make up the deficiency, but it was not quite enough, for he had already allowed for it, and he crossed the finish line, with a new record to be sure, but in time one second slower than he had planned. It was a masterpiece of preliminary preparation and judgment in actual racing, and the visible sign of his supremacy over all comers.

But after all, it was in the Olympic games held in the Shepherd's Bush stadium, England, that he set the standard to which the hosts of middle-distance men continually aspire to-day. The conditions were exceptionally difficult, the preliminaries that led up to the final of the 1,500 meters—roughly 120 yards short of a mile—particularly disheartening to the Americans. As it turned out, to win the event, Sheppard had to defeat J. P. Halstead, of Cornell, at that time considered the best mile runner in America, and then dispose of the fastest milers in England, who were in rare form at the time.

The trial heat in which, through the luck of the draw, the two fastest men at the distance in America had to run against each other, will never be forgotten by those who saw it. Sheppard defeated Halstead by a yard, in a splendid finish, and both men finished in front of Butterfield, the former mile champion of England, who was run off his feet. In this heat Sheppard hung up the time of 4 mins. 5 secs., breaking Lightbody's Olympic record by 2-5 of a second.

In the final Sheppard stepped to the mark accompanied by only one other American, J. P. Sullivan, who, by the way, was far below his accustomed form. Five of the starters wore the colors of Great Britain, and the quintet included such splendid performers as Hallows and Wilson and Tait, the Canadian. The Englishmen were as sure of running Sheppard into the

ground as they were that they were alive. Sheppard was sure of nothing but himself. He ran that day, I believe, the greatest race of his career.

At the crack of the pistol Hallows, who himself had a wonderful turn of speed, shot out in front and made the pace, closely followed by the other Englishmen and the Canadian. Sheppard and Sullivan hung back, but it was soon apparent that the latter was laboring, and that the Britishers were certain of killing off at least one of the Americans. Turning into the stretch, the Englishmen made their effort, and a good one it was. But as it turned out, the judgment of the three men who were ahead of the American at the time was not as good as the judgment of the lone wearer of the stars and stripes. Sullivan had dropped out by this time, and Hallows and Wilson broke into their sprinting strides, but without an answering change on Sheppard's part from the measured stride that was as accurate as the second hand of the finest chronometer.

Wilson's sprint carried him past Hallows—then Sheppard started his terrific sprint. Instantly the Englishmen were in panic. In a fraction of a second they realized that they were beaten men. Sheppard was "kicking the track oftener than the other fellow," as Jack Moakley would put it, and the sound of his drumming feet was the long roll of England's hopes. Fifteen yards from the finish Sheppard shot into the lead by a yard. Maintaining his sprint to the tape he crossed the line a game winner with Wilson in second place, Hallows third, and Tait fourth.

The very next day Sheppard won the 800 meter race in hollow fashion in 1 min. 52 4-5 secs. Fairbairn-Crawford, the English crack, made the pace for three hundred yards, where Sheppard passed Just, another Englishman, and Lunghi, the Italian. Just quit in the stretch, run out, and the American galloped home with speed to spare. Lunghi finished second, and Braun, the German, third.

I lay so much stress on these performances of Sheppard's, not alone because they were beautifully planned and executed, but because of the almost psycho-

logical effect on the rest of the team of an American victory in two events practically sacred to the Englishman. Sheppard's victories hurt the Englishmen inversely as they heartened the Americans. And this is always the value of Sheppard and his work, that his heart is hot and his head is cold when the great test comes. Confidence begets confidence, and this is why when Sheppard is entered in an all-important event and is in condition, his followers predict a victory for him and settle back in their seats in solid comfort, knowing that the event will justify the prophecy.

Here is Sheppard's own training recipe, given not because it is a standard, but because it is different from the average and the result of the runner's long and careful study of his own needs:

Monday—A fast quarter, two good men to make pace.

Tuesday—Six hundred yards.

Wednesday—Seven hundred yards.

Thursday—One thousand yards.

Friday—Half a mile.

Saturday—A fast quarter, or two fast three hundreds.

One day off every week.

No running for two days before a race.

Eat plenty of meat to build up burned tissue.

What the Middle Distance Demands

"The middle distance," says Sheppard, "offers a chance for good sprinters who are poor starters, or speedy milers who lack stamina for a fighting finish. I never knew my own ability until as a schoolboy I had tried sprints, then distances, and finally cross-country. There should be no strain on the lungs with loosely swinging arms.

"The middle distances require the greatest will power and concentration. The middle distance man should run the first quarter in the half three seconds faster than the last. He should leave the pistol at the same speed as for the quarter, and should then settle into his stride. The great difference between the English and the American methods is that the Americans reserve less."

It cannot be said that the good runner

following the Sheppard regime will at once or ever develop into great middle distance men, for no man can attain to the champion's class without careful self-study. This is the great lesson of Sheppard's career—that all other conditions being equal, or even a little unequal, brains make the champion.

Perhaps one of the best examples of Sheppard's ability to sprint, and sprint a second time in the same race—a quality that is born in a man—was his trial for the Olympic team, at 800 meters on Franklin Field, Philadelphia. This time the Irish-American started as if to run against the watch, and his plan was to get out in front and stay in front to the finish. So accurate was his knowledge of his own condition that he felt that he could stave off any rush, by whomsoever made, from behind.

Once more his judgment of his own powers stood him in good stead. There were in the race besides Sheppard two first-class middle distance men, Sheehan of Boston, and Bromilow of New York. Both challenged in turn, and each was in turn shaken off. Twice Sheppard sprinted like the fastest hundred yard man, and twice kept it up until he had "cooked" his man. And yet he crossed the finish with the same marvelous burst of speed that he shows in all his races.

So much for speed. Now for the hardy side of it. In 1905 he ran five perfect races in three days, and traveled every day. None but the stoutest of heart and soundest of wind and limb can hope to equal a record like that. In 1910 the middle distance champion had one of his best seasons. He scored a total of 122 points in the hardest kind of racing, while Martin Sheridan rolled up 120, but in field events which do not take so much out of a man.

Sheppard has had his disappointments as well as his triumphs. One of his defeats by Harry Gissing, another speedy man, came after he had got out of a sick bed and gone to work, still suffering from the grippe. He should have been in bed at the very moment that he toed the mark. There was another bitter disappointment in store for him on October 10, 1906, when at Travers Island he made an effort to break Charlie Kilpatrick's record for the half mile. Sheppard planned his race in the customary fashion, but was so badly interfered with by a wabbling pacemaker that he could not keep anywhere near his schedule.

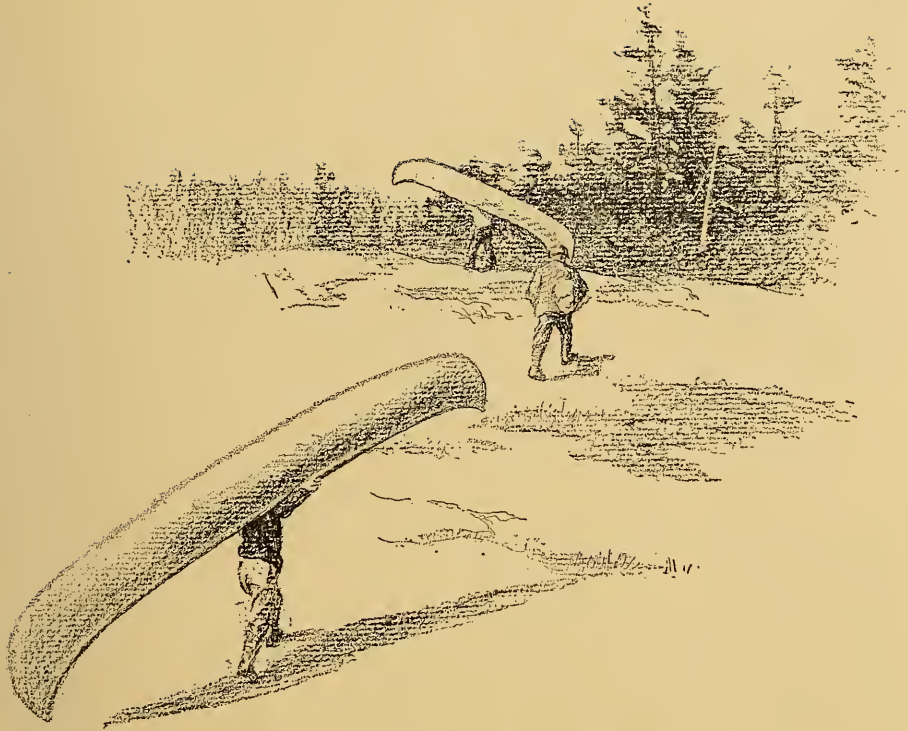
For the final estimate of Sheppard's achievement in any one meet I cannot but go back to his Olympic record, for it marks the triumph of combined speed, courage, and brains. He was the largest point winner at the meet, scoring 11¼ points. He won the 800 and 1,500 meter races from the cream of the world's runners, and was also a member of the winning four-man relay team.

His times in the 800 and 1,500 meters are Olympic records. Watches were also held on him at the half, which he ran out after finishing the 800 meters, and he finished in 1 min. 54 secs., breaking the previous English half-mile record of 1 min. 54 3-5 secs., made by F. J. K. Cross of Oxford in 1888.

For those who love summaries here is another that everlastingly ought to clinch Sheppard's supremacy:

In the summer and fall of 1908 he won twenty-three out of twenty-six half miles, and ran twenty-one of them in 1:59 or better. In one season he made five world's records, and he has broken one record that stood twenty-nine years and another that had been on the books for fourteen years.





SOME BEAR, BUT MOSTLY PARSON

BY PERCY M. CUSHING

Illustrated by George C. Harper

KAHWEAMBELEWAGAMOT it was to the Indians who built their tepees along its silver length before the sun struck red on the first white face to look upon the region. Kahweambelewagamot—the sound was strange, and the lips of this first white man and the others who followed him stumbled over it. So as best they could these early traders asked its meaning of the Indians. And the Indians raised a long shout, and then pressed their fingers to their lips—the sign to listen.

For a moment there was silence; then from rocky crags, from the black wilderness shores, far and farther from the far distances, rolled and swelled an answering shout of mighty volume, to peal

away ripple by ripple into the silence from which it had come. The white men understood then and they called it the Lake of Many Sounds, which was easier to say and to understand.

To-day the traveler who drives his cedar canoe through the country will look at his map and still find on it the old Indian name, but the few straggling settlers he chances to meet, three or four perhaps in all, will tell him it is Hollow Lake, for the demand for condensed brevity which comes of advancing civilization has found its way even up into the Canadian pine and spruce lands.

We went to Hollow Lake, the three of us, for what fun we could find, for perhaps a black bear and for those mottled-backed, pink-fleshed fish which the



HE DIDN'T "TAKE NO STOCK IN
THEM ORNERY TIME-TABUL
MAPS NOHOW."

handful of Hollow Lakers call lake trout, and which are probably a type of land-locked salmon. It is not a hard task to find the lake, for it is ten miles long and three miles wide, and nowadays it is not so far above the dress circle of mature civilization. To be precise, it lies in Haliburton, Ontario, to the north and east of the Muskoka district, and directly south of Algonquin Park, that great game preserve of the Canadian Government.

To reach it from Toronto, one takes the railroad, rides all day, disembarks from the train to embark on a small steamer, sails through the Lake of Bays to the tiny town of Dorset, where he spends the night. Next day Toe Nail Hill, thus named for its steepness and roughness, must be traversed, the mile sweep of Loon Lake crossed, a short portage made, and lo! the Lake of Many Sounds flares northward, a rugged shored and picturesque sweep with romance and promise leering behind every point.

Maybe things are changed now, for it was a long time ago that Frank, who was the Parson's brother, cursed his way up and down Toe Nail Hill and over the Loon Lake portage with a sixty-pound canoe on his back. It was a long time ago that the Parson himself, following bowed down under the tremendous weight of a fishing rod and frying pan, administered jeers and religious rebuke. And it was at an equally distant

period that I, laboring with another canoe, lent mental support to Frank and called silent maledictions on the Parson, for, being younger, I had not yet learned to treat him with proper disrespect.

But though a century had separated that trip from the present, I could never forget the hour when we squared for those jeers on our first successful fishing trip, when the ministerial dignity was humbled by the spike branch of the gnarled tree, and Frank was permitted to outswear himself unreprimated. We got lost the first night out, because the Parson had refused the kindly suggestion of the hotel keeper at Dorset that we better take a guide.

"What?" our ministerial companion had declared with fine scorn. "Why should we take a guide? Have we not two sound, able-bodied young men to do our work?" And pointing triumphantly to Frank and me, he had picked up the frying pan and fishing rods and, directing us how best to carry the canoes, had assailed the obstacles of Toe Nail like a gladiator.

It was raining when we paddled into a blind bay a mile off the main lake that night—a cold, mean rain. Sitting in the bow of my canoe, the Parson had directed our route from the cheap railroad map and time table which he treasured in his inside pocket and constantly referred to as "Our Chart." Frank and I, soft after long months of idleness, had paddled our arms off keeping up with those directions, and we were not in a pleasant frame of mind when, with darkness at hand, with two inches of rain water in the bottom of the canoes, and our clothing soaked, we found ourselves in the edge of the swamp with not a foot of dry ground anywhere on which to camp.

I ran my canoe alongside Frank's, emboldened by weariness, and suggested that I was weary carrying dead freight, whereupon Frank reluctantly ordered the Parson into his boat. Then we held a council of war and the majority opin-

ion was that the Parson's time-table map was next in uselessness only to the Parson himself. So we hit the back trail in the coming gloom, and at about ten o'clock tumbled ashore on a rocky point, where we crawled under the canoes and the rubber ponchos and tried futilely to sleep.

Soon after daybreak, the first of the three residents of the Hollow Lake region we encountered in our two weeks' stay there came over from his cabin half a mile away. He had seen our smoke and he said his name was Crumbie, probably his own corruption of Crombie, an old Toronto family of which he said he was a member. He had been on Hollow Lake five years; had found it a sort of relief from the thickly settled regions below, where there were some unpleasant memories he wished to forget—or escape. But people were getting so plentiful along the lake—there were three families there—that he thought he'd have to be moving farther north.

Mr. Crumbie was a thirsty man, and after he had explored the contents of the Parson's "medicinal" flask to the extent of a two-minute examination, he gladly directed our course down the lake, at the same time lowering his stock in the Parson's eyes by declaring in unbiased terms that he didn't "take no stock in them ornery time-tabul maps nohow."

With a stiff head wind and the Parson to hamper us, it took the greater part of the day to reach the head of the lake, where we found a deserted lumber camp. The bunkhouse stood intact, and from casual observance the bunks seemed to contain nothing but dead leaves and dust, but the Parson, ever particular, feared the smallpox and other scourges that not infrequently sweep lumber camps.

Down on the sandy beach, which ran along shore for two hundred yards, a log supply house had been built on piles ten feet above the water. The ladder with which the building was reached still lay near, and exploration indicated that the single room was clean and would make a good camp house. Into it we lugged our outfit—that is, Frank and I

did the lugging while the Parson directed.

It was still light when we had finished, so the Parson said he would go down to the creek that emptied into the lake a few hundred yards away and catch some trout for supper. In a few minutes he came running back to tell us he had found deer tracks in the sand along the edge of the creek. We went down and looked them over, and there was no doubt about it, they were deer tracks, hundreds of them crossing and recrossing and trampling each other down into a sjudgy mire where the animals had come down to drink.

We had difficulty in getting the Parson to turn in after that, for he was eager to take his 38-55 and go down to wait for a buck to pop out of the brush, though it was September and close season, which shows how eligible he was to the bad sportsmans' club. In the middle of the night we were awakened by dreadful howls. Frank and I banged our heads together in the dark, leaping from our pine-bough bunks at the same instant. A ray of moonlight fell through the square hole that served for a window in the log building, and fell on the camp cot which the Parson had insisted on lugging along and setting up. The cot was empty.

"Something's happened to him, he's gone, gasped Frank, and before I could reply, another series of yells went up from outside the cabin, mingled with a tremendous thumping and banging. We leaped to the door and stumbled down the ladder to the beach. There in the moonlight stood a specter in white, wielding a ponderous club upon a dark object that huddled against the distorted outline of an uprooted stump. The formless yells we had heard now took shape.

"I've got him, boys, I've got him. Come on—a bear cub," the Parson was bawling.

Before we could reach him, the object by the stump lay inanimate. Frank struck a match and bent over it. Behind him the Parson was hopping about in his underwear, gurgling, "I got him—bear cub—killed him with a tree."

Then Frank snorted and straightened up. "Porcupine," he said briefly, and crawled up the ladder to his balsam couch. As for the Parson, there was no more sleep for him. He sat up on his cot and kept us awake the remainder of the night by grunting unintelligibly to himself. Next morning he told us the porcupine had awakened him by fooling around the foot of our ladder, drawn to our camp probably by the bag of salt the Parson had spilled on the beach in the afternoon.

It was the fourth day in our new camp that we began to realize that something ailed our operations. The Parson's palate had rebelled long ere this at canned army ration, a mixture of mule meat and poor potatoes with which we had supplied our larder before starting, and ours were beginning to rebel. We had counted on plenty of fish, but three days of patient effort had failed to produce a single specimen. In one corner of the lake we had found as pretty a little stream as one usually sees. We had fished its riffles and its black pools faithfully with flies the first day, and with bait the second day when we were hungry, without so much as a sign of a trout.

The third day we had tried the lake with flies with no better luck, and on this, the fourth, when the name army ration staggered us, we resorted to the stream again, and lo! the Parson hauled from a tiny pool, at the foot of a baby rapids, an infant brook trout of four inches. As we were dividing that trout in the evening, out of the purple twilight that was weaving its enchantment across the silent surface of the lake slid noiselessly a long canoe. So quietly did it come that we hardly saw it until the soft purr of gravel under its bows as it touched the beach sounded in our ears. Then we looked up into the expressionless face of a solitary Indian.

He was going up Kimball Lake, up Bear Lake, both beyond ours, and then up and up and beyond until he reached his cabin, a cry of sixty miles or more. We asked him of the fishing, and then we met our mistake face to face. In broken English he told us that at this

season, September, the trout had all left the small streams and were out in the deep, cold water of the lake, from which there would be trouble luring them.

If we fished in the right way, however, we could catch plenty of lake trout. This way was to troll with much line and much lead on the line in very deep water. Before our Indian friend departed into the twilight he showed us some large and murderous gangs of trolling hooks, most unsportsmanlike in appearance, and for one of these the Parson surreptitiously bartered a perfectly good clasp knife. For to the Parson another day of army ration would, I believe, have spelled suicide.

In our own outfits we had a couple of bass spoons which we had brought against emergency, and at dawn we started out on serious business. As usual, when there was sport to be had, the Parson was up first, and when we began preparing for breakfast—a task he never assisted in performing—we noticed him pottering around in a muddy backwash from the creek. Presently he came over, fixed up a bit of rope between two trees, and hung his spare clothes and blankets on it, as he explained, to air. When breakfast was ready he appeared with our tin kettle in his hand and sat down and eyed us quizzically. We paid little attention to him, until, shouldering the larger canoe, we set out over a half-mile portage to Kimball Lake, where the Indian told us we would find the best fishing. Then we perceived our Parson, carefully carrying rods and the kettle, following in our wake.

"What are you going to do with that pot?" demanded Frank hastily.

The Parson grinned. "Put it back," ordered his brother. But the Parson sidestepped a hampered kick from Frank's boot as the latter struggled to reach him without dropping the canoe.

It was not till we had embarked on Kimball Lake that the Parson revealed the contents of his kettle. "Chub and shiners," he announced proudly. "The Red Monarch told me they were necessary—after I gave him Frank's pipe."

Frank felt quickly and vainly at his hip pocket, then glared over his shoul-



INSTANTLY THE PARSON'S ROD BEAT THE AIR FRENZIEDLY, AS HE GAVE A MIGHTY SWIPE WITH IT.

der at the Parson. It was no time to risk upsetting the canoe to administer punishment then, but I noted agreeably the click of his teeth and saw things coming for the Dominie when shore was reached again. But the Parson's vision did not seem to extend beyond the immediate moment, for, ignoring all indications of coming storm, he declared jubilantly that we hadn't any show to catch fish without chubs, and that he didn't propose to share any of his with idiots who couldn't forage for themselves.

We said nothing, while our partner gleefully began to rig his rod and tackle. He sat amidships in the canoe facing forward. Frank was paddling in the bow, I in the stern. The Parson then extracted the largest and fattest chub from his kettle, which he placed carefully out of our reach between his knees, baited his murderous gang hooks, and dropped the line overboard at the moment Frank shot a veiled glance over his shoulder at me which meant wonders.

I waited till the Parson person had stopped the flow of line from his reel.

Then, as he was fishing on the same side on which I was paddling, I caught his line between my hand and the paddle on the back stroke and gave it a sharp tug.

Instantly the Parson's rod beat the air frenziedly, as he gave a mighty swipe with it. "Golly, I had him that time, I did. He bit like a whale," he blubbered. And then: "I told you fellows you'd have to fish near bottom with chub and gang hook. I told you, but you were knowitalls."

"Maybe he got your bait," suggested Frank, without looking around.

The idea seemed to impress our friend, for he began to reel in hurriedly. When his line was most in, I gave another vicious yank, and he retorted with a wild jerk that slashed his tackle out of the water over his head and shook the chub from the hooks.

"Gee willikers, he followed it right up, that's what he did. Almost yanked him into the boat. Get him next time." And as the Parson bent excitedly over his bait kettle, Frank turned quickly

and his lips formed three words that were the expression of a grand idea.

So when the Parson dropped his line again over his shoulder, I caught a bight of it in my hand, pulled in till I reached the hooks, twisted off the chub, and let go the tackle before he noticed the absence of the drag of the weighted line. Then quietly I slipped the pilfered chub behind me into the canoe. I let our Parson run out his entire line before I gave him another bite. He struck wildly again.

"Lost the fiend," he shouted. "Can't seem to hook 'em. Maybe he got the bait, too."

Well, we cut into the Parson's supply of chubs and shiners until he hadn't one left. Then came our turn.

"Say, Frank," I remarked seriously, "the Parson can't seem to hook his fish. You're an older hand, suppose you try it." And I handed up one of the purloined chubs.

"Hey," gasped the Parson person, "where'd you get any minnows? I didn't see you catching any."

"Of course you didn't," said Frank meaningly. "Look here, old sky pilot, do you suppose we tell you everything we do? You've had your chance and you've fizzled. Now watch a real fisherman catch fish."

There was a good deal of rashness in this remark, for we didn't know whether we could catch anything or not, but we reasoned that we had as good a percentage as the Parson, since he had been angling for fully an hour with baitless hooks.

Frank baited his bass spoon, following the advice of the Indian that bait was necessary, and I paddled him quietly along the deep water, my nerves on edge for fear the dull strike of the lake trout wouldn't fulfill his boast. But I needn't have worried. In ten minutes I saw the tip of his rod shoot sharply down toward the butt, and I knew by the sawing of the line in the water that it was not a snag.

"You'll lose him, you'll lose him—I did," yelled the Parson, trying to stand up in the canoe. But his Dominieship guessed wrong. In ten minutes a three-pound fish, his shining sides heaving

multi-colored in the sunlight, lay in the bottom of the canoe. And Frank was getting square on the Parson. "Blinkety, blankety, blink!" Goodness, I gave him credit for being an artist, but this was beyond my wildest dreams.

"Fish, fish," spluttered the Parson, groping vaguely in the blue smoke for a Scriptural quotation to stay the sulphur.

"Fish, you bet, the blankiest blank sort of a blankety fine fish your blankety eyes ever fell on, blank it!" roared Frank.

And then the Parson took another look at the flapping beauty in the canoe and the sight was too much for him. He gave up trying to put the kibosh on his brother's eloquence, waved his arms about his head, threw his hat overboard and howled for joy, while Frank went methodically ahead, uncensured, until he was exhausted. It was great—the greatest ever, to be able to go the limit on the Parson and to have the events make him accept it.



We tarried long enough for Frank to land another of the beauties, and to enjoy the sensation of refusing to loan the Parson one of "our chubs" that he might try his hand again, and then we paddled for the foot of the lake and the portage back to camp, for heavy clouds had been piling up in the north for an hour, and even as Frank was reeling in the second trout the sun went down under them.

We decided to stow the canoe in the bushes instead of lugging her back across the portage, as we intended coming over to fish again the next day. We had just agreed that trolling for trout with live bait was pretty poor sport and equally unsportsmanlike, and satisfied our consciences by declaring that in the present case it was necessary for food, when the tons of water that had been working together in the black clouds burst through the tree tops upon us. A hissing, drenching downpour, driven by a rising wind, it soaked through our clothing in a trice, and we hunched our backs to it and hurried.

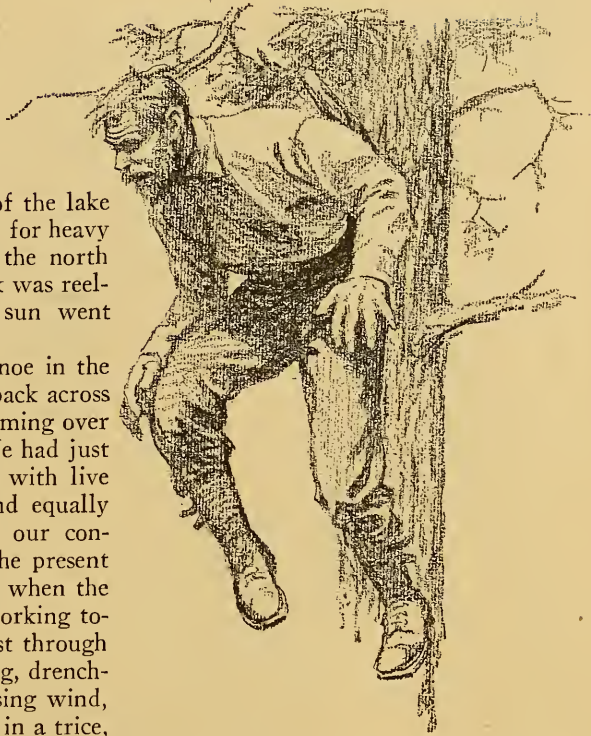
The Parson led the way. I followed. Frank trailed. Presently I felt him pluck at my arm.

"Watch him," he said, pointing to the Parson's narrow back. "He's forgotten he hung all his clothes out to air."

A moment later we came out of the trail and in sight of camp. An array of shirts and underdrawers flapped us a soggy welcome, and for us a joyous one. But for our Parson—with a yell he rushed upon them, tore them from the line, and then, realizing the futility of haste at that late moment, he—well, he set about methodically and without reserve proving himself a close relative of Frank's.

"Blankety rain on my blankety pants—" But we blush with shame to repeat it.

It was the first and only time save one that we had ever heard our Parson speak thus. That other occasion was when he barked his bare left shin on the gunwale of a canoe, and even Frank admitted that then the provocation was just. But



HALFWAY UP THIS TREE, CAUGHT IN SOME INEXPLICABLE MANNER BY THE REAR OF HIS TROUSERS, DANGLED THE PARSON.

Frank had himself barked his own shins in the same place ten minutes before.

At least the day had been a success, for we had found fish, and how good they were broiled on green spits over the fire that night. Also we knew where more were to be had, and though the method of taking them was poor sport, we deemed even unsportsmanlike methods superior to army rations. At dawn next day, the Parson called us in high excitement. We rushed out into the chill air in our underwear.

"Hark!" commanded the rude awakener. We hearkened. Presently from somewhere in the brush came the strangely musical note of a bird. It was a kind of song, long drawn out, and it ended abruptly in a soft silence like the last breath of a June wind. It was a song not to be forgotten, never to be mistaken once heard again.

The Parson broke in on our thoughts.

"That," said he, "is the song of the rare Golden Canadian Warbler. Few ever have the privilege of hearing it."

"Golden Canadian Warbler," we repeated dreamily. "Well, to me it's like a day out of a boy's tenth year or thereabouts," said Frank, his face grown thoughtful.

"You chaps are going fishing," said the Parson. "I'm going bear hunting. Yep," he continued when we looked astonishment, "saw the tracks down along the creek while you were snoozing. I'll have bruin in camp when you get back."

He had to have his way, so we left him. It was noon and we had come ashore with a dozen beauty trout, when we heard the crack of a rifle, and then heard it again.

"He'll get in trouble, the little pinhead," exclaimed Frank earnestly, for despite brother's peculiarities, he was a pretty decent sort of brother after all. I was about to say I didn't think so, when far off through the woods we heard a wild yell, and then another and another.

There was something tragic in those yells, something desperate. Frank was on his feet in a flash. I was a second behind him. We left our rods and the fish lying where they were, and started toward whence the cries had come. As the brush broke before his ponderous bulk, I saw Frank loosening the 32 at his hip.

I was unarmed save for a hunting knife, a useless weapon. But in an extreme a man could use a knife. I felt at my hip to see that it was secure. I thought of the rifles. They were back in camp, too far to go, especially as the cries were coming more frequently now, and in them I thought I could detect a note of agony.

I knew black bears were cowards at the best, but I knew also that they would fight if cornered, or if their cubs were molested, and as we tore through the briars that clutched at our feet and burst our way by sheer strength through tangled clumps of bushes, I wondered if we could reach the Parson in time.

Just ahead I could hear Frank panting and muttering to himself as he

fought onward. Once the shouting stopped, and I went sick at heart, for I knew we were too late. And the next instant the cries flung out again, pitiful, bloodcurdling, and—we burst into a little clearing with a lone stunted tree in its center. Halfway up this tree, caught in some inexplicable manner by the rear of his trousers, dangled the Parson, a ridiculous and pathetic object.

A sharp knotted spike of a broken branch had speared through the waistband of his small clothes in such a way as to hold him pointing head outward from the tree trunk at an angle of about forty-five degrees. The tips of his toes just touched a lower branch, but not sufficiently to give him footing. There was nothing within reach of his arms, and he was so poised that had he loosened himself from the peg on which he stuck, he must have fallen face downward to the ground, a distance of fifteen feet.

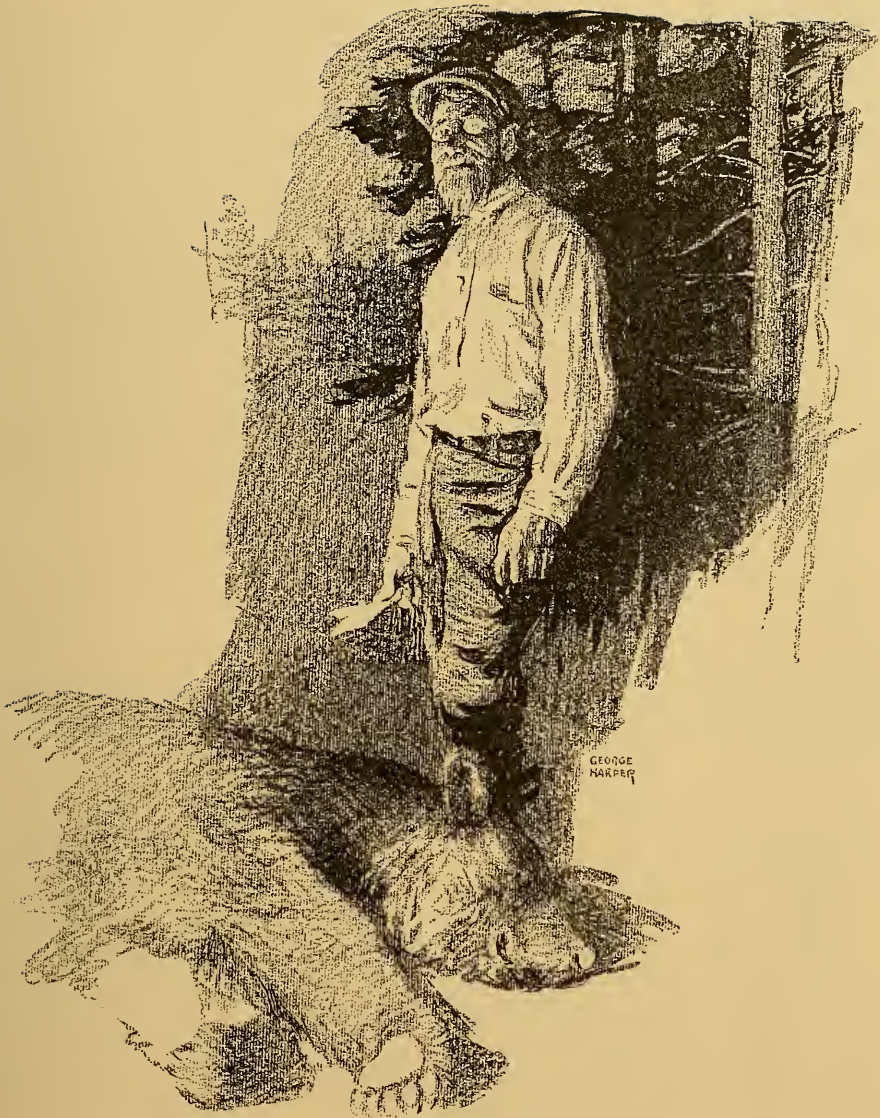
We were so surprised and so disgusted that for a minute we gaped at him motionless. Then Frank tramped over to the tree and made out to shake it.

"Don't! Don't!" yelled the Parson. "You'll shake me down. I can get down myself, but if I do, I'll come down too fast. Come up here and help me."

Frank considered a moment and then went up. When the Parson was on terra firma, his big brother demanded wrathfully: "Why, you little pinhead, how did you get up there?"

The Parson's tale was long. He had seen the bear at the edge of the clearing. He thought it safer to shoot the bear from the tree than from the ground. So he had climbed up. He had fired once, and again, and at the last shot the rifle's recoil had unbalanced him from his perch, and he had started a Steve Brodie for earth, when the kindly spike of a limb caught and held him. Then he had been afraid to free himself for fear he would have continued his downward flight, as there was nothing near enough for him to grab, so he had decided to summon aid.

Suddenly the Parson paused, his face grown eager, intent. He raised his hand for silence. Somewhere in the bush to



THERE WAS BLOOD ON HIS HANDS, AND ON HIS FACE WAS A
PIRATICAL GRIN.

the right a bird was singing—a song long drawn out, not to be forgotten, never to be mistaken once it had been heard.

“That,” said the Parson reverently, “is the song of the rare Red Eared Star Finch. Few have the privilege of hearing it.”

Frank stared. His face worked with restrained emotion. I swallowed hard. Silently and wearily we turned back for our fish, leaving the Parson alone.

Later when we were gathering our catch together we heard the report of a rifle and a whoop which we recognized as having been released by our Parson, but we set our teeth, and Frank remarked grimly that he'd let the little pinhead hang by the neck this time for all he was concerned. It was a long carry across the portage, and when we reached camp dusk was settling. Between the trunks of the trees we caught the gleam of a fire. The Parson had

beaten us home. As we burst onto the beach, he arose quietly from the ground, and the firelight playing on his figure revealed an astounding spectacle. In his hand he held a long sheath knife from which blood was dripping. There was blood on his hands, and on his face was a piratical grin.

"For the love of Heaven," began Frank, and stopped.

"Oh, nothing," said the Parson nonchalantly, "just that bear that I said I would get."

We tiptoed over and peered beside him. And what do you suppose—that little pinhead did have a bear, a big, black, shaggy fellow that lay there humped in a limp mass with its hide half

off. He had found it foraging in camp on his return, and had sneaked up behind and ended its dream of a happy feeding ground.

"Well I'll be—you little—," began Frank; but the Parson's hand, lifted suddenly in an attitude of warning, stayed him.

"Hark," breathed our Dominic, breathless. The song of a bird, unmistakable, not to be forgotten, lifted in the twilight. "That," said the Parson, thoughtfully, is the song of a Hungarian fly catcher—"

But with the cry of an infuriated animal, Frank gripped him by the trousers' seat, and we rolled him in the sand—oh! how we rolled him.



GETTING THE MOST OUT OF THE MAGNETO

BY HAROLD WHITING SLAUSON

TO many a motor car owner the magneto spells mystery, as well as modernism. That the magneto is modern is certain, for of the two hundred and odd thousand motor cars that will soon be placed upon the market this year, but few of their manufacturers do not make a strong feature of this form of ignition as a part of the regular equipment of their output.

The operation of the magneto is simple, its whys and wherefores are logical, and if one investigates the subject, even superficially, he will discover that the much-maligned machine seldom gives trouble, and that when it does, such action, or failure to act, is due to neglect, abuse, or some other perfectly legitimate reason, rather than "pure cussedness" on the part of the instrument itself.

Much of the mystery surrounding the magneto has probably been due to the fact that the machine is concerned with

electricity, and this fluid has always seemed so intangible that any instrument that has had to do with its generation is immediately classed with the scientific and theoretical to a degree beyond the ken of the layman. But if the mere mechanical aspect is considered; if it is realized that the magneto consists mainly of a bundle of wires which, when revolved near the ends of a magnet, collects that magnetism and sends it through the circuit in the form of the electric current, and that consequently the magneto is a converter that changes part of the mechanical energy of the motor into the spark-forming fluid, the chief idea may be more easily grasped.

To be sure, the magneto is delicate, and for that reason it should never be dissected by the amateur, but inasmuch as what few adjustments it has are readily accessible, it is seldom that the machine need to be taken apart. The platinum points of the contact breaker, usually located in the small box on the end

of the armature shaft, may need to be smoothed with emery paper occasionally if they have become pitted from excessive sparking, but this is a simple operation and is not greatly different from the care given to the vibrator of the dash-board spark coil.

A few drops of oil should be fed to the lubricating cups or holes of the armature shaft as often as the directions call for—usually about once every five hundred miles—but aside from this, the owner can generally forget that he has a magneto, and will only be reminded of the fact by the pleasing absence of ignition trouble. If ignition trouble does occur, it is more than probable that the fault lies with the plugs, timer, or wires, rather than with the magneto.

The man who drives a magneto-equipped car knows that the current producer is run by a gear connected, either directly or through the medium of other gears, with the crank shaft of the motor. He knows, then, that the magneto is driven positively and that there is a constant relation between its speed and the number of revolutions of the motor.

But does he know that it is absolutely necessary that a certain position of the armature shall always correspond with a similar position of the crank shaft of the motor, and that consequently the same teeth of the driving gears must always mesh? He will most assuredly be made aware of this if he disconnects his magneto and then fails to replace the gears so that exactly the same teeth are in mesh, for even the difference of a single tooth between the normal positions of the armature and crank shaft will prevent the magneto from delivering a sufficient spark to enable the motor to run.

The reason for this is simple. All of these direct-driven magnetos are of the alternating current type, as this form allows of the simplest construction of armature and windings. The alternating current generator obtains its name from the fact that there are no regularly-defined north and south poles at any part of the circuit, as these keep changing continuously, or alternating.

During each revolution of the armature of the alternating current magneto, there are but two positions at which a

current will be formed. Now the spark in any cylinder of a motor is required at the top of the compression stroke of the piston in that cylinder. Consequently when the piston is at the top of its compression stroke, ready for the spark that will ignite the charge, the armature of the magneto must be in one of its two current-generating positions, and there must therefore be a constant relation between the position of the crank shaft, to which each piston is connected, and that of the revolving part of the magneto.

If, now, the driving gear of the magneto is returned to its place without regard to the teeth of the next gear with which it meshes, it will be seen that the proper relation between the position of the armature and that of the crank shaft will not be maintained. Under these conditions, when the piston is at the top of the compression stroke, ready for the spark, the armature will not be in a position at which a current can be generated, and there can consequently be no spark formed at the plug. Conversely, when the armature has been revolved to the position at which a current will be formed, none of the pistons will be requiring the spark, and this consequent lack of "team work" will prevent the operation of the motor.

In order to maintain this team work between the armature of the magneto and the crank shaft of the motor, the intermeshing teeth of the gears should be marked with a prick punch before they are removed, so that they may be returned to their proper place without trouble. Only in this manner can accurate results be obtained, if it is at any time necessary to remove all or part of the magneto driving gear.

The Heart of the Machine

The magnets forming the "fields" of the magneto in which the armature revolves are of the permanent kind; that is, they do not depend upon windings and a separate electric current for their excitation, as is the case with some of the larger generators. These magnets may be considered to be the most faithful part of the machine, for they generally retain their strength under all

conditions of rest or work, and it is upon them that the proper operation of the magneto largely depends.

A magneto in which the magnets have become weakened is useless for ignition purposes until the fields can be remagnetized, and as this can only be done at the factory, the machine in its entirety must be removed from the motor. It is a comparatively easy matter to determine whether or not the fields have lost their magnetism by placing a piece of iron or steel within close range of the base or sides of the magneto. An appreciable pull will be exerted by the magnets if they still retain their strength, although it is not to be supposed that the force thus exhibited will be very vigorous from such a small machine.

If the magneto has been disconnected from its driving gear for any reason, the amount of magnetism remaining in the fields will be best determined by turning the armature shaft with the hand. A resistance should be offered to the turning at first until a certain point is reached, after which the armature should exhibit a strong tendency to fly forward to a new position, 180 degrees beyond its former normal position of rest. This activity of the armature is one of the best guides to the amount of magnetism remaining in the fields.

Inasmuch as the almost universal application of the magneto to ignition purposes is one of the recent improvements and refinements in automobile manufacture and design, it is but natural that there are many motor cars still in daily service, the engines of which have never known what it was to "spark" from any source save from dry cells or a storage battery. Many high-class cars built four or five years ago were not equipped with magneto ignition, and it has been only during the last two seasons that the smaller and cheaper machines have been provided with what had always been considered as an expensive and luxurious accessory, fitted only to be used on the five or six thousand-dollar automobile.

There are consequently many owners who feel that their cars are satisfactory in every respect, except as regards the source of their ignition current, and they wonder if their automobiles cannot be

modernized by the installation of a magneto. Some enthusiasts have purchased a modern, high-priced magneto ignition outfit such as is now used on some of the best cars, and those who succeeded in installing this plant have been more than repaid for their outlay of time, trouble, and money.

But magnetos of this sort, as has already been pointed out, must be gear driven, and this means that motors designed for the attachment of such an outfit will be provided with special lugs and castings on their base, crank case, and front-gear cover for the accommodation of the necessary gears and shaft. Consequently, except in rare cases, it is a very difficult job so to rebuild those parts of the motor that the plant will successfully accommodate a gear-driven magneto, and the owner of the magnetoless car is therefore advised not to place his hopes and ambitions too high.

Easy to Place the Magneto

But if these older cars cannot be provided with an ignition system exactly like their more recently-constructed cousins, they can at least be equipped with a different form of magneto which, to all intents and purposes, is as efficient and reliable as is the more expensive type furnished with the modern models. Inasmuch as this magneto cannot be gear driven, it must be of the direct-current type, which is the kind that delivers current with well-defined and constant positive and negative poles. The armature of such a machine must be especially wound, and a commutator and brushes must be provided, but this construction enables a maximum current to be formed at any position throughout a turn of the magneto, and thus there is no necessity for a constant relation between its armature and the crank shaft of the motor.

The location of the direct-current magneto depends upon the type of motor to which it is to be attached and the amount of room afforded under the engine bonnet. As a rule, however, it can adapt itself to circumstances and can be placed in almost any out-of-the-way corner near the front or rear of the motor. Its installation, also, is com-

paratively simple, and where an expert machinist would probably require several days for the application of a gear-driven magneto to an old car, this machine can be set up by the owner in as many hours.

If the automobile to be rejuvenated is of the four-cylinder type, the magneto can probably be set alongside the forward part of the engine on one of the lugs or on a special bracket attached to the top of the crank case. When so located, it can be driven by a small belt attached to the forward end of the crank shaft, but a small pulley must be provided for. On some cars this pulley may be keyed to the forward end of the crank shaft between the crank case and clutch that engages with the starting handle, but other models require extra provision to allow for the attachment of the pulley, and it is in such cases that the owner will have to "use his head" in order to overcome obstacles of this nature.

In case the pump or the exhaust or intake manifold occupies so much room under the hood that the magneto cannot be placed at the forward end of the motor, it is probable that space can be found at the rear, near the flywheel. One advantage possessed by a magneto is that it will work as well in one position as in another, and it makes no difference whether it is placed on end, upside down, or "on the bias." A solution of the difficulty may sometimes be found by attaching a bracket to the top of the rear cylinder, and then suspending the magneto from this. Of course, if the magneto is of the belt-driven type, its armature shaft must be set parallel to the crank shaft of the motor, and this consequently limits the number of positions from which to choose the best location for the machine.

One of the most satisfactory forms of mechanical-current generators, and one which admits of the greatest variety of locations and positions of attachment, is the friction-driven magneto. In place of the gear or pulley on the end of the armature shaft, a cone-shaped piece is keyed, to the base of which is attached a disc of a compound high in frictional qualities. The outer edge of the face

of this disc is to be set against the periphery of the side of the rim of the flywheel of the motor, and thus the necessary friction is obtained which drives the magneto.

This system provides for a great variety of positions of the magneto, as it can be set at any angle or in any location along the circumference of the circle described by the periphery of the flywheel. Consequently, if room cannot be found for the installation of the magneto between the rear cylinder of the motor and the rim of the flywheel, the machine may be placed on a bracket attached to one of the lugs supporting the crank case, and in this position the friction disc will revolve against the periphery of the flywheel and the armature shaft will point in a radial direction toward the hub. It will be understood, of course, that in this position the friction disc and the flywheel of the motor revolve in planes perpendicular to each other, and that consequently the crank shaft is set at right angles to the armature shaft.

Look Out for Leaks

This manner of placing the friction-driven magneto is often the only method of attaching it to a single- or double-cylinder motor located under the seat, but the fact that the machine can be installed on old-style cars of this type, and in places generally well filled with the moving parts of the power plant, is a striking illustration of the adaptability and compact form of this little current generator. The installation of a magneto of this type is a simple matter on horizontal, double-opposed motors located under the front hood, for in this design the machine may generally be placed on top of the flat crank-case cover and driven by the side of the rim of the flywheel, against which the face of the friction disc should be set.

Two or four holes can be drilled through the crank-case cover for the accommodation of the cap screws or bolts of the base of the magneto, but care should be taken to use packing, or gaskets, at these points to prevent a leakage of oil which will be thrown up by

the movement of the connecting rods and crank shaft in the case.

On account of the difference between the size of the flywheel of the motor and that of the friction disc of the magneto, the latter will be turned at high speed, even when the car is running slowly, and consequently a spark can be formed whenever the engine is in operation. But the strength and amount of the current generated by a magneto of this type vary with the speed at which the armature is turned, and this current might become excessive at high revolutions of the motor were there no governing device provided for. Consequently, in order to prevent the generation of an excessive current which might burn out the windings of the magneto, the sliding cone on the armature shaft to which the friction disc is attached is held tightly against the flywheel surface by means of a spring through the medium of two fly-ball arms.

When a certain speed has been attained, these fly-ball arms are thrown out by centrifugal force, the spring pressure against the sliding cone is relieved, and slipping takes place between the friction disc attached to it and the surface of the flywheel against which it turns. The higher the speed of the armature becomes, the more is the spring pressure of the friction disc against the flywheel surface reduced, and consequently the magneto cannot be turned beyond a certain number of revolutions per minute. When the magneto is at rest, or when the armature is being turned only at slow speeds, the spring holds the cone and friction disc against the flywheel surface with a sufficient pressure to prevent slipping, and consequently a practically uniform current can be formed at all speeds of the motor.

Although it is probable that complete directions for installing will be furnished with such direct-current magnetos as those described above, particular attention should be paid to the setting of the machine to obtain the best results from the governing device and the longest wear from the friction disc. The base of the machine may be attached to its bracket, or other support, by means of cap screws or bolts that pass through

slotted holes. These slots will allow for longitudinal motion of the machine, and by this means it may be set at the point which will give the proper pressure of the friction disc against the flywheel surface.

If the flywheel is greasy and slippery, the magneto will need to be set closer than would otherwise be the case in order to give a greater pressure to allow for the decreased friction. The holes should be drilled or the bracket should be placed so that, when the magneto is properly set, the base screws will be in the center of the slots, as this will provide for pressure readjustment in either direction.

Contrary to what would naturally be supposed, the face of the friction disc should not be placed flat against the surface of the flywheel, but the magneto should be set at a slight angle so that the outer edge of the face of the friction disc comes into contact with the flywheel. This will form a very flat "cone of friction" and will reduce the slipping between the various points of the surfaces in contact that would otherwise take place.

In view of the trouble to which a man will be put who desires to modernize his old car by the addition of magneto equipment, it may be cheering to him to know that his rejuvenated machine will have some advantages not possessed by the automobile boasting a regular alternating-current, gear-driven magneto. While it is of no vital importance, the man who is forced to use the friction- or belt-driven, direct-current magneto instead of the alternating-current type, has at his disposal a source of electricity from which storage batteries may be charged, and even electric lamps lighted.

While the alternating-current machine could be used with electric lights, a storage battery cannot be employed in connection with it, and consequently the lights would be available only when the motor was running at a high speed. But the direct-current generator can be wired so that it will deliver all of its excess current to a storage battery which may be used either for supplementary ignition, or for lighting electric lamps when the motor is at rest.



THE LARGEST ONE WAS OVER FOUR FEET LONG.

THE TARPON OF TURNER'S RIVER

BY A. W. DIMOCK

Illustrated with Photographs by Julian A. Dimock

MARCO is the name of a post office, but the place is called Collier's. Ask any child on the West Coast of Florida about Marco and he will shake his head, but mention Collier and the infant will brighten up and say: "Dat's Tap'n Bill!"

Island, bay, hotel, houses, boat-building plant, and even the atmosphere are, and always have been, Collier's. When Ponce de Leon was cavorting about the peninsula pestering the inhabitants with his inquiries about a spring, he stopped at Collier's. Everybody who goes down the coast stops there. The only way to avoid a long detour around the Cape Romano Shoals is to go through Collier's Bay to Coon Key, and one cannot pass through Collier's Bay without calling at the store.

Summer is the time to visit Collier. When the little mail boat lands me with my family at the dock Captain Bill meets me with:

"Well, how are you? The hotel isn't open, you know."

"Glad of it. That's why I am here. Where's that baggage truck?"

Then I wheel our baggage to the hotel, we select the choice rooms, and spread our belongings all over the place as if we owned the whole business. When the dinner bell rings we sit down with the family and occasional tramps like ourselves who stop in on their way down the coast. Instead of the colorless crowd of tourists who occupy the tables when the hotel is open, we meet itinerant preachers and teachers, light-house keepers and land seekers, scientists and Seminoles. Best behaved of the lot are the Indians, for they sit quietly, say-

ing nothing, while their eyes take in everything, and they touch neither knife, fork, nor spoon till they have seen how others handle them.

We take possession of the island, and wandering forth with big baskets return laden with a score of varieties of fruits from avocado pears, bananas, and coconuts down through the alphabet to sapidilloes and tamarinds.

As evening approaches we sit on the sheltered piazza that overlooks the bay, and, if the tide favors, watch the porpoises at play, and, more rarely, witness the dizzy leaps of a dozen or a score of tarpon each minute.

From Collier's Bay to Coon Key the channel twists and turns among sand flats and oyster reefs, between wooded banks and around tiny keys without blaze or buoy, stake, or sign to point out the path. After years of observation and practice I can take a boat over the course, if the day is clear, without running on a bank more than once in three trips.

Yet a boy to the manner born has piloted me through the maze on a night so dark that I could scarcely see his face as I sat beside him. He chatted with me throughout the trip with his hand resting carelessly on the wheel which he idly swung to and fro without apparent thought or purpose. His every act was so casual that I had just figured out that we were hopelessly lost somewhere in the Ten Thousand Islands when he leaned past me to shut off the gasoline from the motor. A minute later the boat rubbed gently against some object that I couldn't see.

"Where are we?" I asked.

"At your own dock," was the amazing reply.

My captain carried us over the same course in the same mysterious manner and I was only sure we had passed Coon Key through the broader sweep of the wind and the gentle rise and fall of the boat on the slight swell from the Gulf. Going down the coast I got my bearings and felt rather than saw its familiar features. I was conscious of the nearness of Horse and Panther Keys, and off Gomez Point I had a mental picture of the old man for whom it was

named as I last saw him at his home. He was then well along in his second century, and year by year his recollection of the first Napoleon, under whom he served, became clearer and the details of their intimacy more distinct.

Sand-fly Pass, leading to Chokoloskee Bay, was our goal for the night, and nothing but a nose was needed to find it even in cimmerian darkness. Its mouth was guarded by a pelican key, from which a rookery of the birds sent forth lines of stench as a Fresnal lens radiates light.

In the morning we entered Chokoloskee Bay, and crossing it anchored within the mouth of Allen's River, near the Storter store.

For nearly two miles Allen's River is a considerable stream. Beyond that distance it divides and spreads over flats until it is only navigable to a light draft skiff. Near the mouth of the river we caught and released a few tarpon of good size, but when a mile up the stream I struck a ten-pound fish I returned to the *Irene* and rigged up an eight-ounce fly rod. The fish rose best to a tiny strip of mullet, cast and skittered along the surface, or trolled. They preferred light flies to those of more brilliant coloring. Yet their tastes changed as often as the colors of a chameleon, and they turned up their noses to-day at the lure that best pleased them yesterday.

The light fly rod is too flexible to fasten the hook in the hard mouth of the tarpon with any approach to certainty. In the beginning the fly fisherman will fail, nine times out of ten, to fasten the hook in the mouth of the striking tarpon. Then he will learn to thrust the butt of his rod away from the fish when it seizes the bait, and clutching the line or reel bring a strong, straight pull to bear on the hook in the mouth of the fish.

My first fish on the fly rod in Allen's River weighed about four pounds, but it took longer to land than its predecessor of twenty times that weight. It led me into a narrow creek where an out-thrusting branch from the bank forced me to step out of the canoe into water waist deep. I followed the fish up the shallowing stream, walking on



WE TAKE POSSESSION OF THE ISLAND AND, WANDERING FORTH WITH BIG BASKETS, RETURN LADEN.

the bank when the bushes permitted and wading in the channel when trees came to the water's edge.

When the tarpon had had fun enough with me in shallow water it led me back to the deeper river. I nearly capsized the canoe as I got aboard while playing the fish, which cavorted up and down and across the stream, leaping several feet in the air every minute or two for a quarter of an hour before yielding.

In two days I had a score of strikes and landed half that number of tarpon after an average contest of an hour with each. The largest one was four feet long and weighed therefore about thirty-two pounds, but it was an exceptionally active fish and wore itself out in half an hour by a series of frantic leaps, one of which took it over the bow of the canoe within reach of my hand.

During the two days' fishing there was seldom an interval of ten minutes between the landing of one tarpon and the strike of its successor. On the third day the tarpon were as abundant as ever and jumped all around the canoe, but not a strike could I get. If Solomon had ever fished for tarpon he would have added the way of a tarpon in the water to that of an eagle in the air, a serpent on a rock, and the other things that were beyond his comprehension.

We sailed to the south end of Chokoloskee Bay, where Turner's River connects it with the network of waterways through which tidal water flows in all directions around the big and little keys of the Ten Thousand Islands which extend from Cape Romano to Sable. Channels navigable to tarpon of the greatest draft connect Turner's River with the Gulf of Mexico, while from scores of tiny streams and shallow water-courses it collects the output of many tarpon nurseries.

I began business on Turner's River with an eight-ounce fly rod, and soon was fast to a ten-pound tarpon which thirty minutes later was captured and freed half a mile up the stream. Scarcely had a fresh lure been thrown out when there was a tug on my line and, as I believe, the largest tarpon that was ever caught on a fly rod shot a dozen feet in the air. Three times in quick

succession it leaped violently, shaking its head to dislodge the hook.

Down the river the tarpon dashed till only a few feet of line was left on my little reel. The slight strain I could put on the line wouldn't have feazed a fish one tenth the size of the one to which I was fast. I needed more yards than I had feet of line to offer a chance of tiring this creature whose length exceeded mine by a foot. One more stroke of that propeller tail and my goose would be cooked.

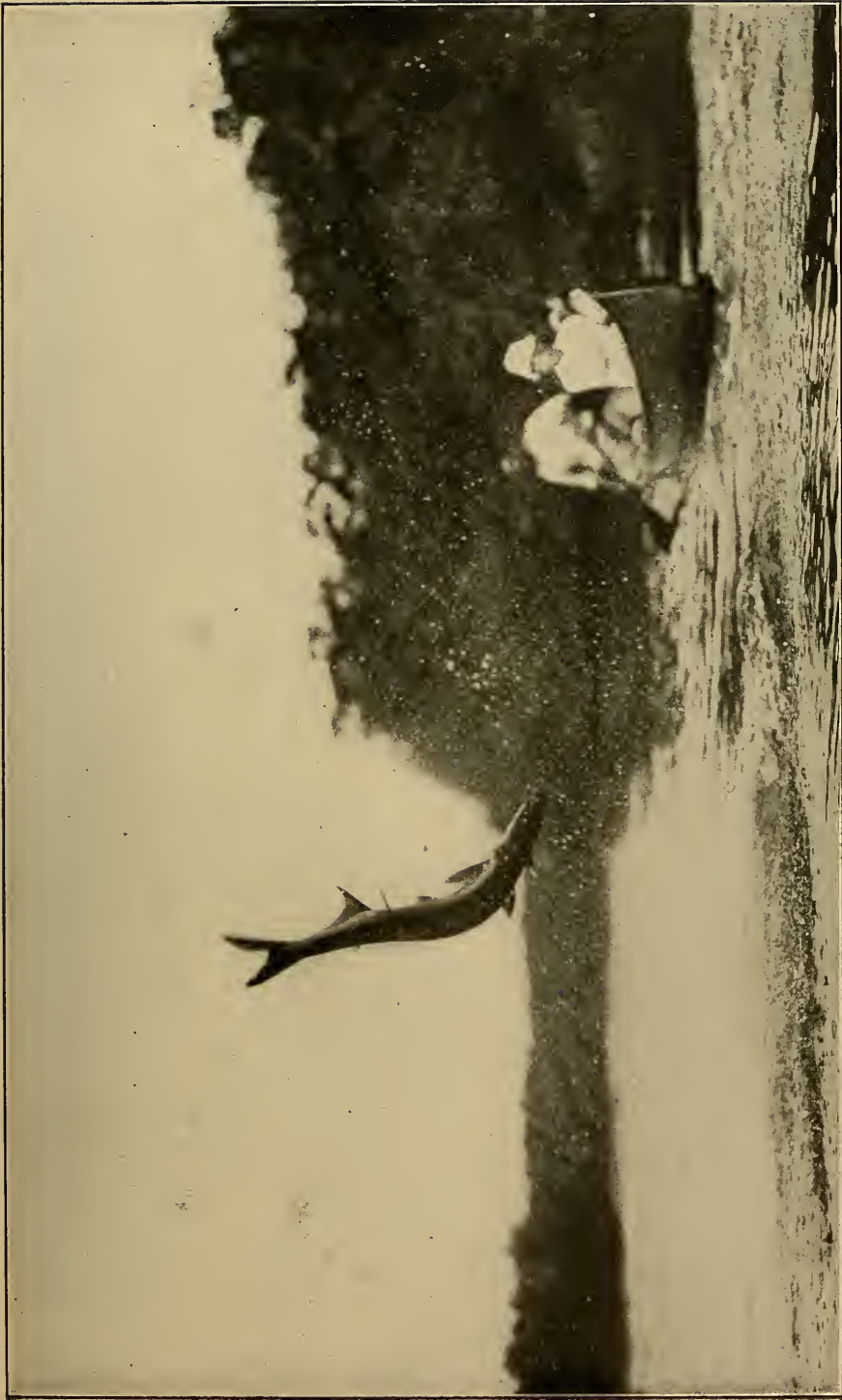
I yelled to the captain to paddle for his life, regardless of the fact that he was already putting in licks that endangered it. Soon he was gaining faster than I could take in line and I shouted to him to slow up, changing the next instant to a cry to go ahead. When the trouble was over I asked the captain if I had screamed at him very often.

"Most all the time, but I didn't mind. I knew you was excited and didn't rightly know what you said," was his reply.

The line never again ran so low as in that first dash of the tarpon. Yet a hundred times the end of our hopes seemed near, but always the fish swam slower, or the captain paddled faster. The wild leaps of the creature were startling but welcome, for they tired the tarpon without carrying away line. We had followed the fish up, down, and across the river, and after an hour's struggle were well out in the bay, yet at all times we had kept within two hundred feet of our quarry.

Always we feared the tarpon's getting too far away. Sometimes the danger was of its coming too near, and more than once it sprang at us with wide-open jaws, falling short of the canoe by inches only, and once it sprang fairly against the captain, nearly capsizing the craft.

The sport of fishing is in inverse ratio to the size of the tackle compared with the activity, strength, and weight of the fish. Linus Yale, as skillful with trout as he was ingenious with locks, used to hitch his horse to a tree by a mountain brook near his New England home and forget for the day the anxieties of the inventor and the burdens of the manufacturer.



AS I BELIEVE, THE LARGEST TARPON THAT WAS EVER CAUGHT ON AN EIGHT-OUNCE FLY ROD SHOT A DOZEN FEET IN THE AIR.



NO SOONER HAD WE TURNED LOOSE AN EXHAUSTED TARPON THAN A FRESH ONE PRESENTED ITSELF.

All trouble was left behind as he constructed a line from hairs in his horse's tail, attached a hook of his own forging, tinier than was ever made before, with an almost microscopic fly, and with a reedlike rod, made on the ground, captured the wariest trout in the brook. When with this flimsy tackle he landed a trout of large size he rejoiced more than when picking the Hobbs lock gave him world-wide fame.

As I followed my big fish the game increased in interest. It was more like chess than fishing. Strength availed little, for the utmost strain I could put on the line through the light rod was no restraint on the powerful tarpon. The creature must be made to tire itself out and do the chief work in its own capture and at the same time be kept within the narrow limits that the shortness of my line established.

When the reel was nearly empty the line was held lightly, while the captain paddled strongly. As we neared the quarry a quick twitch of the line usually sent the tarpon high in the air and off on another dash. As the reel buzzed the captain invited apoplexy by his efforts, while I encouraged him to increase them.

At times the fish seemed to be on to our game and refused to jump when called on. It even became immune to the splash of the paddle and made an ingenious move that threatened checkmate. The tarpon was beside us and the line short when it dived beneath the canoe and swam swiftly away on the other side. There is only one move to meet that attack, and it usually ends in a broken rod and a lost fish. I dropped the rod flat on the water, thrusting it beneath the surface elbow deep, while my finger kept a light pressure on the line. Happily the tip swung to the tarpon without breaking and the fish was played from a rod under water until the captain had turned the canoe around.

The strain of a single pound on a fly rod is more exhausting to the fisherman than ten or even twenty times that pull on a tarpon rod, and I was glad when the camera man said he had used his last plate and offered to change places with me. Usually when plates

were out we got rid of the fish as soon as we could, but this was an unusual fish, destined to hold long the record for an eight-ounce rod capture, if once we could slide it over the side of the little canoe. The craft might be swamped the next minute, but the record would be safe.

The tarpon noticed the new hand at the bellows and went over his repertoire brilliantly. He traveled a mile up the river in search of a place to hide from the human gadfly that worried him and sulked under a bank for some minutes before allowing himself to be coaxed out. He pranced down the stream to the bay, with occasional leaps by the way, and the captain struggled mightily every foot of the course to keep within the limits of the line. In the bay a new terror possessed him and he dashed about as if crazy.

He saw his fate in the thing that he couldn't shake off, as the creature of the forest knows when the wolf is on his track, and he exhausted himself in his panic. Then he rolled over and lay quietly on his back with gasping gills in apparent surrender while the canoe was paddled beside him.

"I'm afraid we'll capsize if I take it aboard," said the captain.

"Get it in the canoe first and capsize afterwards all you want, only don't move till I measure it," replied the camera man.

After the tarpon had been found to measure six feet six inches, the captain got a grip on the corner of its mouth, and lifting its head over the side of the canoe was about to slide it inside when a powerful stroke of the fish's tail sent the head outboard and the captain was given his choice between swamping the canoe or releasing the fish. He let the tarpon go, for which I abused him at the time, but forgave him later when I saw that the hook was still fast in the creature's mouth. It was many minutes before the captain got another chance at the fish, but when he had renewed his hold and was ready to haul it aboard he sang out to me:

"I'll hang on to him this time if he lands me in—Halifax, so look out for the pieces of your canoe!"

But the tarpon slid into the canoe without a flutter, and slipping under the thwarts lay flat in the bottom. The trouble came later when, the rod having been laid aside, camera man and captain worked together to get the slippery thing out from under the thwarts and overboard. They would probably have swamped the canoe anyhow, but the tarpon made the thing sure and secured his revenge by a flap of his tail that landed him in the bay with his tormentors. It was a fitting end to the adventure, for, after the final scrimmage, canoe and canoe men sadly needed the scrubbing they got in the nearby shallow water to which they swam.

We hit the top of the tarpon season at Turner's River, on the West Coast of Florida, and for three days the fish stood in line, waiting their turn like metropolitans seeking good seats at the opera or holding their places in the bread line. No sooner had we turned loose an exhausted tarpon than a fresh one presented itself for the vacant chair. Twenty tarpon a day was our score, of fish that ran from ten to thirty pounds each. Most of them were taken on the fly rod, for which they were too large, as their weight was light for a heavy rod in such blasé hands as ours were becoming by that time.

Much of the action of a fly rod is wasted with a fish of the tarpon type weighing over five pounds, and much time lost from the camera standpoint, since it is hard to hold the fish near the canoe. A stiff, single-action, tournament style of fly rod fits the agile baby tarpon down to the ground, while a withy, double-action article couldn't follow for a minute the fish's changes of mind.

"These fish are too little for the big rod, too big for the little rod, and we have nothing between," I observed to the camera man just after landing on a tarpon rod a ten-pound fish in as many minutes.

"Let's go down the coast," was the reply. "There are big fish in the big rivers and babies in the creeks at the head of Harney."

I agreed to this as I threw out a freshly baited hook and trolled for another ten pounder. But it was a tarpon

of ten stone or more that struck before twenty feet of line had run out, and as the creature shot up toward the sky I shouted:

"There's a seven footer for you, the biggest tarp. of the trip!"

It may have been the biggest, but I shall never know for sure. I threw myself back on the rod with a force that would have slung a little fish to the horizon and my guaranteed rod snapped like glass. I hung on to the broken rod and the tarpon played me for a few minutes, after which he sailed away with half of my line as a trophy.

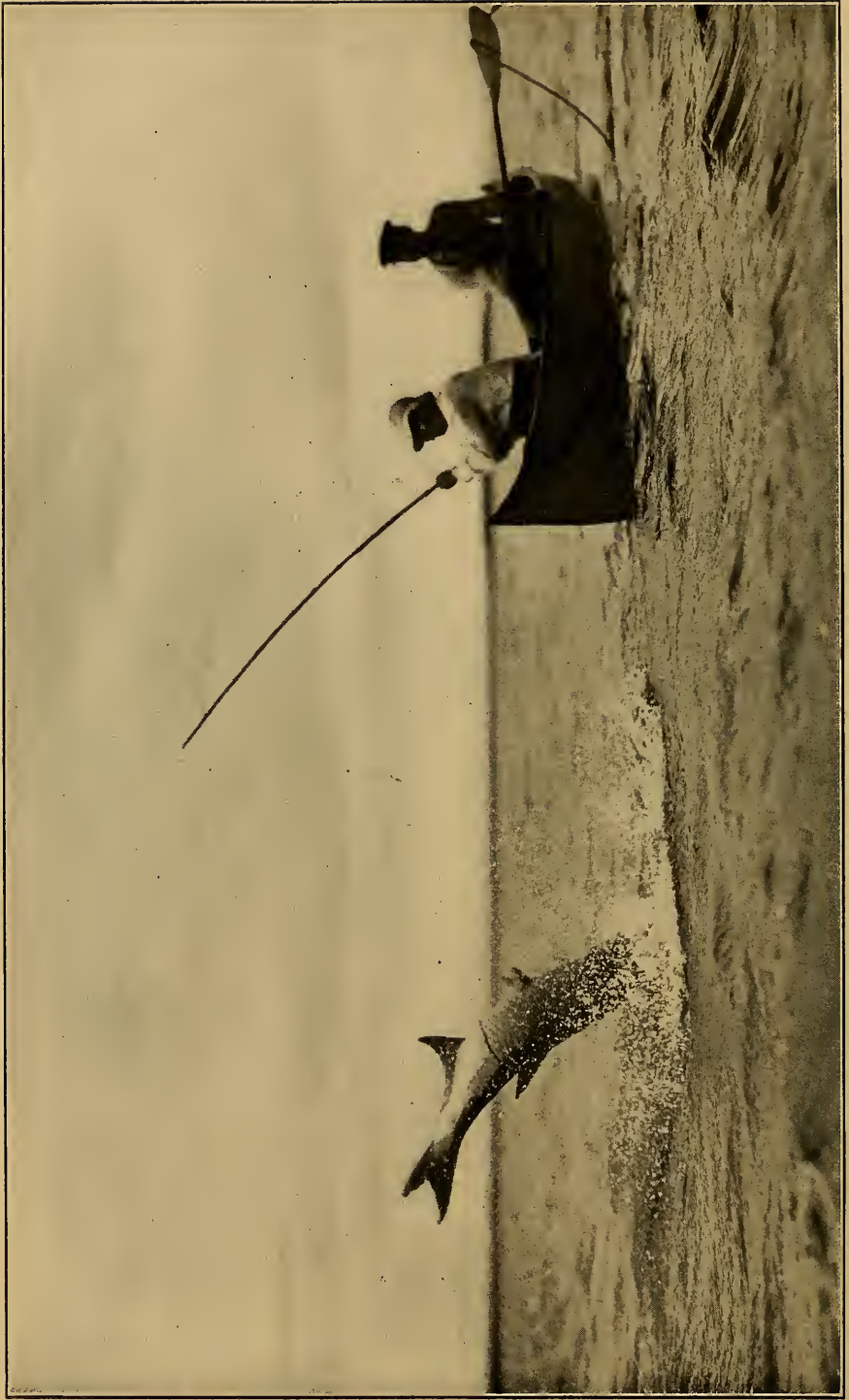
Before running down the coast we went back to the Storter store in search of a substitute for the broken rod. The captain said he could make a better rod than the old one out of anything, from a wagon tongue to a flag pole. We bought a heavy hickory hoe handle which looked unbreakable, and furnished it with extra fittings which I had on hand. As we sailed down the coast I mended the broken rod and we entered on the new campaign with three heavy tarpon rods in commission.

We were cruising in the land of the crustacean. There were reefs of oysters along the coast. Oyster bars guarded the mouths of the rivers and great bunches of the bivalves clung like fruit to the branches of the trees. Beneath us was one vast clam bed, and dropping our anchor we drove poles in the mud down which we climbed and to which we clung with one hand while digging clams out of the mud with the other. We gathered a hundred or more, as many as the most sanguine of us believed we could eat. They ranged in size from that of the little neck of New York to giant quahaugs, of which single specimens weighed over five pounds.

Our anchorage that night was beside the little pelican key that separates the mouths of Broad and Rodger's rivers, and we roasted clams on the beach beside the latter. It was the toss of a copper which stream we should fish in the morning. Their sources and mouths were the same in each case and a creek united their middles like the band of the Siamese twins. We chose Rodger's River because of its beauty, the great



THE BAIT WAS SEIZED BY A SPLENDID SPECIMEN OF THE SILVER KING.



I HAULED ON THE LINE TILL THE FISH WAS TWICE HIS LENGTH FROM ME, AND WAS TRYING TO HOLD HIM THERE.

royal palms that adorned it, and the tragic legends connected with its abandoned plantation, rotting house, and overgrown graves.

Big herons rose sluggishly from flooded banks before us and with hoarse cries flew up the river, dangling their preposterous legs. Fly-up-the-creeks flitted silently away, while lunatic snake birds, made crazy by worms in their brains, watched us from branches that overhung the stream, and when we were almost beneath them dropped into the water as awkwardly as if they had been shot.

We admired beautiful trees, great vines, fragrant flowers, and blossoming orchids as the tarpon bait was trolled from the trailing canoe, and from the mouth of the river to the cut-off no tarpon disturbed our meditations. Hurrying sharks showed huge fins above the surface, slowly rolling porpoises turned keen eyes upon us as they passed, otters lifted their little round heads, and a great manatee, frightened by a sudden glimpse of our outfit, left a long wake of swirls like those of an outgoing liner.

Crossing to Broad River by the crooked cut-off, we traveled a mile and a half to gain a third of that distance. Projecting roots held us back, overhanging branches brushed us harshly, while with bare faces we swept away scores of great spider habitations, suspended from bridges which their occupants had engineered across the stream. Yet I had little cause of complaint, since the only spiders that ran down my neck were the few that escaped the camera man, whose position in the bow of the leading craft gave him the first chance at the arachnids, or vice versa.

As there wasn't a tarpon in Rodger's River, we looked upon trolling down its companion stream as a mere formality, yet no sooner had I put out my line after turning down Broad River than the bait was seized by a splendid specimen of the silver king. The camera man missed the early leaps, for he had been slow in getting out his artillery, but after it had been brought into action he was kept busy. We were carried up into Broad River Bay, where the channels were so overhung with manatee grass that at

every turn my line was loaded almost to the breaking point.

When the motor boat, maneuvering for position, got out of the middle of the channel, the propeller twisted a wad of the grass about the shaft and the motor stopped. Then Joe leaned over the stern of the boat, with head and arms under water as he tore at the clinging mass, while the camera man relieved his mind by energetic exhortation.

The tarpon led us through Broad River Bay to a series of deep channels which we had long known as the home of the manatee, several specimens of which we had captured there. The surrender of our quarry came after we had entered the broad, shallow, island-dotted bay that stretches from the heads of Broad, Rodger's, and Lossman's rivers across to the narrow strip of swamp prairie and forest that separates it from the Everglades.

After releasing the tarpon I fished no more till we were back in Broad River, when, again, on putting out my line, the bait was seized by a tarpon whose length we estimated at five feet since we never had a chance to measure it. The fish attended strictly to business, and after a few brilliant preliminary jumps, made straight for the cut-off, where, after turning a few corners and tying the line around some snags, it leaped joyously high in air, free of all bonds and in full possession of a valuable tarpon hook and a goodly section of costly line.

We traveled a mile down the river before throwing out another lure, and found ourselves in a tarpon town meeting. There were scores of them, leaping and cavorting, dashing hither and yon, and behaving as if at a big banquet, but it was a Barmecide feast, for not a food fish could be seen.

"Hang to 'em, if you can," called out the camera man as I baited my hook, "for I've had bad luck with the fish so far to-day."

"The next tarpon stays with me, or I go with him," was my reply, and the next minute one of the family was over my head, fiercely shaking his wide-open jaws to get rid of the hook. But the hook was fast and I hung to the line through the tarpon's first run, though

the canoe was nearly capsized before the captain could head it for the flying fish. The thwarted creature, after three wild leaps, headed straight for the canoe, and diving under it brought the strain of his weight on the tip of the rod, which broke in two parts. I clung to the butt, and as the fish was of medium size soon brought it to the captain's hand, despite the broken tip.

We had now no rod nearer than the *Irene*, which was five miles distant, but the fish were in biting humor and the opportunity was not to be lost. There was a hand line in the motor boat, and I handed it to the captain, for my muscles were aching, and I thought to rest them with the paddle. The broken rod was left with the camera man, for both the hand line and the captain were strong, mixups with big tarpon certain, and a swim in the river the probable outcome.

One tarpon turned back so quickly, after towing us steadily for a quarter of a mile or so, that I couldn't change the course of the canoe till the fish had torn a dozen yards of line from the captain's hands and was that far behind us. The captain pulled fiercely, and the creature turned again and seemed to leap at me with wide-open jaws. Its weight fell on my arm and the side of the canoe, which would have capsized but for some quick balancing by my companion. Thereafter that afternoon the captain played the fish a bit less savagely, for which I was not sorry.

I had no dread of being swamped by a tarpon. It had happened before and would happen again, probably that very day, but I wanted it over, and expecting it every minute for hours got on my nerves.

It was late when the crisis came and we were near the mouth of the river, for each fish we struck had carried us down the stream with the ebbing tide. It was a tarpon of the largest size that turned away from an approaching hammerhead shark, and swimming beside the canoe shot high in the air directly above it.

I held my paddle without moving, waiting, waiting for the canoe to sink under me as it had done before. The

captain rose to his feet as the tarpon turned in the air, and by a seeming act of volition threw himself clear of the craft.

"Glad I didn't wait for the spill," said the camera man as he turned the plate holder in his camera, "but I don't see how he missed you. What's become of the fish? Can't you get him to do it again?"

The tarpon had escaped. He had given the line a turn about the canoe, and of course it had broken.

The *Irene* was in sight off the mouth of the river as I tied a new hook on the broken line and told the captain I would troll till we reached the boat. But a tarpon lay in wait for me among the oyster reefs, and, after he was fast, started back up the river. He was a hard fighter and so erratic in his dashes as he tacked up the stream that every few minutes I had to give him line to keep from capsizing.

"Can't you get that fish nearer the canoe?" shouted the camera man. "How can I photograph you when you're a mile apart?"

"I'll take him inside the canoe, if you want," I replied, though I had no notion of doing it.

I hauled on the line till the fish was twice his length from me and was trying to hold him there when the creature dived till the line ran straight down. Then it loosened, and like an arrow from a bow something shot up from the depths, dashing gallons of water in my face as it passed. I couldn't look up, but I wondered what would happen. Just as I concluded that this tarpon, like the last, had cleared the canoe in his fall, the craft gave a twist, a roll, and plunged me, shoulder first, beneath the surface!

It was a few yards' swim to an oyster reef, where the captain and I reëmbarked and were soon paddling for the *Irene*. It isn't worth while to change the few garments one wears when fishing for tarpon just because one has been overboard, so we sat on the deck as we were and ate clams on the half shell while Joe made clam stew for a second course and gave us our choice of stewed smoked turtle or clams for the next one.



Photograph by Grace E. Mounts.

WHERE MINNOWS ABOUND.

KEEPING THE WATER OUT OF THE MOTOR BOAT

BY LAWRENCE LA RUE

EVEN though the motor boat spends the greater part of its existence in the water, water should spend but very little time in the motor boat. No matter how well protected the motor may be, the interior of the boat, the floor boards, the inside of the planking, the seats and cushions, and every part of the equipment and furnishings will give better service if they are kept dry, and it is consequently as much of a duty owed to the craft itself as it is to the passengers to provide some sort of protection from the spray and rain.

To be sure, a man can provide himself with a "slicker" and oilskins and keep as dry in the heaviest rain or spray as though he were snugly ensconced in a cabin, but the subsequent time and trouble spent in bailing and drying out the interior of the boat and polishing the rusted metal parts will make the owner wish his craft, as well as himself, could be provided with a set of oilskins. Many cases are on record, of course, in which boats have been run when they were half full of water, but the average motor boat is not a submarine, and the less water that finds its way over the wrong side of the gunwale, the better will it be both for the craft and the occupants.

Every well-treated motor boat is entitled to a boathouse or shelter of some kind in which it may be kept when it is not in use. But the motor boat is not like the turtle and cannot carry its house on its back, and consequently when on camping trips or cruises, if the craft is of the open cockpit type, some provision must be made for a removable covering. An effective protection for this purpose which will completely cover the interior of the boat may be made from stout canvas. This should be made

of the same general shape as the outlines of the cockpit, but its width should be slightly greater than the beam of the boat.

Grommets or brass rings should be worked into the outer edge at frequent intervals to fit over hooks screwed in corresponding positions in the outside of the coaming. When the rings, or grommets, are fitted over the hooks, the cover will be held tightly in position, but as the canvas will either lie flat or will sag in the middle, the water will collect in the center and will probably soak through unless the material has been thoroughly waterproofed. Consequently the center-line of the canvas should be raised above the edges to form sloping sides off which the water will run without soaking through.

This is best provided for by taking a stout stick or narrow board slightly longer than the cockpit and notching this at its edge near each end so that it will fit down over the coaming at the bow and stern. If the canvas has been made of the proper width, it can be fitted down over this board and will be stretched in the form of sloping sides.

Such a covering can be folded and stowed in a small space when not in use. For this reason it is well adapted as a shelter to be carried in the boat on extended trips, and if there is no convenient place in which to store the long center stick, this may be made in two parts and hinged in the middle.

If the motor boat has been purchased before boathouse accommodations have been built to receive it, or if the boathouse is already full and there is no room for the extra craft, the type of cover described above will serve well as a temporary shelter until other provisions can be made. In fact, the writer knows of an instance in which such a cover was made to serve as a boathouse for a small

“runabout” for four seasons. In this case, the stern of the boat was fastened by a long line to a pier that projected into the stream for some distance, while the bow rope was tied to a post near the water’s edge on shore. This method of mooring kept the boat at a safe distance from both pier and shore, even in the heaviest wind, and the craft was as well protected, both inside and out, as though it had been riding placidly in its slip in the boathouse.

A low-lying cover that protects the entire cockpit does its duty too well to be sufficiently versatile to serve also as a spray hood when the boat is running in a heavy sea, for it allows no room for occupants and can be used only as a shelter when the craft is at rest. It is the unprotected motor that will suffer most in a heavy rain or spray, and consequently the simplest kind of cover must take into consideration the sheltering of the carburetor and ignition system—particularly the latter.

Absurd as it may sound, in an emergency a hat has been found to afford a simple and yet highly effective shelter for a single-cylinder motor, and in many instances the placing of a “sou’wester” over the spark plug has enabled the boat to run continuously through a rain that would have stopped the engine “dead” were this head covering not available. If the motor only is to be considered in sheltering the boat from the rain, an oilskin or rubber cloth jacket, that will fit down over the manifold and carburetor with tapes or puckering strings by which it may be held in place in a high wind, will serve to keep the engine itself in running condition. This is the simplest of all coverings, but it is only to be recommended for temporary use until a more complete shelter that will protect cockpit as well as motor can be obtained.

The motor boat having a canopy top will doubtless be provided with side curtains which can be let down, completely enclosing the interior of the boat. These serve well as a covering if the boat is to be left out of its slip over night, and they also afford complete protection to the occupants in case of a rain storm. It is probable that these curtains will be

divided into sections, and in this case one or more on the windward side may be let down to keep the spray out when there is a heavy head sea running.

This would probably interfere with the view of the steersman and the passengers, however, and as the ordinary spray cloth should be merely an extension of the coaming and does not need to connect with the canopy top, a protection other than the curtains is almost necessary for pleasant - weather - but - rough-water navigation. Such an auxiliary spray curtain may consist of a strip of heavy canvas eighteen inches or two feet wide extending around the bow from the ’midship portion of one side of the coaming to a point directly opposite.

Keeping the Canvas Taut

Grommets or brass rings fastened to the bottom edge of this canvas may engage with hooks screwed into the outer side of the coaming. The upper edge of the spray cloth may be secured in the same manner to the upright stanchions, or supports for the canopy top. In order to support the canvas where it rounds the curved coaming at the bow of the cockpit, separate brass or iron rods will need to be used. Casings should be provided in the canvas into which these rods may be slipped, and each of the latter should be supported upright in the coaming by means of two screw eyes placed one above the other.

If the rods are not too tight a fit in these screw eyes, each of the former may be removed when the spray cloth is unhooked, and the entire attachment may then be rolled up and stowed in a small space in one of the lockers. The fact that the spray cloth extends back on each side from the bow to amidships will generally serve to protect the entire cockpit from the flying spray.

A stationary canopy top composed of matched strips of wood made waterproof by a canvas covering, the whole supported on well-secured stanchions, forms a good shelter equipment for a fair-sized motor boat and has the advantage of being more solid and substantial than the removable tops. But many an owner prefers an open boat for short trips and

pleasant weather cruising, and the craft of such a man should be provided with a top that is easily attached and removed "on the spur of the moment" before leaving the boathouse.

Such a canopy top may consist of a framework over which stout waterproof canvas should be stretched and permanently secured. This framework may be supported by brass stanchions, the lower ends of which fit into brass guides and sockets secured to the coaming and deck at the proper points. A set screw, or some other clamping arrangement, should be provided for each socket so that the stanchions will be held securely in place and will not rattle and shake from the vibrations of the motor:

This same clamping arrangement may be used to hold stanchions supporting a matched wood and canvas canopy top as described in the preceding paragraph, but unless all parts of the guides and sockets are made unusually large and heavy and are well secured to the deck and coaming, such a removable shelter will be too unwieldy, bulky, and top-heavy to be practical. As a rule, it is better to confine the removable type of top to the more easily handled canvas variety.

Hinged or sliding hatches should be cut in the roof of every permanent canopy top in order to furnish easy entrances and exits to and from the cockpit. On some boats these hatchways are cut in the sides of the top, while on others the entrance or exit is made by way of the bow or stern deck. It is not advisable to cut a flap in the side or end of a canvas top, but headroom for entrance and exit may be afforded by attaching a hinged bow to the two front or rear stanchions. This hinged bow will carry the end of the canvas top, and when it is turned to a vertical position and lies alongside the stanchions to which its ends are hinged, the canvas will be folded back between the two supports. A fastening of some sort should be provided to hold the hinged bow in an extended position and thus stretch the canvas tightly when this "hatch" is not in use.

Folding "automobile" tops have come into popular use on many types and sizes

of motor boats, and these form a convenient and easily-removed protection from the sun, wind and spray. When extended, such a top is supported on two more sets of bows that are hinged in brackets set in the coaming, and the entire canvas is stretched tight by means of straps attached to cleats set in the bow and stern decks. Each set of bows can be removed easily from its pivot, or hinge, and transferred to the stern of the cockpit where, by means of other pins, they may be turned back along the deck with the stern set of bows. Then the supports are all "nested" together at the stern of the cockpit with the stretches of canvas top folded between them, and a covering that formerly extended over the entire cockpit can thus be compressed into a wonderfully small space in a short time.

The Automobile Top in a Storm.

These automobile tops are provided with lengths of side curtains which may be buttoned down to the gunwale, and thus the entire cockpit of the boat may be enclosed in stormy weather. As these side curtains are cut in sections, only that side of the boat on which the spray or rain is driving need be protected, but if it is found necessary to enclose the entire cockpit, the celluloid windows which are placed in the bow "apron" and some of the side strips will serve to make navigation both easy and dry in the stormiest or roughest weather. The bow apron with its transparent front furnishes a good spray cloth, and as in many forms this curtain extends partly around the side of the coaming and slopes toward the stern from top to bottom, the occupants of the rear of the cockpit also can be protected from the flying water of a head or quartering sea.

Adaptations of the automobile top may be used for a variety of boats and shapes of cockpits. The racing motor boat, for instance, having its engine under the forward deck and provided with cockpit accommodations for only two or three persons, need use only a single set of the bows, and as these are pivoted at a common point, the entire covering may be set up in the proverbial "jiffy."

With the side curtains and the front apron in place, the cockpit of the craft is converted into a marine counterpart of the doctor's buggy or runabout on a rainy day. This type of hood may also be applied as a covering for the stern deck of a cruiser.

Shelters for this type of boat generally consist of an iron pipe framework used for the support of strips of canvas that may be laced to the top and sides, as needed. Some large cruisers are provided with a permanent canopy top, but the desire to remove the covering in pleasant weather makes the proper form of automobile top or detachable awning the more preferable type. It would be inadvisable, of course, to employ the automobile top as a stern deck covering on a larger cruiser, as the broad beam would make necessary the use of bows that would be too wide to support the weight of canvas properly.

An inexpensive covering for a "knock-about" or other boat on which it is not desired to spend much money for a shelter, will be found in the "melon" hood. This obtains its name from the shape that the top assumes when extended, and it is made in as great a number of forms as there are varieties of the vegetable after which it is christened. This hood in its simplest form consists of a set of three or four bent-wood bows, all of which are attached at their ends to a pin set in the coaming on each side of the boat. These bows are covered with a waterproof canvas, the forward end of which is shaped to fit around the bow curve of the cockpit on the deck outside of the coaming.

When the hood is not in use, all the bows are turned forward and lie along the deck outside the coaming, with the canvas folded between them. The canvas, it should be understood, is stretched from one end to the other of all of the bows. Consequently, when the bows are turned up and opened out as far as the canvas will allow, a complete covering is formed over the forward end of the boat and both the sides and the bow are entirely enclosed.

If there are but two bows used and the last one stands vertical, the hood will assume the shape of a "quarter

slice" of melon, and if celluloid windows are cut in the bow portion, this size makes a satisfactory shelter for the steersman. The bow end of the canvas is fastened to the forward curve of the coaming by means of the usual grommets and hooks, and consequently by loosening these and springing out the hoops, or bows, from the pins on which they turn, the hood can be removed entirely.

If the cockpit of the boat to be covered is short, the bows of the melon hood may be pivoted amidships, and by doubling the quarter melon size, a protection completely enclosing the entire cockpit will be formed. This, of course, will require two or three more bows than will the other form, but a "half melon" shape will be obtained that will protect the occupants of the boat and its power plant in all kinds of rain or spray.

Using the Melon Hood.

Another arrangement of the melon hood for a boat having a medium-sized cockpit is to use two of the "quarter slice" shape, installing one at each end so that they will meet amidships when raised. A flap of some kind will need to be used to make a water-tight "joint" between the two. If the cockpit is too long for the two quarter melon hoods to meet, an extra bow may be placed in sockets so that it occupies a position in the middle of the uncovered portion, and to this the extra canvas necessary may be attached. The edges of this canvas may be laced or buttoned to the ends of the hoods that are already in place.

In case the cockpit is too long to be entirely enclosed by one or two hoods without the use of additional bows and canvas, a far different type of covering may be installed to good advantage. While this hood is of the "half melon" shape, its construction is somewhat different from and more elaborate than that described above, but it also admits of a greater variety of uses. In this type, the bows generally consist of iron hoops that straddle the cockpit in the same manner as do the others. These hoops, however, instead of being sewed or laced to the canvas, are at-

tached to it by means of sliding rings. This method of attachment allows the canvas to be slid off the iron hoops—or to one end of all of them, rather—and to lie collapsed outside of the coaming along the deck from bow to stern.

In order to stiffen the edge of this canvas and make it slide more easily and evenly, an iron rod should be sewed into it at one side or the other. If this rod is attached to each hoop by means of a sliding ring, the entire covering may be either opened or collapsed by moving the rod from one side of the cockpit to the other along the hoops. Thus, if the hoops are in position and the canvas is collapsed on one side of the deck outside of the coaming, it may be opened and made to cover the entire cockpit by sliding the outer edge in which the rod is fastened over to the other side.

The rod and the rest of the canvas will follow along the hoops, being guided by the rings. The rod, of course, should be curved at its ends to fit half way around both the bow and stern of the cockpit coaming, for this is the position that the edge of the canvas must assume when it is either collapsed or open.

When the iron rod is slid over the hoops so that the canvas is collapsed and it all lies on the same side of the deck outside the coaming, the hoops, of course, may be turned down flat, as has been described in connection with the first-mentioned melon hood. One of the objections to the other type of melon hood lay in the fact that both sides and overhead must be covered if it is desired to open the shelter at all, and there was consequently no halfway position in which it could serve as a spray hood.

The sliding ring type, however, may be raised up on either side as great or as small an amount as desired, and it thus forms an adjustable spray cloth without interfering with the view, light, and air on the lee side or overhead. The objection may be made to this type of hood that it will look bulky and "mussy" when it is collapsed along the side of the cockpit, but while it is not claimed that it is as neat in appearance as is the automobile top, it is surprising into how small a space a length of stout, light canvas may be folded.

A convertible, removable, adjustable, combination sunshade and rain shelter has been devised which is particularly well suited for use on small, well-equipped, pleasure boats. This consists of a canvas top stretched over a wire frame that is supported only at its two ends by an upright stanchion set at both the bow and stern of the cockpit. These stanchions rest in sockets and consequently are easily set in place and taken out, thus forming the removable feature of this canopy.

The frame of the canvas top is attached to each stanchion by a sliding collar that can be held in any position along the upright by means of a set screw. Thus the top can be set at any desired distance above the cockpit, and as one end can be raised or lowered independently of the other, the canvas may be tilted to serve as a protection from the slanting rays of the sun.

The frame over which the canvas is stretched is set in the sliding collars by means of pins, or pivots, and thus the top may be turned around a horizontal, longitudinal axis. This allows the canopy top to be tilted sideways to serve as a spray or sun shield, or it may also be used in this manner as a protection from cold breezes. When the craft is not in use, the top may be slid down the stanchions until it rests over the coaming, and thus a substantial cockpit cover is formed that will serve well to keep rain out of the interior of the boat.

Whether a man buys a ready-made spray hood or top, or whether he makes one himself, the size and weight of the boat to which it is to be attached should always receive first consideration. A permanent canopy top, set on stout stanchions high enough above the floor to furnish ample headroom, makes one of the best covers for a twenty-five or thirty-foot boat, or larger, but it should not be fitted to a light racer or runabout on which it would be top-heavy. This precaution should not be taken so much on account of the appearance of the craft as because of the actual safety to the occupants of the boat under some conditions. In a heavy blow the wind resistance of the canopy top might easily upset the boat.

THE MAKING OF TENNIS CHAMPIONS

BY FORBES WATSON

EVERY tennis follower knows the type of player who, in spite of perfect physical equipment for tennis, never ranks. He can deliver an irresistible twist service; his ground strokes are deep and swift, and his chops only less controlled than Beals Wright's. At the net he volleys somewhat in the manner of Larned and his smashes of high lobs from deep court, whizzing through space only a little less rapidly than McLoughlin's, bite off the corners. He is our club mate and we beat him four times out of five, not at all because we can do any of these remarkable things, but because he wins for us most of the points by making three outs to every ace. If, nevertheless, he is a little condescending, it is merely because, once upon a time in practice, he won a set from Larned, the only time in fact that he was really on his game. Why do you look in vain among the records for his name? The answer may be that, although he has one of the essentials of a great tennis player, *pace*, he lacks at least two other essentials, *control* and *balance*.

To unite these three elements one must have form. All sports have a standard of form based on the proper use of the natural levers and harmonious muscular movement. In tennis this is especially true. Good form is effective form. It happens also that the most effective use of the body in any game that requires speed and agility usually results in grace.

To gain form one must begin young and follow good models. If, in addition, he can be advised and coached by a man who understands the theory of tennis, all the better. A good tennis stroke, like a good golf stroke, should

have freedom and sweep. The eye should be on the ball, the body balanced and away from the ball so that the arm and shoulders can have play. The swing should be at its top when the racket meets the ball and should follow through. A young player need not fear becoming too academic, for after he has played enough to count, his strokes will adapt themselves to his physical requirements.

Every great tennis player has form and without it no player need expect to go far. Certainly he will never be a champion. Larned, our present champion, has extraordinary finish and, if we except the fact that he is too muscular to be ideally limber and graceful, as both of the Dohertys were, it would be very difficult to find a flaw in his play. He has a complete repertory of shots which he uses with the most delightful ease. The repertory is complete because he is strong from every position and not on account of extreme versatility.

His forehand and backhand are so perfectly executed that the pace of his shots is deceptively fast. It is only necessary to watch one of his opponents to discover the real pace of Larned's game. If he is at all out of position Larned will generally pass him. At the net his volleys are clean, sharp, and dexterous. He always plays a forcing game and never uses the chop.

Larned has played beautiful tennis for twenty years and has won for himself first place not only in American tennis but in the hearts of American tennis followers. It is conceivable that if he had had the temperament of R. D. Wrenn, Malcolm Whitman, Beals Wright, or William Clothier, he would have been champion twice as many times as he has been. It has taken him a long time to control his game and un-

til recent years it was open to question whether such a swift offensive game ever could be perfectly controlled.

The importance of control cannot be better shown than by citing some of the critical points in Larned's career. In 1903 at Longwood Larned met one of the great rarities in tennis, a man absolutely in his own class, H. L. Doherty, and was beaten by a slight margin. No one who saw that match can forget the third and fourth sets, during which Larned touched both ends of the scale of his tennis. The first set went to Doherty 6-3, and the second was 4-1 in favor of the Englishman before Larned gave the gallery a glimpse of the top of his game.

Both Ends of Larned's Game

All about me I could hear mutterings about "rattles" and discourteous comments on the champion's temperament. Whereupon Larned treated us as we would be treated. With ace after ace he took four games from the graceful little Englishman, allowing him to "get" only three points. And indeed it was on that day that Doherty disclosed to the Americans what a marvelous little "getter" he could be.

Larned won the second set 8-6, after a flash of his best play, and then proceeded to kill the hopes of the Americans by losing a love set. It is not uncomplimentary to Doherty to say that Larned proved in this set the disastrous effect of uncontrol. He then sent his friends to the heights by taking a set at 6-2. In the six games which Larned won in this set Doherty took four points. When Doherty found that the set was going against him he may have eased up to save himself for the fifth set; but not noticeably.

In the fifth set there happened one of those moments about which discussion will continue as long as they are remembered. When the score was four all and Doherty was serving, the game went to 40-15 in Larned's favor. The question of a decision came up and Larned couldn't stand the strain. The point was played over. He lost the point and finally the game. He recov-

ered enough to take the next, but Doherty came back and took the set.

There is no doubt, I think, that victory went to the man whose nerves stood the strain best. Doherty played the match throughout without an apparent tremor. All his movements were easy, free, and unstrained, while Larned, in spite of a wonderful offensive game, had to lose because he lacked the calmness of the other.

Both of the Dohertys played with baffling coolness, and throughout the internationals there was nothing "set" about their manner. Although Larned compelled H. L. Doherty to show that he could run fast when necessary, the little Englishman always retained an easy lack of intensity. The brothers delighted the gallery with their graceful deliberateness, and when one of them pulled down a lob with the freedom and preparedness of a professional golfer giving a driving lesson, the applause proved the fairness of the Americans.

While Larned was fighting H. L. Doherty, R. D. Wrenn played against R. F. Doherty a match that fittingly ended the singles career of a man who brought a neat but not extraordinarily well formed game to the top because he had to an eminent degree nerve and brains. Wrenn stepped from the stock exchange to the Longwood courts, after a relatively short interval of practice and when he was not in the best of condition, and played R. F. Doherty a five set match. Even granting the fact that Doherty was bothered with his arm, this victory was a feat worthy of a man noted for coolness and tenacity.

Wrenn was defeated by H. L. Doherty very easily on the first day of the singles, but the weather was bad and he did not get his stride until the last set. What he gained from this match came out in his match with R. F. Doherty, whom he came within an ace of beating. In fact, the impression was general that he only let down when his defeat or victory could make no difference in the result of the internationals. He was three all in the fifth set when Larned had the smaller Englishman 4 all and 40-15.

Wrenn probably never gave as much

thought to tennis as Malcolm Whitman, who is perhaps the brainiest player we have had, but he was strategic, had a wonderful eye, and his tenacity has become a tradition. Though he never had anything like the speed of Larned nor the stone wall defense of Whitman, he was four times national champion, and his career brings out as well as any man's the dominating effect of brains and courage.

The luckiest thing that could happen to a young man ambitious to be champion of the United States, would be to be taught by Malcolm Whitman. While it would not be fair to rank Whitman with Larned, it certainly is true that, had there been any other man as great as Whitman since he dropped out of the game, Larned's record might be different.

Whitman attacked the problem of becoming champion and staying champion as intelligently as any of his predecessors or successors, taking up every point from training to theory and solving it. Nature gave him a splendid physique and plenty of brains and he adapted the game to his needs by pivoting it on his height and long reach. The result was that although not a pretty player his form was sound to the core. He believed in control and thought that a shot which was sure of an ace when it came off but not perfectly sure of coming off, ought to be curbed.

He always strove to balance his entire game, to bring it all forward at a time and not rush one department far ahead leaving another crudely undeveloped. He was never guilty of jarring his game out of plumb by using uncontrolled pace. He was the antithesis of his brilliant contemporary, Dwight F. Davis, whose feats remind one of Maurice McLoughlin and whose record in singles and finally in doubles is a warning to any man who bases his game on terrific pace.

Whitman's ground strokes were deep and certain and held his adversary well back. When he got control of the net, it was almost impossible to pass him. He never brought the gallery to its feet with a theatrical kill but settled down

firmly and irresistibly to force his man out of position and play by him. He had a heartrending defensive game and an offense which has been criticized for lack of pace but which no man could afford to treat frivolously.

When Whitman got down to the business of becoming champion he took first place, held it three years, and then left the field. During this period he remained in ideal physical trim. And the self-evident truth might be mentioned, by the way, that the man who wishes to be champion had better get on the water wagon and stay on it. In 1902 Whitman came back to help to retain the Davis cup and in the Internationals beat R. F. Doherty and Pim. In the same year R. F. beat him at Newport, but Larned took his revenge on R. F. and won the championship.

Whitman the Greatest?

Whitman's complete mastery of the tennis situation from 1898 to 1900 inclusive entitled him to be ranked by a great many people as our greatest American player. He has left his mark on Eastern tennis and we are coming soon to a time when the Californians will prove whether or not his theories which have tended toward generalship and defense rather than brilliant offense are the best.

We have already had a trial of thoughtful strategic tennis which takes into consideration position and the opponent's weakness against what might be called the game of pace. Maurice McLoughlin came East year before last and made a sensation among tennis audiences such as no one has produced since the palmy days of the brilliant and erratic Davis. With him came others, but they were all overshadowed by the marvelous smashing of McLoughlin. In 1909 he was runner up at Newport and went with Long to Australia on the International team. These two brilliant young men were the first Californians to enter the charmed first ten.

Any criticism of McLoughlin must take into consideration his youth, but on the other hand it should be remem-

bered that Wrenn was champion when he was a sophomore at college and Whitman when he was a junior. McLoughlin returned to California after his visit to the East in 1909 with a great reputation. It can hardly be said that his visit in 1910 added to his reputation, though he came up from sixth place to fourth. He was suddenly removed from the California spotlight by the other remarkable Californian Bundy. In 1909 Bundy ranked 12, but when he beat Wright at Newport last Summer and played Larned a five-set match in the challenge round his listing jumped from 12 to 2.

A New Star on the Horizon

When McLoughlin finished his 1909 visit it looked as if cautious generalship in tennis was doomed to fall before smashing pace. And when McLoughlin met Wright at Longwood this year and in spite of many errors banged through to victory, people, while still taking into consideration the fact that Wright's game was not as snappy as it had been in the past, held their breath and waited for Larned. The day Larned and McLoughlin met was hot and humid and the match was eventually interrupted by rain. Larned played with a greater consistent speed than McLoughlin because almost all of his shots were severe. Overhead he was deadly and he beat McLoughlin decisively, making it appear, as he has so often lately, how much he is in a class by himself.

There are three men besides Larned who have been champions since Whitman retired, Ward, Clothier, and Wright. Of these Wright is probably the greatest and he probably also is the most coached player we have had. He began young and always had a number of clubmates who stood at the top to watch and get points from. Whitman benefited him greatly with his advice and his father, George Wright, is one of the most authoritative tennis critics we have. He is very strong and combines generalship with indomitable tenacity. Although he has only been champion once, he has been round the top for some years and has a remarkable international

record. It is said that he is going to retire from singles.

Ward played a game of great versatility and was one of the most delightful men to watch, and Clothier, though he won the championship once, never seemed to reach the limit of his possibilities. A man of great physical power, he was rather heavy for an ideal player and at times he appeared almost cumbersome, but he was always cool and thoughtful and though his form was not beautiful, it was sound in the same way that Whitman's was. The great common factor in the play of all of these men is the important place that tactics and generalship have had in their calculations.

The result of this thoughtfulness which has come into the Eastern play has already affected the Westerners. Last year Bundy was placed ahead of his fellows not on account of leading physical achievements, but because he suddenly loomed on the horizon as a man of resourcefulness and generalship. He had none of the upsets which marred the play of the famous McLoughlin. He lost to McLoughlin at Southhampton and up to the time that he faced Wright at Newport he did not appear to be anything like the strongest factor in the Californian terror. He had, to be sure, outgeneraled Colston, but he still was only considered as a man likely to force Wright to do a little fighting.

When he beat Wright in four sets he found himself a very prominent element in 1910 tennis history, and when he added to his winning of the All Comers the glory of forcing Larned to his utmost, he was given the honor of ranking next to Larned.

Bundy's match with Wright created first interest and then amazement, and the amazement followed quickly in the track of the interest. The Californian won the first two sets in a way that he never would have had it not been for the fact that his great service and smash were supplemented by generalship and that he played his ground strokes with control and effectiveness worthy of Wright himself. The last two sets were both deuce, Wright winning the first

after a magnificent spurt and Bundy the second.

The critical point of the match came in the third set when at eight all, with Wright serving, Bundy made three successive passes down the side lines. As a tribute to Californian energy he sealed his victory with a final smash.

An analysis of the match shows that Bundy was anything but weak in the middle register of his game. He began his victory over Wright when he brought the score in the first set to 4-3 by four beautiful passes. In the second set he also started his lead by a series of fine passes and, as we have seen, he upset Wright at the crucial point by his accurate passing. Altogether, he showed good work off the ground and his game not only combined pace, control, and balance, but it proved him a cool strategic general.

It is interesting to note that against Larned, too, Bundy supplemented his fine service and net-work with excellent driving and passing. Of the three sets that he lost the first went on errors 6-1 to Larned, the third 6-0 with Bundy easing up and the fifth 6-1 after Bundy was practically put out by the heat and humidity. He came out of the match a recognized master.

This result of Bundy's play at Newport was strangely in contrast with McLoughlin's who put up a game against Wright that was flagrant with errors. He not only lacked in overhead severity, but was quite hopeless off the ground, just as he had been earlier at Bay Ridge when he was beaten by Bull. The hopes of those who want and expect to see him a champion were distinctly dampened.

There is one man who has had a great deal to do with keeping the doubles championship in the East who has been for some time one of the brilliant factors in American tennis without ever winning the championship, namely Alexander. One of the greatest pleasures a tennis player can have is to watch Alexander when he is on his game. He is undoubtedly one of the most versatile players we have ever had and the only reason he has not been champion is because he is not as controlled as the champions we have been noticing.

To become a player of the very first rank, that is to say, to enter the class where the present day Larned and H. L. Doherty as he played in 1903 stand, there must be no gap between the overhead game and the ground game. Wright filled this with a very effective chop. In fact, he brought this stroke to such a high pitch of excellence that it gave balance to his game, which, although it never equalled the all round perfection of Larned and the Dohertys, placed him very near them. To fill this gap is the task that faces the Californians and with typical enthusiasm they have already attacked it.

The Californians have certainly tended to add to the zest of the Eastern game and the way they have marched four abreast into the first ten is marvelous. It is very interesting to notice where they jumped from and why they jumped. Bundy jumped from 12 in 1909 to 2 in 1910. McLoughlin ranked 38 in 1907, 6 in 1909, and now ranks 4. Long, too, hurdled from 39 in 1907 to 7 in 1909 and in 1910 climbed up two steps to 5, while Gardner, ranking for the first time after his first season in the East, stepped in ahead of Wallace, Johnson, Palmer, Little, and Inman and took tenth place.

Breaking the Eastern Monopoly

These remarkable jumps in rank are not due altogether to equal jumps in ability but to the fact that California has been too far from the horizon of the ranking committee to be seen clearly. Bundy's rise from 12 to 2 is phenomenal and the fact that Long won fifth place without playing in the East shows that boundaries are falling.

The Westerners have come in and broken down the Eastern monopoly with a great deal of vigor and dash. When McLoughlin is going at full speed and is on the track the best Easterners have to be extremely careful how they are behaving themselves. He began tennis in 1903 at the age of thirteen, the same year that Larned, ranking one, had his ups and downs with H. L. Doherty in the Internationals. Larned is still one and now has only his ups, but he had to beat

Maurice McLoughlin before he could own his fourth Longwood challenge cup.

In 1903 when McLoughlin started tennis Wright ranked four. Last year he was beaten by McLoughlin at Longwood and McLoughlin ranks only one place behind him. McLoughlin was runner up to Clothier last year when he was only nineteen years old. To be accurate, he was eight days younger than Larned was when he was runner up in 1892. The ranks of the two men at the same age were identical—namely, 6.

The net game was not so overdeveloped in those days and Larned had a schooling in ground strokes which neither McLoughlin nor the other Californians have had. Long began tennis in 1902 when Larned and Wright ranked one and three, just as they do now, and Bundy, though seven years older, began tennis in 1900. Wright then ranked four and Larned three. Bundy now ranks between the two, after showing that a Californian can be a general.

Gardner, the other brilliant Californian, began tennis first and, though his record is not quite as startling, it is still brilliant enough to make the others proud to have him one of them. For what they have brought into the game we must be grateful. With Wright out of singles, it leaves three Californians between Larned and Niles. If they develop their ground strokes and increase the balance of their game the chances of a Californian champion look promising.

They have tended to add to rather than subtract from the overbalanced effect of the present game, but if they once turn their enthusiasm to balance and control with the success that they have hitherto obtained in pace, we shall see them taking the championship from the East. It is, of course, a question whether balance and control ever join forces with the smashes of a McLoughlin. Probably not, but the smashes of McLoughlin help to open our eyes to the possibilities of the offensive game.

A MIXED BAG

THE WAY TO COOK A HEDGEHOG—AN ENGLISHMAN WHO WASN'T SO SLOW—THE PRIZE DUCK GUN—THE SECRET OF THE PIGEONS SOLVED—BELIEVED HE'D 'A' SHOT THE YOUNG UN

HEDGEHOG A LA CANAYEN

“LOUIS,” inquired the tenderfoot, “did you ever cook a hedgehog?”

“No, m’sieur, but I have many tam begin. Dat’s not ver’ easy t’ing, to cook hedgehog. But ma fadder—”

“I understand that all you have to do is to fry them quick in hot, deep fat.”

“Wall, I dunno me ’bout dat. P’raps. All de same, I radder chew me de spruce gum. But de fadder of me, he’s de mos’ bes’ cook for hedgehog was never seen. He’s tole plenty peep’, but dat’s p’raps too long story.”

“No, go ahead. I want to find out.”

“Wall, de firs’ t’ing you got to skin heem, an’ dat’s purty mean job. It mak’ you mad when de quill stick in de hand. But she’s not ver’ bad if you got

pinchers. Nex’ you put heem in a pail wit’ plenty salt water and let heem soak, oh, mebbe all night. It tak’ long tam for soak hedgehog enough—”

“How much of him do you take?”

“Oh, jus’ de legs. Dat’s all dere is. An’ after he’s soak, he’s wash off in clean water and den he’s boil in more salt water—”

“How long?”

“Well, what you call par-boil, mebbe tree, four hour. After dat he’s boil in some more water wit’ ver’ leettle salt and some vinegar. Dat’s for mak’ heem tender—”

“How much vinegar?”

“For chicken mos’ likely one, two spoon, but I t’ink me ma fadder say for hedgehog ’bout one cup. Anyhow, he’s boil dere wit’ nice piece pork and mebbe some onion.”

"That's not a par-boil, is it?"

"Oh, mon Dieu, no. 'Bout six, eight hour. Dat give you plenty tam for gettin' de bakin' hole ready, an' de fines' place for dat's in de side of a hill. When everyt'ing's done, you put heem in a kettle wit' some pork on top an' some flour and leettle water dat he's boil in an' mak' de cover ver' tight."

"How long does he stay there?"

"All night, an' ma fadder he say dat if de bakin' hole's not cool off too moche, he's better by noon. Dat's why, ma fren', dere's so many hedgehog. It's ver' hard for cook heem good. But long 'bout noon it's tam for mak' de gravy, wit' flour, an' water he's boil in, an' leettle butter if you got it, an' some pepper.

"When you go for pull heem out de hole, you mus' kick de dog away, or you have all dis troubl' for not'n'. Den he's put on de beeg plate wit' pork an' onion an' plenty gravy. An' de nex' t'ing——"

Louis suddenly arose to kick together the brands of the fire and pattered unaccountably with the sticks on the farther side.

"Yes, what next," insisted the tenderfoot. "I should think it would be about done."

"Wall, no," drawled Louis from the darkness beyond the fire. "De fadder of me, he always say de nex' bes' t'ing is t'row de dam t'ing in de lak'."

W. S. C.

WHY THE PIGEONS DISAPPEARED

"YES, there's a few ducks out there," remarked the old hunter as he gazed out across the marsh at the cloud of teal "milling" up and down in the storm, "but they don't compare to the wild pigeons that used to be back in Pennsylvania. Why, sir, I have seen the pigeons so thick back there that if we wanted to tell the time of day by the sun we would have to throw up a club through the flight before we could see it.

"I mind me one time of the queerest experience I ever had. I was out hunting rabbits with an old musket. It was late in the fall and the rabbits weren't very thick. I was coming home and had

just got to the barn lot when a flight of pigeons went over. They was just above my head and when I looked up I thought that a cyclone was coming. As they passed I up with my old musket and let drive. By gosh, I never got a pigeon.

"I went on into the house some disgusted. Pretty soon my boy went out with a basket to gather up some chips for a fire and when he come back he had that bushel basket full of legs. I had shot under them pigeons and just cut their legs off.

"The next day we went down to where they roosted in the timber back of the house and gathered up the birds. They couldn't sit on the limbs so they fell off and were lying on the ground."

C. S. M.

A POT-SHOT

JERRY HORTON is one of the living exponents of the creed that a rifle is the only gun for your true sportsman. He consistently and persistently maintains this position in spite of all evidence to the contrary. So when four of us went for a week's camp in the Rainy River country, up Northwest, naturally Jerry took along his old .38 repeater.

That old .38 of Jerry's deserves a word of mention, for it was in a class by itself. It was of an ancient and venerable model and of a standard make, but the victim of many years' continued neglect. Its barrel was rusty and its mechanism rickety and it was "leaded" beyond all power of mere words to describe.

To say the least, it was an erratic shooter. I've seen Jerry drive a nail with it at a hundred yards, and I've been present on other occasions when he failed to hit the end of a log, four feet in diameter, at a hundred feet. The bullets were quite as likely to strike sidewise as otherwise, and the havoc wrought in a squirrel when one of those soft slugs struck it while turning end over end was something harrowing to see.

One day Jerry and I were returning from town with tobacco, coffee, salt, and other supplies; I, being the bearer of

the sack, was unarmed. Jerry carried his ancient and cherished rifle. As we climbed a hog-back ridge covered with straggling pine, I spied a dead tree—gaunt reminder of some bygone forest fire—upstanding some two hundred yards to the right of our course. On its topmost branch sat a hen partridge.

I stopped like a pointer and gave Jerry a “s-sst!” of warning. Partridges are palatable when properly cooked and we had the cook at camp who could do it.

“We want that bird,” I told him.

So we made a careful detour and approached within seventy yards of the dead pine, unobserved. We then discovered a second bird—a young one two-thirds grown—perched on a limb four feet below the hen.

“Jerry,” I whispered, “if you ever shot that old blunderbuss of yours to kill, this is the occasion.”

“You go ahead and shoot,” he returned. “You’re a better shot than I am. Go on—try your luck!”

As time was precious and he was stubborn, I took the gun. I laid its aged, rusty barrel across a log and drew a careful bead on the young partridge; he was a plump youngster and my mouth watered for him. It was an easy shot—had I possessed a dependable gun. Second after second passed while I sighted and Jerry held his breath and waited in suspense. Then—hoping for the best—I cracked away and—down tumbled the hen, torn into a tangled mass of skin, gore, and feathers, from her perch four feet above. And far across the valley we watched a whirling speck, receding and presently vanishing, as the young bird split the afternoon breeze.

“I believe I’d ‘a’ shot the young un, if I’d been you,” said Jerry.

E. F. H.

LOST THE LAKE

OUR British cousins have been accused of being devoid of humor for so long that the following yarn is told to remove the imputation in a measure. Not so very long ago an Englishman, just across, visited Sandpoint, one of the large lumbering towns in the Northwest. Practically the en-

tire town and country are owned by the Humbird Lumber Company. The Englishman was taken out into the great pine forests where immense white pines tower on every side.

“To whom does this forest belong?” he asked.

“To the Humbird Lumber Company,” was the answer.

He was shown through the large lumber plant and informed that it belonged to the Humbirds. The fine bank building, the great department store, rows upon rows of dwelling houses, all belonged to the same corporation.

As a crowning treat he was taken for a spin around Lake Pend Oreille in a swift launch. Upon their return, while standing upon the dock, he asked:

“May I ask who owns this lake?”

“Oh, it belongs to God.”

“Aw, really, is that so? Now, would you mind telling me how He managed to get it away from Mr. Humbird?”

C. S. M.

NOT A GOOD DAY FOR DUCKS, EITHER

“YES, sir,” the Principal Precipitator remarked as he handed back my new hammerless after inspecting it critically, “that’s a mighty fine looking gun, but none of these new fangled shotguns can throw shot along with the old muzzle loaders we used to have. I have done some shooting in my time, and give me the old gun every time.

“Why, I remember killing twenty-seven ducks back in Kansas at one shot with the gun I used to shoot. They was setting in a little pond back of the barn and I sneaked up behind a bank and just as they rose let ‘em have it. Yes, sir, picked up twenty-seven of ‘em after the smoke cleared away.”

“That shore was some shootin’,” remarked the Missourian, “but it wa’ant a patchin’ t’ a shot me an’ my brother made onct back in Missouri. We wuz huntin’ duck f’r St. Louey markets. We wuz usin’ muzzle loaders, too, an’ th’ ducks wuz so blamed thick we made good money, but we got sort of ambitious an’ wanted t’ kill a whole lot more of ‘em.

"Bill, that wuz my brother, wuz a natr'l inventor an' he got t' studyin' out a scheme of how to git th' duck herded up int' a slough thar wuz down onto the river bottom, an' kill a passel of 'em at one shot. Bill went down t' whar thar wuz an' ol' sawmill thet hed burnt down an' fetched up a length of ir'n pipe 'bout two inches crost an' six foot long. He plugged up the hind eend of it, bored a hole in it f'r a cap, an' worked on it 'till when he wuz done he hed a first-class swivel gun.

"We rigged th' gun up in a punt that we hunted duck in, an' covered th' punt over with grass. One mornin' we loaded the thing up with two pound of powder an' four pound of shot. The duck seed us comin' an' they all swum t' th' upper eend of th' slough whar it war narrer. Th' warter war jes' black

with 'em. Bill, he war polin' an' I war layin' down sightin' the gun.

"When we crope up so as t' see th' whites of their eyes, Bill he whispers t' me, 'Let 'er go,' an' pulled the trigger. Say, thar wuz th' damdest roar you ev'r heerd, an' we wuz scootin' back'ards round thet slough. We went round four times afore we could git th' infernal punt stopped. When we picked up our duck we counted 'em an' thar wuz three hundred sixty-seven of 'em. Yes, sir; three hundred sixty-seven duck, all on 'em with their feet turned up flappin' in th' air.

"Stranges' thing wuz when we come to examine th' gun it hed jes' snapped an' never went off at all. I wonder how menny duck we'd 'ave killed ef thet blamed gun had went off?"

C. S. M.



INTERNATIONAL POLO

INTERNATIONAL sporting interest this year centers around the matches for the international polo trophy played at Meadowbrook, May 30th and June 3rd and 7th. Although the trophy was first offered in 1886 this is the second match to be played in this country. In that first match twenty-five years ago John Watson and his team swept the field at Newport and carried the cup back with them. For twenty-three years it rested in England until H. P. Whitney's Meadowbrook team brought it back from Hurlingham two years ago.

Last year there was a somewhat half-hearted attempt in England to get to-

gether a challenging team, but players of international caliber were hard to find and no match was held. This year England is sending a team that seems to rank the highest to be found. Captain J. Hardress Lloyd, the captain of the British team, is one of the crack regimental players. Much of his polo was learned in India, the home of the game, where the hard smooth fields make for fast riding and hard hitting.

His Indian service was mostly with the Fourth Dragoon Guards. The other members of the team are Captain Herbert Wilson, of the Yeomanry, Captain Leslie St. George Cheape, of the First King's Dragoons, Lieutenant E. W. Palmes, of the 10th Hussars, Captain F. W. Barrett, of the 15th Hussars,

and Lieutenant A. Noel Edwards, of the 9th Lancers.

Captain Wilson and Lieutenant Edwards were on the winning Roehampton team at Hurlingham in 1909 and Lieut. Palmes, Captain Cheape, and Captain Barrett played with the Tigers who were runners up to the Old Cantabs at Hurlingham last year.

With the exception of Captain Wilson and Lieut. Palmes, all the English players are handicapped at 9 goals, the highest rating under the new English system. Captain Wilson and Lieut. Palmes are rated at 8 each. In the preliminary play in this country Lieut. Palmes, who came to America direct from India, attracted considerable attention by his fast riding, driving the ball much after the manner of Foxhall Keene whose slashing play has been a feature on both sides of the Atlantic for many seasons.

The waiving of the off-side rule, according to the American method, is causing English followers of the game some uneasiness as it is felt by many that this contributed too much to the daring type of play which won for the Americans in 1909. The long period of preliminary practice both in England and this country, however, should contribute much to adapting the English players to the new conditions.

The American team had not been definitely selected at the time this resume was written, but it is doubtful if it will differ greatly from the Meadowbrook four which won at Hurlingham in 1909.

The English players are by no means the unrelated group of brilliant individualists that might be supposed from the manner in which they have been called together. Most of them have played together for the Roehampton Club, and all have been associated at various times in twos and threes on different teams.

It is a matter of some slight historical interest to notice that the trophy whose ownership for at least another year is to be decided at Meadowbrook was given first by a group of Newport enthusiasts. The 1886 match had been arranged and the English team was on its way to

America when the question of an appropriate trophy came up. Frederic Gebhard promptly offered \$1000 for the purchase of a fitting prize, whereupon other enthusiasts insisted that they should be counted in. The final list of subscribers in addition to Mr. Gebhard reads: John Sanford, N. Griswold Lillard, E. D. Morgan, Cornelius Vanderbilt, Fred. O. Beach, E. L. Winthrop, Raymond R. Belmont, O. W. Bird, Elliott Roosevelt, W. K. Thorne.

CLIMBING THE SOUTH POLE

IF the South Pole isn't reached during the coming season it will not be for want of a good trying. Four parties are in the field, English, Norwegian, Australian, and Japanese. Apparently, from reports brought back from Captain Scott, when he entered Bay of Whales to land his expedition and prepare the winter quarters he found Captain Raould Amundsen, discoverer of the Northwest Passage, already on hand with a complete outfit. Captain Amundsen changed his plans after his announced determination late in 1909 to attempt a repetition of Nansen's experiment of drifting across the Arctic Sea from the Asiatic side. His vessel is Nansen's *Fram*.

The last heard from him until the return of Scott's *Terra Nova* to New Zealand was when he touched at Madeira last October. He then intimated that he might have a try at the Antarctic, but as nothing more was heard of him little importance was attached to the statement.

Amundsen's experience in the Arctic should have fitted him exceptionally well for the Antarctic work, but it is doubtful if he will be able to gain much advantage from his earlier arrival on the ground. If winter exploration is difficult in the Arctic, it should be doubly so around the south pole. Sir Ernest Shackleton's description of the storms that smote his party on their march southward from winter quarters after the sun had returned incline one to be skeptical of the Norwegian's ability to make much headway during the winter months now in full swing.

Captain Scott will winter at Bay of Whales and expects to start south sometime in October following about the same route as that taken by the Shackleton expedition.

Of the Japanese and Australian parties little is known. In fact, it has not even been announced whether the latter has started, and it is known only that the Japanese touched at New Zealand and then proceeded southward. It is stated that they had sworn an oath to reach the pole or die. Many good men swore this same oath in regard to the north pole and many of them kept one of the alternatives. Only one man reached the pole.

ONE WAY TO SETTLE IT

ONE New Yorker has solved the problem of country living. He is looking for a farm and the one condition that he insists on is that it shall not be expected to pay for itself. His theory is that the will-o'-the-wisp of profit leads many an inexperienced and deluded city-dweller into marshes of expense when he seeks a country home from which he can never extricate himself. His maxim is, Count every dollar invested in your country place as a dollar gone; if by any chance one returns, welcome it as a long lost brother, but don't expect a repetition of the miracle.

SHOOTING FOR THE MARKET

THERE are some curious misconceptions about the scope and the purpose of the bill introduced in the New York legislature last winter prohibiting the sale of game at any season of the year. The widespread importance of and interest in the subject justify a reference to some of them.

A weekly paper of high standing in New York City takes the rather curious position that without the market for game, game would cease to exist. This is putting the cart before the horse with a vengeance. Remember that the market hunter in America ranks to-day with the poacher in England so far as right-minded sportsmen are concerned. He is a pest and a menace.

The game that he brings into the market is a response to the demand for game only in the sense that that demand has led him to the marshes and the blinds as soon as the season opened and has tempted him to shoot the limit—and then some—until the last day. Remember also that we are dealing with wild game, not with hand-fed, coop-reared birds. The artificial propagation of birds is in its infancy in this country; in fact it has hardly been born.

To compare the open market of England during the shooting season is no comparison at all, any more than to cite the open marketing of barnyard fowls. Granted the difficulty of bringing down your bird on the English moors when he comes driving in before the beaters, he is still a handreared bird, and next year, given good weather and proper attention to the foxes and weasels, there will be plenty more to take the places of those that fall to the guns this year.

Our problem in this country is to preserve the native game in its native condition; to insure abundance of wild life for the covers and hills and forests that will otherwise be tenantless and empty. The encouragement of the breeding of game can be supplied if need be without throwing open the markets to every man who cares to go afield with a gun. Restriction of the bag, shortening of the open season, and the other remedial measures in use or proposed are all very well, but the safest and most effective road for us at present is the closing of the market.

If you want to know the kind of man the market tempts, ask the best sportsmen of your acquaintance how many have ever sold a single bird that they had killed. Then you will have a somewhat clearer idea of the effect of the boasted market demand on the men who are really in earnest about game preservation.

SHOCKING

THE vexed question as to whether the use of forcible and profane language by lady golfers on the links is growing, has been settled in England.

The wife of a Church of England parson, playing at Bournemouth, having missed a particularly easy shot, and broken her club in the attempt, was heard to remonstrate: "Oh, you naughty, *naughty* little ball!"

A GOOD OLD FRIEND

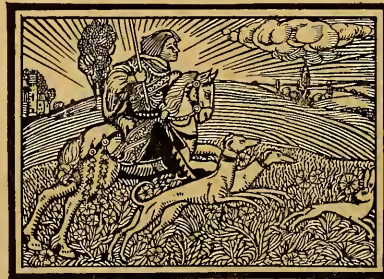
SOMETIMES in these days of much publishing, when many men are rushing into print with many ideas, there are some of us who feel at times the need of a useful antidote for overdoses of the new. That is best to be found in the old. A book that is much spoken of—and occasionally read—is Gilbert White's "Natural History of Selborne." It first saw the light of print nearly a century and a quarter ago, but its interest is perennial.

Practically all the author's life was passed in the little village in which he was born and though he lived through many of the great changes that marked the eighteenth century they seem to have touched him but slightly. As one villager said of him, "He was thought very little of till he was dead and gone, and then he was thought a great deal of." Another, a woman, spoke of him as a "quiet old gentleman with very old-fashioned sayings; he was very kind in giving presents to the poor, and used to keep a locust which crawled about his garden." When she was asked if perhaps she did not have reference to the tortoise of which White writes in one of his letters, she replied, "Ah, that's what I mean."

His letters cover every imaginable phase of the natural life of the district in which he lived,—beetles, birds, thunderstorms, trees, flowers, clouds, animals—all of the outdoor world he touched with the hand of a friend and a master observer. His life was leisurely but full. After he had completed his Natural History he mentioned a previously formed intention to write a Natural History of the Months of the Year, but as another writer had already "completed somewhat of the sort" he begged leave to bid his correspondent and his subject a respectful farewell. Imagine such gracious forbearance in this hurried day of competition.

In the introduction to his published letters written in 1788, he expresses the author's hope that he has added something to the knowledge of and interest in the subjects that he has discussed, and concludes: "But if he should not have been successful in any of these his intentions, yet there remains this consolation behind—that these his pursuits, by keeping the body and mind employed, have, under Providence, contributed to much health and cheerfulness of spirits, even to old age;—and, what still adds to his happiness, have led him to the knowledge of a circle of gentlemen whose intelligent communications, as they have afforded him much pleasing information, so, could he flatter himself with a continuation of them, would they ever be deemed a matter of singular satisfaction and improvement."

A very fit epitaph this for any good outdoor man.



NEWS OF THE OUTDOOR WORLD

Aviation

A REGRETTABLE accident occurred on April 14th, at Rambouillet, France. Lieut. Byasson's biplane fell from a height of 400 feet and killed the aviator. Lieut. Byasson is the first naval aviator of France, and the cause of the accident is unknown.

Capt. Carron, of the French Army Aviation Corps, also fell with his machine, midway between Villacoublay and Versailles, April 18th, and was killed.

The French aviator, Pierre Prier, flew from London to Issy-les-Moulineaux (290 miles), April 12th, in 236 minutes, using a monoplane. This breaks the distance record.

The proposed elimination trials at Belmont Park for the international trophy have been abandoned by the Aero Club. The American team will be selected without competition.

A national circuit of aviation meets is being arranged to compete for events whose prizes total \$1,250,000. The proposed schedule is: Washington, Milwaukee, Pittsfield, Saratoga Springs, Harvard-Boston, and California. It is probable that Annapolis will take preference over Charleston, S. C., as the site for the proposed school of naval aviation.

Automobiling and Motor Boating

MRS. CUNEO, of Richmond Hill, covered half a mile on the Long Island Motor Parkway, April 17th, in Louis Disbrow's Pope car "Hummer" in 0.16½ (112 miles an hour).

The Prix Riviera of \$1,500 for cruisers from 12 to 18 meters long was won April 12th by *Chantecler II*, over the 50 kilometer course in 1 hour 6 minutes 39 seconds. At the conclusion the Duke of Westminster's *Ursula* made seven kilometers in 5 minutes 13 seconds.

At Monte Carlo on the 11th, *Labor IV* won the Prix Mediteranee from twelve starters, 50 kilometer course; time 1.04.32½. Prize of \$1,200.

The Prix Côte d'Azur (\$1,400) for 4-cylinder cruisers 8 to 12 meters, was won by the German boat *Lurshen Daimler*, which covered the 50 kilometers in 1.03.02.

At Monaco on the 6th E. Mackay Edgar's motor boat *Maple Leaf III* won the first race, traveling 47 nautical miles an hour. The Omnium race was won by *Gregoire IX*. *Maple Leaf III* lost her rudder and damaged her propeller during the race. This hydroplane was built to try for the British International Trophy now held by the Motor Boat Club of America. She is just under 40 feet in length and is driven by two motors of 350 horse-power each.

On the Plaza del Rey motordrome at Los Angeles, April 9th, Valentine Hust and Franck Verbeck won the 24-four race with a total of 1,491 miles, averaging 62½ miles an hour, in an Italian Fiat car of 60 horse-power, thus breaking the Stearns car record made at Brighton Beach, August 20th. A Cadillac of 30 horse-power, driven by Adair and Baudette, was second with 1,448 miles, or an average of over 60 miles.

Lacrosse

AT Annapolis, April 13th, the Naval Academy lacrosse team walked over the Lehigh team by 7 to 2. McDonald shone on the Middie's team.

Lehigh played Cornell on the 10th, and defeated them, 5 to 2, at South Bethlehem, Pa.

On the 6th at Annapolis, Md., the Middies played fast lacrosse and gave Cornell a bad beating, winning by 12 to 0.

Harvard opened well with lacrosse, beating Springfield Training School by 7 to 2 at Cambridge on the 8th.

At Swarthmore, Pa., on the 8th, Swarthmore College defeated the New York Lacrosse Club in a poor game.

Harvard defeated Carlisle in a fast, rough game by 2 to 1, April 29th.

Soccer

COLUMBIA and Yale fought to a tie on South Field, April 11th, in an overtime game, neither side scoring.

Haverford College finished its season at Haverford on the 8th by defeating Cornell, 2 to 1.

At New Haven, Conn., on the 12th, Harvard beat Yale by 3 to 1. Capt. Prime of

the Yale team was injured—wrenched knee—and Chang, the Yale Chinese star, also damaged his arm, but returned to the game bandaged.

On the 10th Yale defeated Cornell, 3 to 0, at New Haven. Tan and Chang, the Chinese players on the Yale team, showed remarkable speed.

At Moorestown, N. J., on the 6th, Pennsylvania and Cornell played their intercollegiate championship game, Cornell being defeated, 3 to 1.

Harvard and Cornell tied with a blank score at Ithaca in a fast game at Ithaca, April 29th.

Baseball

INTERCOLLEGIATE baseball games played in April resulted as follows: Georgetown, 2-Princeton, 2; Harvard, 1-Annapolis, 1; Virginia, 4-Fordham, 0; Columbia, 2-Dartmouth, 0; Georgetown, 8-Yale, 2; Pennsylvania, 8-Virginia, 0; Penn. State, 6-Dartmouth, 6; Middies, 5-Harvard, 4; Wesleyan, 3-Middlebury, 0; Cornell, 4-Georgetown, 4; Cornell, 3-Dartmouth, 1; Illinois, 10-Iowa, 1; Lake Forest, 8-Indiana, 5; Minnesota, 6-Northwestern, 4; Penn. State, 7-Washington and Lee, 1; N. Y. U., 3-Vermont, 0; Lafayette, 6-Army, 0; Princeton, 4-Dartmouth, 0; Brown, 9-Trinity, 0; Swarthmore, 1-U. of P., 3; West Point, 3-Lehigh, 6; Penn. State, 10-Navy, 1; Virginia U., 3-Carolina U., 1; Michigan, 6-Reserve, 1; Princeton, 8-Fordham, 2; Yale, 7-Fordham, 2; Princeton, 4-West Virginia, 1; Holy Cross, 5-Amherst, 3; Pennsylvania, 8-Columbia, 1; Brown, 3-Tufts, 2; Bowdoin, 9-Dartmouth, 4; Princeton, 3-Cornell, 2; Yale, 2-Pennsylvania, 1; West Point, 7-Brown, 6; Williams, 5-Trinity, 0; Amherst, 10-Wesleyan, 0; Harvard, 18-Colby, 0; Dartmouth, 8-Mass. Aggies, 2; Western Reserve, 2-Michigan, 0; West Virginia, 6-Navy 3; Illinois, 5-Indiana, 4.

Addie Joss, the Cleveland Naps popular pitcher, died at his home in Toledo, O., of tuberculosis meningitis, April 14th.

At San Francisco, on April 17th, The Waseda University team of Tokio, Japan, easily defeated the Pacific Coast alumni of the same university by 18 to 0. The Japs made excellent use of signal coaching, playing an errorless game.

Miscellaneous

THE University of Iowa rifle team defeated Massachusetts Agricultural College by a score of 1891 to 1890, thus winning the National Inter-Collegiate Shoot with fifteen straight victories.

The Rocky Mountain Rifle Club, Butte, Mont., won the club rifle shooting championship of the United States, having defeated, by 992 to 990 out of a possible 1,000, the Winchester Rod and Gun Club, New Haven. One man of each team made a perfect score of 200.

Clarence F. De Mar, of the North Dorchester Athletic Assn. (Mass.) won the Boston Athletic Assn.'s fifteenth road race, April 19th, covering the distance of 25 miles in 2.21.29 $\frac{3}{4}$. De Mar, although an experienced road racer, is only 21 years old.

The English long-distance runner, Alfred Shrubbs, holder of the ten-mile outdoor record, beat Gusta Ljungstrom for the ten-mile distance at the Metropolitan Rink, New York City, on the 24th, by 250 yards. The official time was given at 51.04, but Shrubbs questions the accuracy of this figure owing to the altered track.

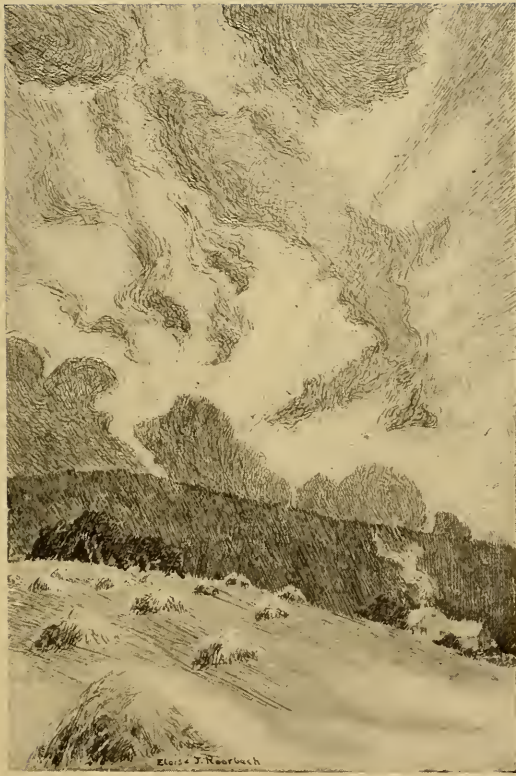
Melbourne, Australia, saw the American sprinter Holway beaten by three yards by Donaldson of Victoria, in the 100 yards, April 12th. Donaldson's time was ten seconds flat.

Dr. Alfred Stillman won the championship in the national squash tennis tournament at the Harvard Club on the 10th, after a three days' fight. Dr. Stillman had to meet John W. Prentiss in the final round. Final score, 17 to 15. Both contestants belong to the Harvard Club, of New York, but in this tournament Mr. Prentiss represented the New York Racquet Club.

At Boston, April 8th, Jay Gould, of New York, won the national court tennis championship for the sixth successive time, defeating Joshua Crane, of Boston, at the Racquet and Tennis Club by the scores of 6-5, 6-1, and 6-0.

The championship of England for indoor tennis was won at Queens Club, London, April 28th, by a Frenchman, A. H. Gobert, from the English veteran, M. J. G. Ritchie, 3-0 in the final singles.

William N. Queal, the American champion, defeated Al Shrubbs, the English record holder, in a ten-mile race at the Metropolitan Rink April 29th, in the exceptionally fast time of 52:15.





CHARLES LIVINGSTON BULL

HE CHARGED INTO THEIR MIDST, AND AS THEY SCATTERED HE SINGLED OUT
ONE OF THEM AND KEPT AFTER IT

Illustration by Charles Livingston Bull for "The Buck of the Bamboos"

THE OUTING MAGAZINE



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THE BUCK OF THE BAMBOOS

BY CHARLES LIVINGSTON BULL

Illustrated by the Author

OUT in the grassy plain, under one of the scattered, low-growing, bushy trees, a big buck lay motionless, save for an occasional flicker of one of his big, round, cupped ears as some insect bit too sharply. From time to time a lump—plainly visible on the outside—would slide up his long, smooth throat and his jaws would commence an almost ceaseless rotary motion; then the lump would slip down his throat once more and the chewing would cease as he listened for a while, every sense on the alert. Then again the lump would slide up and the chewing would be resumed.

He lay there idly dozing, sleeping at times, for several hours, for well he knew that this was the only time of the entire day when he could most safely venture to relax his vigilance, for at this time the killers would also be sleeping.

He knew that somewhere near that strip of jungle over there to the east, where he had to go when he wanted a drink, were a pack of the red dholes, savage, wolfish brutes, which made nightly forays upon the grass-eaters that came to the waterholes.

Also there was the big spotted leopardess, whose kittens were kept safely hidden in a hollow in the trunk of a large tree not more than two miles away down the river. Occasionally, too, a big sloth bear made pilgrimages down through the strip of jungle, and some weeks before he had come upon the remains of another buck of his own kind, and the odors told him of a long, sinister, striped killer, most terrible of all, a tiger which occasionally came along the river on his rounds.

Most of the enemies of the big buck kept to the shade of the trees throughout the day, and though his rest was broken frequently by disquieting sounds or



HIS BIG DEEP-CHEEKED HEAD, CROWNED WITH A SPLENDID PAIR OF CURIOUSLY SEMI-CIRCULAR ANTLERS

scents, he was able to get snatches of sleep from time to time.

He was a fine specimen of the thameng, the large deer of the grassy plains and swamps of Siam, Burma, and the Malay Peninsula, and his big, deep-cheeked head was crowned with a splendid pair of curiously semi-circular antlers. The thameng is unique among all deer in the form of its antlers, which approach nearer to those of the caribou than to any of the other deer, though they lack the palmation. The brow tines are proportionately longer than those of any other deer, extending forward to almost twice the length of the face, and forming most dangerous weapons. There are few other tines and the round beams go back and out and up, curving forward in a splendid sweep.

Through the hot midday hours the teeming life of the plain and jungle was stilled save for a few vultures swinging in wide circles on motionless wings, or

the brilliant, iridescent sunbirds which sat on exposed perches, occasionally darting out after flying insects. Even the lizards, which seem almost impervious to heat, were lying quiet, basking on bare patch of ground or branch of tree.

When the afternoon shadows had crept out over the high grass to a long angle, a slight breeze came up, bringing a little relief from the great heat.

His "cud" long since swallowed for the last time, the big buck felt the desire for a fresh supply of forage.

He rose, threw up his head, at once on the alert, and for at least ten minutes stood motionless, save for his ears which, one at a time, would snap back, listen for a few moments, then forward again, catching every tiny sound that might tell of the movement of a possible enemy. Then, neither hearing nor scenting anything alarming, he stepped forward a few paces out of the shadow of the tree.

As he did so four other deer rose silently from where they had been lying in their forms a few yards apart from each other and as silently came together. Two of them were old does and the others were fawns of about five or six months' growth. For some time they stood together, then started slowly away through the high grass toward the line of jungle. Their gait was rather curious. They lifted each foot in turn quite high and, with a rather long, slow stride, put it down suddenly with a sharp stamp, yet without sound, the sharp hoofs seeming to cut their way among the grass stems and still to strike the ground so lightly as to be inaudible. The grass was so high as to cover the backs of the fawns and almost those of the older deer and at a little distance they seemed to be a group of ghostly heads floating slowly along over the plain, one of them occasionally disappearing as it reached down to nip a fresh shoot.

Always their ears were moving, one forward, the other back, striving for the slightest rustle, catching and identifying every sound. They spend their entire lives in terror, listening and sniffing, for they live in such splendid cover that while they can disappear instantly, their

enemies can creep right up to them without being seen. Their muscles are constantly at the highest pitch, ready instantaneously to hurl them to one side or forward or back, for they never know when will come the ultimate moment of danger.

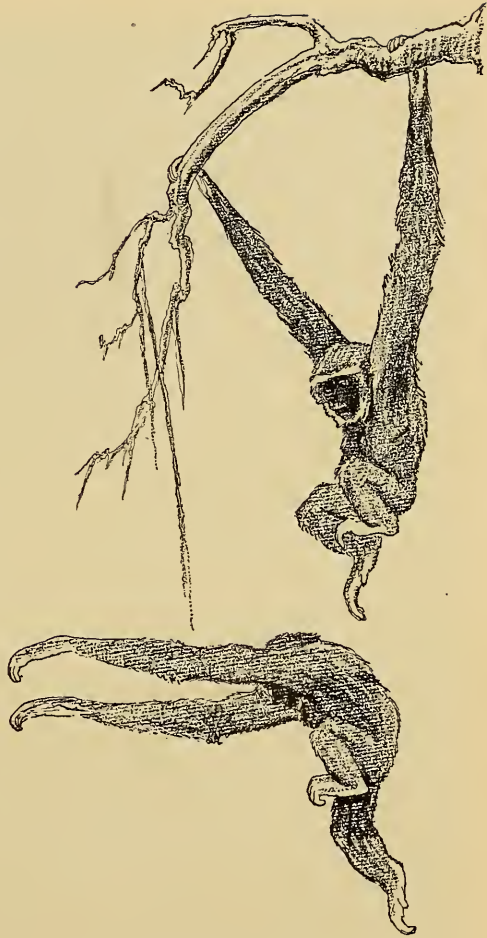
The jungle was bordered by a broad fringe of bamboos, and the young, tender, asparagus-like shoots were the favorite food of these deer and thither they were heading. As they drew near they could see the light green, feathery mass of foliage rising above the grass, crowned by the palms and other forest trees which towered above. The sun sank lower and lower and the green grew yellow and golden and orange, and soon after the little herd had cautiously entered the belt of bamboos the orange changed for a few moments to vermilion, and then—night.

Out over the grass the stars and the young moon dissipated the darkness, and a faint mist arose, seeming to tint the lovely night with cobalt.

Night in the Jungle

From the jungle came the various sounds of the night; the solemn cry of a gibbon, a curious long-armed ape; the loud alarm note of a peacock, taken up and repeated by another nearer, and then still another farther away, and yet one more so far away as to be hardly distinguishable as it echoed faintly down the aisles of the bamboos. With a rushing sound of wings the big fruit bats or flying foxes came flapping along over the jungle in a great flock, seeking some tree whose fruit might be ripe.

Then from down among the bamboos came the loud, reverberating bellow of the lonely old gaur that, having been defeated by a younger bull, had been driven out of his herd and now made his solitary range up and down the strip of jungle. He was a perpetual menace to all the other dwellers, for he would stand silent, savage, and morose till something moved near him, then with a roaring bellow he would charge, and woe to any less nimble footed than he, for with his great bulk behind his massive horns he was a creature to be shunned.



A PAIR OF GIBBONS CAME SWINGING
DOWN THROUGH THE BRANCHES

The big buck and his little family cautiously picked their way in among the bamboos, nipping a shoot here and there, and after a little came to where the bamboo clumps were scattered and trees grew up among them, then into the open jungle, the jungle of great trees whose branches laced together in a tight thatch far overhead, where the lack of sunlight prevented the growth of much underbrush, so that the floor of the jungle among the great buttressed roots was fairly open and easy of passage. Here the little herd fell into line, one of the does leading and the buck bringing up the rear, and walked quickly down what seemed to be a well-marked path or trail.

All through the jungle are these trails, game trails formed by the constant nightly passing of herds of wild creatures going to quench their thirst. Food they can find anywhere, but they must drink, and well the killers know and take advantage of this weakness. The cobra coils beside the trail within easy striking distance and waits for one of the little rodents to come creeping along within reach of his venomous stroke. The huge python awaits the wild pig. The jungle cat crouches upon a great root where the muntjac may come, and the leopard makes his ambush upon a huge limb above the trail. The little herd, however, met none of these dangers, and soon came to the sluggish stream, whose brown waters wound their tortuous way in curves and loops, narrows and pools through the jungle.

Going in Fear

Down to the water they came with the utmost caution, listening long, testing every current of air, for the telltale scent of a possible danger; finally when they had satisfied their thirst they hurried silently away.

They did not go back by the same way, for well they knew that any of the killers, coming across their fresh trail, would be quite sure to follow it, and they had no wish to meet the pack of the dhole or the leopard face to face. Making a wide detour, they came back to the bamboos, and had hardly reached the edge of them when they heard, and at the same time saw, the great bull gaur—or seladang as the Malays call him—come stalking out of the bamboos on his way to the stream.

They stepped nimbly out of the path, well content to give him the right of way, and watched him as he went muttering and rumbling down their back trail. He was not quite out of sight among the trees when they saw him stop, throw up his head with a loud snort, paw the ground for a minute, then lower his head and charge madly down their back track. Then there broke upon the night the wild barking of the dhole, those red dogs of the jungle which down in the Malay Penin-

sula travel in small packs or families, hunting the deer and any smaller game they can find.

They had come, five of them, upon the trail of the deer, and had followed noiselessly, hoping to get near before alarming their quarry, but the great seladang had disturbed their calculations. He charged into their midst, and as they scattered, he singled out one of them and kept after it, although it easily eluded him. The rest of the pack stood about watching the chase, barking and snarling as the great black ox bounded this way and that in pursuit of the little red dog. After a few moments, realizing that he could not catch the active little beast, he stood for a minute, eyeing the dogs, then charged once more at three of them which stood together. They dodged him readily and then, seeming to weary of the vain attempt, he turned once more down toward the stream.

At the first bark the deer had darted away through the bamboos and out into the grass, spreading out so that each one made a separate trail, running with great leaps that cleared at least twelve to fifteen feet at each bound and sailing high over the grass, leaving a trail very difficult for even such keen hunters as the dhole to follow. The diversion created by the seladang gave them several minutes' start, and when the dogs once more took up the trail they found, after leaving the bamboo, that the series of punctures where the deer had alighted in the grass at the end of each bound were so small and so far apart and the grass was so high—well above their heads—that they soon tired of the losing game and turned back into the bamboo in search of easier quarry.

The deer ran for nearly a mile, gradually circling round and finally, seeing that they were not followed, slowed into a walk, and once more cautiously approached the bamboo. The big buck was walking daintily along with his curious, silent, stamping stride when he came upon a quaint, bearlike little creature digging at the roots of a clump of grasses. As he stepped down beside it he stopped short with a "whoof" of surprise.



DEER AND BADGER STOOD FOR A MOMENT WATCHING EACH OTHER, AND THEN
THE BIG BUCK STEPPED NEARER, NOSE OUTSTRETCHED

The digger raised its head, then sat up on its hind feet and turned up its long, pointed nose, sniffing at him like a little striped pig. It was a balisaur or sand badger, and was seeking its supper of earthworms. Deer and badger stood for a moment watching each other, and then the big buck stepped nearer, nose outstretched.

The badger stood upright on its hind feet like a little bear, raised its upper lip in a wicked snarl, and prepared to strike with its big, flat, well-armed fore-paw. The buck came within a few feet of the wicked-looking little creature and sniffed at it, then seemed to decide that it was not worth bothering about and, turning away, left the balisaur to its worm hunting.

The Life of the Jungle

The buck and his little band spent most of the night as they had passed the heat of day, lying in the grass, but shortly before daybreak they went into the bamboos once more and feasted on the shoots, wandering about, scattered, but never very far from each other, for five pairs of big cupped ears and five noses are better than one. They came upon several of the other jungle dwellers in their wanderings, a spotted civet hunting mice among the bamboo stems, a pair of the little barking deer or muntjac slipping silently out of a little glade as they entered.

The big buck leaped aside and then stamped angrily, rolling open the big tearducts below his eyes, and wrinkling up his nose half inclined to fight as he came upon a big python looped at the base of a tree. A little later he found a pangolin, a curious scale-covered creature, waddling along searching for ant nests. Then, coming out into a little open glade as day was breaking, he heard a movement in a tree nearby and a splendid peacock sailed down from his roost followed by two hens. They ran a little way after they alighted and the cock jumped up on a dead branch and looked all about in every direction, on the alert for possible enemies. He stayed there for some time, while the deer

walked about, paying no attention to him, then hopped down and went to hunting for seeds and insects in the grass among the trees.

The beautiful birds and the deer together made a most entrancing picture in the faint blue morning mist of the dense tropical jungle, the masses of feathery bamboo foliage and the big palm leaves shooting up among the roots of the trees making a beautifully varied background. From one of the trees overhead came suddenly a series of loud, unearthly shrieks and cries and a pair of gibbons, those long-armed, tailless apes of India and the Malay Islands, came swinging down through the branches.

For the most part they used only their long arms, swinging from branch to branch, first with one hand, then with the other, their feet curled up under them save when they wished to go downward, when they used their feet as well as their hands. The deer and peafowl paid not the slightest attention to them in spite of their weird cries, and they came down to the lowest branches and stopped there, huddling together. As they stopped, the peafowl threw up their heads to the full height of their long, slender necks and stood rigid, then one by one the deer raised their heads, sniffed and stood erect, motionless, ears, eyes, and nose extended to the utmost as a faint, very faint, odor came floating on the quiet air.

Suddenly the stillness was broken by the wild shrieks of the apes as they sprang up through the branches, and at the same instant the peafowl burst away on wide, round wings, and the bamboos crashed as the does and fawns rushed off through the jungle.

A great spotted leopardess had landed squarely across the shoulders of the big thameng, and he was crushed down where he stood in the little open glade. As the other beasts and birds disappeared, the sounds of their flight died away and soon there was no sound save the soft, low growling of the leopardess as she feasted. Then, faintly, from far away there came the loud ringing alarm cry of a frightened peacock, "Payyowk; payyowk!"



THE COCK JUMPED UPON A DEAD BRANCH AND LOOKED ALL ABOUT IN EVERY DIRECTION, ON THE ALERT FOR POSSIBLE ENEMIES

It was answered by another still farther away and then all was still again. A little later as the sun rose higher and the heat of another tropical day came upon the jungle, the little herd of deer again assembled under the bushy tree

for its shade, but there were only four of them now.

The jungle is a cruel mother; her children, like Eve's, slay their weaker brothers, but, unlike Cain, they kill only that they themselves may live.



THERE IS A CRASH IN THE WATER AS THE TARPON LEAPS BEFORE DASHING AWAY

HARPOONING THE TARPON

BY A. W. DIMOCK

Photographs by Julian A. Dimock

THE little skiff lay motionless on the smooth surface of the river as I stood balanced on its bow, holding ready in my hand the light shaft of a tiny harpoon. I was peering beneath the bank, under overhanging mangroves, for the tarpon that I knew was there. I looked long and far, but vainly. With a half turn of my head I glanced back at the rigid form of my boatman, standing in the stern of the craft, motionless as a bronze statue save that a slight movement of his sculling hand held the skiff stationary in respect to the shore, while his eyes looked deep into the water beside me.

It was flood tide on a calm day and the limpid water of greenish tinge, fresh from the Gulf, showed every rootlet and tiny shell on bank and bottom. I couldn't have missed the smallest fish, yet I studied the depths again, from fifty feet ahead of me down to the water at my very feet.

I was about to speak impatiently to my captain when there burst upon my sight, directly beneath the bow of the skiff and within two feet of its bottom, the huge form of a six-foot tarpon. I scarcely breathed as I slowly, so slowly, turned the point of my harpoon downward. The creature seemed to be floating in the air beneath me, with its every line distinct and almost within reach of



YOU SÓON LEARN TO PAY OUT THE LINE WITHOUT LETTING IT SLIP

my hand. I could make out the protruding jaw, the flexible armor plate that guarded the mouth, the round eye, and the silver cheek.

Beneath my hands was the big bayonet fin, the like of which I had often followed for miles as it cleaved the surface of the shallow waters of the west coast. I could trace each four-inch plate that bulwarked the side of the tarpon and could have struck with my iron any one of the purple scales which followed its spine. Yet, near as I was to the quarry, I was helpless, for with the light pole in my hand I could not drive the barb of the little harpoon through the double armor of the fish into the flesh beyond.

I stood motionless for minutes, expecting every instant the wild dash of a frightened fish and hoping for a flying shot when it came. As I waited, the bank beside me, as well as the tarpon, seemed to glide slowly forward until the bayonet fin was eight feet from my hand and the harpoon which I threw with all my strength, struck beside it and slipping between the scales was firmly lodged in the flesh of the fish.

After a single leap the tarpon started up the river like an express train and had made a hundred yards before I had the line in my hands with the skiff under full headway. Then came a joyous, one-sided game. When the fish slackened its gait I took in line and brought

the skiff nearer. From time to time the tarpon leaped high into the air and started off on a new tack. He carried us from one side to the other of the beautiful Rodger's River; in the shade of broad tamarind trees and beside towering royal palms; along vine-covered oak-bearing banks and past a rotting plantation house, near the solitary grave of its former owner.

The river was wide and free from snags, and the fish had no chance of escape. I had only to handle the line carefully, paying it out to meet the quick rushes of the quarry and keeping a steady strain upon it at other times, and within an hour the tarpon would surely be in the skiff. Then came the "cut-off," which I had forgotten, but which the tarpon remembered and entered.

A Crooked Chase

This was a deep, crooked creek, scarcely ten feet wide, which led to Broad River, only half a mile distant. Yet the creek twisted and turned, flowing a mile and a half to cover a scant half mile. Snags rose from the bottom and roots thrust out from the banks. Trees on opposite banks united their branches above, shrouding the stream with a cave-like gloom. Fat spiders had bridged it and sat in their festooned dens at just the height of my face. I was slapped in the eye by one and my face covered with its web as I entered the creek, holding to the line that led to the tarpon.

I held the line taut and kept as near as possible to the fish, while the boatman jammed his oar into bank, trees, and snags in his attempts to follow the twists in the creek. Sometimes the skiff stranded on a half-submerged log, or caught in a low-hanging branch. Then I paid out line and called to the boatman to hurry, while he worked like mad to free the craft.

Often the fish was two turns in the creek ahead of us, with the line running against snags and through the branches of trees. Each instant there was danger of fouling the line and once, when the fish was swimming through a tangle

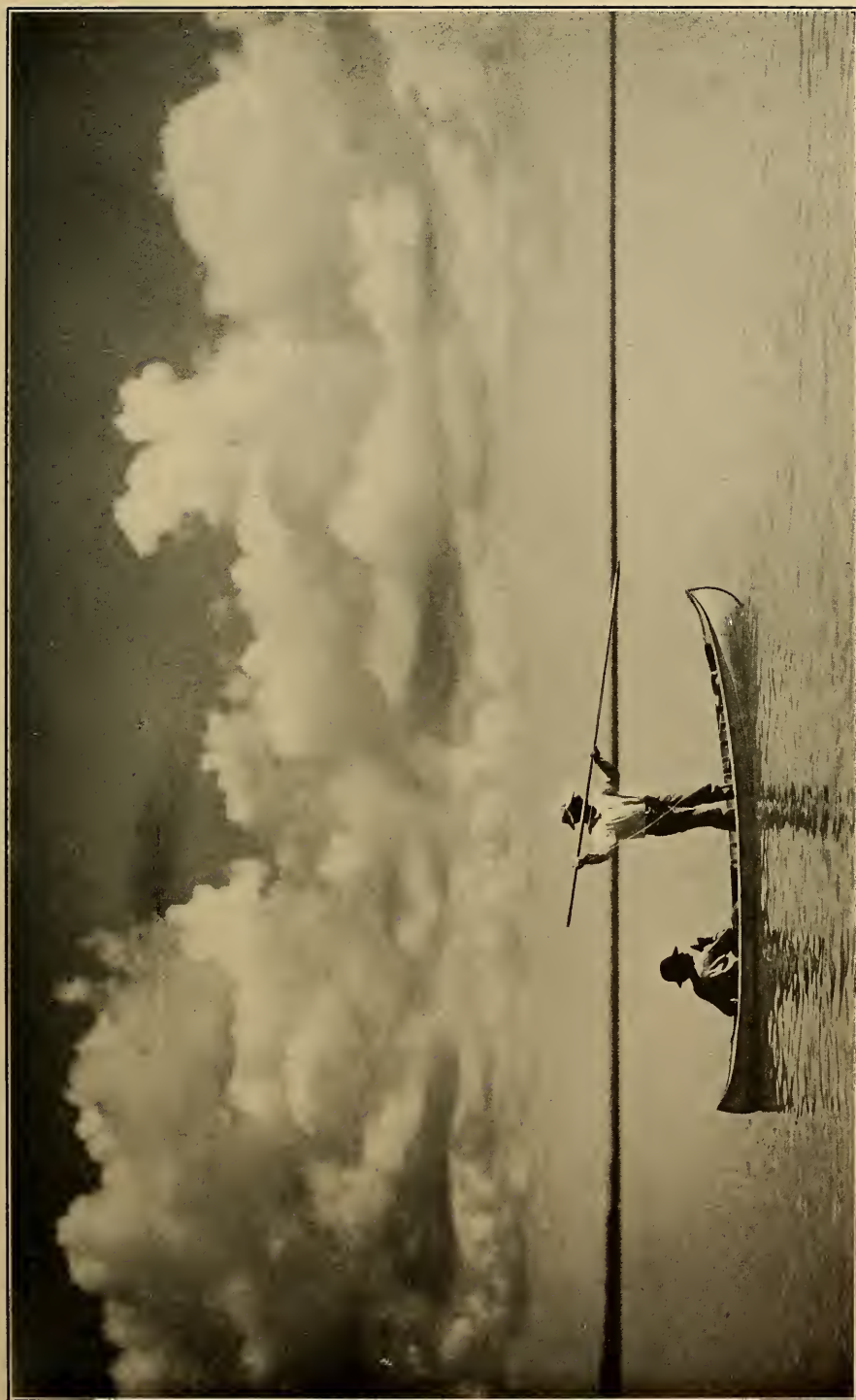
of brush, a nickel would have bought that tarpon. But the creature was considerate and waited under an overhanging bank until we had cleared up the tangle. This was our last trouble, for the creek soon widened, straightened, and opened into Broad River just below the bay of that name. The tarpon was as tired as we, and after a short run in the bay and two or three jumps that hardly lifted it above the surface rolled over on its side and was taken into the skiff.

If you talk to a fisherman of high degree about hunting tarpon with a harpoon, he will scoff at you and accuse you of being unsportsmanlike, both you and your methods. He may compare you with the poacher who spears his salmon by the light of a jack, or with the market hunter who cares nothing how he gets his game, so that he gets it. He will explain to you that the delicacy and skill displayed in the capture of his game and the odds against which he contends constitute the test of true sportsmanship.

His test is all right, but he doesn't apply it. To him tarpon fishing is a specialized sport, and he has paid his outfitter roundly for the conventional tools. To think now for himself would be as futile as exploring the fourth dimension, or butting against syndicated government and standardized graft.

There is much sport in conventional tarpon fishing, but it is the joy of the outdoors, the pleasure of scenery and surroundings, and the picturesque fight against fate which the tarpon puts up. The sportsman in his cushioned revolving chair does nothing that a properly constructed wooden man couldn't do as well, and any good mechanic could devise a combination of cogs and springs that would beat him out of sight.

But the machine that hunts with a harpoon must be a machine that thinks. The hunter who successfully stalks a deer through the forest, or drops him in the open with his rifle at two hundred yards, seldom sits by a runway while hounds run the quarry to him. The sportsman who can cut down the flushed partridge with his first barrel,



I STOOD BALANCED, HOLDING READY IN MY HAND THE LIGHT SHAFT OF A TINY HARPOON

scorns to snare the creature. The difference in skill required between stalking and hounding a deer is great; between snap-shooting and snaring a partridge it is greater; but between successfully hunting a tarpon with a harpoon and catching it with rod and reel it is greatest.

The harpoon which I prefer is only five inches long, including the socket in which the pole is thrust. It is a plain, pointed shaft, of quarter-inch steel with a single barb, an inch from the point. The harpoon pole is twelve feet long and one inch in diameter. A soft cotton line a hundred yards long and an eighth of an inch in diameter completes the outfit. One end of the line is fastened to a small, shallow tub in which it is loosely dropped, not coiled, while the other end is made fast to the harpoon. In tarpon hunting the tub is placed in the bow of the skiff, or canoe, in which the sportsman stands.

Every inch gained in height is a distinct advantage, and it is best for the hunter to place his left foot on the extreme bow of the skiff, resting the right upon the forward seat. With a light canoe one should stand on the bottom unless he happens to be an acrobat of parts. With your harpoon ready for action in your right hand, you sway to the motion of your craft as instinctively as you would balance on a bicycle. With a silent, skillful boatman behind you there is no sound of paddle or sculling oar as the shores of the waters you explore glide past you.

Within a score of years I thus spent a thousand hours, or perhaps twice that, exploring the waters of the west coast of Florida, from Cedar Keys to Capes Sable, and from there to Miami. I followed rivers to their sources in the Everglades and the Big Cypress; drifted with the currents and was paddled or sculled about the ten times ten thousand keys of the Ten Thousand Islands, while my boatman's pole, paddle, or oar sounded the shallows and depths of the network of bays and lakes that extend from the Big Cypress Swamp on the north to the extreme end of the peninsula and even the keys beyond it.

Every minute was full of interest,

while no hour was without its excitement. Every sense was appealed to. Often on the rivers fragrance filled the air from blossoms of magnolia, wild orange, lemon, and lime, of flowers of jessamine and leaves of myrtle and sweet bay. No longer are trees white with the snowy heron, but the brilliant plumage of the red bird and the song of the mocking bird are yet in evidence, while the majestic man-o'-war hawk often floats above one and, rarely, may be seen the most graceful bird that flies, the fork-tailed kite.

Often a water-turkey excites your derision by tumbling clumsily from a tree into the water beside your canoe, and invites your harpoon by swimming swiftly away beneath the surface of the water. So many are the diversions in following the waterways that I have sometimes found it hard to keep on my job and have been mortified by the dash of an unseen tarpon from beneath the bow of my canoe.

Life in the Water

Birds have been made shy and wild animals timid by the destroying tourist, but there is always life in the water, and a continuous panorama moves before the eyes of the hunter as they search the depths before the canoe. In the crystal water from the great springs, in the clear streams from the Everglades and the inflowing tides when the Gulf is quiet, objects many feet beneath the surface are clearly defined. Fish, little and big, brilliant in color and strange of form, slow-moving and swift-darting, hold fast the attention of the sportsman.

In the dark streams that flow from the Big Cypress or through mangrove swamps and the turbid tidal waters when the Gulf has been stirred by a storm, little can be seen beneath the surface and the eye wanders afield, studying the spattering patch where a school of Spanish mackerel are dining, the sprightly play of a family of porpoises in the distance, the swaying fins of a predatory shark, or glimpsing the up-bobbing head of otter and turtle or the disappearing eye of the wary 'gator.



THERE WAS A GOOD DEAL OF A MIX-UP AND WE WERE BUSY SWIMMING ASHORE WITH THE CANOE, PADDLES AND OTHER THINGS

In the shallow water of Florida Bay when the day is calm the hunter with a harpoon may float seemingly in air above a garden of shells and sea-feathers, flowers of coral, and sponges of strange shapes.

Sometimes there glides beneath the craft a creature spotted like a leopard and beautiful as a butterfly, from one to eight feet across the back. It is called a whip-ray, and the tail from which it takes its name is many feet long, smooth as ivory and slim as a coach whip. Attached to the base of the tail are half a dozen serrated daggers, a blow from which might not kill

you, but would probably make you wish you were dead. You could hardly miss the creature with your harpoon, and if you did strike and the barb of your little harpoon held in its tough hide, you would have a joyous ride till your line parted. But you must hold your hand and not waste your time when you are hunting tarpon.

Those ugly things, there are plenty of them, with wicked eyes and cruel mouths, are sharks. If you strike one of them you will lose your harpoon, for the brute will roll up your line for a couple of turns and then bite it in two.

See those three big fins in tandem or-



HUNTING TARPON WITH A HARPOON IS SEVERAL GAMES ROLLED INTO ONE

der sailing majestically in the shoal water above that flat? They are worth looking into, just for curiosity. They belong to a fifteen-foot sawfish, and are just disappearing in the channel. We may find the creature, for it was heading this way. There it comes, gliding under the canoe! See the big weapon, four feet long, four inches wide, with fifty-two teeth, backed by near a thousand pounds of energy! Better not strike it, for it might strike back, and then where would be you and your canoe? Your craft would crumple like paper beneath the slash of that sword.

But there is what we are looking for, the bayonet fin of a tarpon! It is moving slowly through the water as the great fish seeks his prey. Your canoe-man makes a circuit to get in the rear of the fish and cautiously approaches it. His paddling would do credit to an Indian, as foot by foot he nears the quarry. The tarpon is swimming high, showing the big dorsal fin and a foot of the back above water. You are within thirty feet of the creature, whose whole big body is of shining silver. The canoe scarcely gains an inch; you may never again have such a chance, and how could you miss so brilliant and big a mark?

Perhaps your knees tremble a little and your heart thumps a good deal. Mine always do, and that is why I like to hunt tarpon with a harpoon. I don't get half as excited over an interview with a member of the deer family or even a black bear. Of course, grizzlies are another thing because grizzlies are—different.

Better go slow with that tarpon. It looks large, but the really vulnerable part for your harpoon isn't much bigger than the back of an unabridged dictionary, and you couldn't hit that with a harpoon at thirty feet once in ten times. Try it on the grass at a stick of wood and you will be convinced. I never met but three men, who with reasonable certainty, under the conditions named, could strike a tarpon at thirty feet, and of these three two are dead. Your tarpon is nearer now, twenty-five, twenty-four, twenty-three feet. Yes! I know just how hard it is to wait, but stand your ground!

When you do throw, hold your right hand well back toward the butt end of pole, aim a little high and as the pole leaves your hand give the end a slight upward toss to produce a pitching effect. The fish is turning a bit to the left. This gives you a better target, unless it goes too far, when your iron will not penetrate the scales. Now it is a scant twenty feet. *Throw!* There is a crash in the water as the tarpon leaps before dashing away, and as you see the line streaming over the bow of the canoe you rejoice mightily, and taking it in hand too earnestly acquire instantly a bunch of blisters that you will not be able to forget for days.

Handling Your Victim

You soon learn to pay out the line without letting it slip, gripping it alternately with both hands as you get the canoe under way. The canoeman, having picked up the harpoon pole, helps with his paddle until the craft has taken up the gait of the fish. Thereafter you have the creature under control, paying out line when a sudden spurt puts too great a strain upon it and pulling the canoe up to the tarpon when you want more excitement. Careful now! You are getting reckless and have pulled your fragile canoe beside a creature that can knock it endwise with a flip of its tail. Your boatman is sitting on the bottom of the canoe trying to balance it against your eccentric motions and expecting to be wrecked by the struggle any instant.

There! How do you like that? Another foot and the tarpon would have landed in the canoe. It happened to me not long ago. I pulled the canoe too near the fish when it shot ten feet in the air and turning came down, head first, on the side of the craft. There was a good deal of a mix-up and we were so busy swimming ashore with canoe, paddles, and other things that were floating around that I forgot about the tarpon until I got hold of the line tub and found that the fish had pulled out the harpoon and escaped.

Look out! The tarpon touched the canoe that time. Better give it more

line unless you want to swim. See that jump? Eight feet clear of the water, and I have seen them do twice that. It will be half an hour before you can draw your canoe beside the tarpon with safety. Then, as he lies exhausted beside you, a touch of your penknife blade will cut the bit of skin that holds the barb of your weapon and a moment later with a flirt of his tail your captive will start for his home.

If you are not satisfied with the sport you have had, you can hook your thumb in the tarpon's mouth, drag him over the side of the canoe and you will get all you want. But it is better to be satisfied with what you have done—unless you care for a bath. You have had your sport for the day, your cruising

boat may be miles away, but you are never too tired to stand in the bow of the canoe while your boatman paddles you home. You continue to study the water, perhaps throwing your harpoon occasionally at channel bass or smaller fish for practice and the pan. You count the day's work as done, yet it's dollars to doughnuts that if you catch the gleam of a tarpon's scale you will begin the day over again.

Hunting tarpon with a harpoon is several games rolled into one, and is the only sport I have known that never palled upon me for a moment. When I cease to enjoy it, it will be because it could no longer be said of me:

"His eye was not dim nor his natural force abated."



THE FLICKER

THE law classes my friend the flicker as an insectivorous bird, but I prefer to call him a song-bird, and one of the dearest of songbirds, with a laugh as full of good cheer as one could wish. How Audubon loved him! I remember to have been taken severely to task by a critic for having spoken of the music of the woodpecker. "The music of the woodpecker! Preposterous!"

Well, the flicker is a woodpecker and, whether calling or drumming, he is musical, my critic to the contrary notwithstanding. There is such a thing, too, as singing to the eye, and this the flicker does to perfection. His golden wings, his mottled breast, his beautiful neck-band of red, his leisurely springing

flight, are a part of the inner music of Nature; melodies of no tone that lighten the soul.

The flicker is the very embodiment of the health, the grace, the eternal youth of out-of-doors. "Quick, quick, quick, quick!" is his hearty call across the hills. "Cheer up! Cheer up!" he says to the downcast, to the despondent who goes into the woods for a day's tramp and tonic. And then his drum! Winter and summer he beats the march of the lusty, well-rounded life.

"Only a woodpecker," the hunter says who bowls him over for fun. "Only a woodpecker!" How long shall we read and forget:

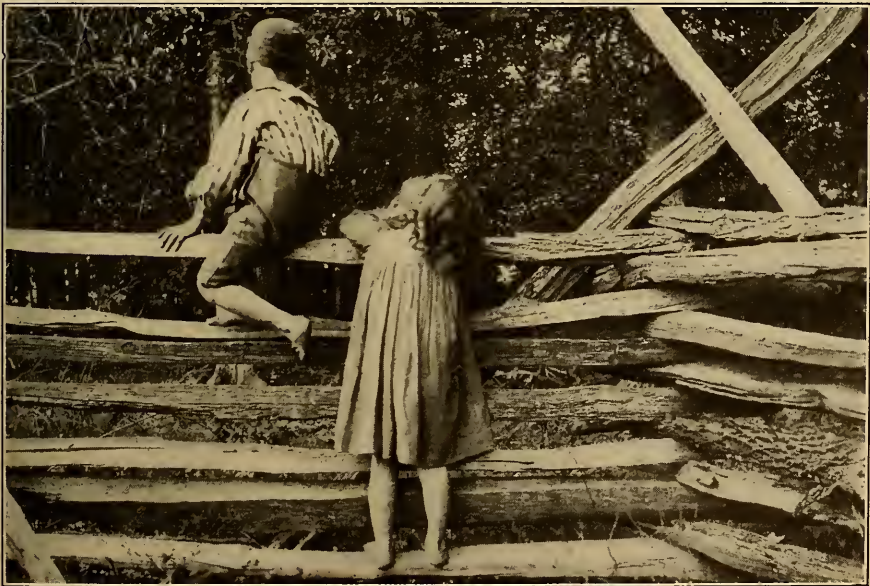
"He prayeth best who loveth best
All things both great and small!"

LIFE'S AT THE SPRING

Photographs by Grace E. Mounts



BOYHOOD DAYS ON THE RIVER



THE TEMPTING SHADOWS OF THE COOL, DARK WOOD

THE ROYAL SPORT OF MOUNTAIN CLIMBING

Photographs from W. H. Ballou



A STIFF CLIMB NEAR THE TOP OF UNICORN PEAK IN THE
MOUNT RAINIER NATIONAL PARK



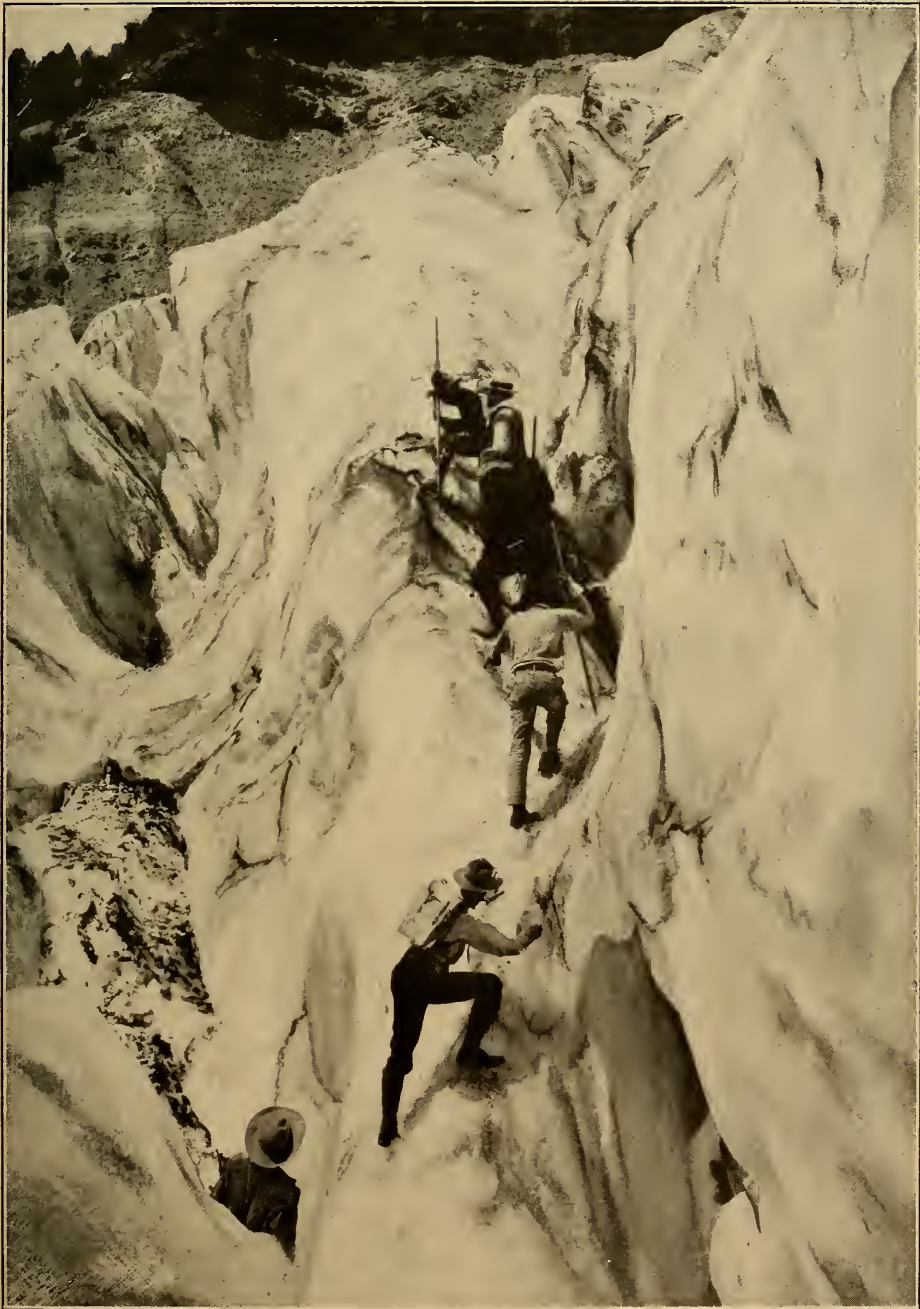
ON THE WAY UP MOUNT SHASTA—HARD ENOUGH TO TEST THE MOST AMBITIOUS



AMONG THE CREVASSES OF BOULDER GLACIER ON MOUNT RAINIER



AN EASY WAY OF COMING DOWN THE SNOWY SLOPES OF THE TATOOSH RANGE



A BAD CORNER AMONG THE CREVASSES OF THE NESQUALLY GLACIER



THE CENSUS MAN AND HIS OUTFIT IN THE LAND OF CATTLE

A CENSUS MAN IN THE COW COUNTRY

BY HOWE WILLIAMS

Illustrated with Photographs

DOWN in Arizona, where the counties are as big as States, where the roads in the mountain regions have the ghastly habit of dwindling into vague and attenuated trails without warning and every human and equine requisite must accompany the traveler, the gathering of statistics for the thirteenth census presupposed and demanded a certain intimacy with two essentials—the “dutch” oven and the “squaw” hitch.

At the civil service examination preliminary to the work I was asked, broadly speaking, if I had ever been to school and could I speak Papago; not a line was there about hitches and “dutch” ovens, although the safe and speedy return of the enumerator and his logarithms depended largely on his ability to throw the one and bake in the other.

On the fifteenth day of April thirty-six hopeful enumerators of various ages and previous occupations were released from Phoenix like a similar number of hounds on a jackrabbit hunt. The majority were assigned to Phoenix, the one community of metropolitan proportions (in a strictly Western sense), and to a half-dozen villages that may be found on recent railway maps. For these a knowledge of desert or mountain craft would have been superfluous. The remainder of the county was snipped off into vast segments of mountain and desert, much of it barren of man tracks even, and a segment each passed over to enumerators who had professed a desire for this sort of thing, some wittingly and others in their innocence.

It was on that day that my immediate superior, a suave young man of infinite tact and volubility, said to me when my turn came: “Your district will be



THE COWMAN LAUGHED. "IT WAS TOPHEAVY ANYWAY," HE SAID

the lair of the bobcat and the panther, the sidewinder's playground and the summer home of the hydrophobia skunk. It's a sort of hurdy-gurdy for the resilient tarantula, the scorpion that bites with his tail and the centipede that bites with his toes.

"Be particular about enumerating the skunks—especially the little ones, for they belong to the hydrophobia variety and the data regarding this interesting little animal is meager. I understand they have a predilection for biting one through the nose as one sleeps. The bobcats you will find quite playful, but I would not enumerate two mountain lions at the same time."

He paused and then added in an abstracted manner as he gazed through the window, "I believe that is all. Oh, yes, if you happen to meet any people up there—cowboys, prospectors, and the like—it might be a good plan to enumerate them also."

My district was to be Cave Creek precinct, the Verde, Camp Creek precinct, and then, if I found time hanging heavily on my hands, I was to putter around a while in the Prescott National Forest reserve. Altogether, he said, my district was about as large as the kingdom of Belgium.

Knowing of yore this young man, I

was quite aware that his word-pictures were painted in primary colors applied raw, and the vast area and the zoölogical character of the country suggested in his farewell to me I accepted as hyperbole. Epitomized, I found my district only about forty miles long by twenty-four wide; a third of it desert and the rest mountain land. There were no railroads in it and much of it was without wagon roads. The single village in the district, Cave Creek, contained perhaps fifteen men and a half-dozen tired-looking women. They were the only women I saw on the journey.

Every resident of the upper country was either a cowboy or a miner—he could be nothing else. In the entire district there were one hundred and twenty-six inhabitants and it cost the government \$1.14 a head to enumerate them.

It was with a not too accurate knowledge of what was before me (lest the expected happen) that I drove out of Phoenix with a team of Mexican ponies and a buckboard laden with provender.

Like a huge yellow checkerboard with green squares about the center is the Salt River valley, asserted to be one of the most productive in the world. The yellow represents the unreclaimed desert, the green the orange groves and al-

falfa fields that draw life from the great Roosevelt reservoir. On all sides are jagged mountains; the Bradshaws, the Mogollons and the beautiful Superstition mountains, as lavender at sunset as the desert is golden, and at midday bare and austere as tinted metal. In the center of the squares lies the capital city like a mottled butterfly stuck fast on a sheet of yellow flypaper.

Across this checkerboard a cowman

where there is nobody to talk to and all uphill. It took us five, but we loitered on the way like truants, and each day was so different from its predecessor that it was like taking up a diurnal residence on some strange planet.

A night on the desert was followed by a day's journey through the foothills starred with gold and copper mines, most of them abandoned, a few in a quiescent stage, while from others ore was



THE BRANDING OF THE CALVES IS NOT A PLEASANT SIGHT

who was riding to Flagstaff to purchase horses and I trotted through the impalpable dust that swarmed into the wagon, settling softly on the provisions like yellow snow. Every stamp of the horses' hoofs shot it out in opaque puffs. It was as buoyant as mist and hung in the atmosphere, marking our trail across the desert with a suspended golden haze.

My cowboy acquaintance knew the roads, the trails, where there was water and where there was none, and he said he would show me to Cave Creek, the Verde, and all the rest. We made camp on the banks of the Arizona canal which divides the desert from the sown. It is the principal artery of irrigation, and from it the laterals criss-cross the valley. Beyond is primeval desert for a space and then foothills and afterward mesa and mountain.

It's a three days' journey to the land

being hoisted tediously to the surface, usually by the proprietor himself with the perfunctory assistance of a Mexican, or two. Yet every one of those holes in the ground represented castles in Spain for the lonely owner. Only in the East, or perhaps thoughtlessly in Arizona, is the simile "It's a gold mine" used to convey the notion of unlimited wealth.

We met men on the road, old and grizzled or young and slatternly, whose sole possessions were a single burro, a camping outfit, and a gold mine. Indeed, in this country the man who does not own a gold mine is rather respected for his firmness of purpose.

From one prospect to another we trotted while I put to the melancholy mine owners and their assistants the rigmarole of questions provided by the census bureau. Over a hillside was a

stack of rocks as big as a barn piled beside the opening to a shaft. A thin, ragged man stood at the hole and at a rope signal from below drove a mournful burro in a circle a few feet in diameter. The burro operated a primitive windlass, and after he had circumscribed the circle ten or a dozen times a toy car on a toy track was disgorged from the hole. The tired, thin man dumped the little carload of ore on the pile and let

"What's it worth? or what'll I take for it?"

"Well, what will you take for it?"

For some reason the query seemed to irritate the ragged man. He reached aggressively into the rear pocket of his overalls, producing a ten-inch plug of tobacco. Sinking his teeth into one end, he tore away root and branch a stringy layer of weed, replaced the plug with its new halfmoon scalloped with teeth



BY NOON TWO HUNDRED CATTLE WERE ENCLOSED IN THE CORRAL

the empty car slide back to the Mexican in the mountain's entrails.

When I completed his pedigree and duly recorded it I examined the rock pile.

"What is it?" I asked.

"Gold," he replied tersely.

"Got capital enough to work it?"

"You see I'm working it, don't you? But I ain't got no money. I own that tent up there and the burro, and some blankets, a bag of pink beans, and four cans of tomatoes. Put that down in your census."

"I'll put down the burro," I said.

"Them rocks assays \$45.17 a ton," he added with the manner of one who had said it many times and always with the vain hope that the statement would startle his listener.

"What do you think your mine is worth?"

marks, and turned to me with a bony finger raised. "Not a darn two-bit piece under one hundred thousand dollars," he snorted.

His attitude indicated that if I had offered him a thousand dollars less he would have shot me dead.

Hardly realizing what I was saying, I remarked, "But, say, old man, I can't quite see how you can *afford* to own a gold mine."

The observation seemed to wilt him. He knew he could not rid himself of that gold mine any more than one can shake off a lobster that has a good grip on his great toe. He could not sell it and the soul of the gambler would not permit him to abandon it or give it away.

In a spirit of concession he said, "Stranger, you are right; I kain't afford it. But I know men in these parts that

owns two and even three gold mines. I ain't so bad off. Thank God, I've got only one."

The man who excavated the road through Camp Creek canyon, some nine miles long, was parsimonious and stingy. He made it narrow gauge where an additional six inches would have increased the peace of mind of those who drive over it. There are places where the driver keeps his eye on the inside front hub, sometimes scratching the abutting granite with it. He knows the outer wheel which hangs over the edge will take care of itself, and he does not want to look at it anyway.

As night approached, the canyon left far behind, we slid down one hog-back after another at a rattling pace. The ponies were comatose. Their day's work was finished far behind and they knew it. There was little semblance of a road left. Boulders scraped the axles as the wagon passed over. Creek beds were choked with them. And out of one of these the apology for an artery of commerce rose so sheer that I glanced almost helplessly at the cowman.

"Let me show you how to drive—I used to be a mule skinner," he said as he climbed into the wagon.

I mounted his pony and rode behind to absorb his system. I believed there

was not a pound of steam in either of those jaded beasts, so I lighted my pipe, fully satisfied that a dry camp in the skunk-infested bottom awaited us.

Softly the cowman started the ponies, gathering speed with progress. As the incline increased its angle he used the whip on their tough hides. It was not till the summit was fairly in sight and the animals, snorting and sweating, were ready to stumble to their knees that the cowman exhibited his final resource. All along he had waited for this moment and except for a staccato "Hike there, hike!" had said little.

Now he broke forth into a volcanic upheaval of curses. A monkey-faced owl flopped out of a tree and I laughed as I thought that the owl must have decided that this was no place for him. The ponies responded to that torrent of brimstone with a last effort that left them winded at the top. When I rode up with a sack of barley and a saddle that had rolled out of the wagon I remarked, "Your efforts seem to be cumulative; you reserve your rather strong language for the final pull. It's what you might call a proper distribution of dynamic force."

"It's just hell and blazes," he replied with a grin.

We dropped down the descent, rat-



THEN WE ALL RODE TO THE FIFTY-ONE, WHERE TOM CAVANESS WAS SOVEREIGN OF THE LANDSCAPE



THEY TELL ME THAT NO COWBOY EVER LIVED WHO WAS NEVER THROWN

tled across a creek that actually had water in it, and drew up on a stretch of ground trampled by many cattle, while the vertical staves of a corral showed white in the gathering gloom. It was the end of the road and further excursion into the cow country meant the abandonment of the wagon.

I had already become fairly proficient, after three days' tuition, in the art of making baking powder bread in the dutch oven. It was now my daily task. The next chapter in the curriculum of mountain craft was the squaw hitch, which the cowman said was the easiest of all hitches and should be acquired first. The buckskin was reserved for the saddle. He looked gritty and was careful where he placed his feet, while the mare stumbled over the rocks in the naïve fashion of one who studies the stars while wandering homeward over broken ground. She was razor-backed and down her spinal column ran a sunken groove where one might roll marbles.

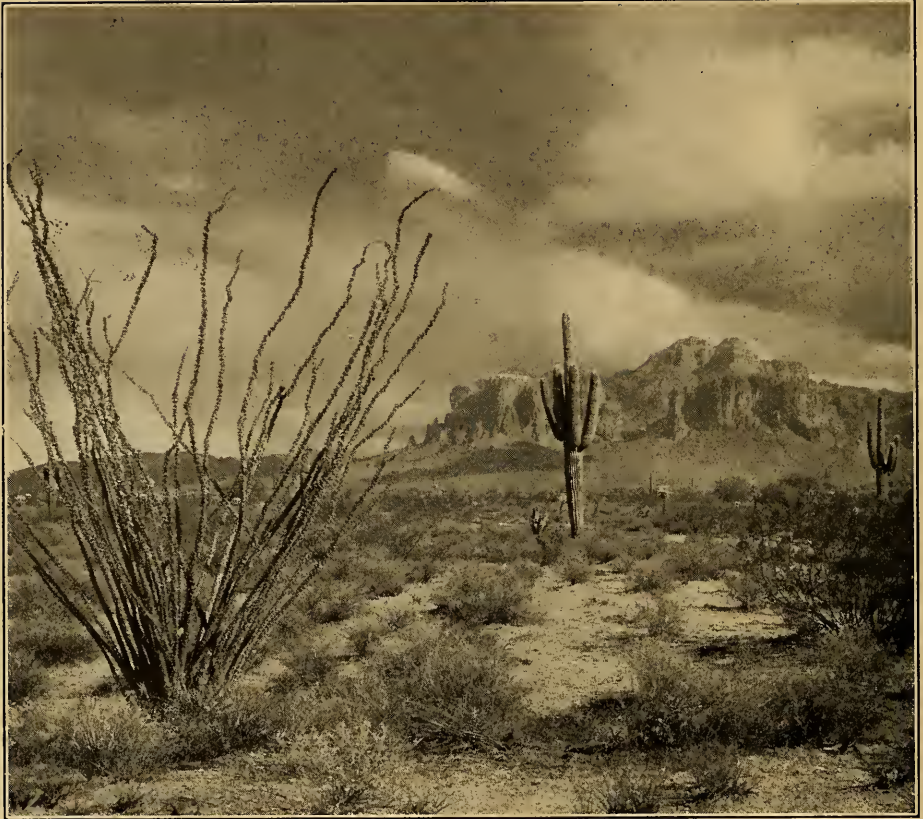
The cowman placed on her back that neat wooden contrivance, the pack saddle, and carefully balancing one against the other and roping each securely, placed in position two sacks of barley and two of flour, three burlap bags filled with canned goods and groceries, a side of bacon, blankets, ax, cooking utensils,

and the rest of the indispensable junk that was in the wagon. When it was all in place the tarpaulin was thrown over the whole and the final hitch that gathered in the corners and held all firmly was thrown. "The squaw is a one-man hitch," he said as he showed me the knot; "the diamond is more secure perhaps, but also more complicated."

The cowman paused to survey his work and brush away the perspiration, while the beast looked over her back at that pinnacle of junk with a disapproving eye. Without so much as a how-d'ye-do? she rolled over, burst the cinches, and with a vicious lunge sent the whole pack flying. Then she got on her legs and gazed curiously at the débris.

To me this performance assumed the proportions of a disaster, for if she refused the pack I could go no farther. The cowman laughed. "It was top-heavy, anyway," he said. The only concession he made to the animal's reluctance was a sack each of flour and barley, which were left in the wagon.

The wildness of the country increased. Cactus and sage brush disappeared as we mounted to higher altitudes. Dwarf cedars and, in the bottoms, cottonwoods, took their place. Many miles were over barren boulders



ON ALL SIDES ARE JAGGED MOUNTAINS AS LAVENDER AT SUNSET AS THE
DESERT IS GOLDEN

scattered thick as cobblestones. From a canyon's depths to the crest of a hill there were places that seemed like riding a horse upstairs, and spots where the slip of a hoof smelled of eternity to me, but the cowman never so much as twisted his neck to see if I were following or lying a shattered remnant in the ravine beneath.

At last I asked gently, "Are there any worse trails in Arizona than this one?"

"Say," he replied, "you want to ride over a cowtrail."

A few days later I rode over cowtrails—those thin, visible lines traced by cattle that criss-cross the mountains and lead from grass to water or salt, or from nowhere to nowhere, and when I returned to Phoenix over that same rocky trail it was more like a boulevard than a boulevard is.

The Six-Bar embraces some six thou-

sand acres, many of them nearly perpendicular, in the Prescott National Forest reserve. The ranchhouse, constructed of stone with a galvanized iron roof, is snugly tucked away in the hills beside a spring. The floor is boarded and over in the corner is a good-sized cookstove with its perennial pot of pink beans on the back. From the beams, in small strips, hang rows of jerky within convenient reach of the hand.

Gradually I began to appreciate the amount of toil expended in the construction of the house and the furnishing of it, for the big sheets of roofing, the timbers of the floor, a bureau, and every other article of furniture had been packed on the backs of mules or burros and brought in this manner over the trail I had just traveled. There was a bookshelf containing a score of the popular novels of two decades past and other



ON THE BANKS OF THE ARIZONA CANAL THAT DIVIDES THE DESERT FROM THE SOWN

literary derelicts. I removed a well-worn volume bereft of binding. The title page ran "Etiquette and the Art of Behavior in Public." There were sub-heads devoted to the "Prince Albert Coat," "Visiting Cards," and like insipidities. I glanced at the table where eight hungry cowboys were reducing the visible supply of beef and beans in a primitive manner and wondered why that book on etiquette.

It was the spring rodeo. My buckskin was discarded for a sure-footed cow pony which took a personal interest in the chase.

In the crisp of the morning we rode out Indian file up the trail and then took to the hills. On a ridge we halted while Pike, the ranch owner, directed the round-up. Two men were stationed in a creek bottom to hold the cattle as they were driven down; the

others spread out over saddles and hogbacks and into canyons, hunting out groups of cattle and gradually amalgamating them into a galloping, frenzied mass. By noon two hundred cattle were enclosed in the corral.

The branding irons of five contiguous ranches were placed in the fire, each ranch represented by a cowboy who looked after the interests of his employer. The ownership of a calf is readily determined by the mother's brand, and the same brand and ear crops are given it. An *orehada* or maverick—wild calves apparently motherless—is the property of the rancher on whose place the branding is done.

The branding of the calves is not a pleasant sight. Slowly swinging their ropes, two cowboys ride among the milling cattle within the corral. A calf is dragged out to the fire, roped by the

forefeet by one and by the hind legs by the other. The ponies know their lesson and back till the ropes are taut. It requires but a few seconds to crop the ears with a sharp blade and stamp the red-hot iron on the flank, but those few seconds are the inquisition for the calf. Usually it bears the knife without a sound, but the sizzling iron causes a doleful wail. When released the calf stumbles to its clumsy legs and trots off to seek its mother and sympathy.

The rodeo lasted four days—one for each point of the compass from which the cattle were gathered. Then we all rode to the Fifty-One, where Tom Cavaness was sovereign of the landscape. His cottage, like Pike's, was constructed of stone, but it was unique in that country in that it possessed a cement floor which Cavaness laid himself, bringing the material from Phoenix by the usual method of four-footed transportation. The cowmen told me that Cavaness was addicted to luxury. "He's gone and got a Portland cement floor to his house and a cowhide bed," they said.

The Cavaness Manor-House

He was a thin, lean-faced chap with hair that came down over his eyes so that one could barely see the twinkle in them. His hospitality was direct and unmistakable and for some days I punched cattle in an amateurish sort of way and other days I remained behind as camp cook. Once, at his solicitation, I accepted the honor of sleeping in the cowhide bed. It was simply as an experiment, for I preferred the open sky despite the hardness of the ground. But I found the cowhide bed as pliable as a hair mattress with springs under it.

The house was built conveniently near a prehistoric ruin of flat rocks which afforded the choicest of building material—and the ruin was not perceptibly despoiled either. It should be a fruitful subject for investigation by the archæologist that the only flat rocks of this region appear to be found in these scattered relics of another race—a race whose weapons were stone axes and whose only art seems to have been

ceramics. Almost every mountain top is decorated with the remains of a fortification and few have been touched with the spade.

I have often wondered how so small a man as Cavaness could create such a volume of noise when he really tried. When supper was ready he would walk out under the brush awning of his cottage and aim his voice at the hillside across the valley, a quarter of a mile away, where might be seen by the keen-eyed a cowboy or so gathering in the horses and mules for the night. He just opened his mouth till you could see far down into his larynx and said, "Come an' git it!" That was all. But the mountains echoed back that "Come an' git it" and sometimes, when that voice of his shattered the atmosphere like a siege gun, I thought I heard loose stones toppling from their resting place of centuries in the ruins beyond. Fancy, I guess, but Tom Cavaness could certainly "reverberate some," as the cowmen said.

Dinner at the Fifty-One was the day's event. There was no bread, but baking powder biscuits were made three times a day. There was no milk except the tinned variety, for a cow camp is the last place on the globe where that commodity is in general use. To milk a range cow she has to be killed first. Fresh meat we had in plenty. When we were out of it Cavaness roped a steer, slaughtered it with an ax, hung the hide to dry on a brush heap, and bore in the four quarters, the liver, heart, and the marrow guts. The rest went to the dogs and coyotes. Thereafter we had tenderloin steaks fried as one fries doughnuts.

But the choicest delicacy of the carcass, which the cowboys had talked about in anticipation till I almost wanted some of it, was the marrow guts. The first meal after the slaughter consisted of this rarebit. As nearly as I could determine from the fried anatomical specimens on my plate, they were sections of the upper intestines. Frankly I believe in doing as the Romans do, and I wish to go on record with the assertion that marrow guts are *good*.

Much to my gratification, I was not

provided, when I joined the rodeo, with an innocent-looking bucking bronco. Cavaness mounted me on the tamest ponies he had—a courtesy I deeply appreciated. It is generally supposed that cowboys ride bucking cayuses for the sport. They don't. They ride them when others are not available or when the horse has to be broken.

They tell me that no cowboy ever lived who was never thrown and a few severe falls take the ginger out of the best of them. Up at the Fifty-One they told me of a burro that "could throw the best man that ever wore spurs"—"of course, he don't have far to fall," they explained. And then there was a mule that could buck an empty saddle into the air.

One of the minor purposes I had in view was to procure a rattlesnake skin, which one can obtain almost anywhere, for a hatband. Not having lived very long in Arizona, I had supposed that it was rather difficult to find a place to sit down in the territory without shooing away the rattlers first. When I spoke about the hatband scheme to the cowboys they wrinkled their brows and looked serious. "The rattlers out here," said one thoughtfully, "aren't exactly the hatband size. You might find one small enough—a baby sidewinder, perhaps—but generally speaking they have enough hide to make a suit of clothes out of." When I rode out on the rodeo it seemed as though the snakes all went over to the other side of the mountain, but when I remained behind the men came in at night and laid freshly picked rattles on my dinner-plate. And I never did see anything except the corpses.

Of the other deadly varmints with which Arizona is supposed to be chiefly populated I might have recorded one lively tarantula that met his death by being stepped on as he was walking into the ranchhouse, a few scorpions, and a large family of centipedes that inhabited the under sides of almost every stone in the ruin. The only thing on legs that the cowboy fears is the skunk. It is the only unpleasant feature about sleeping out of doors on the ground, for the skunk will invade your dreamland when no offense has been offered. It will bite

the sleeper in the face or hand and fight viciously until the life is beaten out of it. After a few days the wounded man is quite likely to show symptoms of hydrophobia and then his case is practically hopeless.

One of the men at the ranch, a Mexican of great ability with the riata, showed me the scar of a fresh wound on his hand and the other men told me (for he knew no English) that he had been attacked and bitten by a skunk at night. Instead of taking the first train for the Pasteur Institute at Chicago, as many do, he simply seared the wound with a branding iron. Thirty days had passed when I saw him and he had suffered no ill effects from it. The bites of this animal, however, are so frequent and so often fatal that some counties of the territory provide means for the use of those unable to pay their expenses at the Pasteur Institute.

No Lack of Coyotes

The country appears to be well stocked with coyotes, and at night their merry song usually occupied my last conscious moment before falling asleep. While out shooting one day I came upon one. He trotted off amiably. I whistled to him and forebore to fill his hide with birdshot. Again while driving cattle out of the brush we rode into a herd of deer grazing near the cows. They scuttled away, but no faster than the cows did. They had never been hunted and the same herd was often seen by the cowboys.

The cowman is his own everything. Cook, blacksmith, doctor, tailor, shoemaker, and even undertaker. Veterinarian of course. It was the last day of the round-up, and the corral was jammed full of excited cattle. They were driven in late in the day and the branding was postponed till the following morning. During the night we heard them raging, and in the morning two cows were found dead and a third with a "crick" in her neck. A vertebra was doubtless dislocated, for the animal held her head on one side and consequently walked in circles whenever she walked at all.

Cavaness knew just what to do. He rode into the struggling mass of beef, roped the stiff-necked cow, and led her out of the corral to a cedar tree. Tossing the rope over a stout limb, he gathered in the loose end, fastened it to the saddle horn, and with the assistance of the others drew the cow off her feet and

left her hanging by the horns. I should like to record that this primitive osteopathy saved her life, for I pitied the grotesque animal dangling helplessly from the tree like a highwayman. The "treatment" straightened her neck, but the cow died shortly after being let down the following morning.

THE BEST PAYING THING ON THE FARM

IF anyone should ask me which is the best paying thing on the farm, I should say immediately sheep—and lots of them. Now, of course, that does not mean that they are the best for any farm, for they must have good pasture, good water, and good shelter, and every farm doesn't provide these.

In regard to sheep, these terms need a little explaining. Pasture which might do for cattle or horses for an indefinite period cannot be used that way for sheep; if they are allowed to run too long on the same ground it becomes infected with the dreaded stomach worm. This will soon cause a flock to cease thriving and go rapidly downhill, for the lambs, nibbling around their mothers, swallow the eggs, and there you are right away with your young stock, which should be continually building up your flocks, becoming only just so many more unhealthy animals.

Now here's where the intelligent farmer is going to show the careless one what the precious little "one ounce of prevention" will do. There are treatments for this malady, which any sheep book will probably give you, but let's not need the treatment.

There are several better things to do. If there is enough land to alternate pastures, that is the simplest way out of it. In case there isn't, then plow up the pasture and plant it, and use the fields of former crops for the pasturing. Sometimes, as on my own farm, the pasture is full of trees and rocks, so that it cannot be plowed. Then I have it burned over thoroughly to kill off the parasites about the first snow-fall.

A new method of intensive sheep

farming is being tried by some agricultural experimenters which they expect to be very successful with small flocks. This is to have the farm divided into small pastures, which are planted in succession with different feed stuffs, and plowed up immediately they are eaten bare. Besides removing all danger from parasites, this method keeps the sheep continually under the eye of the shepherd.

Good water means especially running water. Where it stands, unless it is in a tank or trough well above the ground, it is just as dangerous as old sod for spreading worms.

The last of the three requisites, good shelter, does not mean, for sheep, warm barns. But it means buildings without draughts, so constructed that they can be opened to the south or that the sheep can have free access to outdoor folds, for they must have plenty of fresh air, if they are to thrive.

Sheep have wonderfully thick coats and can stand plenty of the severest weather. My barns are old fashioned, and as yet I have had time to modernize them only by putting in windows and stopping leaks in roofs. The sheep in winter are let out to go to water twice a day. One day they were missed when it was time for them to be back in their quarters. A search was started. In spite of the intense cold of Northern Maine, they were found contentedly reposing under the foundations of a new barn, which was built on the side of a hill, so that the south and east were open to the weather. Animals can teach us a lot about themselves if we will only observe them.

C. E. T.

FISHING WITH A GUN

BY STEPHEN CHALMERS

Illustrated by Thornton D. Skidmore

EVERY man who keeps a rod or a gun, or both, also keeps a private graveyard. His friends need not know where it is, or that he is the owner of it, or that it exists at all, but every sportsman has one, and over the graves therein the grass grows with a telltale verdure. Here lies that sitting rabbit you shot at ten paces (a thing you would never do!). Here sleeps that trout you magnified with a camera at four feet. *Hic jacet*—Well, perhaps you are right! A graveyard is no place for pleasantries!

But it was thinking of a graveyard that got the Tenderfoot reminiscing. The Tenderfoot, who is a close friend of mine, has quite an extensive and verdant acre of his own. That mound over in the corner there covers the neighbor's cat that never came back on account of a new two-dollar pistol that had to be tried out. The tombstone with the weeping angel holding a lyre is erected to the memory of a very, very large fish that jumped back into the lake after being landed and unhooked. The—

But the graveyard that got the Tenderfoot started is in Scotland, where the game and the people are fenced apart. This graveyard, which is a real one, stood along the laird's fence, on one side of which were about 500 acres of houses and people and on the other side about 30,000 acres of rabbits, grouse, heather, and whins.

The people planted flowers in the graveyard and the laird's game came through and ate them, while the Rev-



“A SLING IS A BEEBICAL WEEPON
WHICH DAUVIT USED TO SLAY
THE PHEELISTINES”

erend Lachlan McLachlan sat on the fence and wept. He wouldn't accept the suggestions of village musketeers, having grave doubts about the propriety of sport in a graveyard.

Finally the Rev. Lachlan McLachlan put wire netting around the fence that divided the graveyard from the moor, and thereafter the Tenderfoot sat on an ancestral tombstone and slugged the rabbits with a catapult, as they prowled along the netted fence looking for an inlet to the floral decorations. The Rev. Lachlan McLachlan caught him red-handed one day, but on hearing that the rabbits were killed by a catapult and *outside* the fence, the minister scratched his underlip and seemed greatly pleased.



BEHIND EACH FLAMBEAU IS A GLISTENING, WET BRONZE STATUE

"Ay, ay," said he. "That is not only allowable; it is commendable, for a sling is a Beeblical weepion which Davvit used to slay the Pheelistines. And fegs!" he added, with a sudden glow, "I will be getting a sling myself!"

All of which has nothing to do with fishing with a gun, except that the Tenderfoot never could start a story at the place where it begins. He could have got right down to business by merely stating at the outset that there is no need for a sportsman to be ashamed of his graveyard, real or imaginary. Some of a man's best campfire stories are buried there, if he would only realize it, and the delicate greenness of the turf is at least a hallmark of their humor and truth.

If you discount harassing graveyard rabbits with a sling, or "guddling" trout in the Scottish burns, the Tenderfoot's sporting experiences began in the West Indies, where he went to learn to plant another man's bananas. Strictly speaking, he never had a real *sporting* experience until he got north of Hatteras.

The redness, thickness, and flow of the human blood vary greatly and differ vastly between the equator and the fiftieth parallel. The farther north of Hatteras you get, the keener and truer seems the sporting instinct; the farther south of Hatteras, the stronger the mere killing instinct. Up in Maine I have seen a small boy joyously freezing to death over a hole in the ice in the hope of getting one pickerel; down in the island of Jamaica I have seen a grown white man shoot a tarpon!

But for all that there is much that is interesting in the game of fishing with a gun in the tropics. That particular white man merely made a mistake. He should have pointed the butt of his rifle at the tarpon and *shoved* the trigger. Yet it is quite remarkable how the tropic sun, which is popularly supposed to fire the blood, cools the sporting ardor, especially in the matter of any sort of fishing. I knew but one man personally in the West Indies, where the rivers are full of gamy fish, who scorned to wield anything but the rod and reel. And he was a native at that!

They do plenty of gunning down there—too much of it, in fact. The wild boar that used to roam the West Indian mountain forests is about extinct. His little ivory tusks, which are to be found occasionally in the leaf-mold, are about all that is left of this fiery fighter. Baldpate, ringtail, and other varieties of the wild pigeon are becoming noticeably thinned out, while September 1st is the date of the annual slaughter of pitchwarries—fat little birds that go well on toast.

But the fishing-rod is as scarce as ice in the devil's hotbox, despite the tarpon that nose around the river-mouths and the delicious mountain mullet that lie under cool waterfalls of the upland streams. Perhaps the heat of the sun, or fear of river-damp and fever, discourage the necessary patience and zeal; yet there is contradiction in the fact that a white man in the West Indies will spend long hours in the miasmatic, mosquito-infested swamps in the hope of getting a duck or two, or a bag of pigeons.

No. It is just that the gun is in

highest favor and that the conception of sport is different, even among resident white men. I think it is a general truth about the tropics. We hear much of tiger-shooting in India, elephant hunting in Ceylon, pig sticking in Burmah, and so forth, but we hear strangely little or nothing about rod-and-reel work with the big tropic water-kings, except when a red-hot Northerner hits the Florida shore or the Southern California coast with inducements for tarpon and tuna.

In the West Indies, at least, if fishing is not conducted with a gun, it is with the spear. On any night during the best fishing season, the shores of almost any West Indian island are starred with moving lights. Behind each flambeau is a glistening, wet bronze statue, waist-deep in the sea, the left hand holding aloft a blazing torch, the right balancing an uplifted spear and a pair of gleaming eyes watching the dimly illumined sands below the phosphorescent ripples.

The native fishermen use the deep-sea handline, of course, but they seem never so happy as when killing fish by other means—basket-trap, musket-ball, or dynamite. The last is against the law, but a law is a poor argument against native custom. Even a white man—but here's an incident:

The Tenderfoot happened to be riding through a valley near the sources of the Rio Grande in Jamaica. He rested at the house of a small planter. He didn't know the planter and the planter didn't know him, which didn't matter in the least to either. They do things that way in Jamaica. As the visitor had not ridden down a chicken or a sucking-pig at the gateway (which is almost a duty) the host was put to it to provide something extra for supper.

"It'll have to be fish," he apologized, reaching for a stick of dynamite which he had in a pigeon-hole of his desk.

The river flowed about twenty rods below the house. The Tenderfoot followed the planter and his negro boy



READING THE LONDON TIMES ON THE VERANDAH ONE MORNING WHEN AN ALLIGATOR CAME WADDLING UP THE FRONT STEPS

down the hill, merely wondering. The planter picked out a deep blue-hole, ignited the short fuse on the stick of dynamite, held it very coolly in his right hand until the Tenderfoot's scalp was in knots, then threw it into the pool.

The stick could not have reached bottom before the earth underfoot gave a spasmodic kick. Instantly the calm blue of the water-hole turned to furious foam and emitted a choked detonation. When the turmoil settled there were various kinds of fish floating, belly up, on the surface. The negro boy plunged in and threw the biggest ones ashore, leaving the rest to recover or—not. Thus the commissariat department was relieved.

The fish were served for dinner. They were of excellent flavor, if somewhat soft from concussion. The Ten-

derfoot was little bothered at the time about how that dinner was procured, but he has since wondered how many fish were unnecessarily killed or maimed by that explosion. It would also be interesting to count up the West Indian newspaper items relating to the natives who have killed or maimed themselves instead of the fish.

Between the crude spear and the brutal dynamite-stick, the rifle is a happier medium. It is, at least, the highest form of fishing science in Jamaica (with apologies to that native sportsman with the rod and reel).

All around the island coast the great mountain watersheds of the interior deliver streams in thousands, varying from babbling rivulets to rivers that are too big to babble. The rivers on the south side come out of the mountains and gather width and slimy stillness amid vast swamps that breed alligators. On the north side, where the mountains creep almost to the sea's edge, the rivers are clear, bouldery, and rapid. Alligators are scarce here and as a result the rivers of the north teem with fine, gamy fish.

Naturally, as fish-shooting is the sport on the north side, 'gator-shooting is the pastime on the south.

Alligator-shooting is sport, but it is a matter of taste in sport. The reptile floats on the river surface like a half-submerged log. Only the snout and two bony eyebrows show above water. In daylight this is a hard mark to shoot at. By night you can carry a jack-lantern in your hat and aim at the reflected gleam in the reptile's eye. Most of the alligator-shooting, therefore, is done by night, although the champion crocodile artist of Jamaica told the Tenderfoot that he had shot dozens by daylight.

"How do you do it?" asked the Tenderfoot.

"Perfectly simple," said the champion saurian-salter, who is a great admirer of George Washington's chief virtue. "You borrow a small pickaninny from some black woman. The smaller and tenderer the pickaninny the better chance of getting your game. In fact, I prefer a very young one that squalls without provocation.

"Well, as I was saying, you set the pickaninny on the river bank and you, yourself, crawl into the tall grass to a spot where you can lie with your gun leveled right on the bait. You follow me?"

"Perfectly, perfectly," murmured the Tenderfoot.

"By and by you'll see the 'gators beginning to drift nearer. Presently—and here's where you must be right on the dot with your pull!—one of the 'gators will lunge clear out of the water, making one snap at the pickaninny. *That's* where you get 'im!"

"But," the Tenderfoot protested, "suppose you hit the pickaninny!"

"You'd lose your 'gator and your bait, too. Of course, that would be hard on a man who thought he could shoot straight. But if such a thing happened you would always have this consolation: If you miss the alligator, it is the last of that pickaninny anyway!"

"Oh, yes," said the champion crocodile artist, reminiscently, "I've got as many as seven alligators in one afternoon and never changed the bait once!"

It was the same artist who had a bungalow on a rising by the Black River (famous for alligators). He claims to have been reading the *London Times* on the veranda one morning when an alligator came waddling up the front steps.

"What did you do?" was the chorus at the Jamaica Club, where the story was told.

"As a West Indian gentleman," was the indignant reply, "I could do nothing while the brute was under my roof. But I got him with an express as he waddled down the hill again!"

To come back to real 'gator-shooting, the game is usually played at night. With an expert paddler or two you glide up the river with your jack-lantern rays hunting for topaz-like gleams in the still waters. You have to go with a sharp lookout, for to collide with a floating saurian may result in the canoe being swamped, capsized, or thrashed to pieces by a tail in violent convulsions. Also, to hit anywhere but that topaz-like eye is to make night in that vicinity particularly hideous. An

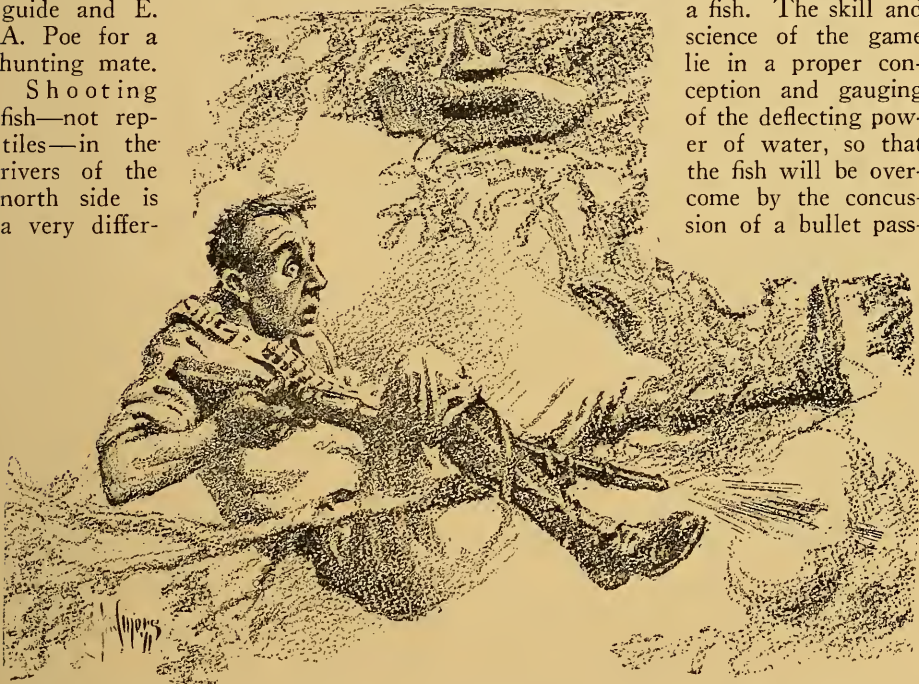
alligator hunter—except a very green one—is never long in doubt about hit or miss.

On the whole it is a very exciting game, and in the pitchy darkness of a river with a jungly festoon on either side, reeking with miasma and raucous with nocturnal life, it has all the thrills and chills of a trip on the Styx with old Charon as guide and E. A. Poe for a hunting mate.

Shooting fish—not reptiles—in the rivers of the north side is a very differ-

within the charmed circle, their shimmering sides reflecting the filtered sunlight.

Once—twice—again and again you raise your rifle, but again and again you take your finger from the trigger. Conditions are not right. For the game is not, literally, to shoot the fish. It is considered either bad shooting or unsportsmanlike to hit a fish. The skill and science of the game lie in a proper conception and gauging of the deflecting power of water, so that the fish will be overcome by the concussion of a bullet pass-



THEN THE ENTIRE VOLCANIC ARRANGEMENTS OF THIS EARTH'S INTERIOR ECONOMY WENT OUT OF ORDER

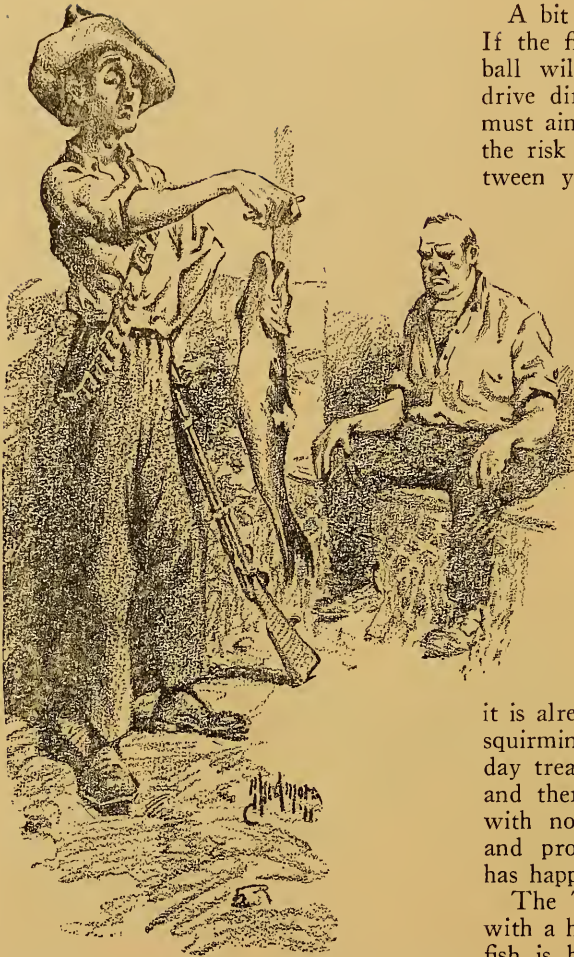
ent game and fraught with a great deal of real outdoor pleasure. I recall nothing more delightfully memorable than lying at full length, of an afternoon, on a little wooden platform built in the branches of a big, green tree overhanging a clear West Indian river.

Farther out sits Man Friday—a native, naked and bronze-hued, and ready to drop off the branch-end at the psychological moment. Below you, through the swarming leaves, your eyes take in a section of deep, blue-green, silent-moving river. Color-flecked shadows flash at intervals in the vague depths. You grip your rifle as a great river-fish rises or a school of dainty mullet appear

ing as near it as possible without touching.

Nor do you shoot a fish on sight. For instance, here is a big "jack" rising. He comes to within three feet of the surface. He is as clearly visible as if he already lay under your hand on a nice green banana leaf. You can see his gills working and his fins and tail vibrating as he lies in midwater, like a ship hove to or a hawk suspended on his air lookout.

But you don't fire, even if you are tempted by the size of the "fellow." Even if you are enough master of the game to plant a bullet right upon that mathematical surface spot where the ball



THE PROUDEST TENDERFOOT IN THE WORLD, HE WALKED WITH AN AIR OF BOREDOM TO THE VERANDAH OF THE PLANTATION-HOUSE

will deflect and pass directly over the fish's head, the lead may not have the force to kill, or even stun. Three feet of water is good armor.

But wait! He's rising—slowly but surely. Two feet! Eighteen inches! Ah, that's possible. But come a little more. . . . No? . . . He's still again, fluttering and breathing water in his gills. He thinks he has come far enough. He is suspicious of the moving branches and that sitting creature on the end of the dipping limb. He seems to be watching that.

It's now or never!

A bit of natural science occurs here. If the fish is directly below you, your ball will hit the water squarely and drive directly down. In this case you must aim at the fish, much as you hate the risk of striking it. If the line between your sights and the fish is oblique, it means that your ball will strike the water this side of the fish and the deflection will carry your bullet directly over the fish without touching it. The concussion will be enough.

You fire. The bullet strikes the surface and deflects, cutting a hole through the water and sending out ripples of vibration that temporarily paralyze the piscatorial brain. The naked Man Friday sees what he has been waiting for—the slow upturning of a white belly. He falls off the branch. Splash! As he grabs the big fish in his hands it is already regaining consciousness and squirming for liberty. But Man Friday treads water and pitches it ashore, and there it is!—a ten-pounder landed with not a scratch, not a hook-prick, and probably quite unaware of what has happened to it!

The Tenderfoot recalls his first fish with a humble and contrite heart. That fish is buried in his private graveyard with other verdant reminiscences.

He was then learning to plant that other man's bananas at the mouth of the Jamaican Rio Grande. Beyond slugging rabbits with a sling, he had no sporting history to back his sporting enterprise. This Rio Grande has a fine estuary and in the mingling waters of the woods and of the salt sea tarpon, snook, barracouta, and other big fish, edible, inedible, or themselves carnivorous, lurk plentifully.

The Big Massa surveyed the overseer and his tenderfoot assistant over the breakfast table one morning. The Big Massa had been grumbling over the seventh instalment that week of pitchwarries on toast.

"Can't we have a change in diet?" he growled. "Here, you!" he added, glaring at the Tenderfoot. "Take a

rifle out of my gunroom after breakfast and see if you can't shoot a fish for dinner."

The Tenderfoot had never heard of shooting fish. He had no more idea of the *modus operandi* than a wall-eyed coot has about making hot tamales. Furthermore, he had never fired a gun in his life.

But the Big Massa was the Big Massa—the terror of the assistant overseer.

"Yes, sir. Certainly, sir!" said the Tenderfoot, with pathetic bravery.

The Big Massa himself picked the rifle and handed it to the Tenderfoot with a brusqueness that was like an ultimatum with a death tag attached. Possibly the Big Massa had a sense of humor. He never came nearer showing it. That rifle was an antiquated British army mule that killed at a mile and dislocated the collar-bone, vertebræ, and neck-joints of the man behind it.

"Take a coolie-boy to pick up your fish," said the Big Massa. "And don't bring back anything short of seven pounds."

It was a command. Go, young man, and shoot me a seven-pound fish! If he had said: "Ride, young man, to Tokio and ask the Mikado if his toe is any better," the Tenderfoot would have gone with a clearer idea of what was required of him and how to go about it.

At the suggestion of the sympathetic overseer, who also threw some hurried light upon fishing with a gun, the Tenderfoot secured, as support, a young heathen Hindoo named Panchoo. (They had coolie labor on that estate.) Panchoo had been at a fish-shoot before. He knew his own end of the business and no doubt supposed that the Tenderfoot knew his.

They came to the big overhanging tree by the river. Panchoo scrambled up to the platform that was built on two stout spreading limbs and helped the Tenderfoot up after him. Panchoo then stripped naked. Presently he crawled out on a branch whose end almost brushed the river, and there he squatted like a bronze sitting Buddha, waiting for *gildari bus'a* (the beardless overseer) to get busy.

The Tenderfoot, in the meantime, sat on the platform, figuratively scratching his head. He could see the river below him, but "nary" a fish. Was it all a joke on his very tenderness? Panchoo seemed not to regard it so. Panchoo sat on the branch-end eyeing the water as if he expected all the fish in the river to assemble beneath his fascinating stare.

Had Panchoo not been there, the Tenderfoot would have been tempted to attach a line and a baited hook to the muzzle of his rifle and get a fish in the good old way. But Panchoo *was* there, and the supremacy of the white race was the issue.

"Ssss! *Sahib! Dekko!*" hissed the heathen Hindoo, after some time, pointing a swift-moving finger at the river's surface.

The Tenderfoot saw it. It was a whopping big fish, of what variety he had no idea and has none yet. And it didn't get away at that!

In a second he forgot his fear of the British army mule. He hoisted its ponderous hind-quarters to his shoulder, sighted through its ear at the white-and-blue-flashing thing in the river, — and fired!

Then the entire volcanic arrangements of this earth's interior economy went out of order. The Jamaican earthquake of 1903 was not in the same class. This was a sort of a thunderous cataclysm. The world turned upside down and inside out. The Tenderfoot found himself falling into space and colliding painfully with an uphurled mountain that had been shaken off the—the Himalayas, or maybe the Hindu-Kush.

At the same time the river was churned into milky foam and into it, with the wail of a lost soul, fell Panchoo from the seemingly uprooted tree. . . . Then for a time there was darkness in the world.

When the smoke cleared and the earth grinding ceased, the Tenderfoot found himself sitting at the foot of the tree (which, oddly enough, had been thrown back into position by the eccentric violence of that cataclysm). His legs, up to his knees, were in the river. The British army mule was caught be-

tween two branches overhead and seemed innocent of all guile. In fact, the smoke still pouring from its muzzle suggested that possibly it had hurt itself.

Toward the Tenderfoot's legs swam the heathen Hindoo, Panchoo. Above the surface he held a large but particularly limp fish. It might have been Goliath's head.

"*Gildari bus'a* make good shoot," said Panchoo, gravely. "*Gildari bus'a* shoot fish in two piece. Panchoo never see man shoot good like so."

The Tenderfoot's sense of sporting prowess awoke from sleep. Panchoo had witnessed the deeds of the Big Massa himself, but never had he seen a shot like this! It could not have been a more wonderful shot, although the Tenderfoot's conscience somehow shrieked like a blatant killjoy. His bullet had got that fish in the middle of the body and all but dissected it into

two meals, for which it was more than enough.

The proudest Tenderfoot in the world, he walked with an air of boredom to the verandah of the plantation-house. Over his left shoulder he bore the army mule. In his right hand he carried that bisected river-whopper.

"Pretty good fish," he remarked casually to the Big Massa.

The Big Massa looked. Then there was another seismic convulsion, accompanied by flashes and heavy volcanic detonations. And the Tenderfoot had it conveyed into his dazed mind in some way that he was *no* sportsman and *no* gentleman, but a *murderer* and a *fish-assassin*—the kind of man who would dynamite minnows for the sheer joy of the kill.

But, like every tenderfoot, he learned—in time; and in time his most welcome task was to go fishing for dinner with Panchoo and that army mule.



MUSCLE MAKETH MAN

BY WOODS HUTCHINSON, M.D.

IT is no accident that muscle makes nearly half our body weight. Indeed, if we add in the bones, whose only use on earth is as stiffening and levers for the muscles to pull us about by, and the tendon and ligamous ropes and sinews which tie the two together, we may regard ourselves as practically two-thirds muscle and its tools. Fundamentally considered, man is but a cast of his stomach, a food-tube surrounded by a thick mould of muscles.

The mutual duties of the two are simple. The business of the stomach is to provide food-fuel for the muscles, and the business of the muscles is to capture more food for the stomach. This is the endless circle which we call Life. All other activities and accomplishments of the human body are merely incidental to it.

Muscle is the largest consumer in the body politic, and its rights and tastes are entitled to a proportionate amount of consideration. Muscle cells are the Plain People of the human republic, with all the characteristics of devotion, industry, and uncomplainingness which characterize that backbone of the state. In spite of its huge bulk and incessant activity, muscle is far and away the healthiest tissue in the body. It has almost no diseases of its own, none that originate primarily or exclusively in it, except the temporary disorder of fatigue, and the only cause for which it ever fails the body politic is from the cutting off of its fuel supply, or of the poisoning of its food, or the paralyzing of its nerves.

Humble and uncomplaining beast of burden as muscle is, it is by no means the footstool of the body structure. On the contrary, it is, in some respects, the most highly specialized, the most vital and wonderfully complex piece of mechanism of all the tissues in the body. Fundamentally considered, we under-

stand thought even better than we do muscular contraction, and which is the greater mystery and which the most vital and important function of the body would be a question open to debate.

Of course, the enormous and indispensable part played by muscular action in the work of life is obvious to the dullest eye. Everything that we regard as a sign of life is a form of muscular action. If it were not for our muscles we might as well be dead, in fact we would be if they stopped contracting. Every word that we utter, every gesture that we make, every expression, every change of color of which our countenances are capable, is produced by a muscular contraction. We may have thoughts without muscular action, but we could not express them, we could not even put them into definite and logical form for expression, without it.

Not one single tiniest step could we take toward communicating with, or impressing anybody or anything outside of our own skin, if it were not for muscle. The whole brain, mighty and massive as it is, began in the first place, and has been built up ever since, simply as a telephone exchange for translating the messages brought by our eyes, ears, and noses into orders to our muscles.

Appetite is the mother of the brain and muscle its father. All that we know even to-day about the mapping out or localization of the surface of that great, gray globe which we call cerebral hemispheres and are so inordinately proud of, is that certain areas of it are concerned with light images and the sense of sight, others with sound waves and the sense of hearing, another with smell, another with the movements of the body, of the shoulder and the arm, of the foot, the hand and the mouth. At a point where these two latter areas, hand and mouth, combine is situated the famous speech-center Broca, the destruc-

tion of which would turn in an instant a Demosthenes into a "dummy."

Man without muscle would be speechless and, for all practical purposes, mindless. Across the vacant areas of the brain surface not occupied by sense-centers or motor-centers we are accustomed to scrawl boldly in the frontal region, "Abstract Concepts," and in the occipital region, "Concrete Concepts," but these are little better than brave names to conceal our real ignorance. All that we really know about the most magnificent modern brain is that at least seven-tenths of it was built up by and for the exercise of the senses and the movements and co-ordination of the muscles, and that the remainder of its bulk probably grew directly out of one or other of these needs. The whole instrument of the mind and the tool of thought is built by the senses and the muscles. Is it any wonder that we are coming to regard that harmonious and healthful mutual development of both these powers called play as the most important part of education, not merely during childhood but all through life?

Play for a Lifetime

Never till we are ready to graduate from the university of life, which ought not to be before sixty-five or seventy, should we cease to regard play as one of our Major Electives. Play makes the child into a man and keeps the man a child, growing and improving all his life long.

But the unique and practically important thing about muscle is that it alone of all the body tissues is directly under the control of the will. That is to say, three-fourths of it is, which we accordingly mark off from the other one-fourth, the heart, the walls of the stomach, intestines, etc., as *voluntary*, or because it is attached to or connected with the bones or the skeletal muscles. Here is the one instance where by taking thought we can literally, Scripture to the contrary notwithstanding, add to our stature. The Japanese schoolboy and the young Japanese soldier have already, according to the latest government reports, added nearly an inch to

their average stature, by dint of proper exercise and training, and satisfying the appetite created by this with abundant and nutritious food, beef, pork, wheat-bread,—foods rich in proteins, instead of rice and fish.

We are utterly powerless to improve our appetites by a mere effort of the will, but send the order indirectly by way of those ever-willing middlemen, the muscles, and a brisk walk of forty minutes in the open air will work that miracle for us. We cannot increase our lung capacity by merely thinking big-chestedly, nor by deep breathing exercises, or any other foolishness of that description, but we can readily expand our chests two or four inches by a course of proper all-over gymnasium exercises, by cross-country tramping, by rowing, wrestling, or playing tennis.

In fact, if we want to increase the metabolic reducing power of our livers, the digestive power of the pancreas, the size and vigor of the heart, the length of our "wind," the clearness and vigor of our thoughts, the sweetness of our tempers, and the soundness of our morality, all we have to do is to give the appropriate order to some group of muscles, and the larger the group the better.

Naturally, since muscle and its attachments form such a large proportion of our body bulk and weight, the question would arise, what, if any, particular diet or kind of food is best adapted to the needs of the muscles, or most necessary for health and efficiency? Fortunately, the question is an easy one to answer, for the appetite, so to speak, of the muscles is of the broadest and most catholic character. They can eat everything, utilize everything, and all is fish that comes to their net. Any sound, nourishing food which is suitable for the use of the body as a whole will give good working power to the muscles and keep their machinery in good repair.

The muscle fiber is really a series of tiny carburetors, not unlike those of an automobile, in which the food-gasoline brought by the blood is burnt in a series of tiny explosions which produce power and heat. When foods began to be studied systematically, it was assumed that, inasmuch as the starches and sugars

are composed of nothing but carbon and water, and are the nearest approach to coal in our foods, they would best be adapted as fuels for the use of muscles, so that the crude classification of foods, those of Liebig, for instance, divide all foods into the *respiratory* and the *plastic*; that is, the starches and sugars, which, being burnt to water and CO_2 in the muscles and in the lungs, were supposed to give off most of the heat and energy to the body, and the protein or nitrogen-containing foods, such as meat, milk, eggs, cheese, etc., which were supposed to be chiefly useful in repairing the wear and tear of the body. All actively living tissue (known as *protein*) contains large amounts of nitrogen, and it was therefore not unnaturally supposed that our nitrogenous or protein foods were chiefly needed for the purposes of making good the wear and tear in the living tissues of the body.

Hence the early dietaries were constructed on the principle of a certain amount of nitrogenous food, or meat, to repair the wear and tear of the body machinery, and a larger amount of non-nitrogenous carbohydrate food (sugars and starches) to supply fuel for its daily running. This was fixed in the ratio of about three to one, that is, one-fourth meat and three-fourths starch, bread, puddings, potatoes, and this still forms the basis of most of our text-book dietaries. It was soon found, however, that this theoretic division of foods would not hold in practice, for the simple reason that proteid, or meat, could readily be burned in the body in large amounts so as to generate energy and heat, as was readily proved by feeding both animals and man at heavy work upon a pure meat diet. In fact, meat is the only single food known upon which alone man can both do his work and keep up his health and vigor for almost an indefinite period.

We still clung, however, to the idea that all the meat that was needed was enough to give nitrogen to make good the loss of nitrogen from the wear and tear of our own tissues, and we even filled out a more or less mythical law according to which the natural lifetime of the cells of the body was not to ex-

ceed seven years, so that we were constantly being made over at least once in that period all our life long. This theory, however, was pretty nearly imaginary, and more careful and accurate methods of investigation have shown clearly of late years that our body cells are a great deal tougher and more long-lived than we had any idea of and that the actual amount of wear and tear in them is much smaller than we had formerly supposed.

Small Danger of "Burning Out"

In other words, our body boilers are not merely copper lined, but steel clad, and can burn a tremendous amount of fuel under them and generate an enormous amount of steam without much corrosion or deterioration. A large share of the nitrogen waste which passes out of our body, chiefly in the form of urea from the kidneys, comes, not from the wear and tear of the body cells, but from the nitrogen of our food, and the general belief now seems to be that only a very small percentage of our total nitrogen excretion is due to the wear and tear of our cells.

In fact, we have gone back to the broad and reassuring general conclusion that the principal thing to be considered about foods is their fuel value and their digestibility, without regard to whether they are meats or starches, animal or vegetable. A certain proportion of meat or proteins must be included in order to furnish repair material for the body and keep it in health, but the actual amounts of meat and starch in a dietary must be determined by their fuel value and digestibility, the appetizing character of the two classes of foods, and by what general and wide experience has shown is the proportion best adapted to maintain the body in health and protect it against the attack of disease.

This, not only by the universal experience of mankind, but also by the best and most careful laboratory experience, has now been found to come surprisingly close to the old three to one rule of thumb standard of the early dietaries, such as is represented by the ordinary meal of a slice of meat or fish to a couple

of slices of bread, potatoes, vegetables, and a good helping of pudding or of some other dessert. Certainly any class or nation which runs much below this standard of diet will be found inferior in stature, in physical vigor, and in longevity, as well as in resisting power to disease.

It has frequently been the custom of trainers, both for the prize ring and for general athletic contests, to adopt peculiar special dietaries as best adapted to the growth of muscle and the development of "wind." Many of these were purely whimsical and based upon the impression that certain foods were specially strengthening, or even that in the case of prize fighters they lent a certain amount of hardness to the tissues and of viciousness to the temper which were conducive to success in the ring.

The first "fighting-food" of this description was, and even yet is, rare beef-steak, or even raw beef, upon which some of our athletes and pugilists have been almost exclusively fed during their training days, with strict limitation of the amount of bread, and that usually in the form of toast, and an interdiction of sweets or fruits. There is probably no other single food upon which they could have been gorged to this extent with less damage, and combined with their breathing, rubbing, and vigorous exercises in the open air, many of them trained well upon this purely carnivorous diet and suffered no particular ill effects. Others, on the other hand, lost their appetites, became unable to sleep, grew nervous and cross-tempered, and in the language of the turf "went stale," largely on account of the monotony of their diet.

Better results are now obtained with less expense and less risk of loss of appetite and "staling" by a well-selected and well-varied mixed diet, instead of forbidding sweets, or drinking at meal times, and the cutting down of the amount of water or other liquids consumed to the lowest possible amount. This latter was supposed to produce a hardening effect upon the tissues, to diminish the softening effect of excessive perspiration, and to improve the wind. As a matter of fact, it did none of these

things. Its origin appears to have been twofold; partly because, on account of the intolerable discomforts induced by it, it was supposed in early days to be necessarily good for anyone who would deliberately endure it, and partly and more weightily because it was the most effective known means of reducing weight so as to bring pugilists down to the level at which they were required to weigh in.

For the last purpose, nothing has been invented so efficacious, but its general effect is decidedly injurious. All the flushing of our body sewers must be done with water, and cutting down the amount of fluids drunk, combined with the prohibition of fresh vegetables and fresh fruits, not infrequently results in distressing eruptions upon the skin, and particularly in crops of boils, which were the dread of every training gymnasium or college training table under the old regime.

The Fallacy of "Sweating It Out"

Another fad of the systems of athletic training is the habit of inducing profuse perspiration, either by exercise in a warm room or by walking, jogging across country, or rowing in heavy flannels and jerseys, out of which has come the popular out-door garment of the day under the significant name of "sweater." This was supposed to harden the tissues, melt down all superfluous fat, and in some mysterious way "get all the softness out" of the man in training, so that when he had reached a point where even the most prolonged and vigorous of exertions would cause little or no perspiration, he used to boast that he was "fit" because there was "no more water in him." Needless to say that if the latter statement had been even approximately true, he would have been reduced to the dimensions and vitality of a mummy, for we are only a walking aquarium and every one of our living and working cells must be kept flooded with water, or it dies.

To such extraordinary extremes were these two processes of cutting down on the supply of water from without and sweating out every possible drop of it

from within carried that both trainers and pugilists have told me of gains in weight of ten, twenty, and twenty-five pounds within the first week after the fight or contest was over. Some have even declared that they actually gained weight during the fight itself, though whether they sucked this in the form of moisture out of the surrounding atmosphere like a dry sponge, or from the water with which they were allowed to wash out their mouths between rounds, they were unable to inform me. But they swore positively that so great had been the tension of training, the minute it was released by the first blow of the fight, they began to absorb moisture at once and were most positive that they weighed from three-quarters of a pound to a pound and a-half more when they stepped out of the ring a victor than when they went into it, a statement which I merely record without comment or criticism, save a marginal note of "important, if true."

It is the almost universal testimony of thoughtful and intelligent men who, during college days or later, have put themselves in training upon the old-fashioned restricted diet, with cake, pie, and all other sweetstuffs eliminated, with a limited supply of water, and excess of sweating exercises, that while it possibly increased their quickness and wind, it produced a feeling of nervous irritability, of tenseness, often accompanied by broken sleep, so that when it was over they often felt, on the whole, rather the worse than the better for the discipline. This method of life and dieting, in fact, is one of the reasons why over-trained athletes of any sort, college crews, baseball nines, football elevens, and pugilists are apt to get into such an extraordinary state of nervous irritability and excitability that they begin to believe in hoodoos of various sorts, they will break down and cry like children after a defeat, or, if criticized too severely by the coach, will literally go off in the corner and sulk like a five-year-old.

I think it is only fair to regard this as one of the important contributing causes to that spirit of bitterness and discourtesy, of hysterical determination

to win at any price, which, though it is steadily diminishing everywhere, is one of the most serious blots upon the escutcheon of college and other athletics. Anyone who has umpired a football game, for instance, toward the close of a season, will be ready to testify that half of the players scarcely acted like men in possession of their ordinary senses, or were really responsible for their actions, and had to be handled and judged like spoiled children fighting over a broken toy.

Everybody Loves a Fat Man

The popular view of the close connection between fat and good nature and weight and balance is not wholly without rational foundation. Fat, unpleasant and stodgy as it is, is one of the most valuable tissues in the human body, and any man who reduces his share of it below a certain reasonable level, not only takes the smooth edge off his temper and balance off his powers of judgment, but exposes all of his higher tissues, notably the muscular, nervous, and secreting, to danger of both starvation and disease. A moderate cushion of fat is one of the best buffers and bucklers against the "slings and arrows of outrageous fortune," whether in the form of disease germs or in strains upon endurance. The man who makes himself into a lean and hungry Cassius, even with the best of intentions, is very apt to get himself into a state of both mind and body where he is more fit for treason, stratagem, and spoils than for comfort, wholesomeness, and a long, happy life.

Another thing to be watched in training is the tendency to concentrate too much upon the one particular feat which the athlete is going in for, or happens to be best at. The body works to an astonishing degree as a whole in even its most localized and specialized activities. The curious fact has been repeatedly noticed by trainers of intelligence and experience, notably by Dr. Dudley Sargent of Harvard, that a man who is training for the high jump, for instance, even after he has got himself in excellent general form and is beginning to con-

centrate upon his jumping feat almost exclusively, very quickly reaches a stage where he makes no appreciable gain and can just clear the bar at the same level day after day. If, as soon as this high-water mark has been reached, the jumper drops jumping altogether and goes back into the general gymnasium for a course on the running track, the bars, the chest weights, with cross-country work, swimming, etc., for about a week, and then comes back and begins his jumping again, he will find that he has not only retained all his former power, but will usually be able to add another inch or inch and a half to the height of his leap. And this process will go on until his utmost limit has been reached.

All Round Development the Ideal

Another illustration of the close relation between great special skill and general athletic vigor and development is the frequency with which a man who takes first rank in, say, pole vaulting, or flat jumping, or even putting the shot, will take good second, or even higher rank, in some two to four other special athletic feats; and the phenomenon of the all-round athlete who can score a high record in two-thirds, or even all of the feats of speed, agility, elasticity, and skill, is by no means uncommon. The aim of all good and rational systems of training should be to develop a good second- or third-rate all-round athlete, who is neither muscle bound nor stale, whose heart has never dilated, whose fat has never been all gaunted out of him, and who is ready to respond to any of the demands from a score of different directions that may be made upon him and his powers in actual life and to conquer the emergencies with a sense of power and reserve in store.

This ideal has never been better shown or more nearly realized as yet than by the so-called "gentleman's" system of living and training carried out by the young Englishmen of the intelligent classes. The aim of it is simply to "keep fit" constantly, so as to be ready at any time at a moment's notice, dressed just as he stands, to walk ten miles, run two, swim one, row at a de-

cent stroke for half a day, and play a hard game of tennis all the afternoon. The method of reaching this is simplicity itself; merely a series of daily acts—I dislike to call them habits, because the real path of health and the road to success is a broad and elastic response to an ever-varying environment and all habits in themselves are bad signs of getting into a rut—which are both enjoyable in themselves and will promote vigor, efficiency, and happiness all through life. There is nothing strange or unusual about them; in fact, they are just good commonsense, rational, wholesome living, such as all of us profess, but far too few of us practice.

Begin on rising with a cold shower or tub bath, just as cold, but no colder, than can be comfortably reacted to with a sense of improvement and exhilaration. There is no merit whatever in either freezing or shocking yourself, or making your teeth ache, or your finger-nails blue, and if you do not warm up promptly and comfortably with an exhilarating glow and find your appetite for breakfast improved by your bath, raise the temperature of the water until you get these desirable results. The proof of the bath is in the bather, not in the coldness of the tub. Your morning bath should be a delight to you, not a duty, and whatever temperature makes you feel best afterwards is the best temperature for you.

Then should follow a good substantial breakfast, no Continental subterfuge in the way of coffee and rolls, but a couple of slices of broiled bacon or a rasher of ham, with or without eggs, plenty of toast, or French rolls, providing you eat only the crust, followed by fresh fruit, cereals, jam or marmalade, with café au lait, cocoa, or weak tea. If you care to add any of the highly advertised brands of breakfast foods, well and good, but be sure and eat your breakfast first and let them come in afterwards, where they really belong, as fillings and trimmings. There is little foundation for the ancient belief in the peculiar wholesomeness of exercise before breakfast; in fact, it is much better to follow the homely philosophy of the inimitable Josh Billings, and "if you

have anything to do before breakfast don't forget to get your breakfast first"; or, to echo the pithy question of Sidney Smith who, on being pompously ordered by his doctor to walk for an hour every morning on an empty stomach, promptly inquired "Whose?"

Begin the Day Right

Don't begrudge the time necessary to take a good breakfast. There's little chance of your making a decent day's run unless you have plenty of fuel under your boilers to begin with. After breakfast should come half or three-quarters of an hour's brisk walk in the open air to blow the cobwebs out of your brain. Cut out the trolley or the train, for instance, and walk to your office, if this be within two miles, but don't overdo it, for although walking in the early morning, whether amid pearly dew and singing birds, or in the amber gloom of the morning sunshine struggling through banks of smoke and fog, is most exhilarating and refreshing, like early rising, it takes it out of you fearfully for the rest of the day unless kept within very moderate limits. Save your heaviest muscular exercise and longest ventilation period for the time between the end of your day's work and dinner.

In the office, shop, or work-shop, keep the windows wide open, so as to work constantly in a moderate current of air. Never mind if your papers or drawings do blow about a little, a few paperweights on them are infinitely cheaper than the retained pressure which will come on your own brain and initiative from loading yourself with fatigue poisons which you can get rid of through either lung or skin in foul, stuffy air. If the soot and dust annoy you, don't shut the windows and stew in your own juice, but make it hot for your city council until they adopt some intelligent method of getting rid of the smoke nuisance and of the dust plague, both of which are, nowadays, perfectly capable of control.

Take a good substantial lunch and at least an hour's nooning; better still, an hour and a half, in the middle of the day. It will pay you good rates for the

time invested in additional working power and superior clearness of head and steadiness of vision for the latter half of the day. You will even find it practically helpful to introduce that mild and harmless English feast, which we usually mention only with a pitying smile, the four o'clock afternoon tea. It takes only a few minutes of time and it clears the head and sustains the jarred and wrecked nerves wonderfully for the final clearing up to get away for the day.

Shut up your desk in the evening in time to leave yourself at least one hour, or better still, an hour and a half, or two before dinner time, and put that time in, according to the season, in a three- to five-mile tramp in the open air, preferably with cheerful and congenial company; an hour in the gymnasium and swimming pool, half an hour of squash, or indoor tennis, three or four good sets of tennis, a game of baseball, or a round of golf. In summer time it is an excellent idea both to make the closing hour as early as possible and to have a light veranda or lawn tea, as soon as you reach home. Then spend all the remaining hours of daylight in the open air, and have instead of dinner a good cold-meat supper, with plenty of fruits, salads, and cooling drinks. If this can be served on a veranda or in the open air, or picnic fashion on the river or in the woods, providing the real snakes in Eden, mosquitoes, will permit, so much the better.

Round out the evening with any form of intelligent amusement, conversation, reading, music, the theater, games of the kind that require more than a spoonful of brains and don't need gambling to make them interesting. This should be your mental playtime, when you do the things that you like and cultivate your own tastes and interests, and in consequence is often the time when your best and most improving and lasting life work will be done—the time that will quicken your imagination, broaden your outlook, and fit you for wider fields and higher usefulness. There is no particular merit in going to bed with the chickens unless you wish to rival the domestic fowl in brilliancy.

Stay up as long as you can find any-

thing interesting to do, or until you begin to feel tired, so long as you turn in between the blankets in time to get at least nine hours' sleep before rising. No time spent in sleep is ever wasted, and most of us in this twentieth century take less sleep than would really be best for us. If you can increase that nine hours to ten and even eleven on Sundays and holidays, it will be one of the best and most rational beginnings that you can make for a day of rest and real recuperation. Even the additional luxury of a breakfast in bed, that keeps you in a state of placidity and perennial repose until eleven or twelve o'clock, is an excellent and profitable way to waste time, whenever you have time to waste. As the ancient Arab proverb hath it: "If thou hast a day to be idle, be idle for a day."

Don't forget to see that the windows, if possible on both sides of the room, are open at least a foot at the top, and that the fresh air of heaven is blowing right across your face as you lie in bed. Put on plenty of covers to keep you warm, preferably in the form of cotton batting

or light, porous eiderdown comforts; you will be astonished how easily you can stand the temperature, even well down toward zero, in your bedroom during the night. Such a method of training for life, continued through life, will insure not only the best possible degree of resisting power against disease, as nearly a perfect appetite and digestion as you are capable of, and as long a life as your inherited tendencies will permit, but also a wholesome, happy, enjoyable existence, every hour of which is well worth while, even if it were never to be followed by another. Live like this and you will never know that you are old, until one day you are suddenly dead. In the course of such a life if you want to go into training at any time for a special event or contest, or for a hunting trip, or canoeing expedition with long portages, or a walking tour, it will take only a few days of training upon any rational method to make you fit and ready for anything in reason and to do all of the things that any man in his senses ought ever to aim for.



BAD MEDICINE

BY HULBERT FOOTNER

Illustrated by R. W. Amick

CHAPTER VIII

The End of St. Pierre

IT was the first of July at Moose River, and the brief, ardent Northern summer was at full tide. There is something about this lovely season that touches the heart like the sight of a too-beautiful girl, whose loveliness in its budding pauses listening for the whisper of death. The sun lingered in the sky throughout endless hazy days, leaving but for a little while at night, and the warmed and grateful land blossomed splendidly. The astonishing greenness of the bare hills suggested nothing of the late wastes of snow. The hollows of the river bank were suffused with the blue of forget-me-nots, and the purple fireweed carpeted all the bush-openings.

In front of the store the little stern-wheeler *North Star* lay with her nose tucked in the mud, ready to start on her return trip with the season's furs. Her crew was stoving the last cords of wood on deck, and almost the entire population of the district was looking on from the top of the bank. The ugly passions of the winter had blown away with its storms, and the one had left no more trace than the other.

The breeds were as light-hearted as children at a show. To them the little craft in the river was "the big boat" and the wonder of their lives. She visited them only once a year, and some had made a three days' journey especially to see her. Among themselves they discussed her wisely.

"You understand him, how he go?" asked Nancy McPhatter of St. Jean Bateese.

The old man shrugged and spread out his palms.

"Joe know!" put in the simple youth

eagerly. He went on to explain with his dramatic gestures. "One very strong devil in there. Him call Stim. Him locked up in big iron box. Him eat wood and drink plenty water. Cap'n Jim pull rope, and him scream. Bill Arkess poke him down there, and him kick out behind!"

The gossip of the country was threshed out among the dark-skinned natives down to the last grain. Ever fearful of ridicule, they guarded their matters closely from the whites, and Parson Dick or Duncan McPhatter, now the trader at Moose River, would have been astonished to hear some of the quaint stories in circulation.

To-day the principal sensation was the departure of St. Pierre Fraser under guard. But in discussing that, they did not neglect lesser matters. Those who had come in from the tepees on Gold-eye Lake, brought the latest news.

"Ralph Croome's woman sick. Parson Dick came to see her."

Upon the heels of this a busy whisper circled 'round eliciting loud Wah! Wahs! of astonishment.

"Parson Dick buy Paul Zero's black fox skin!"

The breeds all knew that Paul Zero had won the grand prize of the North four months before, though the information had not yet reached the trader's ears.

"How much?" was asked.

"Four hundred fifty skins!"

More exclamations of astonishment.

"What Parson Dick do with him?"

But to this the men from Gold-eye Lake could only answer with a shrug.

Some distance beyond the group of breeds on the bank stood the two white women of the country, likewise watching the little steamboat—the one visible link that bound them to their own land.

Unlike the breeds, the ravages of the winter had left marks on these two. The old woman looked frailer and sharper still, and she was eyeing the steamboat as it made ready to go with the look of a prisoner who sees the bars slowly swinging to.

The change in Annis was even more striking. She had lost the bright, child-like eyes of wonder with which she had approached the North. Her face was paler, graver, more mature, infinitely lovelier. The shadow of a deep, quiet pain was never absent from her eyes.

Mother and daughter were very constrained with each other. The recollection of many profitless discussions on the same subject parted them. Neither would give in. It was none the less painful because each was concerned for the other's happiness.

The old woman took Annis's hand beseechingly. "Annis, don't be offended with me," she begged, "but I must speak! Captain Jim will stop the boat in front of our place long enough for you to get your things."

Annis made a gesture of helplessness.

"Duncan said he would give me credit for your passage," the old woman went on breathlessly. "Oh! you will go when I beg it of you! My darling child, I will never know peace of mind again until I get you out of this dreadful land!"

"Must we go over all this again?" said Annis wearily.

"But think what we have been through this terrible winter!" urged the old woman.

"That's done with," Annis said. "There's not another St. Pierre."

"You don't know!" cried the old woman. "You are never safe here, you're too pretty. Duncan sees it too; that's why he gave me the credit. Parson Dick thinks you ought to go."

Annis knew well enough that this was true about Dick; the thought was like a little canker in her breast. However, she betrayed nothing. "Dearest, you know it's useless," she said sadly. "I will not go."

The old woman was too desperately anxious to be over-scrupulous as to the

arguments she used. "Humph!" she said. "I did not think a daughter of mine would be so lacking in a proper pride—after the way he has avoided you!"

This was like salt rubbed in Annis's wounds. "Mother!—*Mother!*" she murmured painfully. "That is not what keeps me here," she added quietly.

"What is it, then?" demanded the old woman, sulky like a child.

"It is not I who should be sent out of the country," said Annis. "I love it! It is you who dread another winter here."

"I have weathered eighteen of them," muttered the old woman.

"I will not leave without you," said Annis.

"You know I'm tied hand and foot by my debt."

"We'll work it off together," said Annis.

Corporal Plaskett, R. N. W. M. P., smart and soldierly in his red tunic, with his carbine across his arm, brought his prisoner through the wood. St. Pierre, in his pallor and emaciation, showed the effect of six months' imprisonment. It had been a hard winter, and not until near March had the policeman been able to get through. Then he had to work up his case, and the search for the body of Aleck Whitebear had lasted until the snow melted. It was found in a muskeg half a mile beyond the old woman's, with a bullet hole through its head. The gun that inflicted it was nearby. It was one of St. Jean Bateese's, and when Plaskett proved that St. Pierre had taken it, the crime was brought home.

St. Pierre was handcuffed. Whatever he felt at thus being led a prisoner through the people over whom he had virtually ruled for so long, he showed nothing. His face was like a mask of brown plaster in which his strange eyes glowed with an undimmed and inexplicable fire. The breeds looked away uncomfortably at his approach; few of them had the hardihood to stare at him. Even in his downfall he was terrible, and none dared exult over him.

A little apart from the group of breeds an aged crone squatted on the

ground, her arms clasping her knees and her face buried between them. She had paid no attention to the chatter around her, but at the clank of the corporal's spurs she quickly raised her head, showing a face incredibly old—seamed, wrinkled, and expressionless as a mummy's. She got up and, putting herself in the corporal's way, timidly touched his elbow. She carried a bundle wrapped in a large cotton handkerchief.

"Halt!" Plaskett commanded his prison. "Who are you?" he asked the old woman.

"Sophie Fraser," she mumbled.

"His mother?"

She nodded, indicating that she wished to give St. Pierre the bundle she carried. At Plaskett's command she undid it, exhibiting a great loaf of bread.

"Very well, I'll take it," said Plaskett.

But the old woman drew back, signifying that she wished to give it into St. Pierre's own hands.

"Go ahead, if you think I'd eat it," said Plaskett carelessly.

A queer, satisfied light appeared in the faded eyes. She quickly tied the ends of the handkerchief around one of St. Pierre's wrists. Plaskett, without losing sight of his prisoner, looked covertly about for Annis.

St. Pierre, when the bundle hung down and he felt its great weight, drew his breath sharply. "What is in it?" he murmured in Cree.

"Stones enough to drown you, my son," she whispered.

"You have done well," he said. "Now leave me."

With a silent, passionate gesture, she pressed her cheek against his manacled hands. Then, turning away, she sat in the same spot and buried her face as before. Such was the leave-taking between mother and son.

A little color returned to St. Pierre's cheeks and he carried his head higher. A saner light appeared in his eyes. He did not obey immediately when he was ordered on board; he had caught sight of Annis within the store.

"Can I speak to Miss Croome?" he asked Plaskett, but sufficiently loud to carry to her ears.

"On board with you!" said Plaskett sternly.

Annis, however, came out. "I will listen to what he has to say, corporal," she said mildly. Her heart, ever occupied with its secret thought, jumped at the hope that he might have something to say that would throw light on the mystery of Dick's conduct.

St. Pierre strode toward her, the wary trooper at his shoulder. The old woman came clucking out of the store, indignant and flustered. St. Pierre gazed at the white girl with an uncommon softness in his black eyes.

"I don't want him to hear," he murmured quite humbly.

Annis smiled at Plaskett. "Let him speak freely," she said.

Plaskett retired a few steps with an ill grace.

"Well, I shan't go away," said the old woman sharply.

St. Pierre ignored her. He squared his shoulders. "Miss Annis, I am not going to whine for forgiveness," he said proudly. "I do not repent. I wanted you, and the color of my skin was against me. I had to do what I could."

"Annis, are you going to listen to such talk?" the old woman cried out.

Plaskett approached. Annis motioned him back. She was not displeased by St. Pierre's bluff tone. "Let him speak," she said.

"In time to come, make allowances for me," St. Pierre went on. "Remember, if I had had any chance at all, I could have been as gentle and as generous as any." His voice deepened. "And you will remember, though I was bad, I was not weak."

"Is this all you had to say?" she asked, disappointed of her secret hope. "What is the use? I have forgiven you."

"I don't want your forgiveness, but your respect," he said quickly.

"Respect?" she said, lifting her eyebrows slightly.

"Just that," he said with a strange look. The smooth blankness of his face was broken by strong emotion. "I never yet bent my back to man or woman," he murmured—and in the act of saying it, he dropped to one knee and, seizing the

hem of her skirt, pressed it to his lips. "I love you," he murmured, so low that none but she could hear.

He was on his feet again as soon as the horrified old woman could cry out. Turning, without another look at Annis, he strode to the top of the bank. Annis looked after him compassionately; no woman, least of all Annis, could be entirely unmoved by such a confession. As he was about to descend the path, old Sophie Fraser sprang up with a shrill, wild cry and clung to him desperately.

Plaskett laid a hand on her shoulder not unkindly. "Come, Mrs. Fraser, we can't have that," he said.

St. Pierre betrayed no emotion, but looked back at Annis, as if struck by a new and softening thought. "Will you take her home?" he asked.

Annis instantly went to the distraught old woman, nor was her mother at all behind her. Each taking an arm, they led poor old Sophie Fraser away through the trees—and so, as St. Pierre wished, none of the three saw what followed.

"Come along, redbreast!" cried St. Pierre with his old, mocking laugh.

His manner was almost joyous now. He ran down the path and leaped on board, Plaskett close at his heels. From the lower deck a stairway rose to the cabin, with a swing door at the bottom. St. Pierre, unexpectedly darting through this door, slammed it back in Plaskett's face. He mounted the steps in four jumps and, running across the cabin, came out on the upper deck. This door had a hook on the outside, which, in spite of the handcuffs, he managed to catch, just as Plaskett flung himself against the door from within. The breeds on the bank gaped and cried out in astonishment.

St. Pierre scrambled up the outside stairway to the roof of the cabin. This deck had no rail. He paused at the edge, lifting his manacled hands high above his head. His stretched body was rigid and quivering.

"Ye free ones, who rode the plains," he cried in a ringing voice. "Take me to your hunting grounds, for I am not one of these! Spirits of my red fathers, receive me! I spit upon the whites!"

In the attitude of one mounting, he stepped off the deck. His body, turning over in the air, struck the water with a great splash and disappeared. A horrified cry went up from the breeds on shore. Plaskett and the captain reached the roof of the cabin just too late.

Throwing off his coat, Plaskett leaped after his prisoner. The breeds, with foolish cries, ran back and forth along the bank. The captain shouted orders in vain; no one was capable of carrying them out. It was Duncan McPhatter who finally pushed off alone in a small boat and, circling the stern of the *North Star*, picked Plaskett out of the icy water.

"He never came up," the trooper said grimly. "We'll have to grapple."

Half an hour later, immediately under the spot where he had jumped, they found him. All that was mortal of St. Pierre Fraser was lifted from the water and laid on deck. When the tightly knotted handkerchief was removed from his cold wrist, the trick was revealed. Plaskett made no comment. A more powerful jailer than he had claimed his prisoner. He took off the unnecessary handcuffs and covered him up.

CHAPTER IX

The Steamboat Goes

WHILE Annis and the old woman were in Sophie Fraser's cabin, two tall figures darkened the doorway. The hearts of both women leaped simultaneously—though for different reasons.

"My boy!" cried the old woman.

"Parson Dick!" murmured Annis.

The old woman precipitated herself into Ralph's arms, while the other two shook hands in a constrained fashion. To Annis it seemed as if all the blood in her body surged to her face and then left it as suddenly. As for Dick, the story of the past six months was written plainly in his face. He looked dull and heavy with over much work and self-denial.

Ralph, too, was older and sobered, and Annis read in that, as well as in Dick's gravity, what had brought them. Presently Ralph told his mother.

"My wife is dead."

"Oh! my poor boy!" cried the old woman, all her animosity melting away.

"There, let's say no more about it," said Ralph uncomfortably. "She was a good sort in her own way, and I would have stuck by her, but—well, you were right. It was a mistake."

The old woman comforted him softly. After awhile she asked timidly: "What are you going to do now?"

"Out on the steambot to 'list in the police," said Ralph.

"What! Leave us so soon!" cried his mother.

"Why not come, too?" he said.

They looked at him sharply. The old woman began to tremble. "I owe three hundred skins," she faltered.

Ralph and Parson Dick exchanged a glance.

"I've something to tell you," said Ralph. "We've no time to lose. Come along, I'll tell you on the way to the boat."

Dick hung back as they started.

"Aren't you coming?" asked Annis, a little wistfully.

He avoided her eyes. Glancing at the pitiful, huddled figure of old Sophie within, he said: "I'll stay with her a minute. I'll be along directly."

But his words were belied by the sad look that followed her through the trees; his eyes expressed consciousness of the final sacrifice of his happiness. Annis did not see the look.

Ten minutes later the old woman, wild with excitement, burst into the little clearing in front of the store.

"Duncan! Duncan!" she cried shrilly.

"Eh, old woman?" said he, at his door.

"See!" she cried, holding up a glossy pelt; "a black fox! My boy brought it to me!"

The cry of black fox was taken up by the breeds, and men, women and children came crowding to see the beautiful freak of nature that constitutes the supreme prize of the woods. The trader examined it hair by hair. He handled it almost reverentially.

"How much, Duncan?" begged the old woman in an agony of suspense.

"Best I ever saw," he said at last. "Four hundred and twenty skins!"

"Heaven be thanked!" cried the old woman. She clasped her hands and the tears rolled down her wrinkled cheeks. "We're free! Annis, do you realize it?—we're free! She ran hither and thither like one distracted. "I must say good-bye to everyone. I must get my things. Duncan, we must fix up our credits! Captain Jim, will you stop the boat a quarter of an hour in front of my cabin while I get a few things?"

"Sure thing, old woman," said the burly skipper heartily.

Duncan led her into the store.

Meanwhile Annis's eyes kept turning anxiously toward the path by which she expected Dick to appear. She could not share in her mother's exultation. The heart she thought she had schooled suffered a fresh and dreadful pang at the thought: Must I leave him without even learning why he thrusts me away? It occurred to her there was something odd about this affair of the black fox skin.

"That was a lucky strike," she said to Ralph quietly. "How did you catch the beauty, Brother?"

Ralph became uneasy at once. "I didn't say I caught him," he said. "It was Paul Zero."

"How did Zero come to give it to you?" she asked curiously.

"It wasn't exactly a gift," said Ralph. "He owed me a debt."

"But we heard you were so poor, and Paul Zero has good credit. How did he come to owe you so much?"

Ralph tried to cover his confusion with a little bluster. "Don't you think I came by it honestly?" he demanded.

"Of course," said Annis, "but—"

"You drive a man mad with your questions," said Ralph, flinging away. "I won't answer any more."

Annis thoughtfully studied the ground. Presently she beckoned Joe Whitebear to her and sent him running to Sophie Fraser's cabin with an urgent message for Dick.

At the top of the path down to the water the old woman said her good-byes. Old scores were all forgotten, and the littlest brown baby was remem-

bered by name. The natives, for their part, forgot her sharp tongue and remembered her kindness. At the end she became a little wistful. Her eyes sought the distant green hills.

"It's really good-bye to the North," she murmured. "I can scarcely believe it yet! How I have longed for this moment!—and now it has come I wonder, if I'm not sorry! It's a big chunk out of my life that I'm leaving. Bid good-bye to any of the boys I don't see, Duncan. Perhaps outside I never should have learned what real kindness was. Tell them to keep a warm spot in their hearts for the old woman!"

She hurried down the path and across the gangplank.

"Well, I guess it's all aboard, Duncan," said Captain Jim.

Annis remained at the top of the bank. As the moment of departure became imminent, her heart began to beat so that she could scarcely speak.

"Captain Jim," she faltered, "could you give me ten minutes longer?"

There are no hard-and-fast schedules in the North.

"Certainly, Miss," said the skipper.

Annis started for Sophie Fraser's hut. Once hidden among the trees she began to run.

Dick and Joe Whitebear were hastening toward the landing-place. Dick, to his pleasure, found he could make the boy talk about Annis without exciting any suspicion in his simple mind.

"Missannis," Joe spoke it as a single word, "give Joe this," he said, proudly exhibiting the gold brooch. He fastened his collar with it, in imitation of her. "Missannis say, 'Joe save my life'."

Dick started. In the course of the official investigation he had learned what had happened in front of the church on Christmas Eve—and the knowledge of Annis's courage was like fuel heaped high on his hopeless love—but this particular incident had not been brought out.

"When was that?" he asked sharply.

"When Aleck Whitebear come to burn church," Joe replied. "Aleck point gun at Missannis, so!" He illustrated vividly. "Missannis say: 'I not

afraid of you!' Joe grab the gun so Aleck not 'urt 'er."

Dick turned pale. His hand fell on the boy's shoulder and gripped it.

"Aleck bring the gun for you," Joe added naïvely. "Missannis think you get 'urt. She not let Joe bring you to the church. She say: 'I must do it all myself!'"

This was all new to Dick. In spite of himself a groan escaped him. This was the woman of matchless courage that he was yielding up forever. It seemed more than human flesh could bear. Hard upon the thought, he turned a bend in the trail and came face to face with her, running to meet him.

Annis stopped short, blushing hotly. Joe, wholly indifferent to their confusion, hovered about them a moment, then remembering the steamboat he shambled away.

Dick was caught completely off his guard. He could not hide his agitation. He set his teeth in his nether lip to keep speech from betraying him. He avoided her eyes.

"You meant to let us go without saying good-bye," she said with deep reproach.

"It seemed better," he said very low.

"Why do you send us away?" she asked suddenly.

"I send you?" he said, startled.

"There's no time for pretending," she said hurriedly. "You bought that skin and gave it to Ralph."

"He told you!"

"No, I guessed it. Now your face confirms it!"

"I hoped you wouldn't find out—until afterwards," he muttered.

"This is the greater part of your quarterly credit. It will cripple you all season. Why do you put us under such an obligation?"

"It was the old woman's dream," he murmured evasively. "She is old. She has had a hard time."

There was silence between them. Annis searched his averted face. "I cannot afford to be maidenly now," she was telling herself; "I must know the truth."

"We are just bandying words," she said softly. "And presently I will be



"I'M GOING TO KEEP YOU AND NEVER LET YOU GO"

gone. Words don't matter much. There are things we know without having to be told them." She paused and her head drooped. In her unmaidenliness she was very maidenly. "Must I say this thing?" she murmured very low. "You make it so hard for me!"

"Don't try to say it," he begged her.

She raised her head. "I will," she said with her own brave directness. "Dick, from the first your eyes have told me that you love me. Was it a lie?"

"No!" he cried.

She turned away. The color came softly back to her cheeks, and the shine to her eyes. "I have not tried to hide my feelings," she murmured.

But still he was silent.

"Dick," she asked gently, "what chasm is there that love cannot bridge across?"

"Annis, don't!" he burst out. "I can't stand any more. I've given my word!"

"Your word? To whom?" she flashed back at him. "Concerning me? Then I must know." She had an intuition. "Was it to my mother?"

He nodded. Gradually it became clear to her. "You promised that you would never—try to make me stay up here?"

He inclined his head again. "She was right," he said. "It is no life for a woman."

"She lived alone," Annis murmured.

"I could not doom you to it," he said.

Annis turned away from him again with an odd ghost of a smile playing about her lips. "You must do as you think best," she said quietly. "I have decided for myself."

"What do you mean?" he demanded anxiously.

"This is my country, and I love it," she said. "I am going to stay here."

"Annis, I shall not let you!" he cried.

"You cannot help yourself," she said coolly. "I shall continue to occupy my mother's cottage. I shall be very happy there."

He stood gazing at her in an agony of indecision. The pause was broken

by a shrill blast of the steamboat's whistle.

Annis stood her ground. "What are you going to do?" she asked with a smile.

Dick looked at her, and his powers of resistance were suddenly swept away. He put out his hand to her; she did not shrink. He took her wholly in his arms, and she rested there like a storm-tossed vessel in a quiet haven. "Do!" he cried, brokenly. "I'm going to keep you and never let you go! Annis! my love, my bravest, it would have killed me if I had lost you!"

For a while they forgot the world. It seemed to them then that all their suffering was worth while to attain such a moment of rapture. They were recalled by a second blast from the North Star's whistle.

"How shall we tell them?" cried Annis in a panic.

It was Dick's turn to be resolute. "Come," he said; "we'll go as far as the Fort with them. Perhaps we can win over the old woman on the way. There's another parson at the Fort. Your mother can go out with Ralph, and we—we can paddle back together!"

As Dick and Annis appeared running, hand in hand, from among the trees, the assembled natives on the bank, apprehending the changed state of affairs, broke into a cheer. They were not allowed to escape without a speech from St. Jean Bateese.

"You get her?" he asked with a serious wink.

Dick nodded.

"Good!" cried St. Jean Bateese. "You come back soon?" he asked anxiously.

"In four days," said Dick.

"Good!" cried the old man, beaming. "We will have a party—a tea-party," he hastily added. He went on in his declamatory style: "The evil voice is stilled and the people know their true friends now. All are sorry for the past. The people wish to hear good words in the church and to learn. The people want you, want both. Come soon!"

(The End)

THE "MYSTERY" OF AUTOMOBILE TRANSMISSION

BY HAROLD WHITING SLAUSON

LOOK OUT! Throw into second—you'll stall your motor. She can never make this hill on the high." The man who is learning to drive a car will hear this warning a dozen times before he realizes that there is a certain relation between the gears and the proportionate speed of the motor and rear wheels. Finally he understands that a shift in the gears is the best relief afforded to a panting and over-worked motor and begins to attach to the gear changing lever its proper importance. The mastery of the gears and gear shifting represents the graduation from novice to adept, and the proper use of the pedals or side lever at the right time has more to do with the long life of the motor and car than has the conscientious purchase of exactly the proper grade of gasoline.

Ask almost any automobile designer or engineer what is the weakest part of the modern gasoline motor car, and it is ten to one that he will reply, "The transmission." By this he will not mean that it is necessarily structurally weak, or that it is the part that will always wear out first, but he will be of the firm conviction that it is the one portion of the entire car that is farthest from mechanical perfection—and many an automobile owner will be inclined to agree with the engineer's opinion, without knowing exactly why. But mechanically incorrect as the transmission may be, those types as found in the modern automobile represent the strongest, simplest, and most efficient forms yet devised, and any field for great improvement will need to be along the lines of an entirely different principle.

The transmission is necessary, however, as long as the gas engine is ex-

pected to carry varying loads, as is the case when the car is starting from rest, or is climbing a steep hill. The novice may wonder if the steam engine can start with a heavy initial load and can run under all conditions without any change in gears, why the gasoline motor requires the interposition of a transmission between the driving wheels of the car and the crank shaft. Briefly, it may be stated that the reason for the transmission in connection with a gas engine lies in the fact that the latter is more self-contained than is the steam engine and generates its own power in each of its cylinders. This power is the force of the explosion of the gasoline mixture, and this energy "spends" itself, or becomes reduced, as the gases expand and the piston descends, and thus the maximum downward pressure lasts but for an instant.

The steam engine, on the other hand, is driven from a practically inexhaustible source of power that begins as soon as, and continues as long as, the valve is opened. The valve may be kept open throughout almost the entire stroke, and in this case the steam from the boiler will exert a maximum pressure on the piston during the whole stroke. In other words, the power applied to the piston of the steam engine is practically continuous, while the gasoline motor receives its impulses only at intervals of every two or four strokes per cylinder.

This means that the gasoline engine, to develop its full power, must run at a certain number of revolutions per minute, and thus when any load is applied that will tend to reduce this speed, a new gear ratio must be introduced. This reduced speed, due to the drag of an excessive load, must not be confused with the reduced speed due to a closed throttle or a retarded spark, for the lat-

ter is an intentional means of cutting down the power.

Consequently, while the gasoline motor may be said to be flexible in so far as its speed can be regulated by the throttle and spark, its power is not "elastic," as is the case with the steam engine and the electric motor, and thus the internal combustion engine does not possess the ability to carry the percentage of overload that can be delivered by the two other forms of power plant.

Self-evident as these facts may be to many an automobile owner, there are probably some for whom this explanation is too technical. Let such a man consider his own case in the days when he doubtless rode a bicycle. When he pedaled along a level road for "all he was worth," his machine made pretty good speed, but as soon as he reached a hill he would either be called upon to exert more power, or his rate of travel would perceptibly decrease. But he is already working at "full power," and assuming that he, like the gasoline engine, can take no overload, he will be compelled to slow down, for, in other words, he cannot make his feet turn as fast since he is compelled to push harder on account of the extra energy he is called upon to exert.

Take the Bicycle, for Example

But if he uses a bicycle with a "lower gear" on the hill, he will be able to make his feet turn faster with no additional exertion, and although the wheel itself will move more slowly, he will climb the ascent with far greater ease than would be the case if he remained on his high-g geared machine. Now if the bicyclist likens himself to the gasoline motor of an automobile, he must remember that the latter power plant cannot develop full power when it is moving slowly and that consequently it must be enabled to turn at normal speed when it is working under a heavy load. It is here that the lower gears come into use, and by them the speed of the rear wheels is sacrificed to the gain in power transmitted to them. Thus the transmission, or device by which the speed ratio between the motor and rear

wheels is raised or lessened, corresponds to the change to the low or high-g geared bicycle.

The man selecting an automobile today has a far easier time of it than did his brother of five or six years ago whose brain was set in a whirl by the variety of specifications from which he must take his choice and which included no less than a dozen different forms and types of transmissions. The majority of these have gradually been eliminated as proving inefficient, until now there are but three main types remaining in general use on pleasure vehicles. Each type may have its separate modifications and refinements which create a sub-classification, but the selection of the present-day purchaser of a gasoline pleasure car is narrowed down to a question of planetary or sliding transmission so far as the gear problem is concerned.

Each of these types has its own advantages for certain classes of work, and on certain models of car, and it is only where the fields occupied by the two overlap that there will be found any great opportunity for a range of selection. For example, a large majority of the high-powered pleasure cars use the sliding transmission, while many of the light, low-priced, simple runabouts employ the planetary type. But some cars of twenty and thirty horsepower are equipped with planetary transmission, while many of the smaller cars are provided with the sliding gear, and in such cases, it is best to explain the construction and advantages of each and let the intending purchaser decide for himself.

The planetary type is the oldest form of transmission and is generally conceded to be the easiest to operate. It is an adaptation of the old "sun and planet" gear, used in the early days of steam engineering, and in its usual form provides for two forward speeds and a reverse. There may be a great variety of details in its structural features, but the general principle of the planetary transmission consists of the action of a central pinion and an outer ring of spur gears, the latter of which revolves in an annular, or internal gear. By means of

a friction clutch, the entire mass of gears may be connected so that they will revolve as a unit, and with the central pinion driving the rear wheels and the ring that carries the spur gears attached to the end of the crank shaft of the motor, the transmission will be on "high," or direct, speed. Each of the spur gears mounted on the ring meshes with the central pinion.

When the clutch is disconnected, the spur gears revolve around the central pinion, each one turning on its individual axis, and the transmission is in "neutral," as the motion is conveyed to the internal gear, instead of to the central pinion. If a band is made to constrict the external surface of the internal gear so that it is prevented from turning, the outer ring of gears will transmit a reduced motion to the central pinion. By providing a similar set of gears so arranged that the second internal gear will turn in the opposite direction, it will be seen that slow and reverse speeds are provided for, the desired one being thrown in by tightening the proper band.

The clutch giving the direct drive is generally operated by a side lever, while the low speed and reverse are usually controlled by two separate pedals located in the floor boards near the foot brake. Some planetary transmissions are used, however, in which all speeds are controlled by the one side lever, but the operating principle is not greatly different from that described above.

All the gears of the planetary transmission are constantly in mesh, and consequently the danger of "stripping" any of the pinions is reduced to a minimum. The high, low and reverse speeds are applied and held in place by friction, thus preventing a positive load from being thrown on the motor or transmission too suddenly, and for this reason the mechanism is easily handled—and is even sometimes called "fool-proof." While this latter feature is not necessarily one that would recommend the planetary transmission to the seasoned automobilist, it nevertheless appeals to many beginners and to those owners who intend to entrust their car to the

ladies of the family or to an inexperienced coachman.

For the same reason the type of gear change in question is used on many heavy trucks that are to be driven by men who are not professional chauffeurs. The planetary transmission is comparatively long-lived and efficient when used on low-powered pleasure cars and on trucks which are never driven at a high speed, but it will seldom be found on a large touring car.

Owing to the number of gears that revolve on the low and reverse speeds, the planetary transmission requires a large amount of lubrication. This is generally provided for by making the transmission case oiltight and filling it with lubricant of the proper grade so that each gear practically revolves in oil. This oil should be renewed occasionally. Care in this respect will minimize the loud whirring and grinding noise that sometimes accompanies the use of the low or reverse gear, but although this may often be due to faulty construction or design of the mechanism, many planetary transmissions are now made which, when properly handled, are almost noiseless on all speeds.

Look Out for the Wear

Inasmuch as the various speeds of the planetary transmission are operated and held in place by means of friction, there is bound to be a certain amount of wear on some of the rubbing surfaces. The constricting bands operating the low and reverse speeds are generally provided with set screws or "turnbuckles" of some sort by means of which the wear may be "taken up."

When it is found that the transmission seems to be slipping on these speeds, the conditions of the bands should be investigated, but neither of them should be tightened to such an extent that there is binding on the neutral when the drums, or internal gears, should be allowed to revolve freely. There will also be found an adjustment for increasing the friction of the clutch controlling the direct drive, and when the motor seems to be running unusually fast for the speed of the car when the trans-

mission is in "high," it is probable that the clutch has become worn or loosened so that slipping takes place between its discs.

One of the limitations of the planetary transmission, and an objection that has prevented its adaptability to the large touring car, is the fact that it is restricted to two forward speeds—and the motor car-owning public has already decided that the machine of over twenty horsepower requires three or four speeds. Three - speed planetary transmissions have been designed and used, but the extra gear set makes such a bulky and complicated addition to the weight of the mechanism that but few of them will now be found. But the planetary transmission having two forward speeds and a reverse is comparatively inexpensive to manufacture, and as it has been stated already that it is exceedingly easy to operate, it probably constitutes the best type of gear-changing arrangement for use on the small, low-powered, low-priced car on which a third speed is neither necessary nor desired.

An observer who sees a car moving along slowly with the man at the wheel tugging at the side lever, each movement of which is accompanied by a clatter and crash and rumble as though there were extreme internal dissension among the members of the mechanism, may be reasonably certain of two things—first, that the car is provided with sliding transmission; and, second, that he is a rank and inexperienced amateur who is *trying* to drive it—for the well-handled sliding gear should operate as noiselessly as does an electric motor and with only a slight click to announce the change of speed. Mechanically imperfect as is the sliding gear, it represents the best type of transmission so far devised for use on the average high-power pleasure car, and whatever "black eyes" it may have received have been mostly due to the mistakes of inexperienced drivers who have blamed the mechanism for the results of their own carelessness or ignorance.

While it is perfectly true that the sliding gear transmission requires greater care in its operation than does the planetary type, the former seems a

veritable marvel of strength and durability when the work it performs and the abuses to which it is often subjected are considered. In fact, on no part of a well-made car are better materials used or more careful workmanship employed than on the transmission—a truth well attested by examinations that have been made of gears after a hundred thousand miles of use without bringing to light scarcely a scratch, mark, or change in the size of the teeth.

"Sliding" Gear Because It Slides

The name of this type of transmission describes it accurately—the gears forming the various speed ratios are slid into position. In its essentials the sliding transmission consists of two shafts, one of which is connected by a gear to the crank shaft of the motor, while the other engages directly with the driving shaft that carries the power to the rear wheels. These two transmission shafts lie parallel with each other in the gear case, and on each of them is mounted a set of spur gears, or pinions. These shafts are generally either square or are provided with feather keys so that the gears may slide longitudinally and yet will be prevented from rotating independently of the shafts. These gears on the separate shafts are so cut that they mesh in couples, half of the total diameter of each pair always being equal to the distance between the bearings of the shafts from center to center.

The shaft driving the rear wheels is called the main shaft, while the one geared to the extension of the crank shaft of the motor is termed the jack shaft. When the gears on the jack shaft are so moved that none meshes with any on the main shaft, the transmission is in "neutral," for no power can be conveyed to the driving wheels. If a small gear on the jack shaft is slid so that it meshes with a large gear on the main shaft, the latter will turn slowly and the transmission will be in "low speed." By sliding larger gears on the jack shaft into mesh with correspondingly smaller ones on the main shaft, the speed of the latter will be increased and "second" and "third" will be obtained.

"High speed," which may be third or fourth, depending upon the make of transmission, can, of course, be obtained by bringing the largest gear on the jack shaft into mesh with the smallest on the main shaft, and in some cars this is so arranged that the speed of the driving shaft will be greater than the speed of the motor. Nearly every sliding transmission, however, has a direct drive, which is generally obtained on the high speed. Direct drive serves to make practically a continuous and solid shaft from the crank shaft of the motor to the live axle, and thus the driving shaft is turned at the same speed as is that of the motor without the interposition of gears.

This is brought about by the use of a positive jaw clutch, one-half of which slides on the main shaft and can be made to engage with its companion, which is mounted at the end of the crank shaft extension at the point where it enters the transmission case. By the crank shaft extension is meant the short shaft between the motor clutch and the transmission. When the motor clutch is engaged, this shaft revolves with the crank shaft and to all intents and purposes is a part of it. Inasmuch as the jack shaft is geared to the crank shaft extension, it will revolve as long as the clutch is engaged, even on direct drive, but as this jack shaft runs "idle" under these conditions and carries no load, it offers practically no resistance to the power of the motor.

The various gears are slid into mesh with their companions by the shifting lever located at the side of the driver's seat. When the various gears are so arranged that successive speeds are obtained by moving the entire set in one direction, the transmission is known as the progressive type of sliding gear. When the gears are arranged to slide individually so that the shifting lever may pick out a certain pinion and move it independently of the others into mesh with its companion on the other shaft, the transmission is known as the selective type. With this modification of the sliding gear transmission, the shifting lever has a side motion which enables it to be moved in either of two

parallel lines, instead of in one continuous direction as is the case with the progressive type of control.

While with the progressive type of sliding transmission, the gears are moved through the lower to reach the higher speeds, the selective form allows one speed to be reached without shifting through any of the others. For example, neutral can be reached directly from fourth speed without moving through any of the intervening gears, and for this reason the selective type of transmission is especially adapted to cars having this additional gear.

Making the Gears Mesh

It will be seen that only those gears are in mesh that are transferring the load from the jack shaft to the main shaft, and this means that with each change in speed, new gears will need to be moved into place. In order to enable the teeth of the sliding gears to find their way in between those of the gears with which they mesh, the edges are beveled, or made wedge-shape, but even then the shift cannot be made if either of the sets is revolving with any great difference in rapidity. Consequently it is necessary to disengage the clutch at the time that the shift is to be made, in order that the gears will reduce their speed until the sets can be slid into place, but with the experienced driver a push on the clutch pedal and an accompanying shove or pull on the transmission lever will accomplish the operation in what seems to be but a single movement. Such adeptness cannot come without practice, however, for the "feel" of the gears and clutch must become a second nature.

If the gear to be moved is revolving at about the same speed as is the one with which it is to mesh, the change may be made easily, but if the car (and with it the main transmission shaft) is running rapidly and the jack shaft has stopped because of its release from the motor, the clutch will need to be re-engaged slightly before the new gear may slide into place without too great "interference" on the part of the teeth. It is this interference, due to too great

a difference between the speed of the two gears to be meshed, that is the cause of the grinding and clashing that proclaim the amateur driver, and the expert will "juggle" the clutch until he can "feel" that the different pinions are revolving at speed suitable for engagement.

The sliding gear transmission is usually located in about the central portion of the frame just back of the clutch, although some manufacturers are mounting it close to the rear axle and attaching the gear case directly to the differential housing. This design furnishes a long propeller shaft extending from the rear axle to the clutch, and consequently the angle of power transmission is reduced and nearly straight-line drive is obtained. This does not mean, however, that a car having its transmission located in the first position cannot be designed with straight-line drive, and just which constitutes the better practice forms a difference of opinion between engineers as well as drivers and owners.

The Problem of a Fourth Speed

The question of the necessity of a fourth speed is also one prolific of discussion among designers and owners, but it may be said, in general, that the majority of high-powered cars are so equipped. Some of the leading makes, however, are provided with but three forward speeds, and the actual necessity for the fourth speed really depends more upon the flexibility of the motor than upon anything else. A good six-cylinder motor is exceedingly flexible and has a large range of speed, with the ability to "pick up" quickly under a load, due to the more frequent impulses imparted to the crank shaft. Consequently, the majority of designers will admit that a three-speed transmission is sufficient for the control of a good six-cylinder car, and yet three out of four of these same engineers will equip the machines that they manufacture with a fourth speed.

This is due to the desires of the automobile-owning "public"—a factor not lightly to be reckoned with in the auto-

mobile trade—and this "public" will get what it wants despite the private opinions of the more practical and experienced engineers. A fourth speed on a six-cylinder car does no material damage, of course, and as long as the intending owner wants it, he can have it—and he can make his choice from among some of the very best cars manufactured.

The gears of the sliding transmission are located in an oiltight box which should be partly filled with a good lubricant. This lubricant may be an oil or a grease, and should be sufficiently "viscous" to adhere to the gears when they revolve rapidly. The proper lubrication of the transmission has more to do with the long life and satisfactory service of this important part of the car than any other question of its care, but as this subject has been discussed fully in a previous article in this magazine (February, 1911) it will not be treated here.

Aside from proper lubrication and careful shifting of the gears, the transmission should require but very little attention, and as the ends of the two shafts are generally mounted in ball bearings, burned or worn out bushings or babbits are practically a thing of the past. Even without ball bearings, the supply of oil in the gear case will probably keep the plain bearings sufficiently lubricated, and it is not likely that these will require any readjustment, scraping or renewal until many thousand miles have been registered to their credit.

The third important type of transmission is the friction drive, which is giving satisfactory service on several makes of light cars. This system entirely eliminates the use of gears, employing in their stead a friction disc driven by the motor, and a sliding wheel so set that its periphery rests against the face of the above-mentioned disc. Any number of speeds between low and high may be obtained with this system by sliding the wheel, which is connected with the driving wheels, to any point along the surface of the friction disc. It is evident that the low speed would be obtained when the sliding wheel is in contact near the center

of the disc's surface, while the speed will increase as the wheel is moved toward the outer rim of the disc, the high being reached when the point of contact is at the greatest distance from the center.

The intending automobile purchaser, or owner, who may have become bewildered by the foregoing advice and

explanations will at least have this comfort in deciding on a car to-day—the poorest transmissions of a few years ago have been eliminated, and those that have stood the test of time and are giving satisfactory service now offer a range of selection in the choice of any one of which the unwitting amateur cannot be very badly “stung.”

THE DOG OF TO-DAY

BY HENRY E. PARKER

Illustrated with Photographs

JWILLOUGHBY MITCHELL, of New Rochelle, New York, is one of the greatest living experts on dogs of all sorts, and terriers in particular; also, he is something of an artist and no mean sculptor. Charles G. Hopton is a well-known judge of dogs and also a newspaper and magazine writer with a ready pen. He, too, knows something of art.

The other day J. Willoughby Mitchell completed a piece of sculpture depicting an Airedale terrier and called Hopton in and asked for an opinion. Hopton looked at the work of art long and earnestly.

“Well,” said he, “it’s certainly art, but I’ll be hanged if it’s Airedale.”

“Isn’t it?” said Mitchell. “Well, just wait ten years, and it will be.”

“Then,” retorted Hopton with much fervor, “may God help the Airedale.”

And there you have the present-day situation in a nutshell. Not only in terriers, but in nearly every breed of dog benched, one may see clearly defined differences between the type shown to-day and the type of breed shown twenty-five years ago. In some cases a clearly marked difference has been wrought within the past decade. The modern system of breeding for points, coupled with the tendencies of fleeting fashions, is responsible for practically all these changes. As a result, dog breeders are divided up with much acuteness in as

healthy a controversy as anyone could wish for.

Says the ultra bench man (and woman): “We are advancing toward the attainment of the ideal dog.” Says the opposition: “You are wrecking all decent dogdom and advancing toward the attainment of freaks and monstrosities: your terriers are turning into giraffes and your gun dogs are fitter for a lady’s chamber than for a stubble field.”

And so they go to it, and neither faction has any charity in its heart for the other. Modern dogdom could learn lessons in brotherly love and amiability from the Montagues and Capulets. As matters stand at present a general comparative review of the evolution of the bench dog of to-day cannot be other than interesting.

Terriers provide the most consistently noticeable changes in type; also, they offer the most contentious case in the general disagreement. Take the Airedale as a case in point. The Airedale as a breed has had little more than enough time to develop into a set type, but already he is the storm center of bitter dissension. The Airedale is a made dog. He did not merely happen. Wayback in the '70's, up in the north of England—the greatest home of dog fancy on earth—some one thought he would like a dog that would combine the virtues of the terrier with the hunting qualities of the hound—a dog at home in water as well as on land. The otter



RUSSELL, PROPERTY OF R. B. LITTLEFIELD

The bulldog is one of the few breeds that has shown no sensational changes in recent years.

hound was crossed with the Old English terrier, and around Keighley, where he was first produced, they called the result the Water Side terrier. It was not till 1880 that he was christened the Airedale terrier. The new production achieved considerable local fame. Then dog fanciers farther afield heard glowing accounts of him, and a demand arose.

Within a very short time he was announced as a paragon of all the canine virtues, and it was not long before he was admitted to be a veritable Admirable Crichton among dogs. Sturdy, larger, and heavier than any existing terrier—he scaled up to forty-five pounds—broad chested, well ribbed, well limbed, black saddled to the roots of the tail, but otherwise mahogany colored, and with an expression of companionable sagacity, he was not by any means a bad-looking dog.

When it came to working qualities he made good on every test that came his way. He had a good nose and a decent turn of speed; and he had the intelligence to use both. He was game as a cock pheasant. He was a holy terror on vermin; he was afraid of nothing. He went to ground as a terrier ought to, and he took to the water as readily

as he went to earth. And with it all he was good tempered and eminently sociable. They do say that no man was ever known to possess an Airedale and fail to develop into a dog fancier.

Out in the Middle West of this country he is hunting coyotes, and the coyote by consequence is much perturbed. In the suburbs of New York the wife gives him to the baby to play with during the daytime, and the baby grows a new contentment. And by night he has all other burglar alarms beaten to a frazzle for reliability and efficiency.

Just how much of his excellence was really and seriously calculated is a moot point. His inventors, so to speak, were of course prompted by serious intention and guided by knowledge, but the outcome of new crosses is always more or less problematical, if not an absolute gamble, and it is a safe assumption that the Yorkshiremen who first produced the Airedale hardly realized to the full the monumental success which was to attend the working out of their ideas. It is certain that, as an all-round utility dog, the equal of the Airedale has never been brought to this country.

But the Airedale to-day is by no means the Airedale that he was even a short decade ago. To-day he is following the general tendencies of all bench terriers. He is lighter in build, longer in the face, a bit narrower in the head, longer in the leg, and much higher at the withers. In short, he is not so sturdy.

Comparison between the modern Airedale and his progenitor on one side, the Old English terrier, is interesting. Whereas the former, the composite, is rapidly approaching elegance and refinement—that much is conceded bench men by their bitterest opponents—the latter, neglected and gradually going out of vogue, is to the Airedale as a cave dweller of the stone age to the twentieth century athlete.

While the gradual fining down of the Airedale may still be regarded by some as but incidental to the establishment of a new breed, this view cannot be entertained of the older Irish terrier. Twenty-five years ago he was benched at thirty pounds; to-day the standard weight is twenty-four, and though prize

winners have run up to twenty-seven, within the past five years twenty-two pounds has come into the money at several of the big shows. In the parlance of the bench breeder, the Irish terrier has been developed along more classy lines; he has grown the sloping shoulders of a race horse. He is higher at the shoulders, but carries good round bone right down to his feet. He is developing a long punishing head, with a powerful jaw, but the head is narrowing where the brain box ought to be. Also, with his modern legginess, breeders are curtailing him lengthways, fore and aft.

The short back is not an easy thing to attain, but within the past twelve months dogs have been benched with eight and a half to nine inches of head and precious little more back from shoulder blade to hip-bone. His ears are no longer cropped, and as breeders have not yet accustomed themselves to this latter condition the Irish terrier is at present apt to be a bit coarse in the ear. This defect, however, is being eradicated rapidly.

The fox terrier, well established as the breed is, shows the general tendency as much as any of the terriers. Twenty-five years ago he was a sturdy, cobby little brute, short in the leg, with a broad head and intelligent face, goggle eyed and big eared. To-day, like the Irish, he has been elongated almost all ways. His head and face are longer, also narrower. He is much higher off the ground, with a straight and narrower front. He is still as game as ever and has an additional turn of speed, but field men condemn the modern type, contending that he is no longer fitted as before to do his allotted work—viz., get to ground. Say they: "How can a dog on stilts get in after a fox or a badger. Then, again, a straight-fronted dog digs everything under his own belly, and then the huntsman has to come to the rescue and, instead of the terrier digging out the badger or fox, he has to be dug out himself."

Of course, there is no gainsaying the bench breeder's statement that, regarded as a work of art and a thing of beauty, the fox terrier is far prettier than he was. He is, too, still well barreled,



CH. SABINE RAREBIT

Field men say the fox terrier is no longer able to "go to ground" as formerly.

having, if anything, a rather better spring of rib.

One of the oldest of the typical English breeds, the bull terrier, has a large following on this side of the water. His American vogue is probably very largely a matter of sympathetic psychology. The bull terrier is amiable and faithful to his friends, intelligent and self-respecting at all times, but let anyone jar his sense of the proprieties, or interfere with what he considers to be his rights, and there will be a shindy with fireworks to it. It is this capacity for self assertion, his reserve of pugnacity—put bluntly, his remarkable efficiency as a scrapper—which has done a great deal to instal him in his present high place in American dogdom.

As is to be expected with a breed that runs back to the times of the earliest English dog fancy, the bull terrier's breed singularly true to type, and no radical changes have been wrought by breeders within the last thirty years. The principal change in the dogs benched has been purely of an artificial nature; by the laws of the English kennel club his ears may no longer be cropped. For a while this robbed him of a certain amount of favor, the flopping ears de-



POMERANIANS HAVE BEEN BRED AS LIGHT AS THREE POUNDS

tracting from his otherwise game and alert appearance. But bull terrier men are now going after small ears, and the overturned flop is being eliminated. In America the bull terrier has been developed along lighter lines than on the other side, where the old standard weight of forty to forty-five pounds is being well maintained.

The bulldog has developed no sensational changes in late years. It is a long cry back to the days of bull baiting, when he was leggy enough to follow a trap. Although he is now but a creature of fad and fancy and by no means a utility dog; he is much the same as he was thirty years ago. He is being gradually brought nearer to the ground, and he is still bred for the short face and the roach back. His wonderful tenacity of purpose has been preserved unimpaired. There is a tendency to accentuate the short face to a degree that seems likely to lead to asphyxiation through sheer constriction of breathing apparatus, but careful breeders are striving after a larger nostril.

His great frontal breadth and enormous strength have not only been retained but accentuated, and, taken by and large, the breed has improved. There are many in the family who lugubriously point to the fact that there are no more champions of the caliber of Rodney Stone and one or two great dogs of one or two decades ago, but there can be no doubt that to-day the general average of bulldogs benched hits a higher mark of consistent quality than ever before, and the fact that there are no recent instances of individual phe-

nomena may be taken as a sign of progress along the lines of consistency rather than as any indication of retrogression.

The English setter has enjoyed a long and uninterrupted period of high esteem and popularity on this side, but the past thirty years have been by no means devoid of vicissitudes. During the period from 1887 to 1892 a lot of angular, slab-sided, narrow-chested, ring-tailed, poor-headed specimens came to the fore in the bench shows. Their manifold defects were certainly not inherited, for they came of good Lewellyn stock, but they were the result of ignorant breeding, and the prominence they attained in the awards was due to the fact that some of the judges of that time were unduly prone to visit the virtues of the father upon the progeny, even to the third and fourth generation.

They were known as Tennessee setters, as most of them hailed from that State. Luckily, they were only a brief and passing phase. There has always been a distinctly marked difference between the bench strains and the field trial dogs, and in both cases there is a further variation from the old type of setter as he exists in England to this day. The latter difference is to be expected, in view of the work. In England the going is heavier, and there, too, the guns start late, finish early, and take a couple of hours off at mid-day for luncheon.

A lighter dog is required here, able to cover thirty and forty miles a day over hard going. And that is the type American breeders are getting. Beside the American dogs of to-day, the Eng-



JAPANESE SPANIELS BREED TRUE TO TYPE AND HAVE CHANGED LITTLE IN RECENT YEARS

lish setter from England appears clumsy, lumbering, choppy, heavy quartered. The American sportsman has come to know just what he wants and he is getting it. That is why, last year, the great English setter Mallwyd Ned, after cleaning up everything on the other side, was brought here with an unbeaten record, only to be decisively beaten by Meadow View May Belle.

In the South there has been a tendency to overdo the departure from the English type, with the result that a lot of spike-headed, curly-tailed light weights, without substance, have been benched. This, however, is but a passing phase, and at that is merely local. The happy medium is coming to the fore, a classic beauty, fine as a race horse, pleasing to the eye, but efficient and glutinous when work comes along.

The setter is to be congratulated in that he runs no risk of the fate which has overtaken the cocker spaniel in this country. Originally a gun dog, and as such one of the best, he is to-day the field man's best joke. In fairness to the cocker it must be admitted that America has hardly given him a square deal. Shooting conditions differ from those on the other side and the cocker has had mighty little chance to show what his capabilities are in the duties for which Nature and the English breeder intended him.

American breeders recognized this



THE IRISH TERRIER IS LIGHTER AND FINER IN HIS LINES THAN FORMERLY



THE AIREDALE OF TO-DAY IS LEGGIER AND NOT SO STURDY AS HIS PROGENITOR

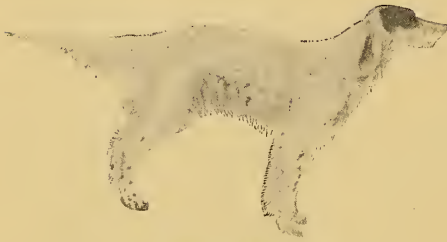
condition of things and, rather than let such good material run to waste, they started in to remake him. Principally, their remaking has taken the form of deliberate and careful shrinkage. They have reduced him in weight from thirty pounds and over to eighteen pounds and less, and the cocker is developing hitherto unsuspected virtues as a domestic pet. Of a truth have circumstances played a scurvy trick on him.

In pointers American breeders have been doing remarkably well of late years, and, while no radical changes have been attempted or attained, there has been a steady improvement in domestically bred dogs up to a point at which prominent bench men declare that there is no longer any need existing for importations. The pointer is a dog of Spanish origin, and he has been known in America ever since the days of Spain's western empire. While most of the early stock was brought over by English settlers, there can be no doubt that, although these dogs formed the foundation of what are known as the native strain, many of the early pointers in America came direct from Spain.

The 1911 model of collie is a metamorphosis compared with the now obsolete article of the '80's. Twenty-five years ago he was a useful member of society, intelligent, capable with sheep, and, as conditions were in the Scottish Highlands, a satisfactory specimen of

utility. To-day he is ornamentally superb—and that is about all. He was a coarse-coated, rugged, honest, windmill-eared worker. To-day he is a dandy, with a dubious reputation for temper.

His coat is a silken magnificence, his coloring has become more brilliant, and his long, narrow fore-face, finely chiselled from muzzle to way up behind the eye, has taken unto itself a not entirely unappropriate expression of supercilious, pampered autocracy. Handsome he certainly is, and to the show bench must go all the credit for his superb appearance. But the same process of refining



MAY BELLE

Owing to the predominance of the field trial men, the setter has held his qualities well.

which has transformed a sturdy laborer into an all but useless fop is also seriously undermining his intelligence. That narrowing of the head is reducing his physical capacity for gray matter. By the present indications the collie bids fair to "develop" into a mere ornamental imbecile. "Beauty, beauty!" cry the bench breeders. Yes, beauty, undoubted. But—is it worth it?

The possible fate of the collie has melancholy precedent in what has already overtaken the once majestic Newfoundland and the once great St. Bernard. These be awful warnings to the apostles of the Dog Beautiful. Less than twenty years ago both these big dogs were healthy, flourishing breeds. But the idealists of the canine beauty parlors gathered power unto themselves and to beauty was everything else sacrificed.

The extremists started to inbreed the Newfoundland for head with the result that within a very few years this once powerful dog degenerated into a pitiable paralytic. His hindquarters grew less and less and still more less, until he was

hardly able to drag himself in and out of the judging ring. His head? Oh, yes, his head was magnificent. But where is the Newfoundland to-day? As a breed he is following his grandfather's hindquarters into that limbo of idealism which even now awaits the collie.

Apart from the mere matter of physical points, there is, of course, a big psychological side to the whole subject of dog breeding; and, while it does not come within the scope of this article, it may be as well to touch briefly on one phase of it, particularly in the case of terriers and field dogs, before passing on to the consideration of toy dogs.

What is the effect upon a dog's instincts and working capacities of continuous and exclusive bench work and the consequent utter absence of field work? That is the crucial point of the present differences of opinion. Field men argue, with seemingly irrefutable logic, that to deprive a dog entirely of all opportunity for field work must of necessity diminish his instincts; the argument is applied with additional vehemence to cases of successive generations of bench dogs thus treated. In such extreme cases it certainly does seem as if environment would eventually overcome heredity.

Bench breeders, on the other hand, deny even the possibility of such an evolution, and they certainly do not fail to bring concrete instances in support of their contention. They point to such dogs as the wire-haired fox terrier Champ. Coastguard, the fox terrier Champ. bitch Wandle Doris (previously known in England as Ridgewood Doris), to Champ. Raby Sensation, and Champ. Manila. All these were bred for the bench, and the bench only. Wandle Doris has not had a day's field work in her ancestry for three or four generations. Yet when she was put into the field here she cocked her rudder and went about her work with the best of them.

Even the cocker, shrunken, a made-over, designed for milady's boudoir, would, it is contended, turn to work to-day just as keenly as did his forebears of ten generations ago. The question boils down to one of logic versus fact,

and fact seems to have it. In any case, one can hardly with reason expect a bench fancier either to breed or purchase a dog worth anything up to \$2,500 and then turn him into a badger hole to run the risk of scars and injury.

Coming to the toy dogs, one finds that changes amounting almost to revolution have come over the benches devoted to fashion's pets, changes too complete to be attributed to mere passing whims and fancies. Not only in types, but in breeds, have the toy dogs of fifteen years ago been superseded.

The original toy dogs of England were the Marlborough spaniels, miniature hunting dogs whose origin was in Blenheim Castle. A strain of Asiatic blood was introduced, and there came the English spaniels, comprising the King Charles, black and tan; the Prince Charles, black, tan, and white; the Blenheim, orange and white; and the Ruby spaniel, solid red. All these enjoyed a vogue as strong here as on the other side of the water, and each breed has been improved in type along more or less the same lines.

The size has been reduced, and they are now handier for a lady to carry. The texture of the coat is better, the colors are more brilliant. A shorter face, longer ears, and larger and more prominent eyes have all been obtained.

Then the Pomeranian came in. Unknown on the English bench twenty-five years ago, he has been adopted and adapted. He was an eighteen-pound edition of the German Schwartzwold spitz. English breeders brought him down in weight to below ten pounds. They have also induced a more solid coloring and his alert eye and general expression of sauciness have been retained. In latter years, however, there has been a regrettable tendency to go to extremes in



WUNG-LUNG

The Pekinese is the best preserved and probably the oldest breed on record.

the reduction of weight, and Poms have been bred down to three and three and a half pounds. For the Pom, that is too small. Four to six pounds is as low as a breeder may safely go. Under that weight there is the risk, amounting almost to a certainty, of anemia, sterility, and a falling off in coat. The foregoing changes, however, are in type only, and are but the least of the changes in toy dog fashions.

Within the past decade two new breeds, each of them foreign, have come to the fore with startling rapidity and a persistence that stamps their present popularity as something more than a mere passing craze. These are the Japanese spaniels and the Pekin Palace dogs, better known as the Pekinese. Both breeds come to us with the stamp of antiquity.

The Pekinese is probably as old as Chinese civilization. He can be positively traced back to before the year 1 of the Christian era. Through all the

centuries he has been probably the more rigidly preserved dog in canine history. Bred exclusively for the edification of the Chinese imperial court, it was a capital offense to take one outside the palace of Peking. And anyone found in possession of a palace dog outside the palace was doomed to lose his head.

The breed was first seen in England in 1860, but it was not until 1900 that English toy-dog breeders had any chance to take up the Pekinese in the regular way. That was the year of the Boxer rebellion, and the armies of the Powers obtained—to put it gently—freer access to the imperial palace than any foreign devils in bulk had ever had before.

Immediately there was a notable influx of palace dogs into England and America. There was a general rush for them, first because they were a novelty, later because the dogs themselves won an enthusiastic popularity. There was an eccentric cuteness about them that appealed strongly to toy dog devotees. To-day, they are ousting the English spaniels.

In appearance they have the characteristics of a lion in miniature. They are strong-ribbed, sturdy, heavily boned, with fore legs bowed; the coat is thick and luxuriant. In weight they used to run as high as eighteen pounds, but this has been considerably reduced, and to-day eight to twelve pounds may be accepted as the standard. They have been bred as low as three pounds, but the breed is not likely to benefit by this extreme lightness.

The English toy dog authorities have provided a very sensible rule setting five pounds as the minimum weight at which a Peking palace dog may be benched. That rule is likely to do much in preserving the healthiness of the breed against the fads of extremists. In color the Pekinese run to red, black, fawn, black and tan, and parti color. They are not spaniels.

The Japanese spaniel is also a breed

of ancient lineage. They, too, are an exclusive dog in their own country, although their exclusiveness is a matter of social custom rather than law. They have been bred for centuries by the Japanese nobility, and only comparatively inferior specimens get on the market. Show specimens for the English and American benches run to a weight of four or five pounds and their principal characteristics are the short muzzle, eyes set high and wide apart, high skull, and either chrysanthemum or horse tail carriage. In color they are black and white or lemon and white. Beyond a slight reduction in weight and the attainment of a finer, silkier coat, they have not differed much in type during the ten years or so that they have been adopted here.

One result of the antiquity of both the Japanese and Chinese toy dogs is that they breed absolutely true to type. The Japanese spaniel, too, is one of the very few breeds with which this country has secured an indisputable lead over the English bench. The English government imposes a six months' quarantine on all dogs entering the country, and that is usually fatal to the Japanese spaniel, which is by no means a robust dog.

On the whole, there is no serious dissension in toy dog circles, such as is disturbing the ranks of the terrier breeders. The idealist has a free hand and a clear field, comparatively speaking, for the toy dog is primarily and essentially but an added detail to the costume of the modern well-gowned woman. Weight is the only point on which there is pronounced disagreement, and none of the sane breeders are likely to go to extremes in producing dwarfs. An extension of the English minimum weight provision for Pekinese would do no harm, however, and it is quite possible that, in the near future, some similar regulation may be applied to all the toy spaniels and Poms.

LEARNING TO SWIM

BY HROLF WISBY

Illustrated with Photographs

IT is a mistake to assume that swimming is difficult to learn because most people learn but slowly and few swim well. There is a tribe of seaboard Indians in South America who regard swimming as more necessary than running and climbing and jumping. They live in the water. They have no teachers. They know what to do by instinct from infancy, the same as we know how to jump and run, and serve as living proof of the fact that swimming is not difficult.

Confidence is the first requisite. Without it you cannot navigate in the water, no matter how well you know the strokes, any more than a person can master a horse he is afraid of. I find that the most natural way to establish confidence is to show the beginner that the water is very anxious to be on good terms with him, that it is anxious to serve him in every possible manner; that it is a friend, not a foe, if he will but give the water a chance to show friendship. This can be demonstrated very quickly by teaching the floating position.

Floating means reclining on the water. So long as one's body is straightened out and the head is thrown well back in the water, the arms and legs will take care of themselves. One has nothing to do but maintain a straight back and submerge the head to the ears. In this position one cannot help but float. It is a physical impossibility for the body to drown so long as this position is maintained. But the minute you raise your head out of the water, or bend the body, or draw up the knees, down you go.

There is nothing strange in this, either. The human head weighs from twenty to twenty-five pounds, is composed of bone and tissue chiefly, and requires considerable immersion before the

point of flotation is reached. You cannot expect old Father Neptune to support that twenty-odd pounds unless you put it into the water, and neither can you expect him to keep that body of yours afloat when you suddenly decrease the area of flotation by doubling up, making a jack-knife out of yourself when you ought to resemble an arrow.

When you have acquired sufficient confidence to float, the moment has arrived for teaching you how to make progress in the water. The back stroke is the most easily acquired motion from the floating position and is the least fatiguing of any stroke in that the body is resting on the back all the time and there is no water pressure on the chest and the face. Consequently I prefer to teach this stroke first rather than the old-fashioned breast stroke which only serves to discourage the novice in that it requires him to keep the head clean out of the water, which in nine cases out of ten, fills him full of brine.

Here is the back stroke in the simplest form: From the floating position you raise your knees, not out of the water, but horizontally under the water until they are almost in line with the hip. Then you shove with the feet, and be sure you shove with the heels and not with the toes. This motion leaves your legs extended horizontally like a pair of scissors blades and propels you forward. The next motion is to bring the legs together, to close the scissors. This must be done, not jerkily or hurriedly, but with a smart, long pull on the water. There is a segment of water between your legs in the scissors position—a triangular body of water against which the inside of each leg, in closing together, exerts a pressure, which adds considerably to the forward motion. This completes the back stroke.

If you will execute these leg motions slowly and carefully—and anybody properly taught can learn this lesson inside of twenty minutes—you have learned two things, to wit: how to float and how to swim on your back. Do not under any circumstances “kick” the water or strike out with your toes. It is a shove—a long, tenacious, elastic stroke that the legs are called upon to deliver, and this shove loses half its driving power if the toes are whipped through the water instead of the heels. In forcing the heels through you afford the palms of the feet a purchase on the water, and it is with the palms that you pull. As most of the driving power at a swimmer’s disposal is in the legs—not in the arms as commonly believed—I am particularly careful in correcting the leg motions before I teach the arm motions. These are very easily acquired once you know the leg motions, but in swimming the back stroke it is not necessary to use the arms except when one desires greater speed. All you have to remember is to shove with the arms when you shove with your legs. The arms are extended almost in line with the shoulders. The palms of the hands should be parallel with the bottom of the tank—this is the correct position of the hands under any and all conditions that may arise while swimming or resting in the water.

The Secret of the Arm Stroke

The hands are swept through the water till the thumbs almost touch the hips. In so doing you must incline the palms slightly—so slightly as to be hardly perceptible in order to cause a proper pressure on the water. The easiest way to remember the secondary motion is to turn each thumb slightly upward before sweeping the hands through the water. The idea is not only to obtain a horizontal purchase on the water, but also to execute a slight vertical pressure simultaneously. By means of this combination position the body moves forward and slightly upward, which is quite desirable, in some cases, as this permits the swimmer to make progress with the head clear of the water. When only the horizontal pressure of the palm

is applied, together with the big shove, of course, and the vertical purchase is ignored, the head is forced under the water at each stroke, and the breathing must be timed to the stroke to maintain endurance.

We have learned thus far not to kick but to shove, not to toe it but to heel it, not to finger it but to palm it flush with the bottom, not to double up but to keep the body straightened out, not to whip the head out of the water while floating but to keep it thrown back with the ears on the water line, to keep the mouth shut and the eyes open; that is about all, but these things must be learned thoroughly before we can go any further.

The easiest motion to acquire after one has mastered the back stroke and the preliminary requirements as here set forth, is the side stroke. Starting from the floating attitude the body is thrown leisurely on the left side so that the left shoulder and hip point bottomward. In this position the body presents less resistance to the water than in the position required for the breast stroke, and as the left side of the head is resting upon the water—not raised out of it as in the breathing motion—less weight is carried by the swimmer and his body floats closer to the surface.

This is a very considerable advantage and facilitates the propelling of the body with less expenditure of effort than when the head is clean above the water and the body and legs stick deep under it as in the breast motion. Too much attention cannot be given the side position of the body. If you show a tendency to flop over on your back it is evidence that your body does not maintain the straight position specified.

Assuming that you have acquired the correct attitude and that you are resting on the left side, the propelling motions are as follows: Extend the left arm in line with the body and the shoulder. Do this slowly and with the palm of the hand pointed bottomward. This motion, slight as it may appear, furnishes a basis of flotation sufficient to maintain the head resting with the left cheek upon the water and prevents it from going under. In other words, the properly extended left arm enables you to breathe



ENGLISH OVER-ARM STROKE

Completion of the stroke; the feet are executing the "scissors" grip on the water; the left arm is extended palm downward to float the body while the right is being whipped into position for a renewal of the stroke.

freely, unhindered by the surrounding element, a decided advantage.

In breathing open the mouth wide—do not gasp—and inhale leisurely. It is a mistake to breathe through the nose; exhale through the nose. Time your breathing to your stroke, one breath for each stroke. Breathe slowly, stroke slowly. Don't struggle, take your time. Keep your eyes on the water and nowhere else. The progress you make will cause a miniature wake behind your chin and until your progress is smooth and even this wake is liable to slop back and fill your mouth, so be on the lookout for it. If you ship any water, nevertheless, don't swallow from sheer fright—simply spit it out.

At the same time that you extend the left arm and hands forward in line with the left shoulder, as described, swing your right arm from your hip—or rather from a point a few inches above and in front of your hip—through the water, palm bottomward, until the thumb

grazes your breast at a point below your chin in the neighborhood of your left collar-bone. In sweeping the right arm into this position take care to follow the body line as much as possible; the thumb of the right hand should almost touch the body as the arm is being pushed forward through the water. Properly executed this motion will disclose only the upper part of the right arm above water while the under arm is immersed to the elbow. The right arm and hand should be in position directly under the left chin immediately after the left hand has completed the forward reaching position.

Thus we have: 1, forward reach of left arm, palm down; 2, forward sweep of right under-arm, palm down. The arm stroke is completed by sweeping the right arm back through the water, palm down, to its starting place somewhere above the right hip. This should be a long, tugging stroke, not a jab.

Simultaneously with this arm-stroke occurs the leg motion. The legs are in



ENGLISH OVER-ARM STROKE

Beginning of the stroke right after breathing. Right arm and leg strokes have been delivered simultaneously. Position of feet shows that shove has been delivered with the palms of the feet and not with the toes.

line with the body; the left leg is parallel to the bottom, the right is flush with the surface. Move the right knee forward—not upward—until it is almost in line with the right hip. Move the left knee forward, also, but not quite so far. You are now in the proper position for delivering what most swimming teachers call the “kick,” but which I maintain is in reality a “shove,” as the sudden motion implied by the term kick avails but little in the water where only the long, easy, elastic stroking of a “shove” results in actual driving power.

Before you shove with the legs, however, remember that it is most important to shove with the heels and not with the toes. Women are particularly liable to form this habit at the start, and nothing could be more fallacious, as stroking with the toes prevents the proper purchase being taken on the water. When you present the heels in shoving, the palms of the feet are presented simultaneously and it is with the palms that you obtain a hold on the water. In shoving along with the toes you are no better off than a footless person kicking the brine with his stumps.

The “Scissors” Stroke

Now then, shove with the heels and see to it that the legs are extended, at the completion of the movement, like the legs of a pair of half-opened shears. This motion, together with the right under-arm stroke, is what propels you forward. The next motion, though but secondary, must not be lost sight of and no teacher should allow a pupil to slouch it, though this is only too frequently the case. When the legs are like a pair of shears this secondary motion consists in bringing the legs together—closing the shears. This action should be executed slowly and carefully with a long, smart pull on the water with the entire length of the straightened legs. In the scissors attitude the legs are separated by a segment of water. By pressing the legs against this segment, in closing the scissors, one obtains an extra forward shove which is a valuable addition to the speed of the completed “scissors grip.”

Summary of the side stroke:

Motion 1. Forward reach of left arm, palm down, in line with left shoulder.

Motion 2. Forward reach of right arm, palm down, under water, grazing the body, to a point below left cheek.

Motion 3. Simultaneously with motion 2 shove with left and right legs, presenting the heels, and extending legs on a plan with a half-opened pair of shears.

Motion 4. Scissors grip with legs, closing them smartly together with a long, tugging pull.

Motion 5. Simultaneously with motion 4, breath is inhaled, and motion 1 is repeated.

If you can learn the preceding three lessons and acquire proficiency in floating and negotiating the back and the side strokes within a single season, you are doing remarkably well and ought to be content with that. In swimming, as in other accomplishments, physical as well as mental, it is not how much you can learn in a short time but how thoroughly you can master what you learn. It is a very unwise thing to crowd a beginner. Over-teaching is almost as undesirable as misteaching. Even if you could actually learn all the standard strokes in a single season to the extent of being able to execute them correctly, I will venture to assert that that would in all probability not make you a thoroughly first-class swimmer.

If knowing the strokes were all that would be essential to master the art of natation, we could all learn the strokes on land in a swimming machine, but swimmers are not hatched that way any more than musicians and artists are created by the correspondence method. The strokes are to a swimmer what the finger exercises are to a musician—not a whit more. If the musician does not combine with his technical skill a certain measure of touch and rendition and originality of conception his performance is of no more consequence than the “canned” action of a player-piano. And, similarly, if a swimmer does not combine the art of navigating the body in the water with all that implies in the way of proper timing of the breath, change of stroke for different water for-

mation, and intuitive knowledge of piloting himself in rough water, handling himself in the surf, and adjusting his effort to distance, tide, and wave action, his performance will not be what nautical science recognizes as good, all-around swimming of the first order.

If you are a beginner I should advise you to be content with learning and absorbing the teaching laid down in the first three lessons—at least for your initial season. Persistent swimming should enable you to become proficient in the back and side strokes and get some real speed and endurance out of them during that time. It takes years and years to develop a truly first-class swimmer, either in the speed or the distance class, so there is no hurry, and by over-crowding yourself the first season you merely stunt your future progress and spoil your chances of perfection.

To those who know the side stroke already I append the following lessons, but I would advise novices not to attempt them.



SIDE STROKE

At time of breathing, showing forward reach of left arm and completion of right arm stroke. The arms are under water all the time with the exception of the right elbow.



AUSTRALIAN STROKE

Completion of stroke at point of breathing, showing the greatly extended position of the body, which is constantly submerged except at point of breathing.

The English over-arm stroke is acquired most readily after the side stroke. The leg motion is the same, except that the legs float a little closer to the surface of the water owing to the continuously submerged position of the head except while inhaling. Care must be taken in shoving the legs that they are not kicked out of the water, otherwise the leg action is the same. And so is the body position, except, as I have said, that the head is thrown forward and under the water with each stroke. This increases the basis of flotation; the water is made to carry and support the head all the time. Even when the inhalation is performed, only the right side of the face comes to the surface, and only for a couple of seconds.

The left arm motion is the same as in the side stroke. The right arm is quite differently handled, however. Instead of being swept forward through the water it is whipped out of it and takes purchase of the water at a point somewhat forward of the head—as far



TRUDGEON STROKE

Position when breathing. The body travels practically on the surface of the water, stomach and palms parallel with the bottom. In breathing the right shoulder is raised slightly out of the water, while the elbow is in the position shown in the picture.

as one's natural reach will allow. From this point the palm of the hand sweeps back, following the line of the body as close to it as possible until the hip is reached—that's the stroke.

In executing this motion the head will be forced sideways to the surface just as the raised elbow is in line with the shoulder—this is the psychological moment for breathing. The forward reaching motion of this stroke should be negotiated not with a stiff arm, as most swimmers do, but with a bended and completely relaxed arm, the fingers of the hand touching the surface of the water. There must be no splashing when the palm digs in and takes purchase on the water. The hand must grip the water with the clear-cut motion of a spade being dug into clay.

The trudgeon stroke is considerably speedier, especially in a fairly smooth sea, than the over-arm. The body is thrown flat on the stomach with the face

buried in the water. The idea is to skim along, one might almost say, upon the surface of the water, with just enough water around the legs to acquire a purchase. The leg motions are the same as in the back stroke, but, of course, the position is reversed and the toes and knees are pointing bottomward, not upward as in the back stroke. It is the same scissors shove and grip on the water with the heels.

The arms are flung forward from the hips alternately, and entirely above the water, the fingers barely grazing the surface. As the left hand reaches and takes purchase the scissors grip of the legs is performed, as the right hand reach is made the scissors shove of the legs is given. Breathing is performed only when the right elbow swings back over the head, which is turned around on the side at that moment, but the body must not be turned with the head.

It requires a great deal of practice to get any speed out of the trudgeon motion, and it is even harder to acquire en-



CRAWL STROKE

Position at time of breathing, showing forward reach of left arm and completion of right arm jab. The leg motion is from the knee down in a vertical position.

duration at it chiefly because the weight of the body is pressed against the water, which in turn interferes notably with the action of the lungs. If you see a trudgeon swimmer with a wiggling motion of the body and a great splashing of hands, it is a sign that he has been improperly taught.

The more difficult crawl and the even more perplexing Australian specialty strokes I consider of little use to teach in a paper intended chiefly for beginners. The breast-stroke, which most old-fashioned instructors teach first, I am inclined to place last. I never saw a swimmer who could master the side and the over-arm strokes that had any use for it except, perhaps, for a change. It is one of the slowest and most discouraging strokes for a beginner to learn, and there is no good reason for teaching it first, if at all.

A brief outline of the motion will suffice, I imagine. The leg motions are the same as in the trudgeon, but the legs are immersed deeply into the water. The swimmer is half standing and half lying in the water on his stomach and breast. At the same time as the leg

shove, both arms are swept forward through the water simultaneously. The hands are gathered, so that the thumbs touch and your wrists touch the breast. The hands are shoved forward in line with the head, and when the reach is completed the palms are slightly inclined, so as to effect a better purchase, and the hands are swept back in a semi-circle until the arms are in line with the shoulders. Then they are whipped into the starting position under the breast, and the palms must be downward when this latter motion is negotiated, as otherwise the progress of the swimmer will be impeded.

The arm and the leg motions occur together, and the head is held right out of the water. The breathing can be performed through the nose, as this stroke is very slow and makes but little demand on the swimmer's lung power. Nevertheless, it is a rather discouraging stroke to teach a novice, as it fills him up with brine and compels him to carry upward to twenty-five pounds extra weight in the shape of his head, which is out of the water continuously and mighty little use in this position.





Photograph by W. B. Paterson, Dayton, O.

ON THE EIGHTEENTH GREEN



“AND DOWN THROUGH THAT HEART-BREAKIN’ SLOSH OF WEATHER
COMES JIMMY NORTH ONE DAY”

THE GIRL AT HUGHIE’S

BY K. J. GEORGE

Illustrated by Neal A. Truslow

I THINK I’ll let Billy Hoyt tell this story. He was there and saw it all, and, like the old Roman guy whose name I’ve forgotten, was a part of it. In a short but open-eyed life, Billy has seen much of the underside of things, and he is no fool. A chance bit of gossip, carelessly repeated, roused him to protest.

“Hey, Kid,” said he, “what do you know about war?” Which is Billy’s way of politely suggesting that you don’t

know what you are talking about. “Who told you about Jimmy North, anyway? Guess I’d better tell you that story and let you get it straight, ’cause if you go shooting with me this fall you’ll likely meet North himself.

“In the first place, Kid, put this under your hat; a man don’t go under no further than he’s a mind to—whether it’s for a woman or a game, or any other of the punk excuses his friends deal you. And Jimmy North was all man.

"He hit these parts fresh from God's country; a young fellow with his way to make, who'd grown too big for the East and came West to play his game. That was the way he sized it up, games being serious matters to him yet. Life was a game, and he was playing it to win. He and I kind of natural drifted together down there at Baker. Jimmy had come down with the new railroad that was climbin' up through the canyon to the wheat lands on top of the mountain an' I was shovel-boss in the first camp on the edge of town.

"She was a wide old town then all right, what with the grain-haulers comin' down off the prairie, an' the rail-roaders comin' in from camp every payday with their little rolls, an' there was quite a bit of pickin' for the easy money sharps in the seven joints the little burg carried. The biggest an' toughest of these was Hughie McConnell's, an' there was where Jimmie an' I used to hang out mostly when we went after a little harmless excitement—buckin' the wheel or the Black Jack games, or just standin' and lookin' on.

"You see, I liked Jimmy fine from the go-off. Big an' straight an' square he was, an' when he liked you he liked you hard, an' what he wanted he took, or at least made a big try for, whether it was a friend or a wife or a jack-pot.

"'What I want, I want,' says he once—'an' if I don't walk on anyone's toes getting it, I'll have it or go to hell a trying.'

"'A hard youngster to cross,' I said then, an' I say so now.

"It was like that when he heard that old man Johns was for selling his ranch on the mountain. The old man had got into trouble over a slipped brand or two and was willing to sell cheap. Jimmy threw up his job (had a row with his boss over it and then borrowed five thousand from the same boss), bought the place and transplanted himself with his suit-case, his pet books and his pictures of his home folks to his new home on the hill, ten miles from anywhere, with a half-breed for a helper an' only chum—day in, day out, week after week, world without end, amen!

"Well, he made it stick. I don't

know much about ranchin', but I do know that in two months' time Jimmy comes down off the hill, brown as his saddle leather an' as tough, makes a first payment to the boss, an' he an' I slips into Hughie's for a talk. An' right there, as you just now observed, was where he met the girl and the fun begins.

"You see, while he'd been gone, Hughie'd got in a bunch of dance hall girls from Spokane and Miles City an' elsewhere and started a dance hall. Every dance called for a drink—two bits a throw for a couple of little snits of beer—an' the girls got their ten cents out of it. So the house made money over the bar all right. Well, they were a hard lot, the girls, but this Aileen girl was some different. Maybe it was the way she dressed, maybe the way she spoke—but, anyhow, she had the pick of the dances when the boys were out on payday.

"Jimmy saw her first thing, an' you couldn't blame him, for she was sure a good looker. But he was shy of that crowd, an' nothing might have happened if the girl hadn't seen him too—he was half a head over the rest of the bunch—and come up an' asked him for a dance, very quiet an' pretty. Well, he gave it to her, of course. Bein' his own man an' havin' the price in his pocket, that was to be expected, but that he should spend the better half of an hour chinning with her over by the end of the bar afterward wasn't accordin' to my reckonin'. And that night, out of my innocence, I told him to keep away from the bunch.

"'You're a good fellow, Billy,' says he, 'but don't you worry about me or the girl either.' I hadn't mentioned any girl in particular, but I didn't say anything back at him.

"He went back up the canyon road next morning, but he came in to say good-bye to me before he went. 'I may be down again before long,' says he; 'it's damn lonesome up there, now that there's nothin' much doin'—an'—' he added, thoughtful like—'it's goin' to be damn lonesomer after—*this!*'

"Next day she starts in to rain, an' for a week she comes down steady, till



“ NIGHT AFTER NIGHT JIMMY NORTH TURNED THE CARDS OR SPUN
THE WHEEL ”

the grade was ankle deep in mud, the bottom dropped out of the road, an' the canyon creek was up an' aroarin', full fed by the rains in the mountains. An' down through that heart-breakin' slosh of weather comes Jimmy North one day, splashed to the eyes with mud an' his pony caked like a schoolhouse door-mat.

He'd gone clean stale, he said, on the mountain with no one but Injun Joe to talk to, an' of course it was him an' me for Hughie's an' the bright lights that night, though Jimmy put up a fine bluff of bein' lukewarm on the subject of where we'd go to play.

“Aileen saw us as we come in the

door—an' she hadn't forgot Jimmy, I guess, any more than he had her. Any-way they were off for the first waltz together, while I, bein' just up to crow-hoppin' through a two-step an' nothin' more, ornaments a beer barrel an' waits for 'em to come my way, thinkin' as I watched 'em that they teamed up together pretty good, for all the girl was only a dance hall girl at the best of it.

"After the dance they come around to me all right, Aileen draggin' a little on Jimmie's arm and lookin' willin' enough for a rest. Something was wrong with the girl that night, an' she wasn't a bit chipper, but sat around with us rather than get out an' rustle dances, an' we made a three cornered talk fest of it.

"I remember one of the girls blowin' in from the outside. She was a dowdy all right—even I could see that her hat wasn't right an' her coat an' skirt didn't match up, an' I grinned at her an' said to Jimmy that she looked like a sure enough farmer. 'Bet she's a Palouser,' says I—'just off the farm. Ain't I right, Kiddo?'

"'Perhaps,' Aileen answers. 'What of it? My folks are farmers—an' God knows I ain't ashamed of them!'

"'No?' I says—not thinkin' much, bein' in fact busy with my pipe—an' maybe they're not ashamed of you all right—if they know?'

"Yes, as bald as that. You see, she was only a dance hall girl—an' I was a pretty rough youngster, I guess. I heard her breath catch sharp, an'—'Good Lord, Billy!' says North husky-like. I looked up then from my pipe, an' the girl was cryin' soft in the bend of her arm, her free hand clenched till the knuckles showed white. Jimmy steps between her an' the open bar-room door, an' right away my hands an' feet began to feel outrageous big an' all of me a whole lot in the way—like you do when you've made a woman cry. So to help things out, I spoke up again.

"'What's the use of cryin', Kid?' I says. 'It's too late for that now.'

"'For God's sake, shut up,' cuts in North, but Aileen throws back her head an' looks at him straight—not at me at all. 'Yes,' she says, 'he's right. It's too late—even for cryin'!'

"Even then, you see, though he hadn't said a word to her so far, she'd begun her long argument with him.

"Then she drifted out to the crowd, an' Jimmy an' I came away for that night. But there was something in North's face that set my brains to workin' overtime. I had my own idea—an idea that is most men's, an' that I knew was North's—of what a woman should and should not be. An' so I sets to work to sound the lad, an' as a feeler kind o' airs my own views concernin' Aileen an' her kind. But I didn't get far, nor learn enough to hurt me.

"'Right you are, Billy,' was all North had to say, with that sort of twisty smile of his. 'A man is always right who expects a woman to be better than he is himself. But—what if she hasn't been?'

"And I had to let it go at that.

"Five days North was in town that trip, for the sky kept fallin' in big chunks, an' there wasn't any use his climbin' back up the canyon in all that ruction. An' there bein' nothin' else doin', it was Hughie's place for us every night, as it was, more's the pity, for most of the boys. An' Jimmy made expenses off the games, for he had the luck an' the head to match. 'I ought to cut out the gamblin',' he says one night—'I really can't afford to play.'

"'Hell, man,' says Hughie—'you can't afford not to. Stay with it, boy, while it's with you—I don't mind. It's good for business.'

"But Jimmy cashes in an' goes off for a two-step with Aileen. Seemed like they were always dancin', those two—or more often talkin' soft an' earnest in the corner back of the bar, when Jimmy an' I weren't buckin' the tiger.

"You'd have thought a wooden Indian would have got wise, but me—I had it set too hard in my nut what North's kind was—his mother and his sisters that I'd seen the pictures of—and what the girl's kind was. So that it come to me hard an' straight one evenin' in my room when North, sittin' on the edge of the bed an' swingin' one foot while he unlaced the boot on the other, says, very casual an' quiet: 'Billy, I want that girl!'

"'What girl?' I asks, knowin' all along, for I wasn't that much of a fool, but kinda sparrin' for time, the way you will when your breath's flattened out o' you.

"'I don't know but one,' says he, grinnin'—'the girl at Hughie's.'

"'Well, take her then,' I snapped at

time had come for Jimmy to choose between his sweetheart an' his friend—an' I wanted Jimmy. But I had once in a while suspected that Jimmy suspected the fool slushiness of the heart under my bristles. An' after awhile his hand slid across to my knee, an'—'Billy,' he said, 'I was curious to know what my friends



"'AILEEN TRIED TO GET HIM TO CHUCK THE PLACE, BUT IT WAS THE SAME THING EACH TIME—'WHEN I NEEDN'T GO ALONE,' HE'D SAY'"

him, sore with the lad, an' with myself too for bein' such a blind bat.

"'It was my tone, an' not the words I suppose—I was a rough youngster, as I said—that made Jimmy's eyes take on the sort of nasty, black look they'd get before he knocked a man down.

"'You don't understand, I guess,' he says. 'I want her to be good enough to me to marry me.'

"'Then, damn it all,' I snaps again, 'talk to *her* about it. She ain't mine.'

"'He didn't say anything for a long time then, an' I didn't look at him—sort of scared myself. For I knew the

would do when they heard. Will it be this way with them all, I wonder?' An' I could see how much he was hurt.

"'Oh, Jimmy North,' I told him then, if I could I'd keep you from doin' this thing. But since I can't, why go ahead an' count me in. What's good enough for you is just as good for me, I reckon. Have you spoken to Aileen yet?"

"'Not yet,' he answers. An' I don't know what the feelin' is you have just before you ask a girl to take you—but whatever it is Jimmy had it strong. You saw it in his eyes, that didn't know

they was smilin'. 'But to-night—to-night, I'll see my girl!' he says. 'And if you don't mind, old sport, let me go alone to-night to Hughie's.'

"'Right you are,' I told him; 'play your own game, but remember little Willy will be sittin' up to catch the latest bulletin.'

"So, havin' tried my best to play old Public Opinion, smug an' shocked an' all, an' backed down because he was Jimmy, I waited at home alone, while Jimmy went alone to Hughie's. Late in the night he came back and opened the door softly, but I was awake, an'—'When?' I asked.

"'God knows,' he answered, an' began to pull off his boots. 'Billy,' he said, 'I've been turned down hard. An' the books are right—it hurts.'

"'If you said I was surprised you'd be puttin' the case mild. 'Turned down?' I yells, sittin' up. 'Say that again!'

"North looks at me with a kind of wry smile. 'Oh, yes,' he says, 'we both thought the same, of course. Any man would, who could offer respectability to a girl at Hughie's. But my noble offer was not accepted with thanks. You see, we left out of our reckoning the little factor called—lovin'!'

"'I thought I saw then an' I was glad—for though I'd told him to count me in, all that night I'd been unable to shake loose from the thought of the lad's folks, that he'd told me was so particular about church on Sundays.

"'So,' says I, tryin' to be humorous about it, 'the lady loves another.'

"'No,' says North slowly, 'the trouble seems to be that she loves me!'

"'I was up in the air then an' I reached for my pipe.

"'Say it slower, Kid,' I implores, 'an' in words of one syllable, I'm not wise in the ways a woman loves in.'

"'No?' says he. 'Well, neither was I. I am now. I knew she loved me, an' I knew she wanted to get away from Hughie an' his kind—had wanted to'—his fists clenched an' unclenched as he said it—'ever since she got pushed in among them. That's why I wasn't expectin'—what she did to-night. But you see, Billy,' he laughed a little, with no fun in him, 'my girl agrees with the

rest of you—that she's no fit wife for a pure white soul like me. Says she loves me too well to cripple me—*cripple* is her word, I think—an' talks of my mother an' my sisters an' my friends.'

"'Then, if you ask me—she talks horse sense,' I said. I had never been in love—then. It was good of Jimmy to bear with me.

"'I'm not askin' you,' he fires back. 'Nor yet my mother nor my sisters. I'm playin' my own game. I need this woman—an' by heaven—by heaven,' says Jimmy North, very quiet, 'I'll have her, Billy!' An' he dropped the boot he'd been holdin' with a bang.

"'But what can you do?' I asked, an' thought it was a question he couldn't answer. 'It ain't your play. It's up to the girl, I reckon, an' in this year of our Lord you can't very well kidnap her.'

"'No,' he spoke as if he'd considered all that before. 'No, I can't kidnap her, an' it's up to her, as you say. But if she won't look up, she will, perhaps, look down.' And suddenly he laughed again, more as if he meant it this time, for wasn't he playing a game and didn't the game always amuse him? But when I tried to get him to loosen up on a few details he shut up like a clam, an' rolled in without another word.

"'I had a hunch that he wasn't sleepin' like he used to, though—just lyin' quiet for fear of wakin' me an' starin' an' starin' in the dark at the big sober eyes of the girl at Hughie's. At least that's what I was doin' most of what was left of the night—an' someway, the eyes rested sort of reproachful on me. But you see I was Public Opinion still, an' I couldn't really help lookin' at her the way I did.

"'In the mornin' Jimmy climbs his cayuse an' hits the trail for the ranch, sayin' he'd be back at the week's end for another go. True for him, he was back as he said, come that day week, an' went to Hughie's alone again. An' when he come into my room that night, I was Johnny on the spot to ask, 'What luck, old pal?'

"'Nothin' doin',' says he, as cheerful as you please. 'But the game's young yet an' here's where I make a new play. Will you double up for keeps on this

room, Billy? I start in turning Black Jack for Hughie to-morrow.'

"I gawped at him with my mouth pretty wide open, I reckon, for he moved too blame fast for my intellect. He grinned that cornerwise grin of his an' was merciful enough not to keep me waitin' for an explanation. 'I'm goin' to have my girl, you see, Billy, an' if she won't marry an honest man, maybe she'll see her way clear to marryin' a tin-horn.'

"I managed to shut my mouth then. All at once I *saw!*

"The next night, which was his first on the job, I went down to Hughie's to see him. And Aileen called me into Hughie's office. Say, after that night I never doubted that she loved him all a *good* woman could. She wanted I should haul him out of that an' show him what a hopeless fool he was makin' of himself. But I'd come to the end of my rope an' I told her so.

"My dear girl,' I says, 'there's only one person on the top side of this earth can make Jimmy North pull up now, an' you're it. Marry him. For the Lord's sake, marry him, an' take him out of this!'

"To think that I—old Public Opinion, big as life—should be implorin' a girl at Hughie's to marry Jimmy North for his soul's good! Even the girl smiled—a little tired smile that didn't last but a second. But she shook her head.

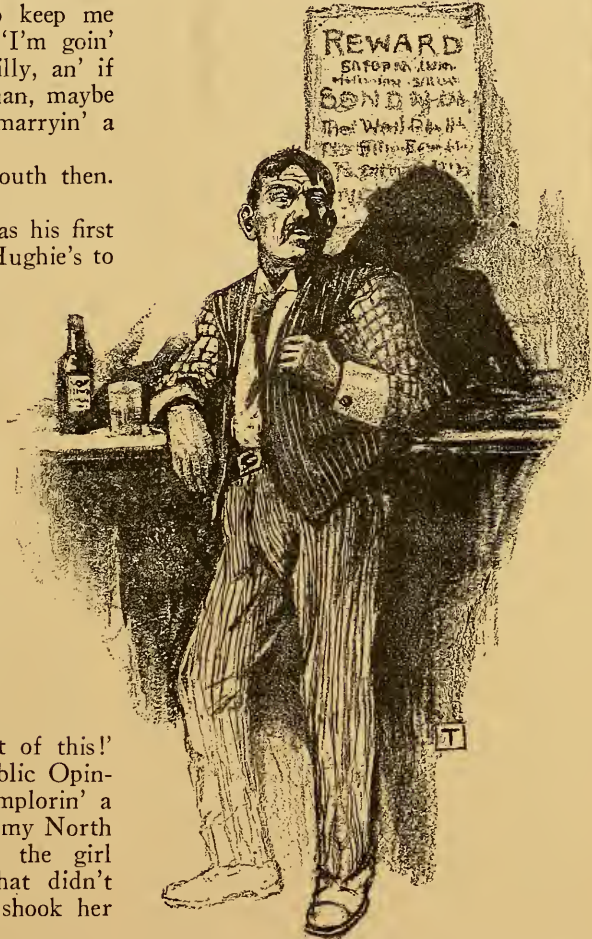
"No,' said she, 'that would be worst of all. He must not marry me.'

"She caught her breath on the words, an' all at once I saw, as I suppose North had seen all along, how very little and helpless and kiddish she was. Her hands doubled an' undoubled on themselves in a troubled way, an'—'Oh, Billy,' she says, 'I'm only sure of that—he mustn't marry me! An' I'm not sure of any-thing else in all the world. If—going out—would do any good—'

"It wouldn't,' I cuts in sharply. 'It would only send him lower yet—forgettin'!

"I know that,' she agrees; 'I've thought that all out so many times. An' hidin' from him—'

"He'd find you now,' I told her, 'if you hid in hell.'



"HUGHIE HAD A FLOOR MANAGER—A BIG, SQUINT-EYED BRUTE, WITH ABOUT AS MUCH SOUL IN HIM AS A COYOTE"

"I know,' she says again. An' then she threw back her head an' shook it hard. 'It's all dark to me, Billy,' she says, 'except—that he must never marry me!'

"It began to dawn upon me that if North was hard, here was one well nigh as hard to match him. I didn't see the end of things.

"Night after night Jimmy North

turned the cards or spun the wheel, an' it's a fact Hughie never had a better man for the place. He didn't like the work, for he was no easy money guy, was North, but one o' the kind made a purpose to work their way. He told me once, when he was feelin' confidential, which wasn't none too often now, that it gave him a wrench every time he took a roll away from some fool Dago that had sweated for it on the dump for a month.

"For all that, he wouldn't stand for any kickin' across the tables, an' when any gazabo blew in with a real wad an' a rep for plungin', it was generally Jimmy that got the chance at him. An' I think those were the only times when he was part way happy, when he was finessin' some Smart Aleck with more dough than brains into backin' three queens against his club flush in a fair an' square game o' draw.

"An' so the thing run on for full three months, an' I begun to worry for sure. I could see an' the girl could see that it was crushin' the life an' soul out of Jimmy North.

"But—'I can't, Billy,' she'd say hopelessly, when I'd try to make her see things different. 'If you could know—if you could only know, Billy, how the girl I was would hate me forever if the girl I am married him. He came too late, Billy'— an' then her face would go into the bend of her arm, an' her shoulders would huddle an' shake, an' there was no more reasonin' with her than with him. Of course, you've heard, havin' heard what you did, of how she roped a good man in—well, I *know*. An' I'll bet I swore harder an' more frequent in those three months—an' to less purpose—than in all the rest of a fairly fluent life.

"As I said, it was crushin' the very soul out of Jimmy. He wouldn't mix with the tin-horn gang to any extent, an' he couldn't mix with the others. The boys didn't cut him out flat—I saw to that. There wasn't many in those days that cared to tie into me without some good reason. But there wasn't the same easy feelin' there used to be. They weren't sure of him. I don't know that you could blame them.

"So North was a man by himself, except for me, an' it hurt him. The work told on him, too; all the good color went out of his face, an' I've seen him many a time lookin' at his hands that were growin' white an' thin like a card sharp's will, you know—an' then grabbin' hold of something hard an' solid like the ax I kept in my room to split kindlin', an' heftin' it—kind of longin', it seemed, to get back an' do a good day's work again.

"An' he was like a bear with a sore head, too. Twice toward the end his temper broke out like a flash of powder, an' he struck out before he thought, so that men began to be leary of him an' to sing small when he was around, an' that hurt, too, I could see. Often, I knew, Aileen tried to get him to chuck the place, but it was the same thing each time—'When I needn't go alone,' he'd say. And the girl would go silent an' shake her head in that helpless, stubborn little way she had.

"How long they might have gone on wearin' each other out I can't say. But something happened at last that changed the whole show.

"Hughie had a floor manager—a big, squint-eyed brute, with about as much soul in him as a coyote—who got the situation sized up lopsided. The rest of the bunch had a pretty shrewd notion how things stood an' kept their hooks off, but not this guy. He didn't like North for a cent anyway, an' he did like the girl, so he was all for buttin' in. Of course the girl wouldn't have anything to do with him, an' that made it worse. He went out of his way to spite her. An' North watched him, narrow-eyed, but said nothing, for fear of harming Aileen, I guess.

"But, I, seeing it all from the outside, told Hughie that some time his crack card man would lay his floor boss out so hard he'd forget to wake up. Hughie only laughed an' said North knew better than to start anything in that house. All the same I wasn't very far from the joint any night after that, so as to be good an' handy in case I was needed.

"Well, one night they were dancin' a Big John, with six couples on the floor

at once an' a wild crowd in the house. North had left the table to take a hand for once, an' this same floor boss was in the dance, too. The girl wouldn't take his hand in the circle, which was a foolish thing to do an' childish, but he had plagued her a bit too much that night. He was sore an' not too sober, an' he struck her, open-handed, not hard, perhaps not in earnest—but still struck her—an' Jimmy stepped in an' floored him.

"The fellow scrambled up quick, reachin' for his gun, an' while the dancers crowd away to left an' right, North strung him out cold with a beer bottle.

"It wasn't a pretty sight. A beer bottle can make a dirty smash, an' there was a lot of blood on the dance hall floor. Some of the girls squealed an' one of them fainted, but Jimmy stood there with the broken bottle neck still in his hand an' his lips drawn tight and workin' against his teeth, till Hughie an' I came an' drew him away to the office. There the girl followed us, slippin' into the room like a little white ghost behind us.

"Hughie would have had North leave town before the marshal could get to him an' had a roll of bills in his hand to give him, but the boy looks at the girl an' shakes his head.

"I can't go, Hughie,' he says; 'guess I'll tough it out. He's not bad hurt, is he?'

"I jammed an elbow into Hughie's ribs an' answers for him.

"He's like to die, Jimmy,' I says solemnly. An' I lied like a pirate, for the guy was havin' his head tied up there in the back room then. But at the word the girl drops into the desk chair, puts her head on her two arms, an' begins to cry in big, chokin' sobs, for the spirit was broken in her.

"North jumped to her an' put his hand on her shoulder.

"Why, sweetheart,' he said with his crooked smile, 'don't cry so. It's all in the game. Maybe this was the way out after all, dear. Not what I planned when things began between us, but it

would have come to this before long, I think.'

"Then I had a hunch an' I got the girl out of the room an' tackled her alone. I spoke plain, for time was short. There was no tellin' when the marshal would come for Jimmy.

"Aileen,' I says, 'listen to me. I don't think that fellow will die. But sooner or later, so sure as Jimmy North lives this life, he will have a life to answer for, for it makes his kind hard an' bitter. You're the only one that can take him out of this. You can make Jimmy North what he was—or you can break him. You've tried one way, an' you see where it's leadin'. Now take a chance on the other way. Marry him an' take him out of this to-night—back to the ranch. Whatever comes of it, it can't be worse than this. Do you understand now?'

"The girl nodded dumbly. 'Yes,' she said after a moment. 'Come back in with me, Billy.'

"Once in she went straight to North. 'Will you go if I go with you, Jimmy?' she asked. And Jimmy—well, you couldn't expect him to think of Hughie an' me—Jimmy lifted her up in both arms.

"It's summer on the ranch, girl,' he cried. 'An' Injun Joe says there's a blue bird built its nest under the eaves.'

"That was all he said—an' Hughie an' me tryin' hard not to listen!

"In fact, that was all there was to it. We rode ten miles that night to the mission for a priest, and in the morning Jimmy and his wife rode back up the canyon to the ranch.

"So you see it's the same story you heard—an' will hear often I suppose before Jimmie's race for governor is over. But I saw the thing happen. An' I know Jimmie's wife, as I hope you will some day—a little woman with big, sober eyes, that don't smile often unless they rest on Jimmie—a good woman. He was right—he needed her. He knew the woman he wanted an' he looked at her through his own eyes—that's all. But an ugly bit of gossip crops up now an' then."

THE CALM-WEATHER SAIL BOAT

BY LAWRENCE LA RUE

SOME extreme sentimentalists will say that the marine motor has transformed the surfaces of our lakes and rivers from a scene of picturesque beauty and indolent ease to one of hurry and bustle in which scurrying or chugging power boats have supplanted the once-universal skiff, the silent canoe, and the graceful sailing craft. They will say that rowing, or sculling, has become a lost art, that the paddle is used only as an emergency aid for a disabled motor boat, and that sails have been converted into canvas covers, spray hoods, and tops for the now ever-present power craft. "Bore," "stroke," and "compression" are the terms heard now, they think, instead of "reach," "tack," and "jibe," while "How many gallons does her tank hold?" is the question that replaces the old "How many yards does she carry?"

These opinions may be justified in certain sections where the power boat is still so much of a novelty that every lover of the water thinks he must become the owner of a motor craft, but far from being an enemy of sailing, the marine motor bids fair so to increase the popularity of this "sport of sports" that canvas will be sold at a premium and the radius of a sailing cruise so extended that new fields and possibilities will be opened far beyond the visions and expectations of the most enthusiastic vacationist.

With a little gasoline engine, commonly known as a "kicker," installed in the sail boat, the craft may forge its way against tide or current that would give untold trouble were wind alone relied upon, harbors can be made without the necessity of waiting for a favoring breeze or a "tow," storms can be weathered safely in an open sea, and canals can be navigated at a speed that would

cause the old tow-path mules to prick up their ears with astonishment and kick up their legs with the desire to avenge a wounded pride. If the cruise is to be long and the time short, so that a regular schedule must be maintained, the auxiliary power may be used to supplement the wind—if the craft is riding on an even keel—and in days of absolute calm, a consistent and regular, if slow, speed may be maintained.

When installing a "kicker" it must not be forgotten, first of all, that the craft is essentially a sail boat, and consequently none of its sailing qualities should be sacrificed to the auxiliary power. To be sure, a well designed racing yacht of fine lines could not be provided with even small power without some reduction in her original sailing speed, but the average cruiser, sloop, or "cat" will suffer but very little from the proper installation of the correct type and size of motor. As the installation of power in a sail boat is only for auxiliary purposes, the question of speed should receive but secondary consideration.

A sail boat model can never be converted into a speedy power craft hull, and if the anxious owner can once get the idea out of his head that it is "miles per hour" that he desires when he installs a "kicker," his task will be greatly simplified and cheapened. Six miles an hour is plenty of speed for an auxiliary sail boat of average size, and if a speed of eight or nine miles can be obtained without too great a sacrifice of cockpit space, the owner may be considered lucky in possessing a hull that so readily lends itself to power craft purposes.

In general, it may be said that more than double the power would be required to drive the craft at eight miles an hour than would be found necessary to obtain a speed of six miles, and as space on an

ordinary sail boat is valuable, the increase in engine room would scarcely be warranted. Of course, if provision is made for auxiliary power when the craft is built, an engine of almost any size, within reasonable limits, may be installed, but the ordinary sail boat furnishes only a limited amount of room in which a "kicker" can be placed.

In view of the fact that the power and speed of the boat are to be subordinated to roominess and interior arrangement, the selection of the proper size and type of motor that is to form the "kicker" becomes an important subject. It is for this kind of work that the slow-speed, "heavy-duty" motor is particularly valuable, and its greater weight, which precludes its use in racing or semi-speed boats, does not form a sufficient objection to overcome its many advantages as auxiliary power in a sail boat. Such a motor can be obtained in greater horsepowers per cylinder than can the lighter, high-speed engines, and this, in itself, constitutes an important point in the selection of the proper power plant for the sail boat.

Six or eight horsepower is a size of "kicker" often used, and while this can be obtained in a single cylinder in the slow-speed type, the same power would probably be distributed over two or three cylinders in a motor of the lighter and higher-speed design. To be sure, high-speed, racing motors of eight, ten, and even higher, horsepower per cylinder will be found in many a boat, but these are parts of multi-cylinder engines developing a horsepower running well into the hundreds and represent a type of power plant totally different from that suitable as a "kicker."

The most convenient out-of-the-way place in which auxiliary power may be installed in a small sloop or "cat" is the 'tween-deck space aft of the cockpit. This space between the keel and the stern deck will probably have been used as a locker, reached by a door opening from the cockpit, and in this case but very little of the cockpit lining need be demolished. With the door closed, it would scarcely be noticed that the craft was equipped with auxiliary power, but of course the compartment should not be

so tightly sealed when the motor is in operation.

The distance between the engine bed and the stern deck above will, to a certain extent, determine the size and type of motor that can be installed. The slow-speed, heavy-duty, single-cylinder motor will have a comparatively long stroke, and consequently the entire engine will set somewhat higher than will one of the multi-cylinder type. This stern compartment will, at its best, be rather difficult of access, however, and consequently the simplest and least complicated design of power plant should be used. Thus the single-cylinder motor, restricted in power to a size that will easily fit the 'tween-deck space, will probably constitute the most satisfactory "kicker" for the ordinary small sloop or cat boat. Whether this should be of the two or the four-cycle type depends upon the size of the motor to be installed and the amount of money that the owner is willing to invest in the conversion of his craft.

The Best Type of Motor

Single-cylinder, two-cycle motors of five, six, and even higher, horsepowers give satisfactory service and are cheaper in initial cost than are their four-cycle cousins. The fuel consumption of the latter is less for a given power, however, and it is probable that in sizes above eight horsepower per cylinder the saving in the cost of gasoline would warrant the greater investment. If it is intended to use the auxiliary power only in emergencies, however, the two-cycle motor will be the better, regardless of its size, for the depreciation will be less and there will be fewer parts to be kept in running condition.

Even a single-cylinder, two-cycle motor, and one used but infrequently, will require occasional attention, and it is well to make the removable bulkhead or door leading from the engine compartment into the cockpit of sufficient size to enable the engine to be reached easily. If the deck above the motor is solid, the cylinder should not set so high but that a spark plug may be removed or a terminal changed. With any except the

smallest type of motor, however, there will not be room between the keel and stern deck to allow the removal of a cylinder for the inspection or repair of piston rings, and the only method in this case is to loosen the engine from its bed and carry it forward to the open cockpit space where all parts may be reached easily.

For this reason, it is probably the best plan to cut an opening in the stern deck above the motor of sufficient size to allow the removal of the cylinder, and thus the "spring overhauling" will not demand the separation of the engine from its foundation. A trap door may cover this opening, but some form of watertight lapping should be used to render the motor as well protected from rain and heavy seas as though it were resting under a thoroughly-caulked deck.

Placing the Motor

If the cockpit is sufficiently large, the motor may be located in the stern portion where it will be much more accessible than would be the case were it placed 'tween decks. As the craft in which the motor is located is primarily a sail boat, however, some provision should be made for covering over the power plant when it is not in use. This may best be done by constructing a box-like framework which, when covered, will completely enclose the motor.

The top, sides, and end should be held in place by means of hooks or buttons so that any portion may be removed to reach the desired part of the motor. This framework may be made to include only the motor proper, in which case a smaller supplementary box should be used to enclose the flywheel, which may thus be covered, even when the motor is in operation.

Even though the motor is used only as auxiliary power, it will not belie its appellation of "kicker" unless the foundation is made sufficiently large and heavy. If the "kicks" are concentrated on a few ribs and planks of the hull, the boat will shake and tremble when under her own power as much as though she were a hundred-horsepower racer, and consequently the vibrations

should be distributed over as large an area as possible. "Two-by-sixes," set on edge, are none too heavy for the main framework of the foundation, and these should be placed parallel with the keel and each bolted through alternate ribs for a distance of at least five or six feet.

The cross members on which the direct weight of the motor is carried should be bolted or screwed to these parallel pieces. Thus the weight and vibrations of the motor, instead of being concentrated directly under its base, will be distributed to every rib on which the parallel members rest, and consequently not only will the boat run more smoothly under power, but its length of life will be increased as well.

If the sail boat has the typical "fantail" stern, the propeller shaft may pass directly through the "squared end" of the keel, and no "log" will be needed. In this case, the stuffing box should be located on the outboard end of the shaft, but as boats of the type in question are generally of the smaller and lighter class, no difficulty should be experienced in raising the stern out of water when it is desired to repack or tighten this stuffing box. Cat boats having a square stern and exterior rudder post cannot be "converted" in this manner, for the propeller and shaft projection would necessitate the removal of the rudder.

In boats of this type, as well as in all other classes in which the keel does not run straight, the shaft may pierce the keel at a slight angle and the propeller revolve forward of the extreme stern. If the motor is located sufficiently far forward of the point at which the shaft pierces the keel, the log may be placed inside, thus allowing the use of an inboard stuffing box which may be repacked and adjusted without the necessity of raising the stern of the boat from the water. If the engine is placed so near to the stern that sufficient room is not allowed for this design, the outboard log and stuffing box must be used, but it is not probable that it will be necessary to renew the packing more than once during a season.

The intake pipe for the circulating water may be let into the bottom plank near the keel at a point under the pump,

while the discharge may be made through the muffler. This discharge jacket water will be turned into steam by the hot gases in the muffler, but the vapor will not be blown aboard except by a strong following wind, in which case, of course, the motor would not be needed. The exhaust pipe should leave the hull above the water line, and it is better that it should be led to the extreme stern of the boat. If necessary, however, the exhaust may be discharged directly through the side opposite the motor, but in either case the pipe should be inclined slightly downward from the engine in order that the system will be self-draining and will free itself of any water which may have washed in through the outlet.

Water in the exhaust piping will sometimes make it difficult to start the motor, and if the system is tilted in the wrong direction, the crank case and cylinder may often become flooded. The muffler may be introduced into any convenient portion of the exhaust pipe line, but better results are obtained when this is located as near to the outlet as possible. Aside from the fact that but little valuable space is occupied, one of the chief advantages to be found with placing the "kicker" under the stern deck lies in the easy manner in which the piping is concealed and the consequent absence of any hot pipes which might otherwise be within too easy reach of some of the passengers or crew of the craft.

In the average motor boat, the fuel tank is located under the bow deck. This is a safe location for it, but in the case of the sail boat equipped with auxiliary power, it might be inconvenient to place the fuel tank in a portion of the craft which is otherwise not affected by the installation of the "kicker." While it is not well to have the gasoline tank placed so close to the motor or muffler that the fuel will become unduly heated before it reaches the carburetor, a well-made and non-leakable receptacle can be placed under the stern deck with perfect safety. It may be held in place by means of metal straps secured to the underside of the deck planks or frame work, but care should be taken to make

certain that the copper feed pipe is so fastened throughout its length that it cannot shake loose or break from the vibrations of the motor.

A hole should be cut in the deck directly over the filling plug of the gasoline tank. This hole should be covered by means of a good-sized flush plate which, when unscrewed, will furnish an opening sufficiently large to enable a man to reach in his hand in order to remove the cap or plug of the tank.

Simplicity the Keynote

There are, of course, many attachments and accessories which may be added to a "kicker plant" to increase its beauty or ease of operation, but if such devices are indulged in too lavishly, the main mission of the boat, that of sailing, will be subordinated and the craft will be converted into an out-and-out motor boat. This, of course, may be desirable in some instances, but the auxiliary power plant should, first of all, be simple and of few parts. The question of the real conversion of a sail boat into a motor boat is another proposition and, as such, should be treated differently. But if the craft is unusually heavy, a greater power may be required, even to obtain the desired six or seven miles an hour, than has been assumed to be the case with the average sail boat.

As long as the size of a single cylinder is limited by the 'tween decks space, a double-cylinder engine may, of course, be used, but some designers and boat builders have found it advisable to instal a twin-screw power plant. In such a boat, two single-cylinder motors are mounted side by side, each of which drives a propeller independently of the other. The arrangement of the foundation will, of course, be different from that described for the single engine, but the principle of the distribution of the weight and vibration will apply as well in one case as in the other.

While the installation of a "kicker" is a comparatively simple matter, the man who sails or runs a craft so equipped should bear in mind one precaution. If the motor is located 'tween decks or in any other enclosed compart-

ment, the space should be aired thoroughly and frequently, whether the power plant is used or not. Oil and grease, and possibly gasoline, are almost certain to collect around the engine base, and the vapors from these are liable to form an inflammable mixture with the uncirculated air of the closed compartment. After a motor has been run, the gasoline in the float chamber of the carburetor gradually evaporates, but in the open air this will do no harm, as it is soon dispelled. This emphasizes the advantage of removable covers, doors, and deck plates in the engine compartment, for only in this manner can the enclosed space be aired properly.

This precaution of starting a fresh air circulation through the motor compartment should be taken previous to running the engine each day. Even though the engine is not to be used for some time, the compartment should be aired every day or so. If to this caution be added the one against leaving greasy waste or rags in any part of the boat in which a free circulation of air cannot be obtained, the danger from fire will be reduced to a minimum and even the most apprehensive passenger may feel as free from nervousness when out in a "kicker" auxiliary sail boat as though gasoline were an unknown liquid.



AFTER THE RISE

BY SAMUEL G. CAMP

SINGULARLY enough in view of the fact that at least half the sport of angling comes after the fish is hooked, from the strike until the quarry is successfully creeled or unfortunately lost—and then it isn't so much fun—the literature of angling is almost wholly confined to the period before the play, restricting itself to matters concerning tackle, how to cast, the best ways to induce a fish to strike, etc., and saying very little about how to play and land a fish after the rise. It should go without saying that it is rather important to know what to do with a fish after you have him "on." I believe that it has been suggested to the novice that one way to land a fish is to reel him up to the rod-tip and then "climb up the rod after him." This is very poor advice. The method, while theoretically sound, is practically worthless.

One may possess the maximum of human knowledge concerning rods, tackle, flies, and baits, both artificial and natural, together with a complete theoretical familiarity with the haunts and habits of game fishes and, additionally, be the most skillful of casters, and still be a very poor practical angler; for the man who handles his rod and his quarry awkwardly, who forces the fight at the wrong time or lets the fish run when it would be better to keep him coming, will hardly ever, unless luck is strongly with him, make a very weighty showing. Nowhere is the importance of knowing how to play and land a fish more in evidence than in fly-fishing for the brook trout.

That skilled tackle handling after the rise is at a premium in trout fly-fishing is due not only to the delicacy of the tackle ordinarily employed, particularly the very small hooks and often fragile

leaders, but to the distinctly game qualities of the brook trout itself and the usually difficult angling conditions afforded by its habitat. There is all the difference in the world between playing a fish in still and in fast water, and the brook trout is essentially a fast water game fish.

The way you will play a trout depends in great measure upon how your tackle is rigged. If you have assembled rod, reel, and line correctly, the chances are that you will soon discover and adopt the best method of handling a hooked trout; on the other hand, if your tackle is improperly adjusted, it will be physically impossible for you to go after your trout the right way. The necessity of saying something about how to adjust your rod, reel, and line is apparent.

In his book, "The Theory and Practice of Dry Fly Fishing," a really authoritative treatise and one most valuable to the wet-fly fisherman as well as to the dry-fly man, Mr. F. M. Halford advises a method of assembling rod and reel which is directly contrary to the usage and advice of most seasoned American fly fishermen. Briefly, his advice is to have the reel on the under side of the rod with the handle to the left, presuming that the angler casts with the right hand. When a trout is hooked the rod is passed to the left hand, turned over so the reel is on top, and the fish is then played directly from the reel.

In view of the fact that, as I have said, this book is a universally acknowledged authority in fly-fishing matters, it would, indeed, be presumptuous in me to say that this method of handling a hooked trout and of assembling rod and reel is all wrong, were it not that, as I am quite sure, the majority of American fly-casters so regard it. For the benefit of the reader not over-familiar with the literature of fly-fishing, it might be well to say that "Dry Fly Fishing" is an English work and refers particularly to chalk stream fishing with the floating fly, although much of the matter contained therein is equally applicable to wet and dry fly-fishing in the trout waters of any country.

The practice of most experienced fly-

casters in this country is to adjust the reel underneath the rod, but, in contradistinction to the method above described, with the handle of the reel to the right. Thus, when a fish is hooked, it is not necessary to turn the rod over when it is passed from the right to the left hand, but the reel is retained underneath the rod at all times, the very best position for it, for several reasons, for the business of fly-fishing. Moreover, the best way to play a trout is distinctly not from the reel. It is taken for granted in the above discussion, and also in the following, that the fly-caster uses a single-action reel.

The Best Way with a Hooked Trout

I believe implicitly that the best way to handle a hooked trout, the one sooner or later adopted by most anglers who do much fly-fishing, is as follows: Having, as above noted, your reel underneath the rod with the handle to the right, maintain at all times, both when casting the flies and playing a fish, a loop of line of convenient length between the reel and the first guide of the rod. This loop of line is controlled by the left hand, allowing the line to run out through the guides or, when necessary, drawing it back. Use the reel only when the loop of line grows so long that, when you are wading the stream, there is danger of fouling the line. When casting from a boat or canoe there is little chance of fouling the line no matter what the length of the loop may be if you take pains to lay down the line evenly on the bottom boards.

Now when you hook a trout you do not, at this very critical point, have to pass the rod from the right to the left hand and, what is worse, turn the rod over so that the reel will be on top. On the contrary, you "stand pat," as it were, still keeping the rod in the right hand and, if the trout is a large one, yielding the line to him through the thumb and forefinger of the left hand, or, if the fish is a small one, gradually drawing in the line—and the trout—with the left hand without recourse to the reel. When stripping in the line, clip it to the handgrasp of the rod be-

tween the first and second fingers of the rod-hand.

If the trout is a fairly large one and is hooked in fast water it will often happen that his first run will exhaust the loop of free line. Then, when he stops running, pass the rod from the right to the left hand—you do not have to turn the rod over because your reel handle is placed to the right—until the fish gives in a little, when you pass the rod back at once to the right hand and strip in the line with the left, in the meanwhile playing him from the reel.

Giving Yourself a Chance

Playing a trout in this manner, one is master of the situation at every stage of the game from the strike to the landing net; and if, at any time, some unusual action of the fish renders the outcome of the fight more than ordinarily doubtful, your chances are many times better for getting out of the difficulty than if you depend upon the reel for the in-take of your line. For instance, every experienced trout fisherman knows that often a trout will run out many feet of line from the reel and then incontinently about-face and run in toward the angler—one of the most difficult situations the fly-caster is ordinarily called upon to face.

About nine times out of ten—it is not safe to rely upon odds more favorable although, of course, sometimes the fish will be so deeply hooked that the chance is lessened—a slack line spells a lost trout. The rapidity with which a fish coming directly toward the angler creates a wake of slack line is difficult to estimate; in any event, the fly-caster's single-action reel is utterly unable to eat up the slack no matter how skilfully the angler may manipulate it.

The fly-caster who handles his fish as indicated herein is of all anglers best armed against the running back of a hooked trout. Once you have reduced the action of stripping in the line with the left hand to a purely automatic motion, so that you perform it quickly, expertly, and without forethought in the matter of how to go about it, it is a very fast fish, indeed, which can accu-

multate much slack line, for the line may be retrieved through the guides far faster than with any sort of reel and almost always with sufficient rapidity to keep the fish on.

It seems, too,—indeed, it is a fact—that when playing a trout in this manner one can usually tell what the fish is going to do before he does it, and the value of this forewarning should be obvious. Every slightest movement of the fish is carried to the left hand of the angler holding the line, and the least lessening or increase of tension between the rod-tip and the quarry is instantly sensed and line taken or given accordingly. Moreover, the method insures against forcing the fish too strenuously because one knows to a practical certainty when there is too much pull,—a thing far more difficult to estimate when killing the fish from the reel.

The advantage of this method over the one requiring a change of the rod from one hand to the other and also turning the rod over at the moment succeeding a successful strike, should be emphasized. Of all points of the play this is the most critical. Almost invariably when a good trout is hooked in fast water his best and longest run and the one, other things being equal, most apt to result in his escape, comes at the very moment he is struck, when he first feels the sting of the hook.

It should be evident that the angler who for the proper handling of his fish depends upon changing his rod from one hand to the other at this time is at a great disadvantage. There is need now of keeping your whole attention on the trout, and certainly your mind should not be divided between the shifting of the rod and the tactics of the quarry. Particularly is this the case when the fish is hooked in a hazardous situation, near overhanging, sharp-edged rocks liable to cut the line if the trout gains their shelter, or dangerous submerged trees and brush in which the line is sure to become fouled.

When a trout is fastened in a difficult place such as those mentioned, keep him coming from the moment of the strike until the danger is past; by stripping in the line with the left hand and

with judicious speed and handling the rod with dexterity and resolution the fish may be actually hustled out of danger before he is hardly aware of the fact that his crowded hour has arrived, —before, in other words, he wakes up and begins to fight. Do not try this summary method of procedure if you play your fish from the reel; sometimes a smashed rod and usually a lost fish will result.

From the time the fish is fastened keep the rod well up in order to gain an up-pull on the trout and also that the pliancy and resiliency, the give and take, of the rod may come into play. But do not, as I have actually seen advised in black and white, carry the rod up so that were it not for the bend the tip would point to the exact center of the high heavens. An angle of about sixty degrees to the water is right. Endeavor to maintain an even tension on the fish, just as much—or, perhaps, a little less—as you believe the trout and your tackle will stand; and, in the preliminary sparring, let the fish do his own fighting.

Also be patient. If the trout is well hooked he is perfectly safe in the water; if he is not well hooked you are sure to lose him anyway if you try to land him prematurely. Play a good trout until you are positive he is thoroughly played out,—then play him some more. Watch out for the seemingly sluggish fish, those which apparently take the situation for granted, make only short, slow runs and appear to be very easy to net. Nine times out of ten they have not begun to fight, and at sight of the landing net will suddenly galvanize into the speediest sort of action, just when you are most unprepared. An in-

different trout should be forced into action—several ways will suggest themselves—before any attempt to land him. The brown trout will more often “play ’possum” in this manner than the speckled brook trout.

Of course, bear in mind the time-honored axioms about keeping a taut line and leading the fish away or heading him off from the natural danger spots in the stream. One of the best arguments for upstream fly-fishing is the fact that you are below your fish when you hook him. When fishing downstream your first object after hooking a trout, and while holding him as safely and closely as may be to the place where you struck him, should be to get downstream below him. For several reasons this is the most advantageous position from which to play a trout; one of them is because when the time comes to use the net the current will drift the fish into the net and not downstream away from it.

When conditions permit always go downstream with your fish in preference to giving line; and when a trout is running strongly downstream through the rapids never attempt to snub him, although it may be a considerable distance to the next pool where, presumably, he will stop. Follow him along the bank as rapidly as possible or, if you cannot go with him, let him have all the line he cares to take. In a case of this sort the slightest restraint means a lost trout. Let him run down to the nearest quiet water; then follow down, reeling in the line taken out with all possible precautions against starting the trout off again until, at least, you have enough line on the reel to meet another run.



CATCHING THE RAINBOW TROUT

BY FRANCIS R. STEEL

With Photographs by the Author

THE rainbow trout—one of the gamest of all trout—is found native in nearly every river and creek of the far West. In winter they stay, usually in large schools, in deep, still water, and do not feed upon surface food, nor take a fly at all well. As soon as the water warms up in spring, however, the rainbow go in a body to the rapids, and to the swiftest current there is, outside of actual white water, in those rapids. In the West this is commonly called “coming on the riffles,” and is an event all important to the fly-fisherman, because when rainbow are in swift water they feed on surface food, and will then take a fly very readily indeed—better, it is said, than any other trout known.

At first the fish congregate on big main-current riffles (often on gravel bars such as the salmon spawn on), but about three weeks later they scatter all over the river, going especially to rocky “holes” near shore, where willow bushes overhang pennants of swift water that trail out into pools below. The time the rainbow come on the riffles depends upon the temperature of the water; thus, it is later in the North than in the South, and later in the mountains than in the valleys.

Last year I found the trout in swift water on the twentieth of May in the creeks of the Santa Cruz Mountains of California; while in the Umpqua River of Oregon, rainbow come on the riffles on the second of June in the valley stretches, and about the twenty-third in the mountains. By July, the fish are taking the fly well in every stream in the West where there are rainbow trout, although August and September are commonly the best months.

In spring, trout rise most readily in

the warmest part of the sunniest days, but during summer and autumn, the best fishing is in cloudy weather. On large streams, morning is usually better than afternoon, because the wind commonly comes up at mid-day and does not die down again until about five o'clock. Evening—between sunset and dark—is the best time of all.

In casting for rainbow remember that they lie in very swift current, commonly at the edge of white water, sometimes in it. They seem to take the fly best when moving slightly upstream or across and up. I don't understand why this should be so, as natural flies do not move in that way, but nevertheless I have found it to be true, especially in the wilder streams. In any case, keep the fly always on the surface and wriggling so that the hackles are constantly in motion.

Personally, I use only one fly, because I find I can keep it on the surface and “wriggling” better than if I have others below it to deaden the motion. Besides, as trout nearly always come upstream in rising, the lower flies often scare away fish coming for the surface fly. Also, in brushy casting, two or three flies “hang up” more often than does a single fly. Then again, fish are sometimes lost by the extra hooks catching on brush or logs. Finally, by actual trial, I have found that I can catch more rainbow by using one fly than with a two or three-fly cast. In river fishing, you must be able to rise and hook fish with close to sixty feet of line to get the most out of the stream, as many of the best places are far out.

In fishing creeks, or the small rocky “holes” in rivers, a short line is most successful because with it the fly can be worked better. Get as close to the fish as you can, without being seen. Be careful not to let the shadow of your rod



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THE MOMENT OF SUSPENSE



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TROUT FOR BREAKFAST

fall across the pool and to keep your line off the water all you can. If you have to wade, try to stay in white water where your legs will be concealed from the trout.

The need of care in this kind of fishing was brought home to me very strongly a couple of summers ago while working down a little creek in Southern California. There were lots of trout in every pool, but I wasn't catching more than one fish to each, and sometimes not that. Finally I crawled up to a pool on hands and knees and cast from a crouching position behind a boulder, keeping the line entirely off the water, and waiting a couple of minutes after each rise, or landed fish, before casting in again.

These methods netted me eighteen trout out of that one pool, and after that I had no trouble in creeling the limit.

When you find fish in the pools or still water, there is little chance of rising them with a fly fished in the usual way. If they are taking natural flies on the surface, try "dry-fly" fishing. In case the trout are lying deep down, sometimes a fly moving very fast, so that distinct V-shaped ripples are made on the surface, will bring them up. If this doesn't work, try fishing a fly deep under water.

Occasionally I have seen trout in deep pools "started coming" by allowing the fly to sink clear to the bottom and then, after leaving it there a few moments, bringing it upward in a series of little jerks. My fishing partner of last summer used this trick often and with good success, with trout in pools, on the Waddell, in the Santa Cruz Mountains, last spring.

As a last resort try a small spoon. This will often get you fish under such conditions when nothing else will. Another time when a spoon will help you is when you

come across a swift current running straight away from the end of a gravel bar or rock point into a likely looking pool which, on account of distance or deep water or brush, it is impossible to reach with a fly. In this case, put on a spoon and, standing as far out in the current as possible, let it drift downstream slowly, keeping the blade spinning all the time. This will nearly always get you at least one good fish.

Rainbow rise very fast, so fast that I do not think you can well strike too quickly—strike when you see the rise, never wait until you feel the fish. You can very easily strike too hard, however—it is surprising how little force is

necessary to "set" the hook in a fish's mouth.

If a trout misses the fly, recast at once into the swirl of the rise at its downstream edge. Very often a rainbow, after missing the fly, will turn and go for it a second time. If you have returned the fly quickly and in the right place, you may, in such a case, turn a clean miss into a hooked fish. If your trout refuses to take the fly on this second cast, the best plan is to wait about three minutes before casting over him again (supposing, of course, that he is big enough to be worth waiting for). Extreme care should be taken in recasting to land the fly delicately and without splash. With a big fish it is better to put on a larger fly before casting over him again.

When you have hooked a trout try to lead him away from where the struggle may scare other fish. A little care in this particular will often double your catch. In the same way, when you get a trout "under the limit" return it to the water at some place where its first frightened dart will not scare other fish. Incidentally, be very careful not to rub off the slime from its body, as this means almost certain death to the trout.

In playing a rainbow, be on the alert to lower the rod-tip quickly when he jumps—a rainbow doesn't simply struggle about on the surface of the water, but goes a clear two feet or more into the air. Lowering the tip lessens the strain of pulling the sunken loop of line through the water after him as he goes up, and also prevents the chance of his breaking the leader by falling on it when he comes down.

The tackle that you have probably been using for Eastern brook trout will do for rainbow. For river fishing, a nine-foot, five-and-a-quarter-ounce rod



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CHANGING FLIES

gives plenty of casting power without undue weight or unwieldy length. The same rod will do for creek fishing, although a shorter and lighter one is better, because a short rod can be cast more easily where the trees hang low over the water and because a light rod works better with the very thin leaders and small flies which are best for this sort of fishing. To balance well, the reel should be of about the same weight as the rod.

By all means put it on so that the handle is to the right, when the guides are up. In playing a fish with the reel in this position the rod is bent in the opposite way from that caused by drawing the line from the water in casting.



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RIGGING UP

This will greatly lengthen the life of your rod, besides keeping it from getting a "set." A tapered line is best, because it puts the flies on the water more lightly than a level line (it is a necessity for "dry-fly" fishing). Leaders ought to be of light gut, six feet long in open water and three feet in brush. A landing net is useful in river fishing, but is more trouble than it is worth in working a brushy creek.

As Western streams are liable to be rocky and it is hard enough to hook a rainbow even with a sharp hook, you should carry a hook file with you on the stream (incidentally use it once in a while). Mount the file on a small wooden handle, attached to a thong, and carry it around your neck. Spoons should be small, one-fourth to one inch blade, and must spin so easily as not to twist the line (this point is very important). I have found two single hooks to work better than a treble or one single on a spoon.

For river fishing in the daytime a number ten fly is usually best, while number twelve is the favorite size for creek work. In the evening, a size larger fly than would be right for the same water in the daytime should be used. Occasionally large rainbow will take a bass fly, on about a 2/0 hook, after refusing everything else. However, I have not known this to happen except in practically virgin streams. I believe three flies—the red hackle (brown

hackle with a red body, it is called in the West), the royal coachman (or other white fly), and the professor (or other gray fly), are all that are needed for rainbow anywhere in the West, in either creek or river fishing.

I use the red hackle in the daytime and the royal coachman at dusk. For a couple of weeks in May when the "trout flies" (a grayish-brown natural insect) are on the water, a professor will take somewhat better than the hackle in sunny weather. Even during this time a red hackle is best on cloudy days. Gray flies should be on hooks one size larger than would be proper for the red hackle under the same conditions. Fish do not respond as quickly to a gray fly cast over them as to a red hackle, but seem to come for it more persistently when once started. I have hooked a rainbow on a professor after the fish had missed the fly eight times in rather quick succession. Rainbow take a fly distinctly better for a touch of red in it. This is especially noticeable in fishing a red hackle (red body) and a brown hackle (peacock berl body) side by side. Even more striking is the comparison of the catching qualities of a royal coachman and a white miller. This preference of rainbow for a touch of red in a fly is most pronounced in virgin waters, but is present in the trout of even such heavily fished rivers as the Truckee and the Rogue.



WHAT IS "INSIDE BASEBALL?"

BY EDWARD LYELL FOX

Photographs by the American Press Association

WE were just two of thirty thousand—a part of the great living band that rimmed the Polo Grounds one June afternoon. From the inner circumference of the band we looked out on the playing field. It was a huge block of close cropped grass that fitted every projection and recession of the stands with the accuracy of a picture puzzle. Men in uniforms—some white, others gray—scampered bewilderingly over the grass. Yet there was a well ordered precision to their movements, and had we not known, the oblong of black score board above the center field seats would have told us that the men were of the Chicago and New York National League teams.

Also, New York was at bat and one of her white-clad Giants had reached first base. This Giant danced about contemptuously and leered broadly when a throw from the Chicago pitcher failed to catch him off the bag. The performance becoming continuous and wearisome, I turned to engage my Friend in conversation.

At first glance, Friend seemed ready to play the overture of a cataleptic fit. His eyes held in a glassy stare and there was a wobbly twitching to his mouth. He laid a heavy hand on my coat sleeve and in one swift moment I tried to appraise the strength of the standing police and medical armies within the park. Yes, there was a policeman directly down from us and—

"Watch Chance," begged Friend hoarsely.

Thinking to humor him, I turned one eye on first base. There stood the rangy Chicago player-manager. He leaned forward, hands on knees. His wide

shoulders were hunched aggressively and there was a perceptible side swaying to his position. Suddenly he straightened, hitched his belt, and tightened his cap.

"Did you see that?"

Friend's voice broke nervously and his face was radiant with discovery. The expression was as if he had looked for the first time on something that for years had seemed intangible and immaterial. My alarm increased, but I uttered a soothing "What?"

"Chance! Chance!" cried Friend proudly. "He just gave the *inside ball signal!*"

The hitched belt—the tightened cap! I wasted but a moment on a mental trouncing for my failure to diagnose the case as belonging to class "Baseball Fan; sub-class Inside Ball." This accomplished, I forgot the policeman and physicians and gravely informed my friend that he had but to order—I would pay. Later I wondered how many of the 30,000 were inoculated like my friend. At different times during the game Chance punched savagely at his glove, raised his shoe so that he might remove clinging dirt from the spikes, brushed back his hair, and rolled a lump from left to right cheek. On each occasion Friend showed the same symptoms and proudly called my attention to his reading of Chicago's signals.

The hitched belt—the tightened cap—*Inside Ball!* Friend is a far sighted and clever business man—yet he pursues an elusive phantom. And Friend is not alone. His kind are in every city and town that supports a baseball team. Like bespectacled butterfly collectors, they institute aimless dodderings after one new, particularly bright, and swiftly flying specimen while other silken wings are close by and attainable. In-

side Ball, mysterious, enticing, elusive—What is it?

Before attempting to define this intangible thing of baseball, permit me to trace its misty growth. The Chicago Nationals won the National League pennant in 1906. In the spring of the following year a new school of baseball science was organized. Its basic teachings were "inside ball." Previous to this time the term had been employed casually but it had little significance. It meant anything from a bunted ball to a stolen base. But in 1907—ah! what a wonderful thing became this Inside Ball!

The public was fed on an ingenious theory. The basis of this theory was that baseball teams were in reality nine marionettes and that a manager pulled the strings of these marionettes. A tug at one string meant a certain play—pardon, strategy—a tug at a second string meant another; and so on. Managers became generals; players, soldiers; the diamond, a battle field; baseball, a war. It was truly marvelous the way these "generals" executed their "campaigns." Always were there "flanking movements" and "stratagems." Convincing diagrams were made showing what plays were possible.

The ball players? Oh, no! They never thought. They were only marionettes. Inside Ball came to be the name for a game of human chess played on a baseball field between two managers. When Chance hitched his belt, it meant that Chicago's master had moved a piece on the chess board. If McGraw unbuttoned his sweater, it meant that a New York pawn had been advanced and that it was Chance's turn. Perhaps Chance might sneeze and possibly on his second move McGraw might cough.

"Watch Chance!" begged Friend hoarsely.

That is a popular conception of Inside Ball to-day. It is a theory, pure and unadorned in its absurdity and grotesque in its exaggerations. And if we must rant over the term why not penetrate its artificial exterior and reach the truth of it? We find the interior filled with the unsolid element of chance.

Inside Ball is merely the outguessing of one team by another. It is not a science but guesswork. I shall call it the "Apotheosis of the Double Cross." The science of one team pitted against the science of another brings about Inside Ball. The scientific strength with the lucky guessers will beat the scientific strength with the unlucky guessers.

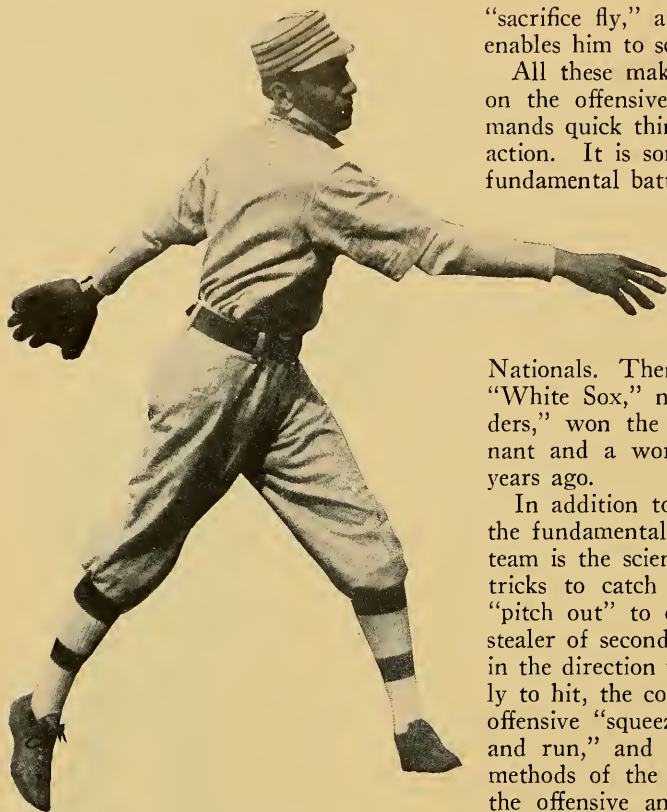


HAL CHASE, N. Y. AMERICANS

Who outguessed the Detroit catcher by ordering the play the Detroit man had suggested.

In sporting parlance, the "double cross" is defined "Inducing an opponent to think you are going to do one thing and then doing the direct opposite." For instance: Mathewson is pitching and Wagner is at bat. Wagner guesses that Mathewson will pitch the next ball "inside" and "high," and he prepares to meet it. Mathewson guesses how Wagner has guessed. Accordingly he "double crosses" Wagner by sending the ball directly over the center of the plate. Wagner, taken by surprise at Mathewson's daring, lets the ball pass and a strike is called on him.

Such is the "double cross" in baseball. Inside Ball is a generalization for this "double crossing." The term covers an entire team. Better to understand this ultimate out-guessing let us examine the scientific offensive and defensive



PITCHER BENDER, PHILA. AMERICANS

Who blocked a hit and run play by Chicago because the catcher guessed the next move.

equipment of the modern major league professional baseball team. Offensively there is the trick of arranging the batting order. The manager must know what men work best together. A player must know the base-running speed of the man who precedes him and the hitting accuracy of the man who follows him. The batting order is the attacking machine. The less friction between the parts the greater the work done.

The arrangement and efficiency of Chicago's batting order was largely responsible for the Cubs winning four of the last five pennant races in the National League. Then there are the different attacking methods of this machine—the many trick plays; the working of a pitcher for a base on balls; the "bunt" that sends a man to second; the "hit and run" that moves him to third; the "delayed steal," "squeeze play,"

"sacrifice fly," and "steal home" that enables him to score.

All these make for scientific baseball on the offensive. Their execution demands quick thinking and just as quick action. It is something apart from the fundamental batting strength of a team.

Batting alone never won a pennant. Remember the fence breaking Blues of Cleveland and the old Philadelphia Nationals. Then recall how the Chicago "White Sox," named the "hitless wonders," won the American League pennant and a world's championship four years ago.

In addition to pitching and fielding the fundamental defensive strength of a team is the scientific phase. The many tricks to catch runners off bases; the "pitch out" to cut down the would-be stealer of second, the moving of players in the direction where a batsman is likely to hit, the combinations to check the offensive "squeeze," "sacrifice fly," "hit and run," and "double steal"—all are methods of the defense. Granted that the offensive and defensive plays of a team are exact sciences, but when the exact science of defense is pitted against the exact science of offense the element of guesswork—Inside Ball—decides the issue. The team that is most successful in the operation of the "Apotheosis of the Double Cross" will win; that means the team with the shrewdest and luckiest guessers.

Now we are ready to see the crucial situations that arise in every game—the situations that come of offensive science meeting defensive science. Later we shall see just what rôle the manager plays in this Inside Ball. To assure perfect clearness, permit me to make specific my generalization of situations as follows:

Batter outguesses pitcher; pitcher outguesses batter; batter outguesses defense; defense outguesses batter; catcher outguesses baserunner; baserunner outguesses catcher; baserunner outguesses defense; defense outguesses baserunner; team attack outguesses team defense; team defense outguesses team attack.

These are the situations that make for Inside Ball. By incidents taken haphazardly from major league and world's series games we shall see that this Inside Ball is in reality the *guesswork of the players*. For instance:

The Detroit Tigers and the Yankees are straining through a closely contested game at the American League Park in New York City. It is a game of daring moves by both teams and the tension of players and spectators grows as the innings pass. It is toward the close of the game. The Yankees get a runner on first base. They work him around to third and the crowd goes wild. Chase is at bat. His legs are straddled wide and the uninitiated attribute the quick, jerky swinging of his bat to nervousness.

All season the Yankees had been favoring the "squeeze play"—the runner scoring from third when the batsman bunted. Ira Thomas, who is catching for Detroit, watches Chase for a possible signal. There is another quick movement by Chase. He brushes the left side of his nose as if flecking some dust. It is the Yankees' signal for the "squeeze" and Thomas reads it.

"Going to try the squeeze," he joshes.

Chase, with the perception of a great ball player, forms his plan instantly. He turns slightly and says:

"You've guessed it, Ira."

This makes Thomas sure that the "squeeze" is *not* to be used. He reasons that Chase wants to score the man from third by means of a long sacrifice fly to the out field. So he signals the pitcher to deliver a ball that Chase will be unable to meet accurately if he swings hard. Chase figures Thomas will guess that way, so he lets the "squeeze" signal stand. Up comes the ball where Thomas orders. It is in the groove that Chase dislikes for a hard hit but favors on his bunts. And of course Chase drops a perfect bunt and "squeezes" the man in from third. In fact the Detroit pitcher and Thomas are so dumbfounded that they make but a futile attempt to field the ball and Chase is safe, as well as the man who dashes across the plate.

Such was the play. A morning newspaper, however, gave an account of the

game that elucidated in most masterly fashion how the New York manager sat on the bench with his legs crossed and moved his suspended foot as a signal for the play. As it was, Chase simply out-guessed Thomas.

Again, in the game between Cincinnati and Philadelphia last year, Pitcher Rowan of the Reds attempted to out-guess Sherwood Magee, the Quakers' great hitter. The situation was built by a baseball melodramatist. The score was 2 to 1 in Cincinnati's favor at the beginning of the ninth inning. Philadelphia had men on second and third bases and two were out. At the bat was Magee. His weakness is a fast ball, "inside" and neck high. As two were out, the logical step was to give Magee a base on balls and take a chance on the next batter. But Rowan pitched to "get" his man.

Magee, realizing that Rowan would use daring tactics, figured it out this



EDDIE COLLINS, PHILA. AMERICANS

His good guessing and daring chances did much to beat Chicago in the last world's series.

way: Rowan would do the unexpected. He would drive the ball over the middle of the plate, thinking that he (Magee) would be expecting a pitch "inside" and neck-high—his weakness. This was exactly as Rowan reasoned. There was a swift white streak from the pitcher's box and Magee crashed his bat against a ball that cut the plate precisely as he had figured.

Magee outguessed Rowan.

Outguessing the Mighty Cobb

But the pitcher just as often outguesses the batter. A striking example is afforded in one of the Chicago-Detroit games for the world championship. The Tigers came to bat in the fourth inning with the score 2 to 0 against them. Both teams were playing "close"—from the opening inning it had been conservative baseball with no daring chances. O'Leary, the chunky Detroit shortstop, led off with a single and big Crawford followed with another. O'Leary was stopped at second.

It looked like a Detroit rally, and the crowd was stamping its feet and uttering joyous howls. Cobb danced up to the plate with his confident swagger. Everybody knew he would bunt and everybody knew Detroit would have three on base.

If Cobb rolls the ball along the third base line, it is almost impossible to put him out, his speed is so great. Brown, the Chicago pitcher, knew this. The stereotyped play would have been to pitch Cobb a ball that he would have difficulty in bunting. So Brown, with remarkable nerve, planned to outguess Cobb. He delivered a ball that Cobb could bunt with the greatest accuracy. He actually invited Cobb to make the play that seemed so advantageous to Detroit.

But, with the delivery, Brown dashed from the pitcher's box to a position on the foul line half way between third and home. It was exactly where Cobb dropped his perfect bunt from the perfect pitch. So Brown swooped on the ball and drove it to Steinfeldt, forcing out O'Leary who was speeding from second to third. So astounded were the Tigers at this magnificent outguessing

of Cobb that Crawford, mulling over the play at second base, was caught on a throw by Catcher Kling. Think of the confusion the Cubs would have been thrown into had Cobb done the outguessing and tapped the ball directly at the pitcher's box with Brown flying toward the foul line!

To show the uncertainty of it all, it was the Cubs who were outguessed in the last world's series. To what extent we shall see later. Merely regarding, however, the situation of pitcher vs. batter, Bender of Philadelphia outguessed the Chicago players time and again. With the count "two strikes" and "three balls" he invariably curved the last ball over the plate. The Cubs, reasoning that he would not dare to curve the deciding pitch, frequently stood like dummies with their bats on their shoulders.

Also, it is this knack of outguessing that makes great batters. There is an incident of the way in which Lajoie, the Cleveland slugger, completely fooled Vickers, a former Philadelphia pitcher. Three balls had been called on Lajoie in the ninth inning, with the Athletics leading 1 to 0. Also two Cleveland runners were prancing on the base lines. With the count "three and none," the batter invariably lets the next ball pass, taking a chance on getting a base on balls. Lajoie, guessing that Vickers—secure in this precedent—would shoot the ball directly over the plate in such a situation, made up his mind to swing. And swing he did. It was a two bagger and the game was won.

But Lajoie was outguessed by Walsh, the Chicago pitcher, in a game that killed Cleveland's pennant chances two years ago. The bases were full and a third strike was needed to get Lajoie. Knowing Walsh to be effective with the "spit ball," Lajoie guessed that the burly Chicagoan would try to strike him out with one of the erratic shoots. In fact, Sullivan, the Chicago catcher, signaled for the "spit ball." But Walsh took the gambler's chance. He knew that Lajoie was looking for that kind of a curve, so he decided to outguess him. Instead of the weird spitter Walsh split the plate with a straight ball, and

Lajoie, outguessed and confused, struck out.

For a succession of "double crosses" let us visit Shibe Park, Philadelphia, and imagine the Athletics and Chicago playing over the last world's series. The first game is about to begin. Down in the dug-out where the Philadelphia bench is placed, Manager Connie Mack is talking to his players. We cannot hear what he is saying; the tumult of the stands is too great. A gong peals and the Athletics scamper to their positions.

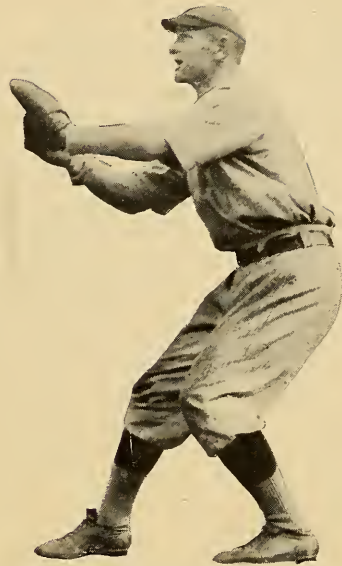
But in that brief moment, Mack spoke the words that his team translated into action on the playing field. He did not counsel: "Watch me for signals from the bench." What he did say was: "Keep Chicago 'crossed,' boys. Out-guess 'em and we'll win!"

That was all—we have the word of one of the players for it.

Let us consider these teams. They are the greatest exponents of scientific baseball in the country. But the "science" of the National League involves more risks than the American. Teams of the latter organization play what is called a "close" game. Generally they are more evenly matched. Often one run will decide the issue. They are apt to be more conservative.

Knowing that Chicago anticipated such a style of play, the Athletics planned a gigantic "double cross." They discarded the so-called American League baseball, and played the slashing, take-every-chance game more characteristic of the National League. The Cubs were taken off their guard. Never had they dreamed that the Athletics would use such tactics. It was the element of surprise that tilted the balance in Philadelphia's favor at the outset and by out-guessing the Cubs continually the Athletics applied more and more pressure to the scale pans.

The game begins; so does the out-guessing. Schulte, the wiry Chicago outfielder, reaches first base. Hofman jumps alongside the plate, swinging his bat menacingly. Out in the pitcher's box, Bender, the Indian, shows his teeth in a smile. But Thomas, the catcher, is peering between the wires of



FRANK CHANCE, CUBS

Whom the fans regard as the greatest exponent of "inside baseball."

his mask at Schulte, a dancing figure off first base. Thomas guesses that Chicago is about to try the "hit and run" play—Schulte is to run as soon as Bender extends his pitching arm and Hofman is to hit the ball, wherever it may be.

The catcher crouches and signals Bender for the "pitch out"—a ball wide of the plate that Hofman cannot reach, thus enabling Thomas to throw out Schulte at second base. So Bender pitches the desired ball; Hofman swings wildly and futilely; Thomas whips the ball down to second; Schulte is cut down. If Thomas had not guessed the play, Hofman would have placed a ground hit on which Schulte would have dashed to third.

And so it went all through the series. The examples are legion. But let us select an example, afforded by two other teams. From the foregoing we saw how the defense outguessed the batter. Detroit and Cleveland will show us how the batter outguessed the defense. It was in one of the early games of the present season. Cleveland insulted a Delahanty; that was a foolish thing. In baseball the name Delahanty is a sort of antithesis of Casey. A Delahanty can always hit in a pinch; Casey

struck out. Cleveland didn't know that and—but I am digressing.

Detroit had two men on bases when Crawford lurched to the plate. Two were out. Guessing that Crawford would be very likely to hit safely which would score the runners, the Cleveland pitcher purposely gave "Wahoo Sam" a base on balls. Also, he guessed that Jim Delahanty, who followed Crawford, would be an easy third out. Cleveland's pitcher did not figure that he was even taking a gambler's chance, for Delahanty has a tendency to hit fly balls. But the guessing was all wrong. Delahanty, the "mark," sent the ball sailing far over the right fielder's head and did not stop running until he reached third base.

Incidentally, New York, last summer, guessed on Delahanty and lost. Twice in one game they passed Crawford to get Delahanty, and each time Delahanty hit for extra bases. Both games were instances of defensive out-guessing beating itself. Delahanty did no guessing; he was only a boomerang.

For a case of where baserunner out-guessed the catcher the first world's series game—Athletics vs. Chicago—is again available. Murphy, the Philadelphia outfielder, got to first and took a very short lead off the base. Kling, the Chicago catcher, saw how near Murphy was to first and guessed that he would not attempt a steal; that the Athletics would try to send him around the bases by "free hitting." So Kling did not signal Brown to "pitch out." Instead he directed him to send the ball around the corners of the plate. Kling was after the batter.

But Murphy guessed that Kling had so reasoned, unwittingly handicapping himself. So Murphy dashed down to second. Kling, outguessed, without the advantage of the "pitch out" and hampered by the batter's blocking swing, saw Murphy steal cleanly. Had Kling signaled for the "pitch out" he would have outguessed Murphy. Luck decided it—nothing else.

A moment later Murphy outguessed Kling again. From second base, he signaled the batter, Barry, for the "hit and run." Kling figured that with a

man on second the Athletics would play "straight baseball"—Barry would try to score Murphy with a hit. Secure in this judgment, Kling a second time failed to use the "pitch out," with the result that Murphy began running with Brown's wind-up. Also, Barry hit the first ball pitched, as is called for by the "hit and run." Again Murphy out-guessed him. Had Kling figured the play correctly and asked for a wide ball, he would have been able to throw out Murphy at third. Remember that when Chicago tried the "hit and run" in the first inning Thomas outguessed Schulte, checking the play.

This luck of the catcher in making guesses cannot be underestimated. Jim McGuire, a veteran, crafty in the tricks of the position, says: "No catcher can call the turn every time. The runner is bound to fool the catcher almost as often as the catcher calls the turn on the runner."

Collins Calls the Turn

Our next point, "fielder outguesses baserunner," has a typical example in the second inning of the second world series game. Tinker, the Chicago shortstop, who was on first, had watched how Second Baseman Collins and Shortstop Barry worked together at the middle bag. With a runner on first base and a man at bat who sent a majority of his hits toward the right, Barry would cover the base on a steal. With a left field hitter, Collins would take the throw. Kling was at bat.

When Kling does not try to "place" his hit, he invariably "pulls" it toward the left side of the diamond. Tinker knew that the Athletics knew this tendency and as a consequence Collins would cover second were he to steal. So he signalled Kling for the "hit and run," also giving the information that Collins would leave his position and run to the base. This was Kling's cue to place his hit through the gap left by Collins, who would start for second as soon as Tinker did.

But the alert Collins saw Tinker's peculiar actions and guessed the play. The "double cross" would block it, so he motioned to Barry to cover second

if Tinker broke for the base. The ball left the pitcher's hand and Tinker charged down the base line. To his confusion it was Barry who ran from his position, not Collins. There came the ring of Kling's bat and Tinker heard the ball hum past and plop into Collins's glove. The latter, smiling sweetly, tossed the ball to First Baseman Davis, doubling up the infuriated Tinker. Tinker guessed; Kling placed his hit, but Collins did the outguessing.

Another case of defensive luck beating that of the offense came in one of the New York Giants-Boston games early this year. Herzog hit to center field, scoring Tenny, the Boston manager. Merkle, the Giants' first baseman, guessed that Herzog would race down to second on the throw in to get Tenny at the plate. Herzog did. Across the diamond from first base dashed Merkle, leaped high, intercepting the throw home, and relayed it to second, cutting down Herzog. It was a most unusual play and was based on guesswork. If Herzog had not tried for second Merkle would have been censured.

But just as often the baserunner outguesses the fielders. There is a saying among ball players: "Keep the ball in front of Cobb. He can beat it!" What they mean is that Cobb's audacity on the base paths is such that the only way to cope with his startling moves is always to have the ball in the immediate vicinity of the fleet Detroit's next objective point.

Audacity and outguessing in baserunning are not one and the same thing, although they are closely identified. Lord was audacious in the third inning of the second world series game when he raced from first base to the plate on a two bagger that flew from Collins's bat. According to all the rules of good baseball, Lord should have stopped at third. But Steinfeldt was so amazed at the sight of Lord racing for home that he dropped Sheckard's "throw in" of Collins's hit out in left field. The unexpected unnerved him.

It is also a favorite stunt of Cobb's to romp away with one more base than he is entitled to by conservative base-

ball. Often he sprints from first to third on a bunt.

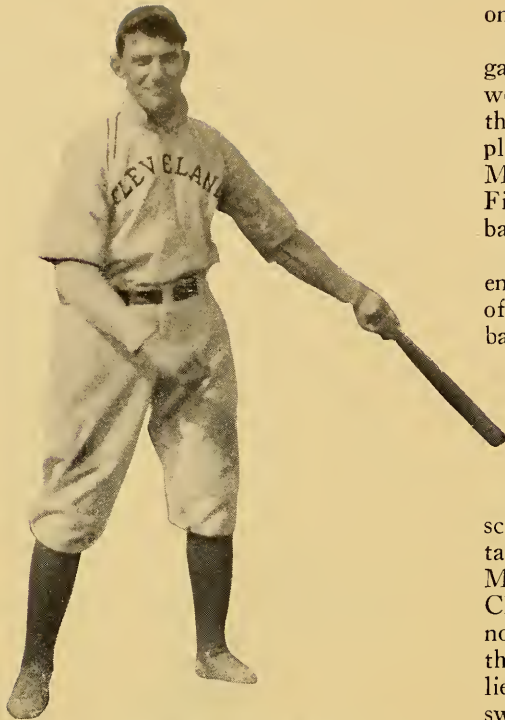
But actual outguessing is just as effective and frequent. Many are the instances where the boyish Collins outguessed the sages of the Chicago team. Once he reached first and by clever acting led Kling to guess that he was contemplating a steal of second. The veteran catcher made Pitcher Overall waste two balls on "pitch outs" in an attempt to catch Collins, who continued his taunting dancing off first. Then Kling guessed that Collins had no idea of stealing and was merely trying to disconcert the Chicago defences. As for Collins, he guessed that Kling would so reason and that he would signal Overall to put the next ball over the plate. This move was Collins's cue to steal. He did. His guess was correct and the batter's swing hampered Kling.

Outwitted again, Kling saw the slender Collins rising from second base,



MAGEE, PHILA. NATIONALS

Who beat a Cincinnati pitcher by guessing that the latter would send up a ball that ordinarily he would not dare to use.



LAJOIE, CLEVELAND,

Who won a game by hitting the fourth ball with no strikes against him.

brushing the dust from his uniform and smiling impudently. On an ordinary steal there is no play of wits between the catcher and baserunner. The latter "goes down," slides, is called "safe" or "out." That is all. Members of championship teams do not make "ordinary steals."

Remember these incidents have been selected haphazardly. They are characteristic of nearly every game where the players are daring enough to use "Inside Ball"—guesswork, pure and simple.

"Keep them crossed," said Mack.

To show that this illustration of "Inside Ball" is not confined to the championship teams of the leagues, let us look a moment on the past season series between the Yankees and the Giants. First Baseman Hal Chase, of the Yankees, guessed that the Giants, heavy hitters, would play a slam-bang game. Accordingly in the opening match of the series, Chase played a deep first base. The Giants outguessed him and bunted down the first base line. And Chase is

one of the shrewdest of ball players.

Take the eighth inning of the fourth game. Murray was on third and Bridwell at bat. Pitcher Fisher guessed that the Giants would try the squeeze play and pitched wide of the plate. Murray, who had started for home with Fisher's motion, was caught between the bases and run down.

More effective guesswork, born of scientific baseball. It is not an element of plain luck. An illustration of baseball luck would be a ground hit ball that bounded unexpectedly over an infielder's head, allowing a runner to score. It is rather the matching of wits against wits, with success coming to the best guesser.

Inside Ball must not be confused with scientific ball. The former is necessitated by the latter. The big managers, McGraw, Mack, Chance, Jennings, and Clarke, never employ players who have not the knack of guessing. Despite the belief to the contrary, rarely do these men sway the progress of a game. It is only at unusual and critical moments that they take charge. Then they become the dominant and very obvious force—a mighty guessing power directing nine other guessing powers. Take this, for instance:

It is a glum afternoon of mid-June a year ago. Scattered over the yellow seats of the Polo Grounds are a scant two thousand spectators. Moreover, they are a disgruntled company, for the Giants are at bat for the ninth inning and St. Louis leads 4 to 0. A living beanpole, Sallee by name, is going through the gyrations of the pitcher's box. As his long and slender arm winds overhead, a confident smirk settles into his face. Sallee has had the Giants at his mercy all afternoon, and this last inning will be easy.

Over the plate sails the ball. Doyle's bat meets it with a solid clump and that fleet Giant reaches first before the St. Louis shortstop's throw. The scoreboard reads 4 to 0, however, and the fans refuse to show interest. Murray lurches up to the plate and skips another grounder to little Hauser. This time the tiny shortstop tosses it to the equally

tiny Huggins at second base, and the disgruntled Doyle is forced out. Sallee's smile becomes more obvious. The men who have been watching the game from the elevated railroad structure disappear, seemingly through some great trapdoor. Seymour comes to bat and as quickly sends the ball arching out to Oakes in center field. Two are out. The two thousand spectators have become one thousand.

But here St. Louis commits a grave tactical error and the aspect of the game changes. Murray is allowed to steal second unmolested. Had Catcher Phelps thrown to Hauser, he would probably have caught Murray. The exacting Bridwell draws a base on balls from the confident Sallee, who tries to strike him out with sweeping curves.

Suddenly from the New York bench bounces a short and heavy figure. It is McGraw, and with his prance-like steps he hurries to the coaching line. Give him the uniform and you would see Napoleon—the attitude, the quiet decision, the folded arms, and even the funny little protruding stomach—all are there. The smirk leaves Sallee's face and he faces Devlin.

That rangy athlete whirls his bat aggressively until time to swing. Then a single bounds through the St. Louis infield. Murray turns third and heads for the plate. But the Napoleon of the coaching line raises his voice and Murray stops at third. McGraw realizes that the psychological effect of the bases full will further disconcert Sallee. The Giants are four runs behind. The gamble is for big stakes.

Now the faltering beanpole rocks distressingly. Merkle swings hard. The ball digs up a tiny cloud of dust near third base and shoots into left field.

Murray and Bridwell dash over the plate.

Instantly McGraw dominates all.

"Devore!" he snaps, and a little and very agile outfielder leaps from the New York bench. "Run for Merkle!"

The second command is even sharper. McGraw begins to call to the coacher on third base. Sallee imagines some of the phrases apply to him and the last of his self-possession goes soaring high and far. Meyers, the big Indian, follows with a single and Devlin sprints home with the third run.

"Keeler!" barks McGraw.

Meyers, who runs like a wounded moose, charges back to the bench. His part is finished. The pudgy figure on the coaching line is playing the game. The St. Louis players gather around Sallee in a conference. The game goes on. The daring McGraw throws his luck on the wheel again and tells Keeler to steal second. He does. Crandall is at bat.

The little figure on the coaching lines is raging like a tornado. Sallee is actually trembling from nervousness. He falters and wobbles the ball toward the plate. Crandall drives it to short field and beats out the throw. Keeler crosses the plate on the heels of Devore and the game is won.

Here the element of "Inside Ball"—outguessing—was subordinated to the psychological effect furnished by juggling players and the personality of McGraw on the coaching line. I am glad Friend did not see that game. Surely he would have perceived, on some later occasion, McGraw standing with crossed arms, and I would have heard a proud whisper:

"Watch McGraw, he's giving the 'Inside Ball' signal!"



A COWBOY WAR

BY ARTHUR CHAPMAN

SINCE the first cattlemen trailed their herds from the Rio Grande to the broad plains of the Great American Desert, as the country west of the Missouri River was known, there have been feuds for the possession of the choicest grazing lands. But it was not until cattlemen fought cattlemen in Lincoln County, New Mexico, late in the '70s, that any of the armed disputes approached real war. The Lincoln County War was a death-grapple that lasted two years and added many tragic pages to the red history of the Southwest. In the number of men engaged, in the length of time it endured, in the number of fatalities, in the value of property destroyed, and in its far-reaching political effect, there has never been anything to match the Lincoln County War in the history of the frontier.

The struggle in the Pecos River country, between rival cattle interests, can be compared to nothing but a feudal war between powerful barons in medieval times, when hosts of armed retainers were glad to dare death while fighting under their chosen banners. The scene of this remarkable strife precluded any Lilliputian warfare. The struggle had to be titanic, to match the surroundings. Lincoln County, at that time, comprised nearly one-third the territory of New Mexico. It contained 40,000 square miles of land and was larger than two or three New England states lumped together, with Rhode Island and Delaware thrown in for good measure.

Here on this great battleground of lonely desert wastes, of virgin forests, and of rolling tracts of bunch grass, or in the forbidding Capitan Mountains, two opposing armies of cowboys made stirring history. Here the frontier soldiers of fortune who enlisted in this feud

—enrolled themselves more for the lust of blood-letting than from any desire for personal gain or motives of animosity—sniped merrily at each other and met or meted out death with equal imperturbability.

It will never be known just how many men were killed in the long months of warfare in New Mexico. Some who were concerned in the war put the number as low as eighty. Others, who speak from personal observation, say the death list mounted into the hundreds. All admit that many cowboys were killed, whose fate was never known. One horseman would see another riding on the lonely range. The men would ride cautiously toward each other. If one happened to be a Chisum man, and the other a Dolan-Riley follower, up came the rifles and spang went the bullets until the death of one of the participants ended the duel. Then the victor would ride away, not daring to stop to ascertain the identity of his fallen foe, lest friends of the vanquished should appear and wreak vengeance.

Or if one bunch of bravos met a chaps-clad crowd from the other camp, there would be a merry fight in some cow-town saloon and the checkered past of some poor chap would be merged into an uncertain future. And whether the victim lay undiscovered and with clean-picked bones on the open range, or whether he were buried on "Boot Hill," he remained unidentified. It was enough that some cowboy with a picturesque soubriquet had "cashed in"—and soon even the little tragedy itself was forgotten in the larger phases of the war.

Old John Chisum started the Lincoln County Cattle War when he trailed 60,000 head of steers from Texas to the Lower Pecos country, in New Mexico. Chisum was one of the most remarkable

characters the frontier ever knew. He was one of the pioneer cattlemen of Texas, and, as scruples about brands never bothered him, his herds soon grew to enormous size.

In the decade following the Civil War many unscrupulous men in Texas became cattle kings, owing to their disregard of the rights of others. Brand rights were overridden and open "rustling" was winked at. Unless a man was prepared to fight for every steer he owned, he would soon see his property in the herds of a more powerful neighbor. Trail herds, on arriving at a shipping point after a journey of many hundred miles overland, would be twice as large as when the start was made—the surplus being made up of other brands picked up en route. Under such conditions men like Chisum flourished and made new fortunes every year.

Soon, however, the better element began to secure control of affairs in the Texas cattle business. The Texas Rangers, the finest and most effective frontier police ever organized, made life miserable for cattle rustlers. The desperate characters who had flocked to Texas realized that they must seek new headquarters. The thinly settled and poorly governed territories of New Mexico and Arizona appealed to them. Incidentally New Mexico offered John Chisum a fine opportunity for even greater conquests than he had made in Texas. He had viewed the beautiful Pecos valley and coveted what he saw, for there was a range to appeal to any cattleman. There was abundant grass, plenty of timber for shelter, and water enough for immense herds.

The fact that other cattlemen had herds grazing in the Pecos country did not disturb Chisum, as after-events showed. In fact, it was part of his scheme to turn these other brands to his own account. He knew that New Mexico was poorly governed and that the only law worth considering was the law that swung at a man's hip. He had triumphed under such conditions in Texas and he could do it again in New Mexico.

When Chisum entered Lincoln County with his herds he had a small

army of cowboys in his employ. Most of these men had records of crime in Texas. They were part of the undesirable element of which the Rangers were ridding the Lone Star State. When these men were offered "fighting pay" to cast their lot with John Chisum they hailed the opportunity. Every man in the Chisum outfit was a gun-fighter, and a more desperate lot of adventurers never "threw in" with a shadier enterprise.

Headquarters were established on the Pecos, the Chisum ranch being known as the Bosque Grande. The ranch house was so constructed that it could be turned into a veritable fortress in case of a siege. A trading post was established, and the Chisum headquarters soon became a center of activity.

No Respector of Brands

Chisum was not satisfied with turning his herds upon a country which belonged to others by all the unwritten laws of Cattle Land. He began to augment his own herds at the expense of his neighbors. In those days of limited stock inspection and unlimited "rustling" there was much stealing of cattle in the south and shipping of stolen brands to the north. No man was better aware of the conditions and opportunities than John Chisum. He would order his men to "cut out" a certain bunch of cattle from the herd of a neighbor. The neighbor would protest, and perhaps would show a bill of sale for the cattle. But Chisum would claim that the bill of sale was void, as the cattle had been "rustled" from another part of the country.

There would be no redress, as the Chisum cowboys stood ready to back the Texan's demands by force of arms. Sometimes this wholesale appropriation of property was carried on under a flimsy pretext of legal right. Orders were written—sometimes hastily scrawled on the back of an envelope in lead-pencil—giving Chisum the right to attach certain cattle. With his gun-fighters at his back, Chisum would wave these orders in the face of an indignant but helpless cattleman and cut out the choicest part of the rancher's herd.

Such a campaign could not have been planned and carried out by any but a man of iron will and great personal bravery. The most ardent of the Texan's enemies was always ready to admit that John Chisum was as great a general and as capable a cattleman as ever threw a leg over saddle leather. In his long years of fighting he never lost his nerve: The tall, lanky, smooth-spoken Texan seemed to be a man of steel. In spite of the fact that the revolver was regarded as the most necessary article of a man's dress on the frontier and that he was at any time likely to come within range of men who had sworn to take his life, John Chisum never "packed a gun."

He fought with the larger weapons of cunning, and left it to his hired bravos to carry out the powder-burning part of his enterprises. The man's inflexible will not only carried him through the dangers threatened by his open enemies, but it held his own unruly gun-fighters completely under his spell. A man of smaller genius would have been slain by his own followers.

Chisum's work could not go on without opposition, and soon he was confronted with an organization of cattle owners. This association soon became known as the Dolan-Riley outfit, for the reason that two aggressive young cattlemen named Dolan and Riley were at its head. Dolan and Riley had only about 3,000 head of cattle of their own, and they were drawn into the fight against Chisum chiefly owing to a previous quarrel with the Texan's right-hand man at Bosque Grande. This quarrel, which gave the anti-Chisum stock owners the fighting leaders they had sought for successful opposition to Chisum, grew out of the crafty work of Alexander A. McSween, who was the Riche-lieu of the little court at Bosque Grande.

McSween was a remarkable character — hardly less remarkable than Chisum, in whose service he lost his life. He was a shrewd, able Scotchman, who was considered the best business head in New Mexico. McSween had been attorney for L. G. Murphy & Co., a cattle concern with which Riley and Dolan were identified. Emil Fritz,

a partner in the concern, died, leaving his property, including a \$10,000 life insurance policy, to his sister.

The woman, against the advice of friends, had McSween appointed administrator. Later, when the lawyer allied himself with John Chisum, she had McSween removed, and a court order was issued ordering the lawyer to turn over the woman's property to Messrs. Dolan and Riley as administrators. McSween had invested money in cattle at Felice, twenty-five miles from Lincoln. At the latter place, which was the county seat, he had organized a bank, a young Englishman named Tunstall being his partner and the cashier of the institution.

Didn't Know the Rules

Tunstall, who was a "tenderfoot" of the pronounced English type, had been told that Chisum and McSween were opposed by a lot of bandits and desperadoes. Consequently when some deputies, armed with the necessary legal papers, arrived at Felice to secure the cattle which were said to belong to the sister of Mr. Fritz, the young Englishman rushed out with a rifle. There is no telling what he intended to do, for he was shot dead by one of the cowboys in the party. A "gun play" on the frontier was not the best introduction to a parley, and the young Englishman met his death because of his unfamiliarity with the rules of the game in the Southwest.

The killing of Tunstall brought Lincoln County into the flames of war. McSween used the death of his partner as a means of stirring up sentiment against Dolan and Riley, but on the other hand the young cattlemen were joined by nearly all the independent cattle owners of the country, and common cause was made against the Bosque Grande outfit. On the principle that fire is best fought with fire, Dolan and Riley hired all the desperate men they could find to fight the Chisum desperadoes. As a result services of "bad men" were soon at a premium, and two armies of gun-fighters were arrayed against each other.

Politics was dragged in by both sides. If one side secured warrants from a

court, the other filled its pockets with justice of the peace warrants. But warrants were simply loopholes in case of possible legal consequences for murder. The fight was simply a war of extermination. The political and legal machinery might help a little, but it was the side that could shoot best that was going to win out.

Tunstall's father, a wealthy Englishman, fanned the flames of war by sending word that he would devote every cent of his large fortune to hunting down the men who were concerned in the killing of his son. It is said he turned over \$30,000 to McSween to hire gun-fighters and that he offered a reward of \$1,000 for the killing of any man who was in the party of deputies at the time of the shooting of young Tunstall. It is said that the notorious desperado, "Billy the Kid," who fought for the Chisum outfit, received such a reward for the killing of "Billy" Moreton, foreman for the Dolan-Riley outfit, and a cowboy named Baker, both of whom were in the party when Tunstall was shot. The killing of these two men was most cold-blooded and shows how blinded to all considerations of humanity were the desperadoes who had been hired to do the range fighting.

Moreton was a young Virginian—as game a cowboy as ever jingled spurs. He and Baker were caught on the range by a party of Chisum's men, one of whom was the desperado, "Billy the Kid," whose name causes the people of the Southwest to shudder, even to-day. The Kid had worked for the Dolan-Riley outfit as a cowboy before the war had started. Owing to his reputation as a young daredevil who would not hesitate at shedding human blood, the Kid had been hired by Chisum, for whom he did yeoman service.

When "Billy the Kid" captured Moreton and Baker, his heart was glad, for he saw a chance to work off personal spite. The Kid had quarreled with Moreton over some trifling affair of cow-camp life and had gone away harboring a grudge against the young foreman. The Kid's grudges were generally wiped out in blood, but never in a more cold-blooded manner than in

Moreton's case. The young Virginian and his cowboy companion were taken to a lonely spot in the Capitan Mountains. They were told that they would be given a short time to write to their friends, if they had anything to say.

Moreton wrote an affecting letter to his "folks" in Virginia. It was a manly, straightforward letter, in which he told of his capture and how he looked for nothing but death. He charged it to his connection with the Tunstall affair, but asserted that he was merely doing his duty in serving legal papers when Tunstall was shot. Moreton's prophecy of death was realized. He and Baker were led out and shot down without a chance to defend themselves. It is said "Billy the Kid" did the killing and that he received a reward. But no doubt this young fiend cared more for this wreaking of a terrible revenge on Moreton than for any money he may have received.

"Billy the Kid" Appears

The part played by "Billy the Kid" in the Lincoln County war would make a thrilling book in itself. This young desperado was just starting his career of crime when the war broke out. William Antrim, or Bonney, as he was sometimes known from the name of his step-father, was a New York street waif who had been brought to New Mexico by his mother. He had broken jail two or three times, when incarcerated for minor thefts, and finally killed a blacksmith for whom he was working at Fort Apache. This gave the boy his first taste of human blood, and he had twenty-one murders recorded against him when he was killed by Sheriff Pat Garrett of Lincoln County a few years later.

When working for the Dolan-Riley outfit, before the war broke out, Billy was looked upon as a good cowpuncher and a first-class entertainer. He was a slim, effeminate looking young chap, with prominent teeth, but a not unpleasant countenance. The owners of the outfit used to take Billy with them on long rides on the range, for the reason that the lad was such "good company."

The Kid's break with the Dolan-Riley outfit came, as has been stated, from his quarrel with Moreton, the foreman.

Then came his enlistment in the Chisum ranks, and from that time on "Billy the Kid" was in his element. He fought on the Chisum side until after the last big battle at Lincoln, where he had a marvelous escape from death, and, after the cattle war was over, the Kid continued as a sort of free lance, rustling cattle and murdering stockmen on his own account. This young assassin never cared how he encompassed the death of an enemy, which fact was shown in his murder of Sheriff Brady of Lincoln County.

Ambushing the Sheriff

Judge Warren Bristol of the District Court at Mesilla, one of the ablest jurists in the Southwest, had issued warrants for the arrest of many of the Chisum faction on charges that ranged from murder downward through a long list of smaller crimes. If these warrants were served, the Chisum side would be dealt a heavy blow, and it was determined to put the sheriff out of the way. "Billy the Kid" and a dozen other gun-fighters were detailed to do the work. On his way to open court, Sheriff Brady would have to pass the McSween corral in Lincoln. In this corral the Kid and his companions waited for their victim.

Sheriff Brady, a man of a high type of courage who had set out to do his part toward ending the Lincoln County war, had been offered a large escort of cowboys from the Dolan-Riley outfit, as it was known that the official's life was in danger. He refused the offer and set out from Lincoln, accompanied by George Hindman and J. B. (Billy) Matthews. As the little party passed the corral a volley was fired, and Sheriff Brady and Hindman fell dead and Matthews was slightly wounded.

With the gameness characteristic of the frontier fighter, Matthews threw himself behind an adobe wall and fired into the corral. One of his shots struck "Billy the Kid" in the upper part of the leg, giving that young desperado the first and only wound he ever received. The

wound was a severe one, and the disabling of their best fighter demoralized the assassins in the corral, so Matthews made his escape. The Kid was out of commission several weeks as a result of his wound, and New Mexico would have been saved much gory history had the result of Matthews's target practice proved fatal. Matthews, who came so near ending the Kid's career at its very outset, recovered from his wounds and was for several years postmaster at Roswell, New Mexico.

After the assassination of Sheriff Brady, the Kid was captured, but killed two guards and made his escape from jail. He continued fighting for Chisum until he had a falling out with the Texan, toward the close of the war. It is said the Kid received what he considered an unfair deal from his employer. Certain it is that he rode away, after swearing a vendetta on the cattleman.

"I'll get a steer or a man for every five dollars you owe me," is the message the Kid sent to Chisum. "If I kill you, the account is wiped out." The desperado made good his threat in a manner that must have sickened even the indomitable Chisum.

The Kid did not cast his fortunes with the Dolan-Riley outfit again. Indeed, it is doubtful if his services would have been accepted, as Billy was then considered too dangerous a man to have on any payroll. Instead he went man-hunting on his own account and became a sort of free lance of the plains. He threw in with some desperate characters, among whom were Dave Rudebaugh, Billy Wilson, and Tom Pickett, all of whom killed men and rustled cattle indiscriminately. It made no difference to them whether a steer bore the rail brand of the Chisum faction or the arrow brand of the Dolan-Riley outfit. Only Billy took special pleasure in killing a Chisum man. He shot three cowboys while they were at their evening meal on the range, merely on their admission that they worked for John Chisum.

In the meantime the rival forces had been soaking the range with human blood. There were constant duels in every part of the county, and many adherents of both camps rode away never

to return again. The one instance of a display of humanity in the fighting took place at Spring Ranch, where eighteen of the Dolan-Riley men met about half that number of Chisum men and engaged in battle.

The men met below the ranchhouse and George McNabb of the Chisum side was killed at the first volley. A Chisum cowboy named Coe threw himself into a depression in the ground, where he fought desperately until wounded. He lay in the blazing sun during the remainder of the fight and would have died had not the Dolan-Riley cowboys, after driving away the Chisum men, taken him to the ranchhouse and given him medical attention.

One Against Fourteen

An instance of the courage of these gun-fighters in facing overwhelming odds was shown in the case of a Dolan-Riley cowboy named Roberts. This man had sickened of the war and told his employers that he intended to leave the country and cast his lot in a more peaceable community. He was paid off, said his farewells, and had made his way about fifty miles from the seat of war when he came upon fourteen Chisum men, under Dick Brewer, one of the Texan's foremen. "Billy the Kid" was in the Chisum party and he laughed at Roberts's story.

"Don't let Roberts get away," the Kid was heard to say to Brewer. "That story about his going to quit the country is all a game. Let's kill him, and we'll have one good fighter less to reckon with."

The men who had just shaken hands with Roberts opened fire on him. The cowboy was suspicious, however, and he had heard what "Billy the Kid" said, so he was ready for action. He fired his heavy rifle without bringing the weapon to his shoulder and wounded George Coe. At the same time Roberts received a bullet through the body. When Coe shouted that he was wounded, the Chisum men scattered. The encounter took place at the home of Dr. J. H. Blazer, where there was a saw-mill, the logs giving the cowboys excellent places

of shelter behind which they could do their shooting.

Mortally wounded though he was, Roberts made his way into the house and dragged two mattresses to the door-sill. Here he lay, with blood spurting from his wound at the slightest move, waiting for a chance to get a shot at his enemies. The Chisum men had surrounded the house, and Brewer had a position behind a log in front of the dwelling. Dr. Blazer was called upon to surrender Roberts, but he refused, whereupon the Chisum men opened fire on the house.

With his rifle resting across the mattresses, Roberts lay in the door and waited until Brewer raised his head to take aim. Then Roberts fired, and Brewer crumpled to the ground with a great hole torn in his forehead. The death of the foreman discouraged the other cowboys. They took Brewer's body and rode away, leaving Roberts to die in peace, which he did a few days later at Fort Stanton, where he was cared for by the wives of the officers.

For months the work of death went on. Not only were men shooting each other down, but thousands of dollars worth of property was being destroyed. If a Chisum man found a Dolan-Riley steer on the range and knew he would not be able to get away with the animal, he would shoot it—and the other side would retaliate in kind. The Dolan-Riley interests had large army contracts to fill, but not a load of feed nor a herd of beef steers could be moved without a small army to guard it.

Finally both sides had to make a total transfer of property to avoid annihilation. Chisum deeded his property to R. D. Hunter & Co., of St. Louis, and Thomas D. Catron, former delegate to Congress from New Mexico, and later mayor of Santa Fe, took over the Dolan-Riley property. While these transfers practically put an end to the destruction of property, they did not affect the taking of human life, as the war raged as fiercely as ever.

In addition to the fights between the opposing factions, outlawry of an independent sort flourished. Desperadoes who took no man's pay robbed trading

posts and committed murders right and left. An instance of the boldness of these independent outlaws was shown in the robbery of the post-office at Bernal, where all the government stock was stolen. The Mescalero Indian agency was attacked and the clerk was murdered and the government horses stolen.

Political offices were used to advance the interests of one side or the other. The sheriff's office was the chief bone of contention. This office switched from one side to the other until both factions were fairly top-heavy with indictments and warrants. After Sheriff Brady's assassination, G. W. Peppin was appointed. Then Governor Axtell was removed, and General Lew Wallace was appointed Governor of New Mexico.

General Wallace came to New Mexico steeped in prejudice against the Dolan-Riley faction. He put in a sheriff named Copeland, an ignorant man who did little or nothing to stop the war, and affairs in Lincoln County grew worse. In addition to his prejudices, General Wallace viewed the situation in New Mexico through the eyes of the novelist and romancer, and the result was not good for the territory. This was evidenced when he made an appointment with "Billy the Kid," at the time that desperado was being sought for the assassination of Sheriff Brady.

The Governor and Kid met in a lonely ranchhouse and had a long talk. This was all "nuts" for a man who loved romance as did the author of "Ben-Hur," but the greatest need in New Mexico just then was a governor who would stamp out the "bad men" as ruthlessly as the governor of Texas had done.

It was not until Sheriff Pat Garrett took charge of Lincoln County affairs, at the conclusion of the cattle war, that matters were straightened out and there began to be some semblance of law in the country of the feudists. Garrett caught and imprisoned "Billy the Kid," and later killed the desperado when the Kid had succeeded in slaying his guards and breaking jail. In addition Garrett killed Tom O'Folliard, Charley Bowdie, Tom Pickett, and two others—all notorious characters who were making life in New Mexico unbearable.

It is a strange coincidence that every one of Garrett's victims was shot in or near the heart. There was no romance about Pat Garrett in those stirring times. He looked on the "bad man" as an enemy to society, to be stamped out of existence as one would kill a rattlesnake.

The Big Fight at Lincoln

Before Garrett came to the sheriff's office, however, the Lincoln County war had reached its crisis. This came in the big battle at Lincoln, in July, 1878. Sheriff Peppin, at the head of a posse of about thirty of the Dolan-Riley men, had left for Bosque Grande to serve warrants on McSween and about fifteen others of the Chisum faction. McSween had heard of the movement and had organized his gun-fighters. He took about thirty of the best men, including "Billy the Kid," and by a countermarch slipped into the town of Lincoln on July 15, taking possession of the place. A second faction was to come from Bosque Grande, and, but for an unlooked-for obstacle to the relief column, the Chisum faction would have been victorious.

McSween and his men were quartered in the lawyer's house, from the corral of which Sheriff Brady had been assassinated. When Sheriff Peppin and his men returned from Bosque Grande they found McSween's party securely fortified. McSween's house was built of heavy logs and was loopholed on all sides. It was stocked with provisions and could withstand a long siege. On July 16 a formal demand for the surrender of McSween's party was made by a deputy named Long. Previous to this demand, Mrs. McSween and some other women in the house had been granted permission to withdraw to a place of safety.

Here a new element entered the fight. Lieutenant Colonel Dudley and sixty soldiers of the United States Cavalry, with gatling and howitzer, came swinging on the scene. Owing to a United States law, forbidding the military to act as a posse, Colonel Dudley felt that he could not interfere in the fighting, but he determined to do as much as possible to prevent bloodshed. He ordered

all non-combatants to move to places of safety and sent word to both sides that there should be no firing across the town, and that the battle must be confined to the vicinity of McSween's house.

The relief column from Bosque Grande had come up, but could not give aid to McSween's men because of Colonel Dudley's order, forbidding general fighting in the town. Both parties were notified that anyone killing or wounding a soldier would be held responsible.

Under these strange conditions, the fight began. The first volley from McSween's party killed a cowboy named Crawford. At one time Colonel Dudley reported the firing was so heavy that one hundred and fifty shots a minute were exchanged. McSween's party was well protected behind the heavy logs of the house, while the sheriff's men had excellent positions behind temporary breastworks surrounding the building. On the sheriff's side, a deputy named Beckwith was killed, and, on the 18th, one of McSween's men was shot through the body. He died a few hours later and was buried in the cellar of the house while the fight was still raging.

For three days the firing went on without perceptible advantage to either side. Then on the evening of July 19 wood was piled against the side of McSween's house and the building was set on fire. McSween and his men merely fought with increased desperation when the flames got beyond control. When they were driven out of one room by the fire they went to another and continued to shoot at the besiegers. At last, when the house was about to collapse, the defenders rushed out. They were met by a counter-charge, and a fierce fight ensued in the light of the burning house. McSween, at the head of his men, fell with five bullets in his body. The others killed were Vincent Romero, Harvey Morris, Jose Chavis, and Francisco Samora. "Billy the Kid" was reported missing and it was thought he had met his death in the burning house, but it was learned later that he had made a marvelous escape.

When the tide of battle began to turn against the Chisum men in McSween's house, the Kid determined to make an

attempt to get away. Followed by a Mexican named Eugenio Salazar, he ran out of the house toward a ditch a few yards away. He was in full view of the besiegers and a volley was fired at him as he ran. When near the ditch, the Kid made a spectacular leap into the air and fell heavily to the ground. It was thought that another one of McSween's men had been killed, and the besiegers turned their attention to the house.

The Kid Gets Away

But the Kid was not even scratched. He had fallen in the chapparal near the ditch and wormed his way, well under cover, until he reached an arroyo which crossed the ditch at a distance of some sixty yards. Once in this arroyo, his escape was easy. The facts of his escape are here related just as the Kid told them to an acquaintance several months after the fight at Lincoln.

This battle was the deciding point in the Lincoln County war. President Hayes put the entire county under martial law. Guerrilla fighting went on for several months, but the Chisum faction felt the loss of the keen and resourceful McSween. John Chisum realized that he was playing a losing game, and that the high stakes he had set his heart upon were bound to vanish. The tremendous expenses of the war and the large amount of property destroyed had brought him face to face with ruin. His dream of conquest had vanished, and he was a broken man, physically and financially, when he left Lincoln County, to die of cancer in Kansas City a few years later.

Nor was there any triumph for the other side in this fierce war. Dolan and Riley lost everything in their long fight. Thus neither side gained material advantage, though the fight put up by Chisum's opponents resulted in keeping the range open to the smaller stockmen and eventually to the homeseekers, who began to flock to the Southwest in the '80s.

Reckoned in cold dollars, the cost of the Lincoln County war is only less appalling than its loss in human blood. The war would have beggared the rich-

est of principalities. The actual losses to the feudists concerned were over \$1,000,000, while the expense to the government in the long period of martial law and during the course of innumerable and apparently interminable suits could not have been less than another million. One who was actively concerned in the war estimates that Chisum, McSween, and their allies must have lost over \$500,000. Of this amount Chisum's personal losses amounted to about \$400,000, if not more.

The Dolan-Riley outfit lost fully \$300,000, the personal losses of Dolan and Riley footing up over half that amount, the other cattle owners in the D and R faction losing smaller fortunes. The progress of the Southwest was retarded by the war, nobody daring to settle in a community that turned a whole territory into a battleground. The losses brought about by the feud, in keeping back immigration, can never be esti-

mated, but no doubt they were fully as heavy as the actual damages in the destruction of property.

Even so serious an affair as this cattle war was not without its ludicrous incidents. John Chisum had a brother, Jim, who kept out of the war and was recognized as a non-combatant. But, unfortunately for the brother, he looked so much like John that one had to get close to him to make sure he was not the leader of the Bosque Grande forces. There was not a cowboy on the opposing side who would not have given his head to be able to kill John Chisum, and every time one of them sighted Jim Chisum there would be a chase. When the mistake was discovered there was always an apology, but it is one of the traditions of the range that Jim Chisum ran several of John's best saddle horses to death in keeping out of the way of hard-riding pursuers who imagined they were on the trail of old John himself.



THE WORLD OF SPORT

GORDON BROWNE

WHEN word went out last May that Gordon Browne was dead college athletes, and football men in particular, without regard to age or college, felt a sense of personal loss. He was close to the ideal type of college athlete—physically, mentally, and morally balanced. To say that he was one of the greatest Yale football captains—leader of one of the greatest Yale teams—hardly states the full case. He was that—and more. He won the Phi Beta Kappa key in his Junior year. He was one of the first three throughout his course in the race for the valedictory. In his Senior year—the year in which

his football interests were most exacting—his classroom work averaged twenty hours a week, including several subjects besides the regular curriculum.

He was a man of most methodical habits, to which most of his success in the classroom, on the gridiron, and on the water may be ascribed. Even in his prep school days his quality of serious and almost grim attention to the business in hand was remarked. His days were planned with mathematical exactness and it was a more than ordinary happening that could excuse a break in the schedule.

His football career at Yale began with his Freshman year. His first lesson on

Yale field was at the hands—literally—of George Foster Sanford—later the coach of the only team to cross Yale's goal line in the year of Browne's captaincy. Sanford was a terror to Freshmen, but Browne gave him all he wanted and effectually convinced the veteran that there was more than usually good stuff in the raw recruit. In his Freshman year Browne met Bouvè, Harvard's star guard, and no one who saw the game doubted the younger player's pre-eminence. The same year he faced Crowdis of Princeton and was a long way from being second best.

The next year the only opponents who were anything near Browne's caliber were Burden, of Harvard, and Edwards, of Princeton. Both these men were at the top of their football careers and without a superior in the country, but as was remarked after the Princeton game, "they got no change out of Gordon Browne."

Browne's 1900 team was a singularly slow one to develop—due largely to the fact that Browne had determined to take the full limit of early season time in laying the foundations of good football in the new material that he found on his hands. There was much shaking of heads and wonder as to what was the matter with Yale. But when the march began it went with a rush. At the end of the season the football mathematicians found that Yale had made $33\frac{1}{2}$ times as many points as all her opponents had scored against her.

Browne was a strict disciplinarian on the field—as might have been expected from his methodical habits in other matters. In the year of his captaincy he did not miss a day of practice, declaring that the captain's place was on the field. Yet he never once failed to return to the campus in time for a five o'clock lecture which had a place on his schedule. In fact, evening football conferences were forced to yield place to the captain's regularly appointed hours of study.

Some who read these paragraphs may feel something of overstrain—a sense that so much earnestness and method—so much grim determination and inflexible purpose—was out of proportion to

the object. The question can hardly be argued. Those to whom college athletics are anathema will see in Gordon Browne only so much good material bent to unworthy uses. Those—and we prefer to think that the latter are in the majority—who see in the games of youth a valuable discipline as well as an excellent example will write the name of Gordon Browne high among the great of the college world.

OXFORD-CAMBRIDGE VS. YALE-HARVARD

ARRANGEMENTS have been completed for a dual field and track meet between Oxford-Cambridge and Yale-Harvard teams, to be held some time in July in England. At the time this paragraph is written no announcement has been made as to the personnel of either team, and probably final decisions will not be made until the last possible moment. Doubtless Harvard will furnish the majority of the track men, especially in the middle distance events, with Yale coming on stronger in the jumps and weights.

This is not the first time the two great English universities have tried conclusions with the two premier American institutions. The first meeting was in England, in 1891. Only firsts were counted and the Englishmen won by five points to four—finishing first in the quarter, half, mile, three miles, and broad jump, while the Americans carried off honors in the hundred, high jump, the hammer throw, and the high hurdles.

It was in 1901 when the four universities met again, this time in this country. Here America turned the tables, the only events won by the visitors being the half-mile, mile, and two-mile.

In 1904 East and West met for the last time in London. Again England was forced to be content with the three distance events, Schick of Harvard duplicating Wefers's performance of $9\frac{1}{8}$ for the hundred.

The record for these contests is thus seen to be a fairly consistent one of victory for the Englishmen in the distance events. With Yale distinctly inferior in

this department this year and Harvard little, if any, above the average, it would seem a safe guess that the Americans will be forced to repeat their performances of previous contests in the hundred, the jumps, and the weights. Judging from the performances in the Intercollegiate at the end of May, there is little ground for expecting a walk-over.

FANS AND FANS

NOT all the baseball enthusiasts are in the bleachers. A man long an expatriate from the country community of his birth returned to it for a few days lately. After the conversational ice had been broken the flock of young nephews who surrounded him began to talk baseball at him. Not one of them had ever seen anything better than fourth-rate minor league ball, but they knew their national game far better than did the visitor. Pennant winners for years back, sensational happenings in critical games, the peculiarities of prominent players, all were on the tips of their tongues. The city in which the visitor lives supports two major league teams, but the country nephews were veritable encyclopedias of baseball compared with his limited stock of knowledge.

All of which leads us to submit respectfully that when all other nationalizing influences fail baseball will be all-sufficient to hold the States together under one flag and one constitution. Also it is another argument for the rural free delivery as the disseminator of useful information.

RECORD-BREAKING MEET

SPEED and more speed was the order of the day in the finals of the intercollegiate track and field games at Cambridge, May 27th. Tommy Conneff's mark of 4 minutes 15 $\frac{3}{5}$ seconds in the mile, which had stood for sixteen years, was clipped a fifth of a second by J. P. Jones of Cornell, who went out later in the half and pulled Parsons' record of 1:56 down to 1:54 $\frac{4}{5}$. Berna, another distance crack from Cornell, set a new American mark of

9:25 $\frac{1}{5}$ in the two-mile. Collegiate and intercollegiate records in the shotput went by the board when Horner of Michigan sent the sixteen-pound sphere 46 feet 7 $\frac{1}{8}$ inches. Babcock of Columbia wrested the pole-vault supremacy from Yale by clearing the bar at 12 feet 8 $\frac{3}{8}$ inches, incidentally featuring himself as the only point winner for Columbia. Craig of Michigan tied the intercollegiate records of 9 $\frac{1}{5}$ and 21 $\frac{1}{5}$ for the hundred and two-twenty respectively, and Young of Amherst went the quarter in 48 $\frac{4}{5}$, tying the time made by Taylor of Pennsylvania four years ago.

It was a day of upsets. Pennsylvania, the favorite for weeks, failed to finish better than fourth, while Yale, of whose team nothing but discouraging reports have been heard all spring, was a close second to Cornell, the winner in points. Michigan, the dark horse from the West, credited with two or three brilliant performers on a mediocre team, put ten men into the finals and battled through to third place, upsetting the hopes of Pennsylvania.

Study of the final results leads one to wonder why some of the other trainers do not take a leaf out of Jack Moakley's book and pay a little more attention to the development of men for the distance events. These require probably less unusual qualifications and are more beneficial in their effect on the participants than any other of the events of the schedule. Most sprinters and jumpers are born with a marked predilection for speed and agility, while almost any man with a healthy body and sound heart and lungs can be taught to give a good account of himself in distance running.

Of course, this is not to say that any one of us, even if caught young and properly trained, can be developed into a Jones or a Berna. It is a fact, however, that these two sterling performers are the highest products of a system which presupposes that any man can be taught to run the distances and to go them in rather better than respectable time. Cornell's long string of victories in the annual cross-country meet is the best possible testimony to the wisdom of Moakley's method.

SOME HEN THIS

THE humble but helpful hen has been held up to us of late as the greatest wealth-producer of the country—the automatic provider of health, material support, and breakfast. It has remained for Tarrytown, a suburb of New York, to present this simple-minded but industrious friend of the farmer in the rôle of a hired hand. Finding her master—we hate to say owner—busy building a chicken coop—presumably for her occupancy—Biddy waited about until the man in the case dropped a nail. Turning to pick it up, he found that Biddy had already forestalled him and was standing by the coop with the nail in her bill, held ready for driving. Thenceforth, until the homely, necessary task was done, man and hen worked in profitable and pleasant alliance. This is all true, too, because it was printed in a New York newspaper.

NOT THE REAL OWNER

A YOUNG Illinois farmer remarked recently in the course of describing the improvements he had been making on a farm lately purchased, "A man doesn't really own the land he lives on. He only has the use of it during his life. If he's a good farmer he'll pass it on to the next man in better shape than it was when he received it." Twenty years ago such a remark would have been unintelligible to many a Middle Western farmer. To-day it is being interwoven daily more closely with the theory and practice of agriculture all over the country. It is a remark that is more significant of the future than any political shibboleth or social rallying cry that has been heard for a generation.

THE FALLACY OF LONG RANGE

EVERY now and then some novice in the pride of ownership tells of how his new gun is killing right along up to a distance of a hundred

yards. Other sportsmen of a more practical bent are trying to devise a weapon that will permit them to reach out just a little farther for ducks and geese than the normal range.

The difficulties of developing any smooth-bore gun that will kill regularly at extreme ranges may be brought home to the shooter by noting the conclusion of the English authority, Sir Ralph Payne Gallwey, that a punt gun, shooting a pound of number one shot with a muzzle velocity of 1,400 feet, is not an effective weapon at distances beyond seventy or eighty yards—its best range being sixty yards. If that is the practical range of a shotgun throwing a pound of shot of large size at high velocity, it is not worth while straining our ten, twelve and eight gauges with the expectation of finding a charge that will prove deadly at one hundred yards.

Even if a shotgun could be invented that would throw a shell similar to that of a quick-firing cannon—one that would go a certain distance and then explode—it is doubtful if the skill of any marksman would be equal to using it effectively upon such fast-moving birds as wildfowl. It has been calculated that with number one shot, having a muzzle velocity of 1,400 feet, shot at a bird passing at the rate of forty miles an hour, the lead for seventy-five yards would be fifteen feet; for one hundred yards twenty-two feet; for one hundred and fifty yards, forty-three feet; for two hundred yards, the lead would be seventy-four feet.

Now, remembering that the normal muzzle velocity of a twelve-gauge charge is about 1,050 feet and that ducks frequently fly one hundred feet a second, in place of the sixty feet allowed for above, we will see that it would be necessary to hold about one hundred and fifty feet ahead of our mark at two hundred yards, as well as some ten or a dozen feet high. After all, we do not need extremely long-range guns, it seems, because we couldn't hit anything with them if we had them, except birds sitting still.

NEWS OF THE OUTDOOR WORLD

Aviation

THE Paris-Madrid Race, with its \$30,000 prize, was won on May 26th by Pierre Vedrines, the French aviator, who covered the final lap of 146 miles in 2 hrs. 45 mins. His actual flying time for the entire trip was 12 hrs. 18 mins.

The German airman, Hirth, won the Upper Rhine reliability flight, covering a total distance of 360 miles, on May 26th.

Lincoln Beachey covered seventeen miles in fifteen minutes, flying from Bridgeport to New Haven, May 25th.

The list of fatal accidents for May has been regrettably long. Lieut. Paul Dupris and Pierre Marie Bournique were burned to death on May 18th at Rheims by the explosion of their gasoline, after falling with their monoplane 250 feet. Rene Vallon, the French aviator, fell at Shanghai on May 6th and was instantly killed in the wreck of his Sommer biplane. On May 21st Henry Maurice Berteaux, the French Minister of War, was killed and Antoine Ernest Monis, Premier and Minister of the Interior, was seriously injured at the start of the Paris-Madrid air race, by Train falling with his Bleriot machine from a height of 100 feet. The aviator was unhurt.

The 45-mile race from Brooklands to Brighton, Eng., was won by Gustave Hamel in 56 minutes, from seven competitors, May 6th.

Claude Schmidt, of Rutland, Vt., flew nineteen miles in 22 minutes from the Mineola Aviation Field, May 7th.

At Washington, D. C., May 7th, a three-cornered race between two aeroplanes and an automobile was won by Lincoln Beachey in 5:15 for three miles. J. A. D. McCurdy handled the second biplane and A. Gary Carter, of Washington, drove the auto.

At Garden City, May 20th, St. Croix Johnstone made a twelve-minute flight at a height of over 1,400 feet. On the 22nd he made a further flight at a height of about

3,000 feet, circling the Garden City hotel and cathedral and visiting the Meadow Brook Hunt Club, and winning thereby the J. J. Lannin cup offered by the proprietors of the Garden City Hotel.

A. V. Hardle, an amateur aviator, was killed at Dominguez Field on the 17th, while testing an aeroplane.

Golf and Tennis

ON May 26th Miss Lillian B. Hyde, of the South Shore Field Club, won the championship of the Women's Metropolitan Golf Association, defeating Mrs. V. M. Earle, of Wykagyl.

Miss Fanny C. Osgood defeated Miss Harriet S. Curtis, of Boston, in defense of her title to the championship of the Boston Women's Golf Association.

At Portrush, Ireland, on May 20th, Miss Dorothy Campbell, holder of the Canadian and American women's championships, defeated Miss E. G. Suttie for the women's championship of Great Britain.

Mrs. Roger Smith, of Nashville, won the championship of the Southern Women's Golf Association at Atlanta, May 19th, defeating Mrs. George Harrington, of Atlanta, 2 up and 1 to play.

Jerome D. Travers won the Metropolitan golf championship for the third time at Garden City on the 27th, defeating Oswald Kirkby, of Englewood, in the finals, 4 up and 3 to play.

E. V. Carter, Jr., of Georgia University, won the singles tennis title in the Southern Intercollegiate Tennis Tournament May 10th, at Atlanta.

Dartmouth and Amherst fought out the tennis New England doubles championship (intercollegiate) on May 25th, finishing with Amherst winning two sets and Dartmouth one.

Williams beat Wesleyan at tennis May 30th, five matches to one. Wesleyan won only one match in the doubles.

Yale beat Harvard on the Longwood tennis courts May 30th, winning the six singles and three doubles matches.

Playing at New Haven, Conn., May 23rd, in the first Eastern-Western college tennis match, Yale won from the University of Minnesota, taking the tournament by 2 matches to 1.

Princeton defeated Michigan players on May 18th 5 to 1, winning all four of the single matches and one of the two doubles.

Lafayette defeated Lehigh on May 17th by a score of 7 to 1, doubles counting 2 points.

Columbia scored over Michigan by winning four and losing two matches on the 17th.

H. H. Hilton, of Liverpool, won the British amateur golf championship at Prestwick, June 2nd, defeating E. A. Lassen, of Lytham, in the finals.

College Baseball Scores for May

GEORGETOWN University, 3—Keio University of Japan, 2; Syracuse, 5—Michigan, 0; Dartmouth, 4—Penn. State, 2; Hamilton, 8—Rochester, 3; Cornell, 5—Williams, 4; Dartmouth, 3—Cornell, 2; Navy, 4—Mount St. Joseph, 2; Colgate, 6—Hamilton, 3; Tokio, 7—St. Louis Univ., 6; Columbia, 9—N. Y. U., 2; Williams, 2—Yale, 1; Pennsylvania, 5—Fordham, 1; Brown, 2—Princeton, 6; Cornell, 4—Colgate, 0; Harvard, 9—Amherst, 2; West Point, 8—Georgetown, 10; Lafayette, 2—Lehigh, 0; Pennsylvania, 10—Virginia, 0; Fordham, 4—Virginia, 2; Columbia, 11—Stevens, 10; Yale, 11—Holy Cross, 7; West Point, 11—Rochester, 0; Brown, 9—Lafayette, 0; Williams, 7—Princeton, 0; Cornell, 4—Penn. State, 3; Brown, 3—Virginia, 0; Lafayette, 9—Holy Cross, 5; Harvard, 3—Bowdoin, 0; Vermont, 6—New Hampshire, 5; Navy, 3—Mt. St. Joseph, 2; Yale, 6—Virginia, 0; Lafayette, 3—Amherst, 0; N. Y. U., 5—Wesleyan, 4; Dartmouth, 2—Cornell, 0; Yale, 4—Columbia, 3; Princeton, 10—Pennsylvania, 8; Trinity, 3—N. Y. U., 2; Cornell, 6—Dartmouth, 0; Navy, 6—Swarthmore, 0; Harvard, 6—Vermont, 5; Michigan, 11—Ohio State, 4; Syracuse, 7—Rochester, 0; Illinois, 6—Wisconsin, 5; Bowdoin, 7—Maine, 6; Chicago, 6—Waseda, Japan, 4; West Point, 13—Trinity, 3; Wi-

liams, 6—Dartmouth, 5; Cornell, 9—Princeton, 9; Harvard, 11—Brown, 1; Lafayette, 4—Columbia, 1; Navy, 2—Dickinson, 0; Yale, 1—Pennsylvania, 3; Vermont, 9—Tufts, 5; Michigan, 5—Syracuse, 3; Pennsylvania, 10—Virginia, 0; Dartmouth, 5—Lafayette, 0; Harvard, 12—Bates, 1; Fordham, 9—Columbia, 4; Brown, 5—Yale, 1; Union, 1—Army, 2; Lafayette, 2—Princeton, 4; Amherst, 2—Williams, 1; Syracuse, 5—Harvard, 3; Michigan, 4—Princeton, 5; Army, 1—Holy Cross, 5; Brown, 4—Pennsylvania, 2; Penn. State, 6—Lehigh, 2; Bowdoin, 4—Maine, 2; Iowa, 2—Waseda Univ. of Japan, 0; Amherst, 2—Yale, 0; Cornell, 5—Williams, 4; Syracuse, 5—Michigan, 0; Dartmouth, 4—Williams, 0; Harvard, 0—Princeton, 5; Yale, 7—Holy Cross, 3; Vermont, 10—Dartmouth, 0; Cornell, 2—Pennsylvania, 1; Army, 7—Navy, 1; Cornell, 6—Yale, 5; Pennsylvania, 7—Princeton, 2; Cornell, 6—Pennsylvania, 5; Yale, 4—Brown, 1; Army, 3—Syracuse, 0.

Miscellaneous

ON May 26th, at Glens Falls, N. Y., Henri St. Yves, ran twelve miles in 1:10:04, winning from Ted Crook, of Fall River, Mass., and J. Sullivan, of Woodbridge, N. J.

On May 9th the Yale gunners won their annual trap-shooting match from Princeton, shooting 224 birds to Princeton's 197.

The English sculler, Ernest Barry, defeated William Albany in a fine race over the 4½-mile course at Putney, England, in 23 mins. 2 secs., before 50,000 people, thus retaining his world's championship.

The Milnes Soccer Cup was awarded to Haverford College for best intercollegiate goal average, May 13th.

Columbia oarsmen beat the Navy eight on the two-mile course on the Severn River by 3½ lengths in 11 mins. 27 secs., May 13th.

The Pennsylvania University crew outrawed Yale by six lengths in 9:10½ on May 13th, at Springfield.

Harvard beat Hobart at lacrosse by 7 goals to 0 at Geneva, May 13th.

Billy Queal made a sensational run of fifteen miles at Celtic Park, May 7th, in 1:22:52½, beating Tom Longboat, before 10,000 persons.

On the Potomac River, May 13th, a new gasoline speed boat owned by W. F. Harris, of Thousand Islands, attained a maximum speed of 42 miles an hour. The new flier is 26 feet long, with twin six-cylinder engines, each developing 250 horsepower. It was built to defend the Harmsworth Trophy.

Lafayette and Lehigh teams each scored 52 points on the 17th, at Easton, Pa., in their dual track meet.

Stevens Inst. lacrosse team defeated the Cornell cracks at Castle Point Field, Hoboken, in a well-played game, by 5 to 2.

At Cambridge, Mass., May 20th, a new world's interscholastic record for one mile was set up by J. D. Mackenzie, whose time was 4:26 $\frac{1}{2}$.

Cornell won the three-cornered boat-race with Yale and Princeton on Carnegie Lake, May 20th, finishing the mile and three-quarters in 9:01. Princeton was second and Yale last.

At the Long Island Kennel Club meet, May 30th, A. Albright, Jr.'s English setter, Mallwyd Ned, received the highest award in all classes.

Ray Harroun, driving a Marmon car, won the 500-mile International Sweepstakes at the Indianapolis Speedway, May 30th. Ralph Mulford, Lozier, finished second and D. Bruce Brown, Fiat, was third. The winner's time was 6 hrs. 41 mins. and 8 secs., and his share of the prize money approximated \$15,000.

The Phillips Exeter Academy won their nineteenth annual dual track and field meet from Phillips Andover Academy, by 57 points to 37, at Andover, May 30th. A new interscholastic half-mile record (New England) was made by W. J. Bingham, of Exeter, with 1 min. 57 $\frac{7}{8}$ secs., and J. A. Mackenzie, of Exeter, reduced the 1909 mile record to 4 mins. 29 $\frac{7}{8}$ secs.

The University of Pennsylvania won the intercollegiate cricket championship by defeating Haverford College eleven by 249 runs to 99.

The Cornell 'Varsity and Freshmen crews won easy victories over Harvard, the former by two lengths and the latter by five lengths, rowing at Ithaca, on the 27th.

Ruth Spencer, of Mansfield, O., broke two world's records for women at the Lake Erie College Track Meet, on May 15th, clearing 6 ft. 4 ins. in the pole-vaulting contest, and jumping 4 ft. in the high jump.

A decision of importance to automobilists was handed down by the Massachusetts Supreme Court May 19th. The operation of an auto without a license by a chauffeur does not render the chauffeur a trespasser on the highway. The court decided that failure to register a machine, however, would render all the occupants of a car trespassers.

Syracuse lost to the Midshipmen at Annapolis on May 20th, over the two-mile course, the Navy men rowing the distance in 11:02 against the Syracusans 11:18.

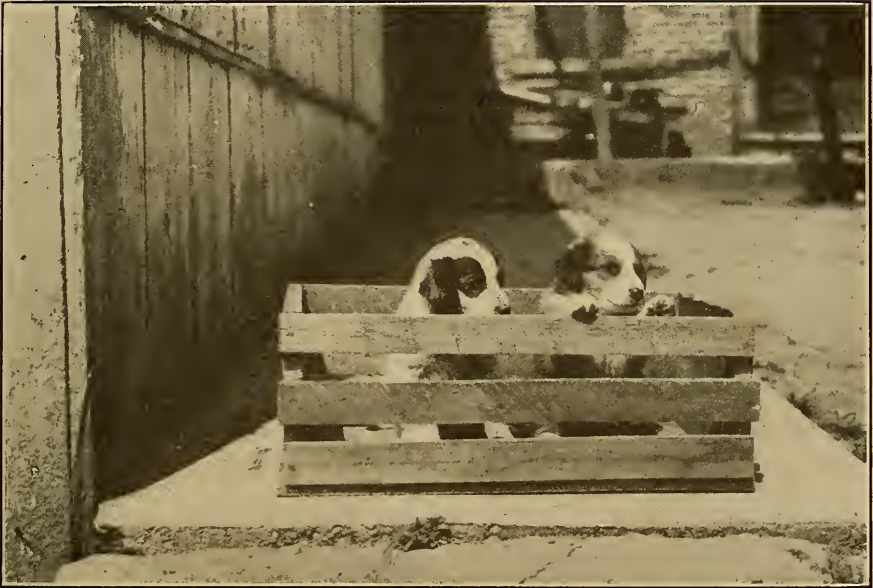
The intercollegiate track and field meet at Cambridge, Mass., May 27th, was a memorable one in many respects, the final figures showing the Ithacans 30 $\frac{1}{2}$ points to the good. The point winners were: Cornell 30 $\frac{1}{2}$, Yale 24 $\frac{1}{2}$, Michigan 24, Pennsylvania 18 $\frac{3}{8}$, Dartmouth 9, Princeton 8, Harvard 6, Amherst 5, Columbia 5, Mass. I. T. 3 $\frac{1}{8}$, Williams 3, Rutgers 2, Penn. State 2, Brown 1.

The world's amateur record of one mile, 4:15 $\frac{3}{8}$, held by Tommy Conneff, was lowered to 4:15 $\frac{2}{8}$ by John Paul Jones, of Cornell, who subsequently ran the half mile in 1:54 $\frac{5}{8}$. The pole-vault record of 12 ft. 4 $\frac{3}{8}$ ins., held by W. R. Dray, was broken by Harry S. Babcock, of Columbia, who cleared 12 ft. 8 $\frac{3}{4}$ ins. The 100 and 220 yard track records were equalled by Ralph Craig, of Michigan, in 9 $\frac{1}{8}$ and 21 $\frac{1}{8}$ secs. respectively. Young, of Amherst, equalled the quarter-mile record.

The New York Post Office Clerks' Association meet at Celtic Park, May 28th, was marked by some new world's records. Martin Sheridan scaled the discus 141 ft. 4 $\frac{3}{8}$ ins., and Matt McGrath, of the New York A. C., threw the 56-pound weight 53 ft. 11 ins.

Northwestern University won the track meet from Indiana University by 62 to 52 May 20th.

The Coronation Derby was won by J. B. Joel's Sunstar, May 31st, ridden by Stern, a French jockey,—time 2:36 $\frac{1}{8}$, 1 $\frac{3}{8}$ secs. slower than the record for the course made last year by Lemberg.





A GREAT BIG MOON AT FIRST, LOW DOWN IN THE SKY AND OF THE
PALEST GOLD

Drawing by Charles Livingston Bull for "The Traitors"

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CANOEING IN EDEN

BY HULBERT FOOTNER

Photographs by C. A. Edgar and the Author

RAILROADING in Eden is conducted with a non-chalance highly characteristic of that easy-going land. We were compelled to wait eight days on the border for our canoe. However, in camp on the shore of Lake Tohopekaliga we improved the time practising the pronunciation of that name, hunting the wily snipe with indifferent success, and going in swimming to the boundless astonishment of the overcoated natives. The January sun in Eden felt very good on skins newly-arrived from frostier latitudes. The cook, in considerable agony of mind, essayed to solve the problem of baking biscuit before a soft wood fire. To the end it remained a good deal of a mystery.

When at last, late one afternoon, Abner came paddling across the broad lake from town looking like a mannikin on a shingle, I measured the camp outfit with a sinking heart. The *Mosquito* was only a fifteen-footer, and

besides our twice six feet of crew she was expected to carry two large and hefty grub-boxes, a great roll of blankets, ditto of canvas, a suit-case of clothes, besides arms, ammunition, cooking utensils, and miscellaneous articles ranging from a pair of rubber boots to Abner's derby, which, however, we subsequently abandoned.

I scarcely slept that night trying to do the sum, and next morning loading up, as the *Mosquito* settled lower and lower, I was filled with despair. I got in at last, expecting the worst, but to my astonishment she still floated—with a scant three inches of freeboard astern!

We were borne down the lake on the shoulders of a stiff norther. If we had stopped paddling the billows would instantly have billowed right in over the stern, but somehow we managed to keep ahead—and on top. We flew past a village, and the whole population of eight came running down the dock to see the strange craft, no doubt the first submersible that had appeared in those

waters. That village was the last we were to see in a hundred and fifty miles.

A little later we beheld a strange sight on the shore, a deserted grape-fruit orchard. There they were, thousands of twenty-five-cent grape-fruit of a lusciousness undreamed of in the North, ours for the picking. We landed in a grassy cove and feasted. We were very dainty in our appetites, and if each one we tasted did not come up to the supreme standard of flavor, overboard it went. When, after much tasting, we succeeded in picking out the best tree, the staggering *Mosquito* had to submit to a still greater load. Ever after that in Eden we eschewed water to drink; grape-fruit juice was our nectar.

I refuse to state in what time we made the fifteen miles of Lake Tohopekaliga—I like to rattle off that name—no canoeist would believe it. Afterwards we went through a canal where, amidst great excitement, Abner brought down his first brace of duck; crossed Cypress Lake, where we saw millions of ducks; then another canal and Lake Hatchinea. From midafternoon on we were engaged in discussing where to spend the night.

Rich in Camping Places

In choosing a camping place we were in much the same position as a girl choosing a husband. Every now and then we saw one that would do, but always kept on looking for a better, until finally night overtook us and we had to take the first old thing that offered. The norther increased to a regular gale, and there was no wood but a kind of lath crib-work that had been cast up on the beach. That night, I will confess, we shivered in Eden.

In the morning the air was like champagne and the sun painted the lily-pads with pure gold. We entered the first part of the Kissimmee River, an intimate little stream meandering through vast fields of water-hyacinth and lily-pads. Twice we sailed by a "hammock" of dry land carpeted with short grass, and set out with hoary live-oaks waving streamers of moss. On the first an ancient turpentine still added to the picturesqueness of the scene, on the

second a modern saw-mill made a blot. The laborers stared at us as we passed, and we were reminded that there were still people in the world.

The next body of water was Lake Kissimmee, the largest so far. We might have been at sea for all we could see of land on the eastern horizon. The norther was still holding its own, and rounding the points the steersman had much ado to snake the *Mosquito* through the combers without taking too much aboard. At luncheon on the sandy beach the first serpent seen in Eden sought to join the circle round the camp-fire, but received a less hospitable welcome than that extended by our greatest of great-grandmothers.

That night with back-breaking labor we carried our whole outfit through a quarter of a mile of grass and water to a grove of live-oaks, only to find that on the other side, the water came right up to dry land. Such is life! Of all our camps this on Lake Kissimmee was the most romantic to the eye. The effect of the firelight under the arching branches of the ancient oaks, all hung and bedecked with streamers of gray moss, was magnificent. Well within the radius of the light a 'possum watched us impudently from his own stump, aware, no doubt, that Abner's gun was out of reach. Chameleons slept with us on our mossy bed. In the morning we put one of them on a red blanket, but he failed to pass the test.

The main part of the Kissimmee River occupied us for a week. I have no hesitation in affirming that it is the crookedest river in the world, though I haven't seen them all. It would bring us almost to the edge of a hammock that we wished to make, only to turn its back on it, and we could paddle for miles back and forth, north, south, east and west, never quite losing sight of the hammock, yet never quite getting there. In places the bank had given way, and the water rushing through suggested a short cut, but after we had lost ourselves a few times in a wilderness of grass and hyacinth, we decided it would pay to exert strength of mind and stick to the main current, however crazy the course it pursued. We often wished



A DAY OF CALM SEAS DARKENED BY HURRYING, VAGRANT BREEZES

for an airship to look down from above and see what that river really was doing. However, there was a good current which flattered us that we were doing great execution with our paddles.

In other respects the Kissimmee River is peculiar. It has dug a canal for itself through vast watery meadows, throwing up banks on either hand as neatly as a steam-dredge. One wonders why it preferred such a crooked canal. Standing up in the canoe and looking over the bank, the scene was almost theatrical in its loveliness.

As far as the eye could see stretched a vast flat sea of vivid green, rolling under at the horizon. Here and there at immense distances would be placed a group of palms or a single tree, just right. These watery prairies supported a race of beasts peculiar to the locality. Hearing a tremendous snorting and splashing issuing from the tall grass we



THE BANKS WERE LINED WITH TALL, SLENDER PALMS, LEANING OVER THE WATER

expected to see an ichthyosaurus or at least a dinosaur, and held our breaths—but it was only a water cow!

In January it is spring in Eden, and spring in January has the delightful added spice of something good that you have no business to be enjoying. We could scarcely believe our eyes at the sight of so much tender loveliness. The banks were clothed with small trees and shrubs bursting into the red and green and yellow of young leaves. There were many beautiful and fragile flowers we could not name, and a very paradise of gorgeous but unmusical birds that filled the air with a great croaking and screaming. Their indignant surprise at our intrusion upon their solitude often took very comical forms.

The first night on the river we could not find a piece of dry land wide enough and flat enough to sleep on, and we accomplished the apparently impossible feat of lying down in the canoe with all our baggage. It was a tight fit. I had no sooner fallen asleep than I was awakened by a terrible coughing, barking noise, and starting up, it seemed to me that the Heavens were breathing fire. I sensed a frightful monster approaching in the river, the ichthyosaurus this time! I thought, and fear clutched at my heart-strings.

Presently I perceived that it was another kind of monster, scarcely less dangerous to us in our exposed position, and I violently shook the sleeping Abner. I do not remember what I said to him, but Abner swears that he was awakened by hearing me scream in his ear: "Wake up! Wake up! Here comes *Lily!*"

The *Lily* is the little stern-wheeler that runs to Bassenger. How she managed to get by without washing us under I cannot explain, for she almost filled the river, but luck was still with us.

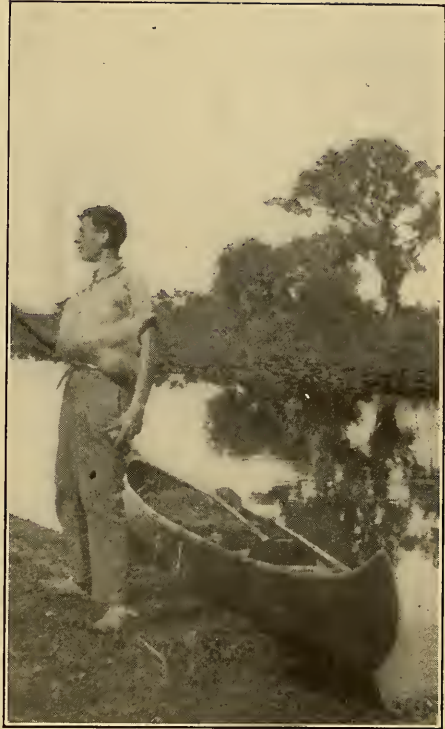
Bassenger was the first and last village on the river. To be exact, it lay two miles back, a hot and dusty two miles through loose sand and palmetto-scrub, as I can testify. We camped for two days nearby, waiting for letters to overtake us from the outside world. The principal industry of Bassenger appeared to be chills, which proved that

even Eden has its drawbacks as an all-year residence. Crackers and quinine pills headed the list of imports.

While I went to the village, Abner fished for trout and caught a pre-historic turtle as big as a baby's bath-tub. Not being present, I am unable to describe how he was landed on an ordinary fishing line, but there he was when I got back. We spent the rest of the day killing him, but he refused to stay dead. The bump of obstinacy is largely developed in turtles. In the middle of the night he came to and, wriggling out of the noose we put him into, he started quietly for the tent to revenge himself for all those cracks on the head. I aroused Abner—it was his turtle. He seized the hatchet and this time made assurance doubly sure. The stew was excellent.

All the way down we had been hearing stories of alligators; how they attacked swimmers in the water; how when really annoyed they had been known to bite the side out of a small boat. At first we took great care in the water never to venture from the canoe or from the shore, but from the results of our own observations I should say there was little danger of an attack so long as the alligator's line of retreat was open. What he might do in a corner I am not prepared to state.

We began to see alligators below Bassenger where the water was untroubled by the *Lily's* stern-wheel. Swinging quietly around the bends we sometimes came upon one no farther than a room's length away, sunning himself on a sandbar. The first took my breath away; we have all seen little ones or half-grown ones in the zoological gardens, but here was a monster, seemingly as large as the canoe, and hideous as a nightmare. He stood not upon the order of his going, but quick as a flash doubled up and plunged in with a splash like the launching of a battleship. The wave he sent out was almost enough to capsize us. He was so close he must have dived under the canoe to escape, and it was not pleasant to think of striking his horny back with the paddles. A moment later, when an orange rolled out of the sack in front



ABNER, AFTER A VISIT TO AN ORANGE ORCHARD

of me and across my bare foot, I almost sprang out of the canoe.

There are a few of these patriarchs—perhaps a thousand years old, who knows? left in the lower Kissimmee River, and I think we saw them all. Here was a pretty good imitation of the prehistoric monsters after all. At many promising bends in the river I held my camera ready, but it was always when I had just put it down that I saw them—or else the light was bad, or they were quicker than I. At any rate the best I could obtain was a picture of the spot where an alligator had just lain.

Abner could not resist banging at the ducks that whistled up in front of us as we proceeded. Abner is something of a sharpshooter, but a duck times his flight warily, and he didn't get many. His vanity was wounded, until one afternoon when he revenged himself on the whole tribe of ducks. At a bend in the river we heard a great chattering and splashing among the tall water plants,



AS FAR AS THE EYE COULD SEE STRETCHED A VAST FLAT SEA OF VIVID GREEN,
ROLLING UNDER AT THE HORIZON

and stealing up softly, we peered in among the reeds.

Abner saw a single duck and let drive at him. Instantly there was pandemonium; thousands upon thousands of ducks arose and came flying out through an opening immediately in front of the canoe, so close we could almost have knocked them down with the paddles. We stared dazed and open-mouthed at the extraordinary sight, until Abner yelled "Camera!" at me. I snapped it twice, but it was out of focus and the sun was low. I only got two blurs.

Afterwards we went for the duck he had shot at, and found birds lying wounded and dead everywhere among the water plants. When Abner had collected eleven I wouldn't let him look any farther, because, I said, no one would believe the story if he made it an even dozen.

When we found the current slackening in the river, we looked eagerly round every bend for the big lake, Okeechobee, saving the Great Lakes, the largest body of fresh water in the country. We saw it first by moonlight, stretching dimly to the horizon, and though we had paddled far we could not resist striking out upon it forth-

with. However, a strong breeze from the southwest was kicking up quite a sea, and when it began to slop in and I heard the breakers pounding the beach, I thought it smacked of imprudence to trust ourselves to that unknown coast. Besides, we hadn't had any supper. Much to the disgust of Abner, who is a glutton for paddling, we returned to the mouth of the river.

We found a fisherman living on the point who told us all about the shores of the lake. Like everyone else we met, he was still somewhat under the spell of the dreadful hurricane which had devastated Eden three months before. Every stick of this man's belongings had been blown clean away and the spot of land on which he lived was covered with six feet of water. He had saved his life by roosting in a tree for three days and three nights.

The lovely, tossing, moonlit lake still tempted us, and after a sup and a bite over the fisherman's fire—we introduced him to his first taste of cocoa, but he was restrained by politeness from giving his opinion of the beverage—we set forth again. Rounding the point, we headed straight across for the eastern shore, steering by the stars. The wind and the waves had moderated. After all



TO THE SOUTH AND WEST EXTEND THE EVERGLADES, THE VAST WILDERNESS OF SAW-GRASS, CUSTARD-APPLE, AND MANGROVE

there is nothing so inspiring as a great body of water.

That bit of paddling was one of the finest things in Eden. Tossing up and down, away out of touch of the shore, with a sweet, warm wind in our faces and overhead the lady in the moon—this month her profile was turned down—smiling as tenderly upon us as if she was ours alone, we were ecstatically happy. We serenaded our lady robustly without any danger of being overheard by a musical critic.

This was the long way around the lake that we had chosen, but on this side, the fisherman had told us, there was a fine beach extending for sixty miles. It was lined the whole distance by an ancient growth of cypress, magnificent and forbidding old trees. At intervals in the long stretch we came upon the quaint hut of a lonely fisherman, its walls and roof thatched with palm. Each of these toilers of Okeechobee had a tale to tell of the perils of that troublous sea, but while we were upon it, the sun shone all day and all night the moon beamed in a gentle calm. The cook's temper had suffered under the strain of getting dinner at the end of a hard day's work, so we had adopted the plan of having our principal meal

and a good rest in the middle of the day. We were thereby enabled to paddle late and the nights were supremely beautiful.

Nearing the southerly end of the lake, we trusted in the fine weather and made a long cut across. Out in the middle, while we had paused for a swim, the wind suddenly changed and came blowing out of the north down the whole expanse of the lake. Remembering the stories he had heard, the steersman had an anxious half hour, until he saw that it did not intend to blow any harder than the *Mosquito* could stand.

To the south and west of the lake extend the Everglades, the vast, monotonous wilderness of saw-grass, custard-apple, and mangrove. Camping on a cypress island at the edge of it, we met that other pest of Eden, the mosquito. While it was yet day, they kept us slapping vigorously, but at nightfall, ye Gods! they suddenly descended on us in voracious millions. As for smudges, these mosquitoes seemed to love 'em.

We managed to cook our supper to the accompaniment of bitter profanity, and then we fled with it to the bosom of the lake. But the mosquitoes came, too. While we paddled they lay low



SMALL ROOM TO SPARE WHEN THE
BOAT GOES BY

in the bottom of the canoe, to feast upon our ankles, and as soon as we stopped, they rose in a swarm around our heads with a song of fiendish glee. The best we could do was for me to snatch a bite of food while Abner paddled, and vice versa.

We decided to stand watch and watch all night. I drew the first trick, and while Abner found an uncomfortable bed in the canoe, I set my patient course up the lake, giving the shore a very wide berth. There was a kind of breathless joy in navigating this unknown sea by night. It was fairly rough. In spite of map, compass, and stars, I lost myself in the grass of a wide, shallow bay and was obliged to come about in a smart head sea. It was odd to see Abner's raised knees falling from side to side as she rolled, but he never woke. I next headed miles out in the lake to round a supposed point, half-seen blurs in the moonlight. In the end it proved to be an island, not down on the map; but

on the weather side of it I found a dry beach and no mosquitoes!

Our camping preparations that night were of the briefest. I rolled up and was instantly dead to the world. Later Abner woke me, saying he heard a strange grunting and hadn't he better build a fire to keep them off, whatever they were? The ichthyosaurus again! I heard the sound plainly enough, a deep, cavernous grunting close to, but I was too weary to be much impressed. "Let 'em grunt!" I said, and dropped off again. I think he followed my example. At any rate we woke up safe and sound in the morning. It may have been an alligator's love song.

Another drainage canal diverts part of the waters of Okeechobee to the Caloosahatchee River. A great volume of water carried us through at almost railway speed, and coming to a quiet lake midway, it seemed by contrast as if we would never get across. The first few miles of the river were uninteresting, for we could not see over the great heaps of marl thrown up by the dredges on either hand. However, by moonrise we were in Eden again. We were traveling westward now, and our lady rose astern of us, smiling her first greeting through the willows that lined the banks.

This evening I slept in the canoe while Abner paddled across Lake Flirt. He awoke me to help choose a camping place and to share in what we agreed was the loveliest picture we had seen in Eden. Here the river was narrow and deep and swift. The banks were lined on either hand with tall, slender palms leaning over the water, and the narrow course between was drenched with moonlight which threw the fantastic shapes of the trees into bold relief. In a little bay on our left, a flock of curlews paddled on the water and restlessly flapped their wings, their white bodies outlined sharply in the mystical light against the dark tree masses behind. It is impossible to convey the effect in words; it was as beautiful and unreal as a dream.

Next morning we arrived at Labelle City, the first village we had seen since Bassenger. As might be gathered

from the name, Labelle was a boom town and it was filled with the unnatural bustle of such a place. The river wound endlessly around the village without ever coming close, and I finally went ashore to ask one of the new settlers the way to the post-office. This proud land-owner, indignant that a yacht had tied up to "his point," was building a smudge to drive the yachtsmen away. In answer to my question he pointed through the woods, and after climbing several fences and crossing a private yard, I finally reached the post-office only to find that the river, with one more bend, swept up to the back door. For general intelligence I would unhesitatingly award the booby prize to that new settler of Labelle City. This was another settlement where they didn't know what bread was. "Everybody eats crackers," the store-keeper informed me with a superior air.

The Caloosahatchee was very different from the Kissimmee; the current swifter, the banks bolder, the vegetation more tropical. In its way it was even more beautiful than the first river, but we liked it less, for here the habitations of men began to intrude upon our Eden. Orange and grape-fruit groves lined much of the banks. Very fine fruit grows here; some we bought; some hung over the bank temptingly within reach. We liked to be invited to go and pick for ourselves in the orchards. We would come out with all we could carry outside, which we paid for, and all we could carry inside, which passed free. This was expected.

At the end of the second day we beheld the lights of Fort Myers, and were presently in touch with the world of railroads, telegraphs, and work once more. The next afternoon we were sadly talking about packing up, when we suddenly decided to steal one more day for a dash to the Gulf, and in ten minutes we were off down the river. It grew dark long before we made the twenty miles, and we lost ourselves completely among the "oyster rocks," where the river spreads out wide and shallow at its mouth. The tide was running out like a mill-race, and the grate of the sharp shells on the bottom



BREAKFAST IN EDEN IS A PRIMITIVE
BUT ENJOYABLE OCCASION

of the canoe was not a pleasant sound.

We saw a light at length, and paddling close we beheld a strange and eerie scene that reminded us of the grave-digging episode in Hamlet. On a tiny islet out in the middle of the lonely river by the light of a couple of lanterns hung on bushes several men were digging swiftly, conversing in subdued voices. We thought of buried treasure—the location was ideal—and of still darker crimes. We approached them in considerable trepidation, but alas! for Romance, they were only getting a load of shell with which to make concrete, and they were working at night so as to have the advantage of the returning tide! We camped on the islet.

The last day was the best of all. Nature vouchsafed us the finest in her whole collection of days; a day of calm seas darkened by hurrying, vagrant breezes; a day of magnificent swelling cloud masses against the blue. As long as we live we will never forget how the



THE KISSIMMEE RIVER, AN INTIMATE LITTLE STREAM MEANDERING THROUGH VAST FIELDS OF WATER-HYACINTH AND LILY-PADS

sun shone on the green sea and the dazzling beaches, and how good the salt breezes tasted. We paddled out of the river, and across the wide pass to Sanibel Island. We loafed on the beach, collecting tropical shells, laughing at the absurd gravity of the pelicans in their fishing operations, swimming—with a wary eye for sharks, and soaking it in generally.

We paddled all the way back to Myers, too,—except the last seven miles, over which we were towed by a jolly old fisherman in a motor-boat. Could the finish have been improved upon? We lay back at our ease, and Nature, our friend to the last, painted us a sunset out of the most gorgeous colors on her palette. That was our farewell to Eden.

THE VIREO

THIS charming little fellow—an elusive voice of the greenwood—scarcely needs the protection of the law. He lives so much in the open air, his color so blends with the yellow-green of the sunlit leaves, that the boy with the gun considers him too small for game and entirely too hard to find.

Ah, but what a singer he is! Happiest just after a shower, when the raindrops are breeze-shaken into the mellow gold of the sunlight and the woods are refreshed. To me his voice has a liquid quality finer than that of any other singer. Many a time I have been awakened by him at my window (the trees grow thick about it), in the first rose of the dawn, and I could wish for no love-

lier aubade. And his song, too, is distinctly musical as compared with the songs of other birds. One catches the tune, as it were, directly and writes it more easily from memory.

It is a little singular how few people know the vireo. His very name sounds strange to many who have a fair speaking acquaintance with other songbirds. And yet his note cannot fail to attract the attention of anyone who has an ear for bird music. How often I have had a friend say on hearing him for the first time: "What bird is that? The vireo? Well, that's a new bird to me!"

And all this in the old home of Audubon and in the woods where he walked and "loafed" the days away.



GULLS RESTING ON A TREE-TOP AT CLOSE RANGE

THE CONQUEST OF NO MAN'S LAND

BY HERBERT K. JOB
State Ornithologist of Connecticut

Photographs by the Author

IT would hardly seem possible in this age of successful hunting with the camera that a man could be set ashore with a photographic outfit on an islet swarming with sea-birds, for the express purpose of taking their pictures, and yet fail to secure a single one. I am ashamed to confess it, but yet, with the hope of encouraging despairing beginners, I will gulp down that choking sensation of modesty and, with downcast eyes, admit that I did it. Without aspiring to any booby prize, I will tell the story of my blundering and of how persistence finally triumphed. Incidentally, it will suggest a most delightful and profitable trip for others to make and tell of the ways of an interesting and conspicuous bird which is well worth getting better acquainted with.

About the last place in the world where one could expect to discover sea-birds would be in a pine forest. Yet that is what I did one day out owl-hunting. It happened on a cold, blustering day in March, the time when the nesting of the great horned owl is at its height. I was exploring a wild forest tract in south-eastern Massachusetts, when I came across pellets of bone and hair disgorged by the big owl.

Seeing a house out from the edge of the woods, I went to it to make inquiries about the hootings of the owls. A young man came to the door. He was only a visitor there and knew nothing about the local birds. Indeed, he thought there were few of them there anyway. But if it was *birds* I wanted, the best place to find them was where he came from, — Matinicus Island, off

the coast of Maine. There I could see more birds in a day that I could up here in a year.

Of course I went,—who wouldn't, after such a description as that which I listened to! Very early one morning, about the middle of the following June, a friend and I found ourselves landing from the Boston steamer at Rockland, Maine. For two hours we had to tramp

sengers had a sorry time. But at last rock-bound Matinicus opened to view, some two miles long, capped by spruce forest, rocky fields, and a scattered fishing settlement. We put up at a comfortable fisherman's house and proceeded to learn our new surroundings and the adjacent islets where dwelt the sea-birds. Best of them all was No Man's Land, the home of a swarm of big white her-

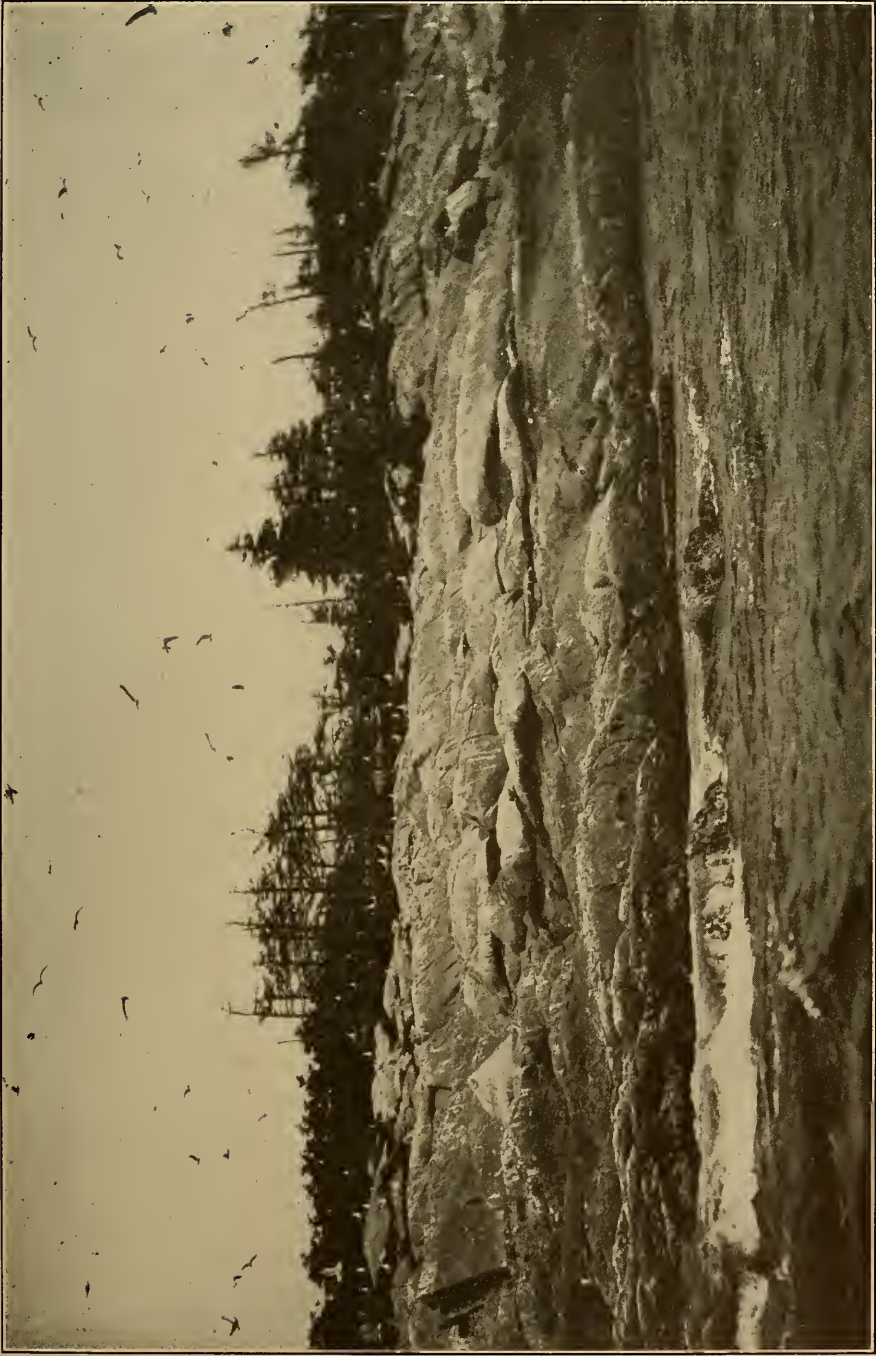


HERRING GULL HOVERING DOWN TO ALIGHT

the streets before the sleepy restaurant keepers began to pull down their blinds. After we had stowed away our breakfasts, the packet schooner was ready for its tri-weekly trip, and we made a fresh start for the last stage of the journey to our island, eighteen miles out to sea. The problem included a dead beat to windward, with practically no wind, a good down-east fog, and a heavy swell to buck. The average fishing schooner needs half a gale to beat to windward, and we had the schooner without the gale.

It took all day, and the women pas-

ring gulls, with which this story is especially concerned. It lay only a mile away, invisible in the mist, but the breeze brought to our ears an astonishing chorus of bird voices. The next day was fair, so we got a dory and embarked for the lonely islet, having been duly cautioned about the danger of landing through the surf on its steep, rocky shores. I shall never forget the impression of that first near view of No Man's Land. The name well fitted, for though owned by man, it was clearly no place for human life to exist. How could man live on a few acres of storm-



IT WAS A SCENE OF MOTION, SOUND, LIFE, ACTIVITY

lashed rocks, with nothing else but a little wiry grass and some stunted spruces? The pounding surf would, much of the time, forbid him the attempt either to land or disembark, under penalty of disaster. Besides, the place was pre-empted by *birds*.

It was indeed no *man's* land, but clearly a bird world all by itself, a natural bird paradise, swarming with bird life, headquarters for the beautiful great herring gulls. The air was filled with clouds of fluttering whiteness. The rocks looked as though a sudden snow-squall was smiting them, in this whirling, descending cloud of white birds. It was, though, no dead, silent scene of winter desolation, but one of motion, sound, life, activity.

The very island itself almost seemed alive. The surf leaped against it and roared in bass undertone. The birds were incessantly in motion, and their crying, screaming, cackling, whistling, fluting chorus represented about every imaginable instrument of a Strauss orchestra,

making noise enough, literally, to beat the band.

Here it is, and in other places like it, where are reared the hordes of gulls which, from October to April, grace the bays and harbors along our entire coast. How I enjoy watching them as they winnow about the docks or bridges of New Haven, Boston, New York, and elsewhere. Sometimes I take special pains to cross by ferry from New York to Jersey City, just to watch these graceful sea-birds which add such beauty to the wintry scene. Thoughts of artificial town affairs vanish, and the ferry, for the time, transports one on a longer journey than across the river, out into the great, admirable world of Nature, unspoiled and undefiled.

And what, pray tell, are all these gulls that we see,—brown, gray, speckled, streaked, white,—more kinds than one can shake a stick at? No, except for an occasional great black-backed gull, all sooty black above, or some very rare straggler from the Arctic, which I need



FROM THE TOPS OF LOW SPRUCE TREES THEY TAMELY WATCHED MY APPROACH



QUIETLY I PICKED OFF THE BIRDS IN THEIR VARIOUS POSITIONS AND EMPLOYMENTS

not stop to describe, practically all 'the gulls to be seen around docks or flats are one and the same, our friend, the herring gull. The dark ones are the young of the year, the mottled gray ones the same kind in their second year, while those mostly white, with pearl-gray upper parts and black wing-tips, are another year or more older, having reached the full adult plumage.

These gulls, in winter, range away down into the Gulf of Mexico. Everywhere they serve as useful scavengers, to keep our shores clean and wholesome. Should one care to see an interesting demonstration of this, it is quite an experience to take passage, some winter's day, from New York City on a tug down into the lower bay, at a time when the garbage scows are dumping their contents. The army of gulls which descends upon this refuse is something astonishing. Well do they perform their function. Should any of the refuse remain to wash ashore, the gulls will be on hand there also to finish it.

Strong and graceful is the flight of the gulls. The harder the wind blows, the better they seem to like it. They tack up almost into the teeth of the wintry blasts, then turn and scale off before them with amazing rapidity. Sometimes, when they are journeying, we can see them high above the city, or even far inland over the hill country, at such elevation that they appear like the merest white specks against the blue. They often follow the vessels far out to sea, and it is probable that sometimes the same individuals follow them clear across the ocean.

Probably also the gulls which we see in any locality during the winter are generally the same ones. Just as with birds in summer that return to nest year by year in our gardens, there is some evidence that gulls return annually to a chosen winter residence, remaining there till the vernal influence again calls them northward. In support of this is the celebrated case of "Gull Dick," a herring gull recognizable by some peculiar



I WATCHED WITH KEEN DELIGHT THE BIG WHITE BIRDS AT CLOSE RANGE

mark and by its tameness, which for twenty years returned each winter to be fed from the Brenton Reef lightship, off the Rhode Island coast.

As with this famous "Dick," the gulls have regular night roosts on reefs or shoals offshore, where they are safe from intrusion. Unlike him, though, on the open coast they are exceedingly shy. Many a time, when I was a boy with a gun, did I vainly try to get near them on the bays and flats. They know pretty well where they are safe. Near the docks, where shooting is not allowed, they are quite fearless, but when they fly down the bay again they are as shy as ever.

A writer, Mr. George H. Mackay, has noticed that the wild ducks sometimes turn this shyness of the gulls to good account. Flocks of ducks, particularly of the black duck, when the gulls are near, will abandon all precautions and even go to sleep. When danger approaches, the gulls will fly about and scream loudly, thus giving the ducks plenty of time to fly away. Taking his cue from this, a gunner used with suc-

cess a wooden gull with his decoy ducks, to give confidence to approaching flocks. At other times the gulls have been observed to be less friendly with the ducks, for, when marine ducks were diving and emerging with fish which they had just caught, the gulls would swoop at the ducks and try to snatch the fish from them.

During April, and even into May, the gulls, preparatory to leaving us for the summer, gather into flocks and resort to the shoals and flats, a noisy throng. There, with the aid of a strong glass, we may watch their mating antics, see the males puff out the feathers of their throats and strut pompously about, heads thrown back and bills pointed aloft. The time for departure has come, and soon they have left us,—all but a few immature birds,—and presently they are back at the old breeding resorts. A few adventurous ones arrive there as early as the middle of March, and thence on into May.

The first eggs are laid about the middle of May, and by early June nearly all have sets, unless accident or robbery



HERE WAS LIFE INDEED, THE VERY POETRY OF FORM, COLOR, AND MOTION

should compel a second laying. In quest of suitable nesting resorts they range away up into the Arctic wilderness. Some are content with Labrador, Newfoundland, Nova Scotia, and down to the rocky islands of the coast of Maine, of which No Man's Land is their most southerly breeding colony. Here I was, at last, viewing it from the tossing dory offshore.

We managed to make a landing in a chasm and drag the boat out on a flat rock. The gulls hovered in clouds over us, screaming their angry protests. Almost at once we began to find nests everywhere, in endless profusion. They were rather slight platforms of grass or sea-weed, placed under a low spruce, by a rock, amid weeds or grass, in fact, in all sorts of situations. Three was the usual number of eggs, often two, and rarely four. They are large and handsome, of dark drab or olive color, heavily marked. Sheep had been ferried over to the island and left there for the summer to graze. They are said often to trample the young, when the old birds are away. But when at home, on guard,

the gull is master of the timid sheep. When the latter graze too near, the gulls scream and menace them. When this warning is unheeded, the gull will fly furiously at the intruders and send them scurrying off in a panic. They also drive off the crows and ravens, which are on the watch to sneak in when the parents are away to suck eggs or eat young gulls.

The average fisherman seems not over anxious to protect the gulls from sheep, or other enemies, looking upon them as rivals in his fishing and feeling that so many gulls must destroy great quantities of fish and lobster fry. To some extent there may be ground for this feeling immediately in the vicinity of the large colonies, though in general these fears are doubtless exaggerated. The ocean is large, and the gulls are mainly scavengers, eating fish or animal matter cast up by the waves or left exposed by the falling tide. Sometimes they pursue schools of herring, when these break water, and pick up a few of the smaller ones.

Dead fish they eagerly devour and



CULLS GATHERED ON THE TREES TO SEE WHAT WE ARE DOING WITH THAT CAMERA

sometimes gorge themselves till they can hardly fly. When they find a dead duck, or other bird, they will rip open the skin and devour the flesh. They are not averse to robbing nests, when they get the chance. They eat some vegetable matter, browsing at low tide among the beds of kelp. Also they like insects and feed their young with larvae, moths, and beetles.

On the whole, the gulls are decidedly worth while, both as scavengers and for the enjoyment which they afford, beautifying the wintry coast with their wonderfully attractive presence. It is man, rather than the birds, who vandalizes Nature and exterminates the fish and game. It will be a sad day when the esthetic interest of the harmless wild creature shall not avail against the call of commercializing and life-destroying mammon.

As I viewed the animated scenes of this wonderful island, a great enthusiasm seized me to capture them all with the camera, so I worked away industriously till the plates were exhausted, "saving" time by not bothering to cover the camera with a focus-cloth when I withdrew or inserted a slide, though the light, reflected by the sea, was very intense. There were various other things of interest on the island. One was a raven's nest, a big platform of large crooked sticks, lined with sheep's wool, up in a spruce tree. Some boys had taken the young, which we saw over on the main island. The queer little Mother Carey's chickens, or petrels, were on their nests, each incubating one fragile white egg, down at the end of a burrow like a rat-hole. An eider duck scrambled off the rocks into the sea, and we tried hard to find its well-concealed nest.

The fun was all too soon over, and in course of time I found myself back at home in the darkroom, with an experienced friend to help develop the precious plates. Every last one simply turned black. "Over-exposed and fogged," was the verdict. There was not one solitary picture which was printable, dreadful to relate. It was a painful lesson, and I am only thankful that it did not discourage further effort.

Some day, I said, I will try No Man's Land again.

It was ten years before the time seemed to serve. In the meanwhile I had made considerable improvement in photography. The outfit this time consisted of two cameras, one of them of the reflecting type, with rapid curtain shutter, suitable for flight pictures. I was eager to try conclusions again and retrieve the former fiasco. This time two lively boys accompanied me, one of them my son, and it was no small part of the fun to witness their enthusiasm. Since the previous trip many improvements had been made.

After a Ten-year Wait

Best of all, instead of the slow sailing packet we found a nice little steamboat, which made easy work of running out to the island in two hours, regardless of the wind. Every fisherman's boat was now provided with a gasoline motor. The march of improvement had even reached No Man's Land. No longer was it shot out or robbed by passing fishing crews who wanted gulls or eggs. It had been leased by the National Association of Audubon Societies, and its owner, Captain Mark Young, familiarly known as Uncle Markie, had been hired as warden. He was always on his job, and under his fostering care the gulls had increased wonderfully. So strictly had he looked out for them that they had received the name of "Uncle Markie's chickens," and his rights in them were fully respected.

Early the next morning our party of three, assisted by Uncle Markie, were launching the heavy dory from the rocky cove. It was a day of brilliant sunshine, breezy, and cool as late September, typical summer weather and temperature for Matinicus. The Arctic drift washes these shores with its current of melted icebergs that is nearly as cold in summer as in winter, hence it is always cool. We had left Boston sweltering in a torrid wave which still continued, while out here was refreshing coolness. At times this attack of the Arctic on the torrid generates fog, as

a sort of smoke of battle, but even this is easier to bear than the deadly heat and dust.

The impression made upon me by this new approach to No Man's Land seemed fully as great as that occasioned by the first sight of it. The gull population had certainly doubled or trebled in numbers. Picturesque as was the natural scenery, nothing inanimate can equal life itself, and here was life indeed,—teeming, exuberant, beautiful life, those snow-white gulls, the very poetry of form, color, and motion. Even their harsh cries in mighty volume, issuing from thousands of throats, far from being distracting or unharmonious, blended with the tumult of the surf and added splendidly to the massive effect of the whole. The sweeter music of mockingbird or nightingale in such setting would have seemed puny and out of place.

As Uncle Markie and the boys rowed the dory nearer and nearer, I was making ready the reflecting camera with a feeling of exultation and assurance

that this time there would be no fiasco. This time I knew enough to use a focus cloth, and the cameras had been carefully tested to make sure that there were no leaks of light. All the conditions were perfect. So, as we approached the rugged shores and the birds began to rise in clouds, like summer cumuli, I began to make exposures from which I knew for a practical certainty there would be something to show.

So far so good. But now arose the practical question, which broke in upon my rapture like a cold chill, as to whether, after all, we should be able to make a landing that day. A considerable swell was breaking impartially all around the island, but we saved the day by taking chances and leaping to a rock when the wave swelled, the warden kindly agreeing to anchor off and wait for us. On this trip we had come a month later than before. It was the middle of July, and few eggs remained unhatched. The warden had found the period of incubation to be from twenty-four to twenty-eight days.



I HAD FINISHED, AND, EMERGING, SENT THE BIRDS OFF IN FRIGHT AND UPROAR



THE GULLS HOVER OVERHEAD, CACKLING NOISILY

When the chicks emerge they are hardly able to stand, but within half a day they will run from the nest at the approach of an intruder. In five weeks more they begin to take to wing. By the middle of September all the young are able to look out for themselves. About that time the old ones desert the island, leaving the youngsters to follow, which they soon do.

The island now fairly swarmed with downy mottled youngsters, which hid in the grass or scurried before us in droves. In color and markings they resemble the eggs from which they came and remind one of animated eggs on stilts, with a stick inserted for a neck. Uncle Markie had warned us not to chase them down to the water's edge, as in their fright they will launch into the sea, either to drown in the surf or be carried off by wind and current.

The process of feeding this motley throng is interesting. The food supply near the island is far inadequate, so the adults scour the waters and shores for many miles around. They start off early in the morning and come straggling

back, according to their luck in finding food. Returning, they fly low above the water, swiftly, making a bee-line for home, regardless of fog or wind. Alighting at the accustomed spot, in whining tones, they call the children to dinner. The chicks run from their hiding-places, and the parent disgorges the partly digested mass from its crop on the ground, letting the young help themselves. No visitors are allowed to eat with the family. If they attempt it, they get blows on the head which sometimes cause their death. At other times, too, they are impatient with their neighbors' children.

On these breeding islands the visitor soon notices a new trait in the gulls, the habit of alighting on trees, a thing which they never do anywhere else. From the tops of the low spruce trees they tamely watched my approach and allowed me easy snapshots at them at close range. On some islands, where they are much robbed, they form the habit of building bulky nests in the trees.

Since the former trip I mastered the method of the umbrella tent. I had

brought one and we set it up by some nests with eggs, decking it with grass and spruce limbs. The boys left me hidden, and the gulls, unable to count, which is the case with other birds as well, thought that the coast was clear. The tent they evidently regarded as a harmless brush-heap. In a few moments, after a little prying, they were serenely walking past me to their nests. One gull even brushed its wings against my knees, separated from it only by the thickness of the cloth.

Through some little peek-holes I watched with keen delight the big white birds at close range. One would alight a little way off and walk to its nest, settling down over the eggs and turning them with its bill, within less than ten feet of me. They seemed to have the habit of keeping open their bills, as though panting from the "heat,"—just as though it could be really hot out in that delightful place! The male bird, when not away fishing, seemed to have a regular roost near the nest, on some rock or low spruce. There he would stand on guard and at times would take his turn on the nest.

I had instructed the boys to keep well out of sight, so presently this part of the colony became very quiet. I watched the gulls alight all about me and saw the young come out from hiding, sometimes to receive food. It was a pretty spectacle of home life, the lovely white adults surrounded by their gray chicks, playful or lying in the sun, as the case might be. The cleanness of the adults impressed me. Not a mark of soil or

stain could be seen on their elegant plumage. The fact is that they are great bathers and frequently gather in squadrons out on the water, splashing the water over them, then preening and oiling their feathers.

This vigil in the tent gave splendid opportunities for photography. Quietly I picked off the birds in their various positions and employments. It may be that the constant noise of birds and elements makes gulls more indifferent to sounds than some other birds, such as, for instance, the herons. At any rate, I was able to use the focal plane shutter camera without alarming them much. When I had finished and, emerging, sent the birds off in fright and uproar, I realized that this was the crowning experience of a successful day. Hailing the warden, we managed to scramble aboard again, and rowed back triumphantly to Matinicus. There were various other islands to visit, and these we duly conquered.

When finally the trip was at an end, the darkroom had a very different story to tell. Even my fourteen-year-old, under my instruction, had taken a fine series of bird pictures. The experience certainly goes to show that there is no need to be disheartened over early difficulties in this fine manly sport of hunting with the camera. Provided that one has true sporting blood, the enthusiasm which makes light of hardship and obstacles, together with a proper type of camera, not necessarily expensive, persistence is bound to win the victory in the end.





YOU SIMPLY FLOAT, HUNT ALONG SHORE, FISH FOR BASS

FLOATING THROUGH THE OZARKS

BY CHARLES PHELPS CUSHING

Photographs by the Author

IF, as a boy or as a somewhat older dreamer, you ever sat upon a bank beside some hurrying watercourse, flipping chips into the current, and watched them ride out of sight around a bend and longed to go floating with them on a journey of adventure, you can easily understand the passion that draws hundreds of sportsmen to southern Missouri and northern Arkansas every summer to take "floats" down the swift, clear rivers of the Ozark hills. We all know how to sympathize with those boyhood longings of Stevenson's "Will o' the Mill"—"something kept tugging at his heartstrings; the running water carried his desires along with it as he dreamed over its fleeting surface."

In the Ozarks the idea works out in this wise: you sit on a camp-stool in a flat-bottomed boat which is twenty feet or worse in length and never more than

three broad at the widest point. Of necessity, your first reflection will be that the craft is a cross between a log raft and a canoe—too heavy for speed and modeled too much on the lines of a toothpick to be safe. The guide, no fancy stage hero of the north woods, but a plain country boy in faded blue overalls, sits on a roll of oilcloth-covered baggage and steers with a paddle, which is nothing more impressive than an old oar chopped off halfway down the handle. The cook-box, the tent and its jointed pole, the two cots, the potatoes and onions and bread and bacon and eggs are protected from spray by the tent canvas. The whole cargo is carefully stowed in a way that preserves the balance, and you may stand up if you like and cast for bass without much fear of being upset.

To sit on the camp-stool and smoke while the current whirls you through a

panorama of hill country appears to be the sanest form of enjoyment on such an expedition, but, unfortunately, most of us pack with our baggage the city man's restless desire to be doing something in which there are possibilities of excitement. In consequence, nearly everyone brings a rifle or a camera or fishing tackle, or all. My own obsession was to be taking pictures; so, with a camera on shortened tripod legs and sighting and firing like a gunner on a battleship, I floated down the James and the White in southern Missouri, shooting pictures. . . . Yet the happiest man, no doubt, would be he who could sit smoking in contentment without even the presence of a fishhook to annoy him—just thinking that here, at last, was one of his boyhood's ambitions being realized. He is floating on a splinter toward the sea!

No Worry—Even About Expense

Nothing serious need be on his mind, not even the thought of the expense of the trip. For the services of Jim or Earnie or the Old Man's Son he is charged only \$1.50 a day, and the guide is supposed to do every stroke of the work. Fifty cents a day is the rent for the boat, fifty for the tent, twenty for the cots and bedding: two travelers could make a four-day float for \$16, plus the price of food and the cost of shipping the boat home. The pleasant feature of the latter item is that at the end of a four or five days' float on one of these wriggly Ozark streams you are likely to find yourself not over twenty miles from where you started. Two or three miles across the hills by aeroplane would put the traveler as close to his destination, perhaps, as a whole day's trip in a toothpick boat. For one example, the White River in a single county in Arkansas (Baxter) winds one hundred and twenty-five miles.

Besides the fun of traveling, these Ozark boat-excursionists taste many of the joys that made life worth while to Huck Finn. This region has none of the flavor of professionalism and pose that sometimes may be detected in the Maine woods. You simply float, hunt along shore, fish for bass, shoot a few

frogs and turtles, and after a camp-cooked meal enjoy your pipe in some such contented state of mind as Huck possessed that night in the cave, when the storm was bursting just outside and the thunder was like barrels rolling down long flights of stairs, while in the cave there was everything that counts for genuine comfort: "Jim, this is nice," I says. "I wouldn't want to be nowhere else. Pass me another hunk of fish and some hot cornbread."

In a farmhouse a mile up the river from Galena, a house on the side of a hill, where from the high verandah through the trees you can see the wriggly river flashing in the sunlight, a country dinner, as the proper preliminary to a float, is cooking. Yet even before you taste that dinner you may feel with Huck, "I wouldn't want to be nowhere else." It gives an elevation of spirits just to stand on the Old Man's second-story porch and splatter and splutter in a tin wash-basin in cold water from a well.

Try "washing up" outdoors. It's a better appetizer than the best imported ale. There is the river whirling by and your imagination pulling you after it; a wide stretch of bright green turf to the bank, and across it Jim is dragging the provisions toward the Old Man's fleet of hollowed toothpicks. These only wait to be untied to speed away on the current. And all the while that smell of good home cooking!

Cornbread, fried country chicken, watermelon—some one knew a thing or two about the city man's tastes. It wouldn't be fair to the river to talk about that dinner any more. . . . So—across the turf that puts springs in your heels. Jim's in the boat. You're in yourself. The small chain that serves for a hawser clinks musically, dramatically, on the floor. Jim dips his paddle and makes a little whirlpool of water with it. We're off! Jim quits paddling after the third stroke. In this there is evidence that already we are into the swing of the running methods, for the river, not the boatman, does the work.

The current has the splinter now for a plaything. It takes joy in the posses-



THE WHOLE CARGO IS CAREFULLY STOWED IN A WAY THAT PRESERVES
THE BALANCE .

sion, gurgling, slapping the flat keel, once whirling us toward a tree that hangs so low over the water that it almost brushes off the crew. Where the boat floats so swiftly, curiosity can travel no farther in advance than the next bend; as in a speeding motor car, the tourist, until he is accustomed to the pace, takes more interest in the road just ahead than in any graceful silhouette on the skyline. The boat scoots under a bridge, the last one to be seen for five days. (I have traveled in one Ozark district where there was only one bridge in the county and that a wobbly, home-

made suspension foot-bridge, which you weren't supposed to use without permission of the owner.) The town of Galena whisks by. Leave it with few regrets and no description. Another wriggle or two of the current and towns are just a memory.

We glided past a few new bungalows, in one of which a phonograph was blaring through a horn large enough for a concert hall. Downstream a little way a gray-haired man who might have been a banker was fishing in a bathing suit. "Fish bitin'?" asked Jim. The boat passed so swiftly that the latter part of



WE CAMPED THAT NIGHT ON A BAR OF PEBBLES, WITH BALD JOE STRIKING UP IN THE BACKGROUND

the short reply was considerably fainter than the first: "Not — to-day — think they — must be nesting." Jim only chuckled. A few rods more and we watched in fascination while a young man with red hair dived off the end of a log like a startled turtle. But one wriggle farther in the course of the stream and we came to an end of all that faintly suggested the city.

There was a sharp turn just ahead, with a snag sticking out and bobbing a little in the middle of the narrow passage. We swept close under a willow branch. The waves of the riffle loudly slapped the keel; the boat grazed the stump, jerked, slid by. Jim worked fast with the paddle and breathed through his mouth, not as physical culture would advise. When we had left that rapid behind, I felt that this was an introduction to open country. After that, when a spot of red on the silver surface of the river marked a shoal ahead, I had no anxiety for the camera, for Jim had proved himself a real boatman. For his part, Jim put down the paddle and rolled a cigarette.

Only a portion of the land near the river—or, for that matter, on the hills—was under cultivation. That gave the fields some of the charm that belongs to any sort of rarity. Over one open space

between the treetops we saw a farmer stacking hay. Just a flash and he was left behind. Another time we heard a terrific clatter, something like a runaway on cobblestones. "What's that?" I asked excitedly. Jim shouted with laughter. "I 'low somebody's plowin'," he said. The noise was of stones striking the metal of a cultivator's teeth.

This stoniness of the soil, I learned, necessitates a rather unusual variety of farming. The man who would attempt to clear the stones from his field would have mighty little field left, so the approved method is to pile the boulders in monuments and level down the smaller rock with home-made rollers, which are simply heavy logs with axles. I have seen cornfields in the Ozarks in autumn that looked like the beds of dried-up streams, and orchards where soil scarcely could be detected at all. The ground is fertile and productive, despite appearances.

To make a mere living is as easy here, perhaps, as anywhere in the land, and the original settlers in the Ozark region in plenty of instances have been satisfied with a "well-enough" standard. A new population, more restless and progressive, has been arriving in the last decade and is changing all this, but there are still a few southern Missouri coun-



A CROSS BETWEEN A LOG RAFT AND A CANOE—TOO HEAVY FOR SPEED AND TOO MUCH LIKE A SPLINTER FOR SAFETY

ties in which log houses are as likely to be the rule as the exception. So when bungalows changed to cabins we knew we had glided into the country of the real Ozarks.

Jim had a penchant for spring water, and we stopped to taste at many landings. I suspected that some thirsty tourist had once told him that the mark of a good guide is a knowledge of the location of all the springs.

In a peninsula formed by a horseshoe bend of the stream we found at one of these stops a temptation to change from floating to an even more contented existence as campers. High limestone bluffs and the mirrored river protected this summer fastness from all the world but boatmen; and of the representatives of three generations camping here the white-bearded head of the clan was the merriest of all, with a face twenty years younger than his beard. His daughter had inherited laughter and plumpness and had acquired some sunburn which heightened an ordinary rosiness. Father and daughter chased after some small girls, who were dressed in one-piece bathing suits, and tried to persuade them to pose for the photographer in a family group, but the third generation skipped around trees as nimbly as grasshoppers on a day when you need them for bait.

All the while a young man, who was shaving before a little mirror nailed to a tree, smiled and kept silent.

The minutes of that afternoon fled at as fast a pace as the river. A little before sunset I began to cast for bass—promptly snagged the minnow and snapped the line. The current was taking the boat so fast that there was no time for maneuvers. After that I sat down, considerably relieved, and took more comfort in enjoying the scenery. In the deepening shadows the hills seemed to loom higher; the limestone bluffs appeared more sheer and jagged. I found no trouble then to believe Jim when he “guessed” that some of the crests were five hundred feet above the waterline of the river. In the dim light in some of the bends, the slap of little waves on the keel in the riffles sounded somehow weird. The chip on which we floated appeared to go twice as fast when it rushed by masses of strange shadows.

It was much too dark for a safe passage over shoals when we came to an opening in the solid wall of trees and heard voices at a ford. It was Cape Fair, Jim said, and a good place to spend the night. On the east was a high hill; on the other shore, where we landed on a bank of pebbles, a giant

tree. The faintest sort of red glow on the skyline back of that showed where the sun had gone down. Jim drove four stakes into the pebbles, a blow to each stake, hooked the corners of the tent-ropes over them, stuck a pole up under the center of the canvas, and there was our pyramid tent ready for the night. I made up cots and unloaded the boat cargo; Jim had a fire going and the dinner under way in another two minutes.

By the time the coffee had begun to bubble and the first pan of eggs and bacon was ready, we had visitors—the manager of a nearby fishing club and his wife and a baby. Jim must have engineered an extra careful job of cooking that was an honor to the ways of our sex, for Mrs. Manager found no important flaws. Little things, such as a cinder in the frying-pan, she mildly deplored, but nothing more.

The First Taste Lasts Long

There is a danger, perhaps, in dwelling too long on that first day; but the things that happen in the opening chapter are symbols far more impressive and interesting than a whole sleepy morning of the fourth day, when you merely sit in the sun and enjoy life like a turtle.

On the first, everything thrills; on the fourth, the whole world takes a nap.

That first campfire seemed to be close to the edge of a shadowy realm of romance. The presence of the Aurora and Sarcoxie Fishing Clubs couldn't disturb the atmosphere. We sat with our backs against logs and ate; smoked again and cast a fond eye at the chip on which we had floated to such a wholly desirable stopping-place.

The manager of the fishing club told a few. So did Jim. So did I. There can't be much doubt that the Ozark streams still have their share of fish. Yet, personally, I was caring much less about the fish than about the relish in sitting beside a campfire with a pipe and watching a full moon mount from behind the high hill just across the stream.

That same hill must have been to blame for keeping the sun from striking into our tent sooner the next morning. I recalled no noise through that night but the dripping of dew, like a spring rain, from the giant tree. Then I smelled the aroma of coffee, heard twigs crackling on the cookfire, and knew it was morning. We were half an hour late, Jim declared. I looked at my watch and put it back without remembering what it told. And no matter!

Jim's in the boat. You're in yourself.



THEN I SMELLED THE AROMA OF COFFEE AND KNEW IT WAS MORNING



ONCE IN A LONG TIME, WE MET ANOTHER FLOAT-TRIP PARTY

The chain clinks musically on the floor. Jim dips his paddle and it makes a little whirlpool in the water — once, twice, three times, and rests. . . . You begin to see that there is something like a refrain in the incidents of your trip; and that in this recurrence of the familiar there is something as comforting as the voice of old friends.

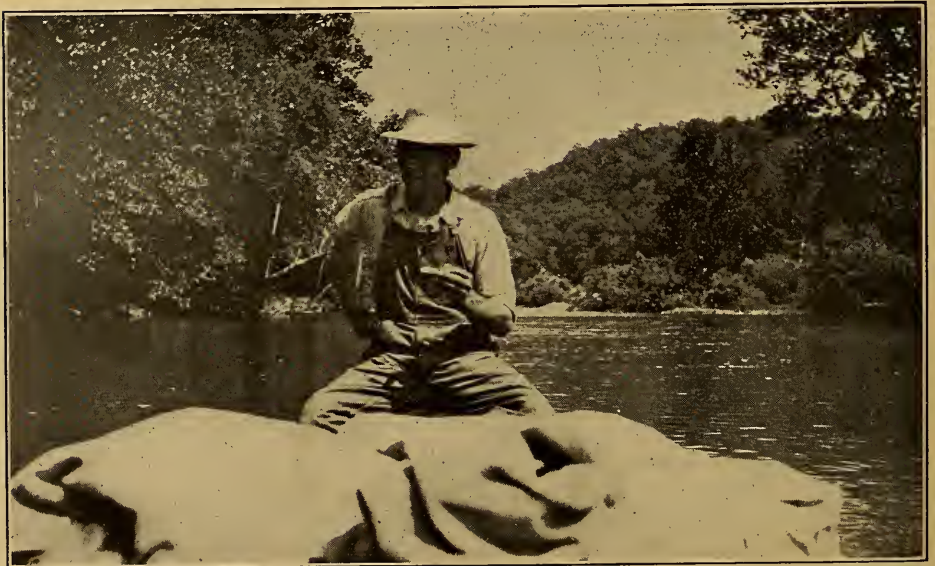
We floated that day into a land of cliffs, higher than those of the day before, but simply old friends of greater stature. Back of these rose peaked hills, now with elevation enough to be dignified by the name of "balds." Beside us in the morning floated a fisherman and his wife and a guide in a splinter boat which sat unusually low in the water. He kept close to the shore, casting with accuracy to the edge of the bank, with words of encouragement and advice to the fish all the while and occasionally praising his own skill. The wife smiled approvingly and the guide sat with a fixed grin.

We came to Virgin Bluffs. Seven hundred feet in their perpendicular of white limestone, Jim said, and whether he was telling a "stretcher" or not would have been difficult to dispute. They were the more impressive because in Virgin Shoals, at their base, the water

caught the boat with a jerk and plunged it through a hundred yards of rough water in which there were intervals where the riffles could not have been much higher without deserving to be called waves.

When the river is full, they run as high as two feet, Jim averred. Now—"aw, shucks, these ain't much." I can't recall now even what time in the morning we ran these shoals, or whether Jim really had to work very hard to get through without shipping water. Stone ledges and trees whisked by; the camera snapped four times; and the next we noticed was that a flock of tame ducks was following along behind us like friendly pups.

I began to long, soon thereafter, for something to do besides sit on a campstool and think. The shoals, no doubt, stir the blood. Jim advised stopping at a convenient wooded island to cut a paw paw for a boat pole. "Push a little with it an' you'll feel better," he said. The prescription was excellent and comes to you now highly recommended as an appetizer. Poling is a science in the Ozarks, for the reason that it is the only way to make head in taking a boat upstream. It is indispensable also for the raftsmen. We passed one tie-raft



FOR HIS PART, JIM PUT DOWN THE PADDLE AND ROLLED A CIGARETTE

which made me think of a partially submerged train of box cars. Here and there, like brakemen for the train, the raftsmen waved and shouted.

In deep shade near the head of an island, sitting on black loam beside a spring where imagination must have made the place seem ten degrees cooler than reality, we had luncheon without the trouble of heating coffee, and speculated about the advantages and drawbacks of various ways of making a living. Jim told of how tired a guide gets sometimes after a long day of paddling for fishermen, particularly when a heavy string of bass drags behind the boat to make work twice as hard. He related that one guide of his acquaintance trailed a string of fish over some willows in a rapids on purpose to lose it and make paddling easier. It wouldn't be fair to tell which guide this was.

I took the paddle that afternoon and ran a few of the shoals. To be at the helm of an Ozark splinter is by no means the same thing as managing a canoe. It is necessary to head the splinter sooner before you plunge into the riffle, but you may count on this home-made boat to keep from being whirled around unless there is evident cause. The blade area of Jim's paddle seemed to be small as compared with a good broad canoe paddle, but perhaps the heavy, stiff wood is necessary when the piece of oar is called upon suddenly in a rapids to serve as a pole.

Once in a while we came to a ford. When Jim talked to anyone who happened to be there, it was in a low, natural tone which carried a great distance without apparent effort. All the natives, when they are near the river, use these tones, while the stranger will shout and raise a startling rumpus with the echoes.

I recalled, when I heard one of these conversations, full of back country phrases and with every "it" Anglicized to "hit," that this was the country in which Harold Bell Wright had found color for his novel, "The Shepherd of the Hills." The old ferryman's speech was easy to remember when reminders were so close: "When God looked down upon th' work of his hands and

called hit good, he war sure a-lookin' at this here Ozark country. Rough? Law, yes! Hit war made that a-way on purpose. Ain't nothin' to a flat country nohow."

Jim told the names of as many of the balds as he could remember; and added that they were growing as valuable nowadays for raising Angora goats as for delighting painters. Now and then he could point to a moving spot of white on the cliffs and declare it was another goat. I wondered if the owners of these animals captured their property by shooting them like mountain goats, or if they only seined for them or caught them in traps. Certainly no one could hope to give chase to a goat on one of those declivities.

Late in the afternoon Jim cast for bass and in short order caught two in succession. "They're nestin', all right," he remarked, grinning. "I 'low we dropped right into one of the nests."

We camped that night on a bar of pebbles, near where the James flows into the White. When we ran inshore and looked back up the river, Bald Joe, one of the highest of the cones in the neighborhood, was still touched with sunlight at its tip.

We had an unusually large dinner that night—the reward of a day of more than ordinary exertion—and ate two strong, raw onions for the relish course. I had become so fond of our crude old boat that I asked Jim what a new one would cost. As I recall it now he said he "'lowed about seven or eight dollars." The wood was cheap enough, he explained, but you have to hire a blacksmith to make some of the iron clamps.

Jim had lived in this section of the Ozarks most of his life and appeared to be fairly representative. He rather shrank from peering into the future and took all the more interest in each day's meals and smokes. From his pockets, while searching for a match, he drew out among other curiosities that night some mammoth clay marbles. The men in his neighborhood have been taking as great a fancy to this boyhood game as rural Kansas to horseshoe pitching. Jim didn't care for quoits, but had a horseshoe nail ring. The Old Man could

produce some remarkable arts and crafts work in this medium, Jim declared. And he added: "He makes some with two hearts on 'em—for such as them."

From which I gathered that Jim was not in love.

How far he differed from the ordinary professional guide may be seen in the fact that at times he couldn't have been accused of being exactly taciturn. I was almost asleep that night when I heard him drawl:

"Ever et a citron?"

I was not, at that time, among those who have been so blessed. I had almost drowsed away again when I heard:

"Blame near like a watermelon—outside."

Another long pause. Then I was raised up in my cot, startled to hear:

"But when you cut into it, it ain't."

Dimly I recall that long, long after that I heard the single word "green." Is that, I wonder, the true inwardness of citron?

The next morning, to compensate for the laziness of the day before, we were up before five. When the sun struck over the treetops across the river, driving long rays here and there through the smoke-like mist, I never felt more helpless as an artist than when I adjusted the camera to attempt to record a symphony of white and gold and silver.

The cooking and packing all worked now with system and speed. And now . . . Jim's in the boat. You're in yourself. The chain clinks on the splinter's bottom. Dip. Dip. Dip. The old, sweet refrain again!

With every hour that day time went lazily. I basked in the sunlight; stopped gladly at every spring; ate and dozed with all the contentment of an aged cat. Once in a while Jim hit the water with the flat side of his paddle and made a sound like a shot. When the turtles tumbled off into the water at that alarm we always chuckled. "Right smart a bluff," Jim remarked about a towering

cliff. And I answered with a sleepy nod.

Living now was a series of little incidents, not adventures. Another party of float-trip men, a white crane, a buzzard's nest, the primitive architecture of the store at Timberlain's ferry, or a view of how the river is eating up a cornfield won barely more than our recognition.

The sort of thing that came to delight us most was an oddity in the way of conversation, such as this at the Pinckley's ferry general store, where our purchase was a dozen hot, old-fashioned biscuits:

"How far do you call it to Branson, by river?" I asked.

"Ain't never ben there," the storekeeper drawled.

"Then where does this road go?"

"That? Jest back through the bresh a piece."

A contagious contentment! Beside this, Will o' the Mill's life was thrilling and adventurous.

As a photographer, however, I continued to be active on a few occasions. The light coming from around a bend, as if the Morning Sun made his home just behind a clump of river-bank trees, the simplicity of outline of a bald and its reflection in the water—such combinations as these gave me almost as much delight as ever, though outwardly I greeted them with little enthusiasm. The endless compositions in which the triangle dominated recurred like a theme in music; and I once found myself wondering if any sort of tent but a pyramid would dare hold up its head in that land of conical balds.

There came a day when I felt identified with the chip on which we floated. Time became a joke; business a dimly remembered annoyance. . . . We came to Branson after four days of floating, a distance estimated by Jim as nearly two hundred miles, and guessed by me as at least half that much. Yet from Branson back to Galena the distance by railway was less than twenty miles.





SLID DOWN A LONG SLANT OF GLASSY GREEN SEA TO THE NEXT WAVE

THE TRAITORS

BY F. ST. MARS

Illustrated by Charles Livingston Bull

"A dream which was not all a dream."

DOES anybody in the flock know a safe feeding-ground? Because I don't, and if they do, perhaps they'll kindly quack it up."

Green Head, the old mallard drake, spoke without turning his head as he topped a short, sullen wave and slid down a long slant of glassy green sea to the next wave. And the following flock strung out behind, all head to wind, all swimming steadily, looking at a distance like a line of corks capping a fishing-net, answered never a word.

"No," quacked he—he had led them for two winters. "Apparently they don't, being half of them confiding and immature, as you might put it, and the other half 'keeper-bred.'" (This is the greatest insult you can offer a wild duck.) "They wouldn't."

"Not all, you old mud puddler," gabbled half-a-dozen voices loudly. "I cracked my shell north o' Shetland." "And I was brooded by Skager Rack." "And I grew up within the Polar Circle." "And I'm from the White Sea." "I saw Greenland first, anyway." "And, if you don't mind, I am from Tring and I rightly belong to Mr. Rothschild, so they said, but I am all as wild as any of the rest of you."

"Oh, my flight feathers! Listen to 'em. Wonder they don't tie labels round their little green necks, same's they'll have when they're hung up in the game shops," snapped an oldish, square-set, scarred and rusty bachelor, who, according to current gossip, had once flown as far as India. "There's a quietish bit o' feeding round behind Mussel Isle where——" a wave took him crossways, and he disappeared in a green smother for a few seconds, to come up again and continue serenely.

"As I was saying, where the punts can't come, 'cause it's private. There is—or there was—one keeper there, but he won't be out this tide, I reckon. He wears somethin' like glass over his eyes, and you can see it glint in the moon half-a-dozen gunshots off."

The leader turned toward land at that and set the regulation beat of the long-distance swimming stroke—thirty to the minute—of all wild ducks, and the flock swung in his wake like a well-handled squadron of cruisers, taking their time and stroke from him.

"Good," quacked he, in the peculiar, half-whispered, wheezy quack affected by drakes. "I thought Breydon was bad enough with more guns th'n duck to it, and Sandwich Bay wasn't a rush-pool with th' nor'easter blowing fit t' pluck th' coverts off you, but this interminable

chop, chop, chop——” a wavelet sailed up quietly and hit him on the back of the head not gently, falling out and sidling away landward with a chuckle. “There,” he went on, shaking his wondrous green cranium. “There’s a case in point. This channel chop fair turns my crop up.”

“Better’n scuttling about over th’ land with guns popping up like ma’k’rel on th’ rise whenever you drop to feed,” remarked the old bachelor. “Now, when I was——”

“Q-u-a-c-k, qu-ack, q-u-ack,” shouted all the ducks in chorus. They had heard all about his voyage of discovery up the Thames before, and had had enough.

Far away ahead through the purple haze could be heard the deep boom of waves tumbling to pieces on a pebbly shore. Suddenly the note dropped an octave, and——

“Tide’s turned,” sang out an old duck swimming third in the line. “You’ll want all your knowledge of swimming now, you youngsters behind there.”

“We know it,” came the answer in chorus. “We felt the set of it under our breasts before your old feathers told you.”

“Shut your beaks and swim together,” snuffled Green Head testily. “You’ll

get the tide racing out of Mudsworth Harbor with the wind to help it in twenty wing beats, and you’ll have more’n you can do to keep head on.”

They had.

Just as the sinking sun turned the sullen blue-green waves to pure ruby, and the “white horses” to pale pink cream, the tide, racing tumultuously off Mudsworth Harbor, a wide, muddy stretch half silted up and with a bar and one channel close inland and narrow as a small lane, raced down upon them.

“Oh, glory!” jabbered one young duck near the end of the line, whirling round and round like a cork. “I didn’t take on for this when I joined your fool flock.”

“That’s what you get for swimming aslant the tide ’cause it’s easier,” snapped the aged duck who had spoken before. “Ram your breast hard into it, kid, and take your direction from your next ahead. This is a still pool to what we’ll get in the channel——scoters on your right, sir.”

Green Head yanked round his neck and saw every now and then, as the waves flung them up the skyline, a string of squat, round, black duck, tucking into the swell like torpedo boats.

“Going in?” he quacked over the watery space.

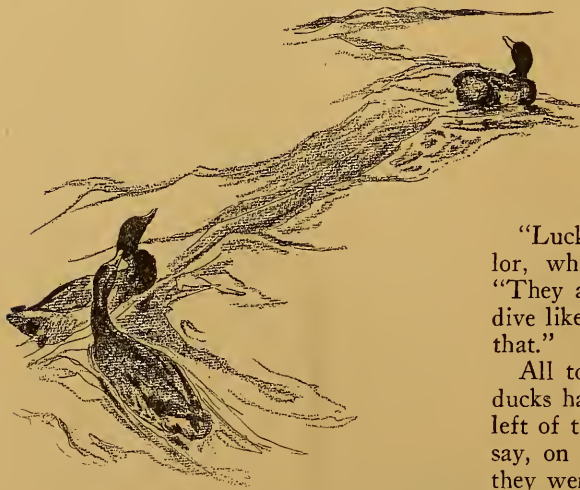
“No, thank you,” came the instant retort. “We don’t hanker any after lead like you soft river folk. The sea’s good enough for us, any tide. All under there.”

And with one accord the little black fellows went from sight without warning.

“Lucky beggars,” said the old bachelor, who swam next to Green Head. “They aren’t good to eat and they can dive like piffins. There now! Look at that.”

All together the flock of black scoter ducks had shot up to the surface on the left of the swimming mallard, that is to say, on the opposite side to that where they went down.

“There now!” cried the old duck. “Dived clean under us, they did, and we never so much as knew it.”



“DON’T SAY I TOLD YOU,” LAUGHED THE GULL, RESTING IDLY AND ROCKING ON STILL WINGS

"He-oh, he-oh," came a laughing voice from above. It was a herring gull, beating out from the harbor. "Water's off the mud inside, oh, you ducks. You're late. There's a bunch of widgeon and four mallard up before you."

"Let 'em," snapped Green Head. "Every binocular within two miles'll mark 'em. Give me the dark any tide."

"Don't say I told you," laughed the gull, resting idly and rocking on still wings. "They protect me these days, but there's a punt and a man just around th' bend inside the bar. Good feeding. S'long."

And he slid off into the darkening haze at the speed of an average Scotch express.

The sun went down in a glory of gold, leaving a pinky haze all over the sky, that means frost, hard frost, and a northeast wind got up and broke the waves, and the sea turned by way of steel to pale green, and died down to sullen, blue-black surge, and all the world shuddered. Night had come.

"Now! All together! Up you come," quacked Green Head, spreading his wings, stretching his neck upward, and beating the air.

The flock rose as one bird, evenly, together to a wing beat, as though the whole outfit was worked by one lever. As it flew, this flock counted one hundred and seventy mallard—wild duck, if you like—and, rising on a long slant they fell into the immemorial fighting formation, the gigantic-winged V affected by all duck and geese. At the apex of the feathered wedge Green Head set the course and the pace, the old bachelor at his right rear, the old duck at his left, and the rest stringing out according to flying strength on either hand and behind.

The wind whistled icily through their feathers, and their wings set up a rhythmic "when, when, when, when," one hundred and twenty beats to the minute, or two to the second—for they were going against the wind, or nearly so. Green Head did not alter the slant, but continued to rise till some of the youngsters at the tail end of the right—the longer—line began to complain.

"Say, sir, d'you reckon to find virgin lakes in th' moon then, or what?" cried one.

"Oh, great gales! I'm not going up to the clouds. Where d'you reckon you're taking us?" gabbled another.

"Out of range of shore shooters, you infants," snapped Green Head angrily, and then, over his shoulder to the bachelor, "Keep it up. There's three figures on the shore. I can see 'em."

"*Q-u-i-e-t, q-u-i-e-t,*" snuffled that old and cunning one, in the half-choked note of leading drakes. "Quiet, you down-tufted flappers there, or I'll fall out and abolish your curly tail-feathers one by one."

That was a terrible threat, for the glossy curly feathers on his tail are the pride of every drake, and they ceased their gabbling forthwith.

The flock surged onward, full speed ahead and silently, while the row of fanged waves marking the bar of Muds-worth Harbor swung by beneath them. After the bar, sandhills cropped up, and there were three dull smudges flat on the bents there, which might be shadows or——. The moonlight glinted, a bar-like glint, upon an incautiously raised gun-barrel, and Green Head lifted another ten feet—in case.

"Strike my pinions end-ways! But you were right, sir," sang out a young drake in the rear. "Three of 'em,—men among th' sandhills,—all waiting for——"

"Us," cut in Green Head quietly. "And you'd have been lying all of a crumpled heap now down there if you'd had your own silly way. *Q-u-i-e-t* now, *q-u-i-e-t.*"

Behind the sandhills opened out a great sheet of still water, turned to glass where the falling tide gave warning of acres of mud beneath, and dotted and speckled with strange salt-water grasses and those stranger, uncanny weeds which always grow in such places. Across this they beat with swift, steady strokes, keen-eyed, watchful, alert, but anyway, far out of shot. They noted a gunning-punt, still as death itself, and another, long, lean, and gray, crossing the track of the newly-risen moon—a great big moon at first, low down in the sky and

of the palest gold. These punts, with their raking "punt-guns" nosing from the bows, were looking for them and such as they, and they knew it.

Another flock of duck—mallard by the stroke of their wings, which are a little slower than most of the other species—beat up and passed with a subdued chorus of greeting beneath them.

"Who's your leader?" sang out Green Head, for a flock is known by its leader as often as not, and a flock with a leader of good repute will often be joined by other and smaller flocks. "The leader is half the flock," is a saying you will often hear among wild-duck and geese.

"Yellow Foot," came the reply, delivered fifty yards away, for both flocks were doing their thirty miles an hour.

"Oh, my webbed feet!" quoth Green Head.

"Great sou'westers!" gabbled the old bachelor.

"My eggs!" quacked the old duck.

"Say, you people," sang out a perky drake in the middle of the flock, "wouldn't an Aylesbury be of more account?"

"No, give 'em an Indian Runner," laughed some irreverent youngsters farther back.

And one flighty, flirty young duck of the new school, who flew in the bachelor's, or right, line, made them all gabble at once by quacking: "Say, boys, can't we lend 'em that old decoy we saw the other night along for a leader?"

It was evident that Mr. Yellow Foot was noted for many things, but not for clever leadership. Anyway, no answer came from the passing flock, and by the same token they knew that the gibe went home. Now Yellow Foot had settled his flock at the invitation of some decoy ducks about a moon back and had assured his colleagues only three nights ago that a gunning-punt was a drifting weed-clump. No wonder they were chaffed off their course.

Anon our flock made out an island, which was Mussel Island, encircled the flank of it, sailed up along its windward shore, turned again with a seawall and a gleaming stretch of marsh beneath them, circled three times in

case of lurking foes, and came down with a whirr and a smother of spray into the quiet waters of a large pool.

"Wing! Back wing! You hustling maniacs there! You've sent every eel to the bottom just as they were on the feed," cracked a husky, rusty voice in a dark corner, which came from what looked like a post, but was a gray heron motionless upon one leg.

"Oh, you're there!" gasped Green Head, righting himself and wagging his tail, while the others talked all together as duck will when they settle. "That is one up against me for a leader. I failed to see your gray self."

"That didn't make you drop like—like swans," replied the heron, in an injured tone. "You've upset the water-rats as well."

"Sorry. Blame nature," quoth the bachelor. "It's not our fault. It's the way we're made. We can't drop any other way."

"Ah," said the heron, shooting out his neck like a catapult and deftly stopping a water-rat with a hissing lunge of his spear-like beak. He hopped ungainly hops to the grass with his prize, saying: "Forgiven, I assure you. You've made this fellow shift out of deep water, anyway."

"Whee-yu, whee-yu," came suddenly out of nowhere special overhead to the accompaniment of quick whistling wings.

"Oh," snapped the old duck. "Here's these noisy widgeon. Tell 'em the pool's full."

But the widgeon—wild duck smaller than the mallard—came pelting down like bullets, offering no apology whatever.

"We reckon that where old Green Head feeds is as safe as most places," their leader whistled breezily, with a halt and jerk and roll in his swimming, for widgeon are rather more marine than mallard. "Whee-yu! Isn't it cold?"

"Oh, you reckon it's safe where I am, do you? But we are none of us safe these days of motor gunning-punts and high-power twelve-bores," Green Head quacked, wagging all three curly black feathers of his tail with pardonable pride. "Where's th' keeper gone?" he

sang out to the heron, back at his post again and motionless as a tree stem.

"'Less said fewer dead,'" replied the heron, quoting a well-known wild-fowl motto. "What a rowdy crew you duck are. He's gone. Gone back to his little warm house and his little warm bed at sunset, as he always does. Now—keep quiet, if you can, and give the eels time. They're lively to-night."

Now the ducks and the heron overlooked one little fact, but how were they to know? The gentleman who kept that marsh strictly preserved had engaged a new and a younger under-keeper, and no flies settled upon this man. Thus it transpired that Green Head, rounding a bend all alone to explore a narrow dyke, almost had his neck dislocated by a terrified hurrying snipe, who was whistling at the top of his voice, "E-s-c-a-p-e! E-s-c-a-p-e!" and, at the same instant, he became aware of a dark smudge on the bank.

The time it took Green Head to turn upon his tail, duck under the bank, and hurl himself upward crying "Q-u-i-c-k! Q-u-i-c-k!" in a hurried gabble was about as long as it took the dark smudge, the new keeper, to aim—a matter of seconds.

Green Head was, however, out of sight in the night when the short, shattering report rang out, and the bachelor, the old duck, and the older members of his flock were already up. Nevertheless, judging by the chaos which followed and sounds of much flapping, someone was in trouble, which someone was the tail end of the widgeon flock, three of them shot clean dead on the spot.

That flock—what was left of it—came past them full swing, going like the wind, a minute later.

"That's what comes of trusting a mallard," whistled their leader angrily. "We might have known."

"Of course you might," quacked the bachelor. "Only you didn't. *We* never invited you. Go and eat widgeon grass." This was a pithy insult in allusion to the fact that widgeon feed largely upon a water-weed or grass known as *zostera*. "It's about all you're fit for."



A GRAY HERON MOTIONLESS ON ONE LEG

Green Head slackened his speed and swung on a large curve very high up. He was himself a bit ruffled, though goodness knows how many kinds of narrow squeaks he had had before—not less than one a week, probably, throughout his life.

"How many of us here?" he queried querulously.

"About half, sir," came the reply from somewhere back behind out of the infinite whistling darkness that was there, the rest, the left wing of the V, having gone off with the old duck. "But," continued the voice, "*we* are all here, and—here she comes!"

There was a whirr of many wings—as if someone invisible was wheeling innumerable small swords—and a quick, short quacking, and out of the night swung the old duck with her charges.

"Every feather safe, sir," she chattered, dropping deftly into her place behind Green Head, and picking up the regulation beat of the flock's wing stride as if she were part of a machine. "Not one missing. They might give us half a chance, though. We can't feed anywhere——"

"Oh, yes, you can!" broke in a short, gruff voice, as a very big, slim duck, with an oddly long and pointed tail, winnowed out of the blackness. "I know a sanctuary belonging to a lord. He only shoots two days a season, and it's all marsh and river and pool and salt estuary mixed up. Just the place for us."

He was a pintail duck, and the same are an odd breed. They rarely maneuver in large flocks like the other species, but attach themselves singly, and being handsome, masterful and big, generally lead other flocks not of their own kin, such as widgeon, and occasionally mallard. Green Head looked him over, from his singularly long brown-and-white neck, his white breast and gray back, so elegantly pencilled with white against black patches, to his long pointed tail-feathers. He was grand, all twenty-eight inches of him—four inches longer than the largest mallard—and Green Head knew that of all duck he was the wariest, wildest, strongest, and most cunning. His advice was worth taking,—yet—that

insolent word "us" was ominous and foreboded many things, and he had heard strange tales concerning the habits of pintails, not all printable, and none commendable.

"Fly softly," muttered the old bachelor between his half-closed mandibles. "I'd rather be hung up in a game-shop, head down and marked two-and-six—and dirt cheap, too—than have dealings with a rusty-headed, rusty-voiced, rusty-hearted pintail. They're all adventurers, sir, from mandible to primaries, incubated, hatched, and fledged, adventurers first and last and always."

"Turn and go, then," snapped Green Head over his shoulder. "And I'll go with you, but—I know the flock. They'll follow him. It's flock-law; we must fly as they fly when the majority are against us, or live forever alone. Come on. Guide," he jerked out, shortly, to the pintail—notice, he did not say "lead."

And the slim, fine bird slid up past them, as an "Indomitable" might glide up past a line of "Dreadnoughts," and fell in ahead of them.

"We have heard that mallard are great flyers," he began in his low, hollow quack, stretching his very long neck and feeling, as it were, the lift of the northeast wind. "The widgeon tell me"—pintail are generally to be found with widgeon—"that there are no flyers like unto the mallard drakes, and my only fear is that my poor wings will go too slow—too slow—too slow."

And with the last sentence, two words to every wing-stroke, he bounded forward like a grayhound slipped from the leash.

There are those who talk about the speed of the swift, and some who think that the wood-pigeon flies not slowly, and others who know that the teal is speedy; yet if any of those had beheld this pintail flapping out for his reputation he would have stared, and—gone away, dumb.

In three minutes the ducks were out-paced and fell back in a wedge of their own. In five minutes the drakes had broken rank and were slashing into the night like mad birds. In seven minutes the pintail was seven hundred yards

ahead of Green Head and still gaining, and the bachelor, who had minutes before ceased anathematizing the guide for want of breath, was snorting open mutiny through his splayed beak. My word!—that was flying. And what was more marvelous, the pintail was not even pushed. As the virulent bachelor said:

"He has another five knots an hour up his giddy wing that he has not even begun to let out yet. Oh, stop him, sir,"

The pintail slung round his long neck and looked at the bachelor sideways.

"Ah," he said. "We've met before, I fancy. You are one of those things they call a bachelor, are you not?"

"We have," came the retort, quick as thought; "last summer in Lapland, where I had the pleasure of helping to mob you for running away with a mallard's lawful wife."

In the silence which followed you



THE SLIM, FINE BIRD SLID
UP PAST THEM, AS AN
"INDOMITABLE" MIGHT
GLIDE UP PAST A LINE OF
"DREADNOUGHTS"

he said to Green Head. "And let's kill him and have done with him. The eyes of all the ducks are on us, and although it doesn't matter to me—being what I am—you and all the other drakes are throwing prestige to the gulls."

"Can't," gasped Green Head. "I'm leader and I'm supposed to keep first. Hear 'em laughing." A wicked, derisive chorus of female quacking cut through the night. "Curse my short wing-span. If I'd only his long one I'd show him—and them."

"Strike me with number two shot and pluck me clean! Have all your lordly drakes been pinioned, or how?" sang out the pintail suddenly, shooting round in a curve and cutting in again ahead of Green Head with insulting ease.

"We asked you to guide, not gibe," remarked the bachelor suddenly. "D'you think we've nothing better to do than panic across two longitudes and wear out our only flight feathers for fun?" He did not add that the hearts of half the drakes were almost bursting with exhaustion and—other feelings.

could have heard the regular beat of oars in rowlocks a mile to the westward. The pintail slackened speed and flew level with Green Head silently, and the bachelor chuckled rudely a foot behind, and the other drakes looked at one another and smiled that open-beaked duck smile, which anyone may see any day if they watch the birds. It was not a good thing to bandy words with the bachelor.

After a certain time a narrow, silent estuary opened up, a gleam of molten silver, beneath them, and beyond were marshes splashed also with molten silver, where pools nestled, bearded with reeds, and farther on was a lake, shallow, as ducks like it, and guarded from the sea by a narrow bar of sand.

The pintail slid forward on still pinions and dropped his long neck, saying:

"It is——"

"Here," cut in the bachelor calmly. "Knew the place before you were hatched, sea pheasant." Pintails are frequently called sea pheasants because of their long, pointed tail. "A good haunt, but—there are limitations."

The pintail said nothing to that, but he looked many things, as the flock dropped into the lake with a tinkling crash and began to feed at once.

"Curlew along the shore and red-shanks on the marsh always mean safe feeding, ladies," quacked the pintail, pointing with his beak at the mud, where long-legged, brown birds with beaks curved like sickles and others on the land with bills like red shuas guaranteed safety, for both are past masters at wariness.

"How clever of him," gabbled one young duck, greasing his back feathers proudly.

"Yes, dear, and how handsome, with that white pencilling on gray wings," replied another. "Such a fine flyer, too."

"Yap! yap! yap! yap!" snapped the bachelor to the old duck. "Just listen to 'em. They'll go on like that all night, admiring their own silly reflections in the moonlit water and jabbering about their fine new gentleman. Fine devil, saving your presence, madam."

"Oh, don't mind me," she jerked out, standing on her head for the twentieth time and hauling up a bunch of lank, spongy green weed, which she dissected and sampled, with the air of a connoisseur, as it floated. "You know the old joke that was bandied about among the pochard ducks on Skager Rack last year: 'Do a pintail, or he'll do you'? What's the wandering robber got up his gaudy wing this flight, I wonder?"

The bachelor spun round and brought up a wildly flopping small fish.

"Ever heard of the falconers of Selston? They hunt here—or used to. Just about dawn, though, if I am not wrong, and if we wait that long—which I won't—he'll vanish."

"So'll I," was the terse rejoinder.

During the night hundreds of duck, widgeon, pochard, scaup, golden-eye, tufted, and teal, came flinging down out of the sky to feed on this abode of quietness and peace. And on either side they could hear the far-away, dull thud of punt-guns lowering the population of their fellows on other and unreserved waters. This place was a hotel, it seemed; in order that their cup of

comfort should be full, they found—the pintail led them to it—on more than one mud-bank, food, wild-duck meal, of most exquisite taste and aroma, spread there, as the pintail said, "by the gods, apparently, ladies, for our special benefit." But he was wrong; it was by the falconers of Selston.

"Gods!" snorted the bachelor, between mouthfuls. "Yes, winged ones, with hooked bills and spurs. You—you—puffing, piffing mud burblers. Oh, go and adorn an oven, it's evidently what you're suffering for," and he turned away with wagging tail, in disgust.

He had suffered much in the way of insult from the younger ducks, who hated all bachelors on principle and who were always getting the flock into dangerous places by their whims and fancies.

It wanted a full half hour before dawn, and the almost continuous whistle of wings in the sky and the ceaseless uproarious gabbling on the marsh told that the revels of the usually much persecuted wildfowl were at their highest; the great honking V-shaped phalanxes of the wild geese had not yet hurled in from the sea, where, contrary to the custom of the ducks, they slept at night, and the gulls were still slumbering—after their restless, nightmare-ridden fashion—on the sand-banks, when Green Head turned suddenly and missed the pintail.

"Hi!" he sang out to the bachelor from the bank. "Where's that levantine, lady-leading, sea-pheasant of ours got to?"

"Know not. Why? Has he gone?" came the reply, much muffled, from a clump of zosteria grass, where the old drake was at issue with a shore-crab, who, after the manner of all those crabs, was showing fight instead of dying decently.

"Yes."

"Quite sure?"

"Quite."

"Oh! That's done it!"

There was an interval while he seemed to be conferring with the old duck. Then:

"I'm off. Coming? I'll tell you why as we go along."

"You'd better trust the bachelor, he's

a downy bird," said a mallard drake of mature years to Green Head, and the two rose together, though it was half an hour before dawn, the usual fighting time, for ducks go to sea and sleep during the day and come ashore to feed at night, as a rule, especially if they are much shot at.

"Why? Where? What th' decayed jellyfish are you going for?" came a roaring chorus from the flock, as the three drakes and the one old duck swept past them, beating out to sea.

"Because it's not safe to stop. Am I leader, or am I not? Are you coming, or are you not?" quacked Green Head, who had all the drake's small store of patience, and was beginning to lose that little.

"*Emphatically not,*" cried the pintail, appearing again suddenly. "Why, they're quite safe here. Can sleep among the reeds all comfy by day. After all I've done for you, too."

"Yes, ungrateful old mud sludgers! Suspicious old tiddle dibblers! Frightened worm eaters!" echoed the turbulent youngsters.

But a few of the older and more experienced birds rose without comment and followed the subdued quack of the leader dying away down wind, helped along by a shower of chaff from the hundred or so "last year's birds" that were left.

Dawn—still, calm, and icy—peeped with a gray, hard light over the eastern horizon, and, as if its coming had been a signal, the pintail opened his wings and rose quietly.

"I think," he said, "that I'll just flap down to the sand for a breakfast of sand-hoppers. Don't mind me. You go right on feeding, and when you're done, you'll find the reeds better to sleep in than your archaic leader's open sea—but I shall be back by then."

He beat away with steady whistling strokes and, directly the sand dunes hid him, doubled his speed and headed straight for the open sea. And they never saw him again. By the time the sun—a golden splendor, rising with a sudden clash of light that was almost audible—had cleared the land he was twenty miles away, rocking to the lift

of the channel chop, with three co-devils of his own species.

And the young mallard went to sleep in the reeds and, flock after flock, the other duck of all species whistled away out to sea, leaving only a few scattered bunches of young, unsophisticated, and mostly keeper-bred birds; the curlew slipped mysteriously into space and the redshanks drifted after them, with their extraordinarily penetrating whistle of "Tyo, tyo-o" dwindling into the cold horizon.

After they had gone an odd silence fell upon the lake, a gleaming sheet of gold under the eye of the awakened sun. Only the coots bobbed about in the open and moorhens skulked in the shallows by the reeds.

There is, however, no space or need here to tell how the falcons came, with His Lordship at their head; no wonder he rarely shot here. How long, lean boats sped over the golden waters, and how black and eager cocker spaniels woke our flock of young mallard up out of the reeds and forced them to fly for their silly lives.

Nor room to show how they were no sooner up than there shot from the wrists of certain among the crowd of falcons two superb, swift-winged, raking peregrine falcons; how the flock saw them and knew, and fled across the icy heavens; how the falcon swirled up till they were no more than specks above the straining, panting, open-beaked but frantically fleeing flock; and how the falcons came down again, with furled wings, close-feathered, rigid, hissing, steel wedges, hurling headlong out of infinite space, falling projectiles, irresistible and superbly terrible.

None among the duck ever speak of the falcons' passage through the flock, hissing with the velocity and with bared spurs held rigid; the burst of feathers which followed, exactly as if two ducks had been shot; or the instant crumpled-up, headlong fall of those luckless ones blasted from life in a flash. More especially, however, are they dumb about the way in which they were driven to and fro by gun shots and silk kites cut to the shape of hawks, and how two great white Iceland falcons repeated the

deeds of the peregrines, action for action; nor do they ever mention the disorganized, shattered, and utterly demoralized breaking away of the flock at last to the southward, making madly, blindly, for the flock's private rendezvous, seven miles S. S. E. of Selsey Bill. And finally, the raw, flaming shame that the young drakes felt as they hurtled down panting before the cold, scornful gaze of the flock, and the cruel, biting searing words with which Green Head lashed them, are matters the privacy of which even the writer must respect.

He gave his word so to do, in fact, when he received this tale from the beak

of the bachelor on the waters of a certain preserve which shall be nameless. The bachelor had been winged by a keeper, half-tamed, and was used as a decoy. Upon this occasion he had attracted a flock of widgeon, who left behind them when they went—at the invitation of the writer's gun—their leader—a pintail.

Now that pintail flapped on the grass, gasping out his life and, turning his head, regarded the bachelor, floating placidly on the water thirty yards away.

"Traitor!" quacked the pintail and fell forward, dead.

"Traitor!" replied the bachelor and went to sleep.



THE CALL

BY CORA D. FENTON

HAVE you heard the calling, calling of the Distance,
Through the purple reaches where the mountains wait;
With the Dreamland round their shoulders, where the sunset fire smoulders—
Oh, the guarding Distance calls us from their gate.

In the morning it entices with the sunrise,
In the evening it is urging through the gold;
We must heed the sweet insistence, for this mystic blue-veiled Distance
Hides our wished for land of Dreams within its hold.

We will cinch the saddle tighter, tie the strings of wide sombrero,
While the mists about the top are gray and dim;
With the eager trail uptrending, and the morning sky low bending—
Oh, the evening star will see us o'er the rim.

When the wind blows thin and keen about the summit,
And the camp-fire sparkles warm upon the brim,
On a couch of pine boughs fragrant, who would scorn to be a vagrant,
And follow when the Distance calls to him?



LIVING OFF THE LAND

BY HELEN DODD

"He that tilleth his land shall be satisfied with bread."

WE farm to make the most of our lives and not to make a profit-bearing business of it. We try to raise what we eat and to eat what we raise, being satisfied with farm-grown food in season. Our life in the open has given us normal palates and healthy appetites. Not having tired of canned peas in winter, we are hungry in July for the favorite dinner of the hills, green peas and new potatoes cooked together and served with cream, the only meat being crisp slices of our home-cured bacon. Simple fare, but when accompanied by the best milk, bread and butter, cider jelly, and followed by a salad served with Italian oil, our home-made cheese and berries, fresh or preserved, I have never known it to fail to satisfy.

It has become an interesting study to use our food products to the best advantage. Careful storage gives us an increasing variety in winter vegetables. I put a small quantity of green vegetables into preserve jars, and always extend them, as I do the canned tomatoes we buy, with the more plentiful farm foods. Peas are served as the Germans do them, in a rich cream sauce with tiny slices of slender carrots that add color and flavor as well as bulk. Corn makes a rich succotash with beans, or a cream soup. Tomatoes are made into soups or used as sauce for spaghetti, rice, or poorer cuts of meat.

Meat, whether we buy it or raise it,

is used to the last small scrap of the least desirable cut. To make it more palatable, I call upon all the vegetables and a long list of spices and seasonings. Braised beef has fourteen additions served with it, onion, carrots, beets, turnips, parsnips, celery, salt pork or bacon scraps, salt, pepper, bay leaf, celery seed, mace, parsley, and Worcestershire sauce or a sour jelly. Soup stocks, stews, and the many manifestations of the "Gosh! Hash!" idea take up all parts of the meat that city housewives rarely see, and the country butcher makes into his unvarying sausage. Our summer meat dish is of bacon or ham of our curing, eggs, salt fish, or occasional small cuts from the itinerant cart.

Another economy that ingenious cookery and unlimited fuel make possible is the use of much cheaper forms of cereals and other staples. Not only are ground oats and cracked wheat less costly than rolled oats and many forms of wheat sold in packages, they are of better flavor and more food value than the steamed grains, and easily cooked with a fireless cooker. Much that I have had to learn by experience is now taught in many ways, but the principles are, like the laws of mathematics, within everybody's reach, once we learn to look for them.

Recipes from all parts of the world are searched for new combinations of materials, and we have tried substituting our varieties of beans and other veg-

etables for Asiatic or Mexican with great success. "Cheese on beans! How horrible!" To one who knows only the baked beans sweetened with molasses, maybe, but tell an army man home from the Philippines of the combination and he instantly approves, and he also devotes himself to a dish of chicken and macaroni and cheese and curry with enthusiasm. The beans of the scarlet runners, the ripened black beans of the butter varieties, and even the old cranberry beans, are capable of delightful new appearances.

Four kinds of cornmeal I keep on hand, granulated, bolted yellow, stone ground white, and stone ground yellow flint of our growing; three kinds of wheat flour, and coarse Graham. With these and rye and barley we can have a variety of bread and hot gems that make possible a very small expenditure for crackers or biscuit.

Best Is Cheapest

It is a blessed fact that the most forceful food for human energy is almost always in the line of economical production. I have found all my devices for lightening my labors as cook advised on the ground of more wholesome food. Although we relish, on occasions, the more sophisticated form of food we once used often, it is true that we appreciate them for the sake of variety and are glad to see the economical dishes in their turn.

The first butter we used I made in a little stone churn that gave us half a pound at a time. The Rebel made a wooden dasher to replace the lost one, but as I did not use a thermometer many churnings of cream swelled more than the capacity of the churn allowed, and how far that whipped cream could fly! Later, I studied Uncle Sam's bulletins and learned that I had not kept a proper temperature.

When we began to make butter on a large scale, we sometimes had long churnings but never such spattering ones. We were well equipped and really enjoyed the work, but many a winter day we could not get the butter room up to the sixty degrees called for in our direc-

tions and it made hard work of printing.

Now we make only enough butter for our table and we churn two quarts of rich cream at a time. We use a gallon glass jar strapped to an oscillating wooden frame run by the wheel from an old bone grinder. The Rebel's machine is a most satisfactory churn, and provides the same grade of butter as the big barrel churn.

Even on the small scale, we find that the same principles of butter making hold, and we find a real pleasure in our personal acquaintance with the helpful bacteria and other elements needed by good butter. It begins with the cow, of course. She must be of a good family of a butter making breed. Our registered Jerseys have at all times of the year furnished a color and flavor and body of butter on farm-grown food never approached by native cattle.

The next element is clean handling. We very early purchased a covered milk pail for the sake of providing the children with proper milk, and we have found the flavor of milk and cream so much better that it seems now the only kind of pail fit to use. The most punctilious care of milk utensils is always rewarded. Cold water flushing of every part of every tool as soon as emptied, washing with sal soda and hot water and brushes never used for other utensils, and much boiling water for rinsing and sterilizing—a regularly recurring program like this is really accomplished with much less energy and time than one believes on reading about it.

Temperature is a most important element in all stages of butter making. Cooling the fresh milk at once to fifty degrees or lower, or the fresh cream if a separator is used, insures the keeping under control of all the harmful bacteria. In winter the cream must not go below forty degrees, for there are bitter flavored bacteria ready to come in. We do not find it necessary to introduce the helpful acid-producing bacteria, as larger scale work would demand, but gain the velvety texture and nut-like flavor by keeping the cream at sixty degrees for ten hours before churning in the summer, a longer time in winter.

When the cream is "ripe," the big

little boy brings in the frame and wheel for churning. In summer, we churn the cream at fifty-eight degrees, in winter sometimes at sixty-eight. Once I forgot the thermometer in the jar and it was shaken into fragments, all the mercury being scattered through the butter in minute particles. I did not want to lose the butter, so, after washing out the buttermilk, I put it into the oven with some fresh water. The mercury and water and casein were left in the bottom of the pan, but the pure butter fat was tasteless and of a curious texture. That showed how necessary is the small amount of buttermilk and salt and the sixteen per cent of water allowed in butter.

Since the texture of butter depends upon the water left in it, and upon the temperature while working and churning, it is most important to have pure cold water for washing. The hardness and smoothness and granular quality of fine butter really affect its flavor, since they enable us to taste it. Our butter is worked by hand in a bowl with a maple wood paddle, and then rolled into balls for the table. These weigh a little less than an ounce and are so convenient for cooking and serving that they are better for our use than prints.

When we read in one of Uncle Sam's bulletins that the Storrs Station was ready to help farmers make Camembert and other cheeses, we were very cheese hungry. None of the village storekeepers had any through the hot weather, nor did they have it if butter was high priced and cheese thereby too costly for country ideas. We wrote asking for advice, and they promptly sent us bulletins and letters.

"If you want to put some time into work without the necessity of selling the cheeses made," wrote the cheese expert, "I could put you in the way of having considerable *fun* with Camembert and in all likelihood of having a number of excellent eating cheeses . . . you could work with two quarts of milk at a time if you cared to and would fuss . . . I would not want to promise golden results. . . ."

"Well," said the Rebel, "we can tell him what we have learned in dairying,

and that we shall never again expect our cows to yield golden results."

We studied the scientific bulletins and the Doctor's letters; the Rebel made with care the tin forms as described, and I fashioned mats from fragments of matting after boiling out all color and taste. The climate of late September was favorable and I had beginner's luck with my first attempts.

"A new industry!" said the Rebel, as he watched me "dipping" the smooth curd from the big milk pan into his perforated tin forms, that were about as large as a tomato can.

"I want to see the mold!" declared the scientific uncle who was visiting, and I brought out the Doctor's tiny test-tube with the green mold.

The two white curds drained over night on the tiny mats I had made. In the morning, the guests and the family watched the "noc' late put on" as the littlest boy said. Then the cheeses were set on little round racks and covered with a glass percolator, my substitute for the Doctor's belljar.

Waiting for the Cheese

Four weeks is a long time to watch cheese when your mouth is watering in anticipation! Eagerly we looked for the first appearance of white velvet, and anxiously we watched the gray green spots grow. Turning them carefully every day or two, I finally felt the softening of the curd, and we cut into one.

Too soon, of course! There was a fine creamy, custard like consistency at the surface and unripened curd in the middle. The proof of the pudding is in the eating, however, and that cheese was good to eat! I sent a section of it to the Doctor and received from him real encouragement and advice for further work.

Cold weather brought some trouble, but Camembert cheese, like everything else in our farm experience, yielded at last to genuine interest and a little "babying." The old ice-box that served to hold moisture and inoculated air around my cheeses was brought right into the dining-room for the winter months. Even there, against the outside wall, the ther-

mometer went below the sixty degrees prescribed, and I appropriated for my cheese outfit some small freestones meant to warm up human chills!

Gradually I learned just how many drops of rennet and how many cups of buttermilk were needed to turn my four quarts of milk into two fine, smooth curds, how much salt to rub into them, and the proper temperature and moisture to maintain.

Camembert cheese is made from these fresh curds by the growth of two molds, *Penicillium Camemberti* which has been imported to this country from France and was supplied to me from the Storrs laboratory, and *Oidium lactis*, commonly grown on buttermilk. The buttermilk mold grows readily here at a wide range of temperature, and the Camembert mold grows from a pure culture if kept at about sixty degrees F. and sufficiently moist. In my work, I had to judge of the moisture by the condition of the cheeses themselves. Experience! to provide the proper balance between the moisture within the cheese and in the atmosphere surrounding it.

The Camembert mold starts the growth of certain enzymes within the cheese and these act upon the curd to change its texture to the soft creamy state. But at a certain stage, about two weeks after inoculation, when the mold has grown in spots over a little more than half the surface of the cheese, it must be checked, by a wrapper of parchment paper, to allow the buttermilk to do its share in giving the stronger flavor.

Practically, my experiments worked out very well. We had many delicious cheeses to eat and to send away to those who had enjoyed Camembert with us in the city restaurants. I found them delicious cooked in many dishes, even Welsh rarebit. When one was too strong, too old, or not evenly ripened I cooked it, and at the beginning of the hot weather I melted all I had on hand, in various stages of ripeness, and poured the smooth mass into jelly tumblers. Sealed with parchment and tight covers, and stored in the cool cellar, the cheese kept perfectly as late as September.

I enjoyed the distinction of being the first to make this cheese on a small scale

in a farmhouse, and so the Doctor, my distant instructor, was sent to report on the work. After we had exchanged news on the making, had eaten of the foreign cheese and those of the Station's and my manufacture, when the Doctor had been convinced that Camembert was useful in cookery, and we were wondering what we might do for the Government that had helped us, the Rebel said:

Made Good Already

"Now what do you want us to do? Is it to the interest of your department for us to do this work commercially? Or is a small success like this as valuable as a larger one?"

"Why," answered the Doctor, "you have made good in producing as many cheeses as you have already."

"But haven't we got to do something to justify your coming?"

"Oh, my trip is justified by that baked macaroni and cheese I ate! The possibility of using unsalable cheeses in cooking shows a way to reduce large factory losses."

"Well, we haven't lost any," I added, "only one the cat stole before I found out that he liked them. We have eaten all we made, cooked or otherwise."

"And I," said the Doctor, "in the course of experiments, have seen twenty thousand burned!"

He taught me, too, how to make cream cheese with rennet instead of by heating sour milk as I had done before. We set two quarts of rich Jersey milk, with a little buttermilk and some cream added, and one drop of rennet, keeping it at eighty-five degrees in a larger kettle of water in the fireless cooker. In eight hours it had wheyed, leaving a floating mass of creamy curd. After cooling, it was drained and worked on a cloth until it had a delicious texture. By using sour cream instead of buttermilk to produce acidity, I gain a richer flavor and lose less cream in the whey. Great variety is possible, in flavor and texture, by varying the quantities of cream and of rennet.

The happiest and most far-reaching household industry is the gathering and preserving of all our riches in the fall.

From the garden we gather, at the first sign of frost, all the ripe tomatoes and green, cucumbers, green beanpods, and such celery, cauliflower, and horse radish as we need for pickles. The grandmothers of our family and others in several States have contributed from their lore, and with local recipes we have such a number of attractive ways of making our green things into winter flavors that we do not sigh for greenhouse salads.

There are the mixed pickles of one old-fashioned cookbook, made from tiny cucumbers, button onions, the smallest green tomatoes sliced and delicate cauliflower separated into flowerets and red peppers sliced thin. While I follow the old rule for quantities of vinegar and spice—there is not a grain of sugar—I am really trying to make a pickle that looks and tastes like those of English purveyors to royalty. The rest of the little green tomatoes go into the famous Bangor grandmother's sliced sweet pickle. The local piccalilli has been glorified by the additional scalding in vinegar and some new spices suggested by a "York State" recipe. I better the recipes by using a larger proportion of tender celery, for my June enthusiasm that set celery plants in the rain is well rewarded.

There are mustard pickles to which I add curry, and the cucumbers of the right size are made into a salad pickle that recalls summer salads. Now I know why the dainty English pickles are so costly—somebody has to stand over the vines to catch the little cucumbers as they form—in our garden they always jump from the tiny sets with blossoms still clinging into the long cucumbers all right for salad but too large for my sense of pickle proportion. The finest local pickle is of ripe cucumbers, peeled and cut in broad slices after removing the seeds, and cooked in a rich syrup of maple sugar and well chosen whole spices. The flavor varies with the taste of the maker in spices and with the flavor of the maple sugar, but all kinds are good and some deserve a monument.

All the crocks and large receptacles on the place are called into service. Everyone within call slices or peels or

chops or stirs. Colanders, cheesecloth, wooden spoons, brown bowls and enamel bowls, even the glass punchbowl, and many baskets are full of salting, draining, or waiting things. The good smells and tastes, bits of cinnamon bark or lumps of brown sugar compensate the little boys for their share in the work and row upon row of glass jars make a jolly promise for us all.

In Apple-Picking Time

After the perishable garden stuff is stored, we begin to harvest the apples. We are not yet modern orchardists, but we add to the fruit of a few young trees set in our second year on the farm that of many old trees scattered about the fields and pastures. It seems as if the sun and winds of the three generations that have passed over the great scraggly trees of the pasture slopes had deposited in the fruit itself some of the aroma of hope and happiness of the life of those early dwellers on the hills. Perhaps the deer could tell us why the old trees' apples taste so good. They know them all, and so do our cattle. Certainly no pears of cultivated orchards carry into winter the flavors of those we were picking when a great frightened buck rushed past us, his tongue hanging out of his mouth and his breath coming in hard drawn gasps that took our hearts with him.

There are big sour apples growing near the sugar woods that make prime mincemeat. Higher up on the hill are sweet apples and tart, rosy-cheeked ones that keep until spring when we crave their acid. The finest of this locality are the Lincoln, named by the one-time owner of the farm, and the first old tree still gives the best flavored fruit. They are large, somewhat flattened, yellow with a rich red on one side, juicy white flesh, and make the spiciest apple sauce and baked apples. Their splendid texture when preserved has added new fame to an old family recipe, our long-loved apple chutney.

For cider we choose among many kinds for different purposes. That for vinegar is made of sweet apples, brown and rich. For cooking or some pre-

serves I like the sour, almost white cider that suggests light catawba wine. For bottling hot, so that we may have sweet cider next summer, we use the local dictum, two-thirds sour and one-third sweet. It has some color and keeps clear and bright in flavor, yet fresh and sweet for a year. The red sweet apples that grow in the swale make the nicest cider for jelly and apple butter—a Tennessee grandmother told us how to make that!

Fresh cider, mostly sweet apples, can be boiled slowly and carefully until it makes a jelly as dark red and solid and rich in flavor as currant. We use it with meat, for it is sourer than any jelly made with sugar and can be had in large quantity. Boiled cider, nearly ready to jell, is indispensable in making mincemeat, it quite makes up for the lack of brandy. Many flavors of crabapple jelly and marmalade are possible by choosing among the varieties grown here. A family tradition of a grandmother's crabapple marmalade that was dark and spicy and solid is at last satisfied with that made from dark red crabapples, boiled slowly so that all the juice yields its flavor.

Late in the fall, when it is cold for outdoor play, the little boys work with a will at the small cider press. It is surprising how much cider the two can make in a day when their enthusiasm is fresh. They help, too, in the making of apple butter.

In the steep sidehill across the road from the house, the boys dug a rounded shelf. On this the Rebel set in a heavy iron frame the white lined iron kettle that was chosen for cider jelly making, and encased the frame in old sheet iron from out worn heating stoves. The little boys brought brush and branches pruned from the old apple trees along

the road, and made a pile of wood that was not good enough for any other stove! The little red sweet apples were cut up, cores and skins and all, into the rich brown cider that half filled the kettle. We cooked the apples until they were soft enough to mash through a colander. More cider, sugar and cinnamon bark were added to the apple pulp and were cooked in the broad kettle, continuously stirred with the wide wooden hoe the Rebel made.

We began to think our Tennessee advisers were right when they said to stir all day and half the night! We stirred till sundown and the cats crawled into the warmth and gratefully used the low space under the sloping roof at the back of our shelter. Many a batch have we taken off by lantern light and many a lunch has the family eaten around the apple kettle, in relays so that someone was always stirring to keep the heavy mass from burning!

Yet the cold weather came before we tired of making apple butter. Although we could keep the apples from freezing in their bin in the bank, by covering them with blankets and leaves, still there came a time when the canvas sides of our shelter and the fire and the stirring were not enough to keep one warm. The wooden paddles and long-handled hoe, the store of cinnamon bark and other things that had had shelves made for them up against the roof were brought into the house. Yet every jar of apple butter we open in the winter brings back the smell of the cooking cider, the sound of the crackling branches burning in the rough stove in the earth, the taste of the cold winds of the fall, and the cozy, outdoor comfort that charmed us all as we watched by lantern light the slowly shrinking spicy mass.



LANDING THE BLACK BASS

BY SAMUEL G. CAMP

UNDOUBTEDLY the most delicate and critical operation the angler is called upon to perform is the landing of a large brook trout in swift water, but the angler for bass, too, soon discovers that something in addition to "main strength and ignorance" is requisite if one would consistently land the majority of his strikes when fishing for either the large or small mouthed black bass. Particularly is this the case as regards the fly- and bait-caster. However, the right way to land a black bass when fly-fishing in either lake or river is quite similar to the way a trout should be handled, and as we have already discussed that subject in a former article it would seem best to confine the present one to the best methods for the bait-caster to adopt.

By far the greater part of bass fishing is done in lakes, and landing a game fish of any kind is much easier in still than in fast water, but in the case of the black bass the situation is complicated by the proneness of the bass to leap; possibly this offsets in a considerable degree the difference in the amount of skill required for landing a brook trout in fast and a bass in still water. At any rate, the veteran bass fisherman would be loath to concede that the trout angler plays the more difficult game.

Also, as a matter of comparison between the landing of bass and brook trout, it is noteworthy that as regards average angling conditions a pound brook trout is a large fish, while a black bass of equal weight is simply a good enough one to keep—and surely size makes a difference when it comes to a show-down between sixteen or more ounces of game fish and four ounces of split-bamboo.

Then, too, lake fishing is not all cakes and ale by any means; for, while as a

general thing submerged snags need not be taken into consideration as in brook fishing, still we have always the weeds with us and usually the bass are in them. So although, as I have said, the landing of a large brook trout in the rapids is certainly the most difficult part of all fresh water angling—possibly barring salmon fishing and granting light tackle—it would seem that, taking the average run of fish and fishing conditions, landing a black bass is not far behind as a matter requiring skilled tackle handling, "know how" and experience.

First of all, even as with trout tackle, much depends upon how your rod and reel are rigged. The single-action reel of the fly-caster is properly used underneath the rod with the handle to the right; the quadruple multiplying reel of the bait-caster should be used on top of the rod also with the reel handle to the right. This is the manner in which the majority of experienced bait-casters adjust the reel in its relation to the rod, but another way, with the reel underneath when playing a fish and the handle to the left when casting, is strongly advocated by a few. The latter method is very disadvantageous and the wise angler will not and does not adopt it. The casting reel must continually be controlled with the ball of the thumb, and when the reel is used underneath the rod this necessitates turning the rod over before the running out of the line can be regulated. For both casting the bait and playing a bass use your casting reel on top of the rod with the handle to the right.

Anglers as well as others who play outdoor games sometimes carry things to extremes; an instance of this may be seen in the very short casting rods advocated by some bass fishermen. Better, that is, longer, casting may undoubtedly be done with the very short rods, but

casting is not the whole of fishing for bass by a very long cast indeed, and the bait-caster when selecting a fishing rod—as distinguished from a mere casting machine—should bear this in mind. Within reason, always holding to the idea that light tackle is the only desirable sort for many and the very best of reasons, the longer your rod the more control you have over a hooked fish; wherefore, obviously, reducing rod length increases the chance of disaster.

But the bait-caster who follows the modern form of this sport, using largely the overhead cast and artificial lures, is limited in his option as to rod length by the fact that overhead casting cannot be done—is very awkward and not consistently practicable at any rate—with a long rod. It may be safely said that a rod of six feet is the longest with which the overhead bait-caster can work with comfort and efficiency. On the other hand a rod less than five feet six inches, although a casting rod, is not to be considered a fishing rod. Any casting rod from five and a half to six feet will be right. With the five and a half foot rod you can cast a little better and easier; with the six foot rod you will have more control over your fish.

What to Expect of Rod and Bait

When selecting a fly- or bait-casting rod it is necessary to consider, as above suggested, not only the rod's suitability to casting, but also its efficiency in playing and landing a fish; so also when selecting lures for bait-casting it is imperative that the angler give some consideration to the question as to whether, after a fish has been hooked, the bait will insure, as far as may be, successful landing or, rather, tend to render the final capture of the bass a matter of doubt. As a general proposition it may be said that in the case of the numerous forms of floating baits and wooden minnows, your chances of safely landing the bass increase as the number of hooks with which the bait is fitted decrease.

Provided the hook is correctly placed on the lure the initial hooking of the fish is as sure with a single hook as with twelve or fifteen. Do not use at most

more than one double or treble hook; additional hooks merely serve, three times out of five, to lodge your fish fast in the weeds; also anyone who has spent a good half-hour in extricating one of the multiple-hooked artificial lures from the meshes of a landing net will appreciate the advantage of a single hook or one triangle in that respect.

Moreover, since half the sport of fishing is found between the rise and the landing net, it is well not to use any of the large and heavy baits with which the market is flooded. Baits such as these kill the fish without need of skill on the part of the angler or any necessity for nicety of judgment in handling rod and reel—you simply allow the bass to tow the bait around for a little while and then haul him inboard and kill him if he isn't dead already. And another thing in connection with over-weighty lures; if you have a fine little split-bamboo casting rod and wish it to retain for a normal number of seasons and in some satisfactory degree its original straightness and resiliency, eschew the "ferry-boat" baits. With a steel rod heavy lures may be cast without danger to the rod; not so with the split-bamboo.

To hook the majority of rising bass when bait-casting it is just as necessary to strike the fish as when fly-fishing. A bass which strikes the bait with more than ordinary vigor will often hook himself, but this cannot be relied upon and the strike of the angler must always follow that of the fish; and for the beginner at bait-casting there's the rub. Due to the fact that when casting from the reel one must strike with the left hand, at first, until custom and experience result in some degree of expertness, strike after strike will be lost.

At the end of the cast, when the lure has reached the water, the casting rod is transferred from the right hand, with which presumably the casting will be done, to the left. Then, while the reel is manipulated with the right hand, the rod is held in the left while the line must be spooled evenly on the reel with the fingers or thumb of the left hand. There are two methods of spooling the line on the reel when reeling in. Following one, you guide the line on the reel

between the thumb and forefinger of the left hand. The alternative method is to spool the line with the thumb only, and this is certainly the preferable one since it allows a much firmer grip on the rod.

When, at the end of a long cast, a bass rises to the bait, the consequent strike of the angler must come quickly and hard, for the slack in the line must first be straightened out before the hook can be driven home in the jaw of the fish; this cannot be done if the grip of the hand upon the rod is not firm. Also, when reeling in do not rest the butt of the rod against the body. The rod should be held well away from you at not too great an angle to the water so that when the time to strike comes it may be done by raising the rod tip swiftly. Obviously, if while reeling in, the rod is pointed almost straight up you can only strike a bass by practically falling over backward, and that is not a graceful or safe thing to do, particularly when casting from a canoe.

The orthodox small-mouth black bass—and many large-mouths—breaks water at once when hooked. If held after the first jump, either of the sweet water basses may again go into the air one or more times, and the chances are that the small-mouth will leap twice at least. The time-honored rule of lowering the tip to a leaping fish is of no practical value to the bait-caster unless the fish jumps while near the boat. When a bass breaks water at the end of a hundred or more feet of line—a not over-lengthy cast when lake fishing—he is back again before any easing of the line caused by lowering the tip can be communicated to the “business end.”

When the bass has been played in to a position near the boat, the angler may, in case of a leap, take his choice between allowing the fish to jump and lowering the rod tip, or “upsetting” the bass before he comes out, although the latter course is not always sure, for sometimes it is simply impossible to prevent the leap. If the first method is elected, remember that the downward motion of the rod tip should be only just enough

to ease the fish back into the water, when the rod should at once be raised to its original position.

Parenthetically, you will find that most inexperienced bass fishermen, instead of lowering the tip to a leaping fish, raise it. When the bass “goes up in the air” the rattled novice follows suit, also the tip of his rod, and the line is pulled taut on the bass at the height of his leap—with easily calculated results.

If the bass is within a short distance of the boat and under absolute control of the rod the leap may often be prevented by putting a strong sidewise pull on the fish, sometimes even submerging the tip of the rod and thus obtaining a downward pull. If, however, the attempt to upset the fish fails, the line must be immediately slacked or the bass will leap on an absolutely taut line, and this in the case of a heavy fish usually spells his freedom.

It is well for the bait-caster accustomed also to fly-casting and the single-action reel to remember that a quadruple multiplier need hardly be cranked with the speed used at times with the single-action. Merely by way of experiment, if you are not used to a four-multiplying reel, try reeling in a floating bait at top speed; you will then realize that if in the excitement of playing a more than ordinarily good fish your anxiety leads you to crank the reel very fast, there is little doubt but that you will force the fighting to the danger point. Even when leisurely cranked, a four-multiplying reel retrieves the line at a comparatively fast rate; when worked at top speed the reel fairly snatches in the line.

In one situation only is there fair excuse for utilizing the lightning speed of the quadruple reel; that is when fishing for large-mouth black bass in the weeds. Use a stiff, short casting rod, a stout and carefully tested line, a weedless lure of some sort or one with a single hook, and when you strike a bass not too large to be forced—force him. This sort of fishing is not quite the top notch in the art of angling. It serves, however, at times, to provide “meat.”

THE SPECIAL MESSENGER

BY CHARLES ALDEN SELTZER

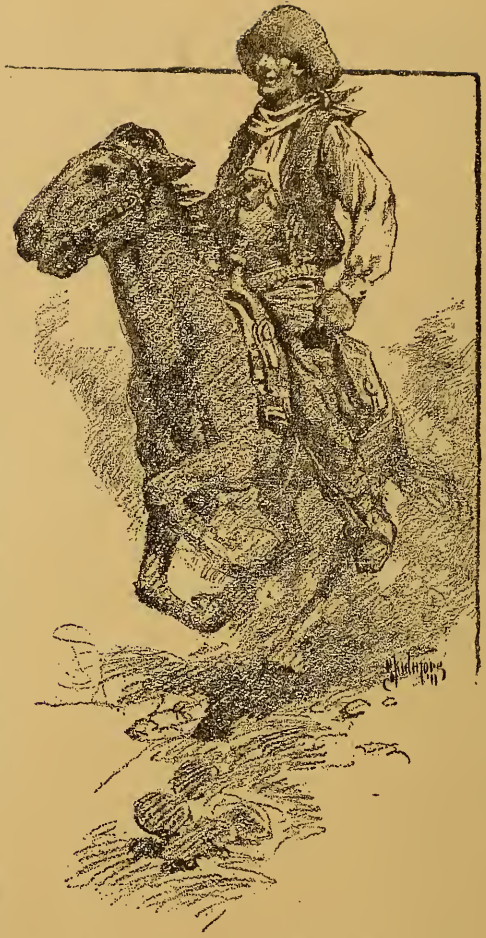
Illustrated by Thornton D. Skidmore

A DEEP lonesomeness had settled over the Lone Wolf Tavern. No traveler, not even a freighter—who, even though Mexican, would have dispersed the monotony—had passed for two whole days. The adobe walls of the building were sizzling with the heat; the huge arms of the windmill hung motionless; all movement had ceased; the world seemed suspended in a vacuum. For miles in all directions the plains stretched away, silent, vast, a sea of gray-white, dotted here and there with barren brown streaks and rock spires whose weird shapes rose, sentinel-like, toward the sky.

Jerry Rubble was behind the bar in the Lone Wolf, wiping the alkali dust from a whiskey bottle, when he became aware of the arrival of a horseman. Therefore, following his usual custom, he placed the bottle on the crude sideboard, chucked the towel upon a hook, and strode to the door. The sun had reached its zenith and was swimming, a shimmering disk of molten silver, down the great arc of white, blurred sky; the heat devils danced on the baked alkali; little whirlwinds of dust rose and swirled in a wind that blighted growing things, crumpling and withering and curling them into the hot sand.

Even in the Lone Wolf the heat was almost unbearable, and as Jerry came around the end of the bar and approached the door he wiped the sweat from his face with the tail of his apron.

When he reached the door he saw a man, seated upon a pony, looking at him with a mild curiosity. The man



HALF AN HOUR LATER THE SPECIAL MESSENGER DEPARTED FROM THE LONE WOLF

was evidently a puncher, for he was rigged out in the approved manner of the period—chaps, broad brim, knotted scarf at the throat, high heel boots, and cartridge belt. Rubble's glance was languid, but it took in all these details in one sweep. In addition, Rubble noted something else. The man was broad shouldered, lithe, and muscular, and he wore two guns, the bottoms of their holsters carefully tied down.

"Two-gun," Rubble remarked mentally, with a longer breath than ordinarily. From a day two years before, when he had been shot through the hip in a clash with a two-gun man he had

felt a sort of chill when meeting a man of that type. But a customer was a customer, and Rubble was not a man to deliberately place a check upon the gold that flowed into his cash-drawer. Therefore he fought down the chill and forced a smile through his lips.

"Hot to-day," he ventured.

"Some hot," agreed the man, drawing. He grinned, showing Rubble a row of white teeth that gleamed under his drooping mustache. "You got anything around here to wet the dust that's crackin' my throat?" he questioned. He threw one leg over the pommel of his saddle, preparatory to dismounting. "There ain't a bit of wetness passed my lips since I left Lazette, last night," he added.

"I reckon I've got somethin' that'll slick you up a bit," returned Rubble.

The man slid down from his pony and stretched himself languidly. Then he raised his right hand, jerking a thumb toward the pony. "Fixin's for him?" he questioned.

"Shore." Rubble nodded toward the corner of the building. "Water in the trough by the windmill. Plenty of feed in the stable."

He watched as the stranger led his pony out of sight around the corner of the building. Then he returned to his place behind the bar, a slight frown wrinkling his forehead.

The stranger had impressed him unfavorably. And this unfavorable impression had not been entirely created by his previous experience with two-gun men. There was something about this stranger; something that swam deep in his serene eyes; a certain suggestion of grim mockery that drew the corners of his mouth down; an air of absolute confidence, that smote Rubble with doubt and distrust.

While the man cared for his pony Rubble continued his work behind the bar, affecting an unconcern that he did not feel. There was no apparent reason why the stranger should have disturbed him. Other men had come to the Lone Wolf—men with bad reputations, strangers and acquaintances whom he dared not trust out of his sight. Then why should he distrust this man, who

had not spoken above a dozen words to him?

He began to whistle his favorite tune, assuring himself that he was growing "finicky." But the spirit of unrest that had seized upon him was not to be banished, and presently he ceased whistling and poured himself a generous drink from his private bottle. Then he drew out the ivory handled six-shooter that he kept always in a sling beneath his vest, examining it carefully. When the stranger came in he was busily at work among the bottles. He heard the stranger walk to the bar, heard the bar creak as the latter leaned his weight upon it. When he turned the stranger was carelessly spinning a double eagle with a deft finger. He looked up as Rubble faced him.

"Trot out a little of that stuff that you've been gassin' about," he said quietly.

While he drank Rubble regarded him furtively. He discovered nothing about him that might lead him to alter his previous opinion. So while the stranger drank a second glass of whiskey, Rubble busied himself, apparently unmindful of the stranger's presence, but in reality alert and watchful.

"Ain't half bad," observed the stranger finally. He looked steadily at Rubble. "You drinkin'?" he questioned.

Rubble nodded and helped himself to a glassful. Then he poured another, shoving the bottle toward the stranger. "Have one on the house," he invited.

The stranger drank and then moved lazily across the room, dropping into a chair beside a card table and stretching himself languidly, facing the bar.

"Feels good," he said. "Country's drier'n hell."

"Yep," agreed Rubble. He paused in his work and held the towel motionless on the bottle that he had been wiping. "Ride far?" he interrogated.

"From Lazette," returned the stranger. "Dry there, too."

"I reckon." Rubble resumed work with the bottle. For a few minutes there was a silence. Then, feeling the pressure of an overpowering curiosity, Rubble spoke again.

"Goin' to Dry Bottom?" he asked

The stranger stretched himself, smiling slightly. "Mebbe," he returned languidly. "Takin' my time. This looks pretty good to me. Reckon I'll hang out here for a day or two."

Rubble's lips straightened a little and he again produced the private bottle, gulping down a brimming glassful of its contents.

Strangers often stayed at the Lone Wolf over night; sometimes they stayed several nights. Occasionally a puncher drifted in, overwhelmed with the monotony of things and eager for variety. A puncher in this mood might decide to remain at the Lone Wolf for an indefinite period, doling out his hard-earned wages piecemeal, in return for Rubble's whiskey. Then there were freighters, who camped overnight in the vicinity, finding the Lone Wolf an attraction after days and nights on the trail. These were mostly Mexicans, or half-breed Indians, and as a rule they spent little. But each mite that rolled over Rubble's bar added something to the grand total that, after a while, would reach the figure that Rubble's greed had set.

But Rubble found no welcome in his heart for this man. Even his lust for money could not have induced him to harbor the man over night. But from all indications he was not to have a voice in the matter. "I reckon I'll hang out here for a day or two," the stranger had said. The expression smacked of insolence, and Rubble's face suddenly reddened with anger.

"You ain't asked me nothin' about that yet!" he flared, his voice chilling. "It takes two to make a bargain!" He had set the bottle down, and his right hand lingered near the butt of the six-shooter that was concealed under his vest.

The stranger's lips parted with a slow, tigerish expression. "Take your paw away from your gun!" he commanded slowly. "If I was wantin' anything like that you'd have been fit for the mourners quite a spell ago."

Rubble's eyes widened and his hand fell reluctantly to his side. Projecting from the stranger's side was the muzzle of a heavy revolver—magically produced, it seemed. He spoke again, his

words burdened with a slight hint of mockery.

"I reckon you're some scairt about somethin'," he drawled. "There's some men can't see another man without thinkin' he's wantin' to perforate them." He laughed mildly. "I ain't figgerin' to do that," he added, "unless you're thinkin' to ketch me unexpected. If you're tryin' that I'm tellin' you that you want to make a clean job of it." He laughed genially, the menace gone from voice and eyes.

"Let's talk sense," he said. "I'm wantin' to hang out here for a day or two—mebee three. You've got lots of room. I'm payin' what you ask. That go?"

"I'm askin' ten dollars for a bed, an' you c'n do your own cookin'!" snapped Rubble.

The stranger laughed. "Correct," he said. "That's what I call doin' things up square."

Toward evening the stranger dragged a chair outside, placed it in the strip of shade in front of the building, tilted it back against the wall, dropped into it, and seemed to fall into a doze. Rubble heard him, but did not investigate, his curiosity taking him only to the end of the bar. He was content to allow this man the isolation that he desired.

No man that Rubble had seen in many months had stirred him so deeply as had this man. But he was not scared, as the stranger had intimated, he was merely troubled. His thoughts kept going to the hoard of golden eagles that he had concealed in a snug corner behind the bar. Often he had counted this money when he was sure that no one was about, not with the avarice of the miser, but with a quiet satisfaction that grew in proportion to the amount. Some day he was going to make the trip to Dry Bottom to deposit the money. He began to wish that he had done this long ago; perhaps he would now feel more secure.

Shortly before sundown he went to the door. The stranger was lounging in the chair, his eyes open. He turned as he saw Rubble.

"Pretty lonesome here," he offered.

"Some," returned Rubble.

The stranger stretched and yawned. "Expect any one along to-day?" he questioned, after finishing his yawn.

"I reckon the express messenger'll be along about sundown," Rubble informed him.

Watching closely, Rubble saw the stranger's eyes glitter. He drew a slow, deep breath, convinced that he had finally stumbled upon the reason of the stranger's presence.

The latter's tone was casual when he spoke again.

"I reckon Cal Emmet's still messenger?" he inquired.

"He sure is," returned Rubble.

There was a riot of excitement in Rubble's mind now and not a little relief over the thought that if the stranger was bent upon robbing the express messenger, his own money would be safe. He smiled slightly. There was not a little satisfaction to be had in the knowledge that he knew exactly what the stranger was driving at.

The latter shifted in his chair until he faced Rubble squarely. "I reckon Cal's travelin' pretty light now—not much doin' in the express line?"

If the stranger was expecting to learn anything about Cal Emmet from Rubble he was doomed to disappointment, for the latter's eyes gleamed knowingly.

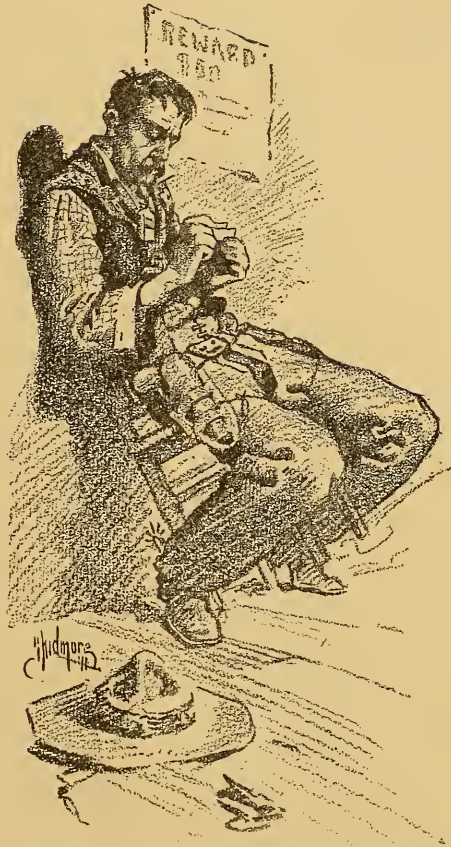
"I reckon Cal Emmet ain't goin' around tellin' just exactly what he's doin'," he returned coldly.

The stranger laughed. "Why, no," he returned, "that wouldn't be doin' him any good. Some road agent might take in into his mind that he'd like to see what Cal carries in them saddlebags of his'n."

Rubble's eyes glittered for an instant. "They'd have to be pretty slick," he returned. "Cal ain't no tenderfoot, an' any road agent would have a tol'able time relievin' him of his saddlebags."

"I reckon they would," agreed the stranger, his lips wreathing into a smile. "Cal's sure man's size." He leaned back again, looking out at the stretch of hot sand that was just now growing gray with the first faint shadows that precede the sunset.

"It's a curious thing though," he remarked presently, "that them there ex-



THE STRANGER RESUMED HIS RECLINING POSITION AND NONCHALANTLY BEGAN ROLLING A CIGARETTE

press companies don't trust their men. They don't see things like we do."

"Meanin'?" inquired Rubble.

"Meanin' that when they've got anything big goin' on they don't trust the regular man to do it. They're always hirin' a special man."

Rubble did not answer immediately, but his mind was working rapidly. Was there anything "big" going on now—something that required the services of a special man? Did the stranger suspect the express company of planning to transfer a large sum of money?

Rubble knew something of the new mines over near Lazette, and knew that, as a rule, the regular messenger, Cal Emmet, would not average above five hundred in gold dust each trip. He knew also that special men came through

occasionally, when the amount to be transferred was great and the company had reason to suspect that the regular messenger might be waylaid. What did the stranger know?

Rubble wiped his dry lips with the tail of his apron, attempting a casual tone that was far from natural.

"I reckon they won't be hirin' no special man now though," he said. "I ain't heard that anyone's made a strike anywhere."

The stranger laughed oddly. "Sometimes there's a strike made that ain't advertised," he drawled.

Rubble opened his lips to answer, and then closed them again, for about a mile out on the plains he saw a dust cloud rising from one end of a shallow washout. The stranger had seen also, and both men were silent until, emerging from the dust cloud, a pony and rider appeared. For an instant they stood out boldly against the sky line. Then the stranger spoke.

"I reckon that's Cal Emmet now," he said.

Rubble nodded and came out of the door, watching with narrowed eyes; his hands wrapped in his apron.

The stranger resumed his former reclining position and nonchalantly began rolling a cigarette. The cigarette made, he lighted it and leaned back, blowing the smoke skyward. Rubble watched him furtively.

Ten minutes later the rider came up, halting just in front of the two men. He was above the average height, rugged in appearance, with a strongly lined, weather-beaten face. He looked gravely at Rubble, ignoring the stranger entirely.

"You got room for me an' my cayuse to-night?" he questioned.

"Shore," returned Rubble. But there was curiosity in his eyes. Behind the man, strapped securely to the cantle of the saddle, were two saddlebags that hung heavily down upon the pony's flanks. Rubble recognized the bags instantly, as he had also recognized the pony, as belonging to Cal Emmet, the regular messenger. But the man he had never seen before. Therefore his curiosity moved him to a question.

"Where's Cal?" he asked.

The rider smiled slightly. "Cal ain't makin' this trip," he said quietly.

Rubble cast a significant glance toward the stranger, which, apparently, the latter did not catch. But he now moved a little. "You fillin' Cal Emmet's boots now?" he questioned of the rider.

The latter had been ready to dismount, but at the stranger's words he settled back into the saddle, turning and glancing sharply into the stranger's face. He started slightly, his lips straightening a little, his eyes glittering.

"I wasn't expectin' to see Bill Coleman in this here country," he said coldly.

The stranger laughed. His own lips curled a little. "But you're seein' him," he returned.

The rider slipped down from the saddle, ignoring Coleman and giving his attention to the pony. Presently he led the animal around the corner of the building toward the windmill. After taking a sharp glance at Coleman, who was unconcernedly rolling another cigarette, Rubble wheeled and disappeared through the doorway.

From the rear door he watched until the rider had stabled his pony, and was coming toward the building, the saddlebags swinging from his shoulder. Then he walked behind the bar. The rider entered the rear door and strode toward Rubble, placing the saddlebags on the bar in front of him. Then, after looking cautiously around the room, he tiptoed to the front door and peered around the jamb. To all appearances Coleman was dozing. Therefore the rider came stealthily away, returning to the bar and leaning far over toward Rubble.

"How long's he been here?" he questioned in a subdued voice.

"Since noon," returned Rubble guardedly.

The messenger cast a troubled glance at the bags that he had placed on the bar. Then he drew a deep breath and looked again toward the door. Rubble leaned closer to him.

"What's he?" he questioned, jerking a thumb toward the front door.

The messenger grimaced. "Rustler, tin-horn, road-agent,—anything. So

crooked he can't lay straight in bed."

Rubble's teeth closed with a snap. "I knowed it!" he exclaimed. "Tumbled to him right off. Thought it was me he was after!"

The messenger smiled grimly, shot another rapid glance toward the front door, and then spoke low and confidentially to Rubble.

"You was right in thinkin' that," he said. "Cal Emmet heard two men cookin' this here deal. One of them was comin' here to lift what stuff you've got hid an' the other was to rustle Cal's saddlebags on the Dry Bottom trail. Cal didn't know the men, but from the way they talked they knowed him. So I come, thinkin' I'd be safe because I was a stranger. An' the first thing I run plum into Bill Coleman. An' he knows me!" He made a gesture of disgust. "Now if I'd had sense enough to chuck these damn saddlebags I reckon I'd have got by all right. But I didn't have sense enough an' so I've got 'em here. An' now——" He looked grimly at Rubble. "Gimme a drink!" he ordered.

Rubble placed a bottle and glass before the messenger. While the latter drank, Coleman came in through the front door, walking languidly to the bar and standing near the messenger.

"Puttin' up here to-night, Miller?" he questioned.

The messenger turned slowly and his gaze met Coleman's. For an instant they gazed at each other, Miller's eyes cold and steady, Coleman's glinting with the mockery that Rubble had seen in them during the entire afternoon. Then Miller's lips opened a little as words came through them.

"I'm stayin' here for a feed," he said evenly. "Then I'm hittin' the breeze down the Cimarron trail."

Coleman's eyelids flickered

once. Then his gaze was steady as before. He flipped a coin on the bar.

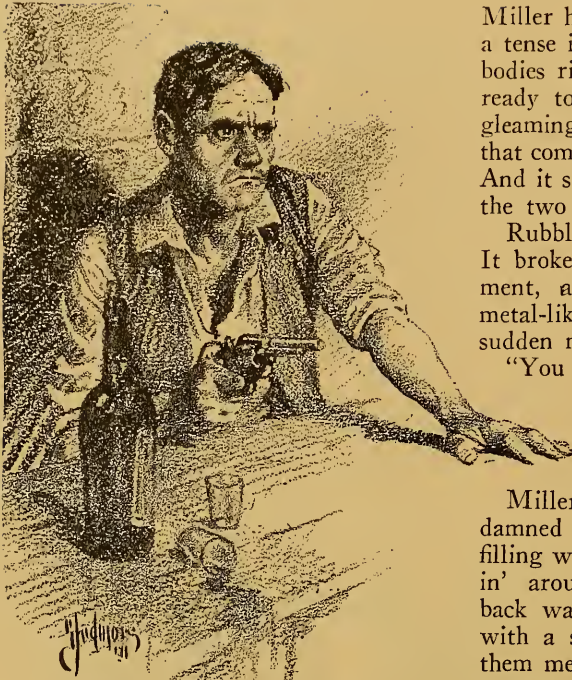
"Drinkin'?" he invited. "I'm hangin' out here to-night."

Had Rubble's imagination played him a trick in making him think that when Coleman had spoken he had shot a significant glance in his direction? He reddened and almost dropped the bottle that he was in the act of setting upon the bar. For a moment he was fearful that Coleman had noticed his nervousness, but when he looked up the latter was nonchalantly drinking his whiskey.

Rubble drank also, and when he tilted his glass his gaze caught Miller's for a brief instant. The latter deliberately closed an eye at him with an expression



MILLER'S SIX-SHOOTER WAS OUT, ITS MUZZLE
MENACING COLEMAN



“YOU'RE GOIN' RIGHT OUT AN' CLIMB
ONTO YOUR CAYUSE AN' TRAVEL”

that seemed to convey a warning. Rubble thought he knew what the wink meant. Miller had told him of the proposed looting of the Lone Wolf, and Coleman's expressed decision to spend the night in the tavern proved that Rubble's money was in danger. Yet Rubble had told no man where he kept his money, and he was certain that his secret was safe. When he turned his back to the two men to replace the bottle on the sideboard, he assured himself grimly that if Coleman contemplated robbery he would have considerable trouble in finding the money.

While his back was turned he heard a sudden, grating sound, accompanied by a curse. He turned swiftly. Miller's six-shooter was out, its muzzle menacing Coleman. The latter stood at the bar, one hand grasping the butt of a half-drawn pistol, the other closed on one of the saddlebags, as though he had been attempting, by feeling the bag, to discover what it contained. Plainly,

Miller had caught him in the act. For a tense instant the two men stood, their bodies rigid, every muscle straining and ready to spring into action, their eyes gleaming with the metal-like hardness that comes when reckless men face death. And it seemed that death stood between the two men.

Rubble drew a slow, quivering breath. It broke the intense silence of the moment, and Coleman's eyes lost their metal-like hardness and glinted with a sudden mockery.

“You usin' that there gun?” he sneered, speaking to the messenger, one corner of his mouth wreathing into a satiric upward curve.

Miller's eyes did not waver. “You damned sneak!” he returned, his voice filling with a sneering contempt. “Nos-in' around my saddlebags when my back was turned!” His eyes glittered with a sudden scorn. “You're one of them men which travel around, wearin' two guns, thinkin' folks is scared of you! But I ain't scared none. You take your paw away from your gun or I'll perforate your gun-arm so plenty that you'll think you're wearin' a sieve on your shoulder!”

Coleman glared wolfishly, but into his eyes came a glint of doubt, and he allowed his hand to fall to his side. Then Miller spoke again, his voice hardening, his lips straightening grimly.

“I reckon I ain't sayin' anything that you don't know when I tell you that there's five thousand in gold dust in them there saddlebags. You an' another sneak was thinkin' to rustle it from Cal Emmet.” He laughed harshly. “But you ain't got Cal Emmet to deal with now; you're doin' business with Clem Miller! An' that there dust is goin' to Cimarron—to-night! An' Clem Miller's goin' to take it! If you an' your sneak of a pardner meet up with me on the trail this country'll be minus two men which thought Clem Miller was easy. You got that?”

Coleman sneered. But, watching him closely, Rubble thought he saw a slow pallor come over his face. It was the first sign of indecision that he had seen in the man and it swept away the

lingering disquiet that had gnawed at his heart ever since Coleman had appeared. His eyes glittered venomously as with a sudden motion he drew his ivory-handled six-shooter and shoved its muzzle over the bar toward Coleman.

"I'm tellin' you somethin' else," he said coldly. "That contrac' we made about you stayin' here over night don't go! You're goin' right out an' climb onto your cayuse an' travel. I'm watchin' you go. An' when you make tracks out of the door I'm gettin' my rifle. I'm goin' to keep a bead on you till you've hit the breeze consid'able." He leaned a little closer to Coleman, his muscles stiffening. "You goin'?" he demanded.

Coleman sneered, but without a word he strode to the rear door. When he reached it he turned and looked back, his eyes narrowed to glittering slits.

"I reckon I'm goin'," he said. "But I'm tellin' you somethin' before I do. It's pretty gen'rally known that the man which runs the Lone Wolf ain't been anywhere to bank his money for a year."

He stepped down from the door, and both Rubble and Miller stood silent as his jeering laugh reached them. No word was said by either of the two men until they saw Coleman ride past the rear door, until they heard the rapid drumming of his pony's hoofs on the hard sand of the plains. Then Miller stepped to the door, looking out after the departing horseman. Returning to the bar, he spoke.

"You got any money stacked up anywheres around here?" he questioned gravely.

Rubble nodded, his face again wearing the troubled expression. "I wish I didn't have though," he returned.

Miller smiled mirthlessly, jerking a thumb toward the door.

"He's hittin' it down the Cimarron trail," he said. "I reckon my palaver about takin' the dust to Cimarron fooled him. I'm totin' it to Dry Bottom." The smile died out of his face and now he spoke seriously.

"But that don't let you out," he said. "Him an' his pardner 'll watch the Cimarron trail for me, an' when they find out that I've fooled them they'll

come back here an' get your dust. I'm right sorry for you. It's an awful lonesome place."

He shrugged his shoulders, as though with this speech he had delivered himself of his final word. Then he resumed, with a business-like air. "I'm takin' a drink an' a bite, an' then I'm lightin' out for Dry Bottom. I'd like mighty well to stay an' help you put them two sneaks out of business when they come monkeyin' around here to-night, but I've got five thousand of the company's dust, an' I ain't feelin' that I ought to run any risk losin' it."

"Sure not," returned Rubble absently, as he made an effort to conceal the nervousness that was coming on again.

Miller hesitated while in the act of tilting his glass toward his lips, looking keenly at Rubble.

"You sure you got your money where they can't find it?" he questioned.

"I reckon they'd have a hard time findin' it," returned Rubble.

Miller drank his whiskey and placed the glass gravely down. "I meant to tell you before," he said. "When Cal Emmet was listenin' to them two sneaks back in Lazette he heard one of them say that he knowed where you kept your dust."

Rubble's eyes gleamed savagely for an instant, and then the gleam died out and was succeeded by the old, troubled expression. This in turn presently gave way to a whimsical humor, as he suddenly struck a fist heavily on the bar.

"You say Coleman took the Cimarron trail?" he questioned.

"He sure did," returned Miller, gravely.

"An' you're hittin' it up to Dry Bottom?"

"Sure. I reckon they won't get me."

Rubble laughed. "They sure won't," he agreed with enthusiasm. "An' they ain't goin' to get Rubble's dust either, for it's going right in your saddlebags to Dry Bottom!"

For an instant Miller stood, looking at Rubble. Then his eyes twinkled as he stepped over and grasped the latter's outstretched hand.

"That's a damned slick move!" he said earnestly. "I was goin' to tell you

to do it myself, but I was afraid you'd think I was buttin' in!"

Half an hour later, having secured drink and food, the special messenger departed from the Lone Wolf, the saddlebags, containing a thousand dollars of Rubble's money, securely fastened to the cantle of the saddle.

As dusk approached, Rubble took his rifle from its accustomed pegs on the wall, cleaned and oiled it, and loaded it carefully. Then he dragged a chair outside, placed it in a position from which he could scan every foot of the surrounding country, and with the rifle across his knees, took up the vigil.

The dusk came on quickly. The gloom of semi-darkness followed, and a slight breeze, cool and laden with the aroma of the sage-brush, sighed among the sparse weeds. In half an hour Rubble found difficulty in distinguishing objects only a few hundred feet distant. Then he arose, took his chair and placed it just inside the front door, locking the rear door, lest someone steal upon him from that direction. He did not light the kerosene lamps as usual, but sat beside the door in total darkness.

An hour later, while he still sat, he heard a sound. Cautiously peering around the corner of the door jamb, he made out the figure of a man, approaching the Lone Wolf from the direction of Lazette. Waiting to make sure that the man was alone, Rubble finally stepped out of the door and threw his rifle to a level.

"Hands up, damn you!" he snarled.

The man halted, his hands rising quickly above his head. For an instant

there was silence. Then the man's voice.

"Is that you, Rubble?"

The rifle in Rubble's hands wavered and threatened to crash to the earth.

"Cal Emmet!" he shouted. "An' walkin'! Why, man, where's your cayuse?"

The man walked slowly forward. Even in the darkness Rubble could see that he limped painfully.

"Cayuse hell!" he exploded, profanity gushing from him. "Been walkin' for twenty miles! Cayuse gone, saddlebags an' saddle gone. Held up thirty-five miles out of Lazette!"

Rubble walked close to him. "Cal," he said quaveringly, "there was a man here to-day ridin' your pony an' wearin' your saddlebags. Was he a special man?"

In the darkness Rubble could see Emmet's lips curl. "Special man nothin'!" he flared. "That man must have been one of them two guys which held me up!"

Rubble's jaw sagged. "Two of them!" he said weakly. "One of them two-gun?" he inquired.

"Yes!" sneered Emmet; "the damned —"

Rubble drooped. "An' they got five thousand from you?" he questioned.

"Five thousand nothin'!" returned Emmet, scornfully. "It ain't for what was in the bags that I'm carin'. But they got my cayuse. There wasn't a hundred dollars in the bags!"

"There was," returned Rubble dolefully; "there was a thousand that I know of."



SAVING OUR FISH

BY DILLON WALLACE

Illustrated with Photographs

WITH the colonization and civilization of any region a period of readjustment in the animal and vegetable life of that region begins. As the wilderness gives way to farms and towns, wild vegetation is supplanted by cultivated orchards and crops, and wild animals give place to domesticated stock. With a hundred white men employing innumerable contrivances for catching fish where once an Indian used only his primitive net, with streams dammed and factories pouring a flood of impurities into the water, and with other streams diverted to irrigate arid lands, fish disappear and many streams become wholly unadapted to the various aboriginal species once inhabiting them.

All this must take place if there is to be progress in the world. A city cannot stand in the midst of a primeval forest, for the people who inhabit the city must be fed by the fruits of the surrounding land and the forest must be cut down in order that the land be tilled. Streams must be converted into power, to turn machinery for the manufacture of the necessities of the civilized inhabitants. Thus wild animals must find new retreats or cease to exist, and fish, by the process of readjustment, disappear from waters no longer adapted to them.

Two hundred years ago the region now embraced within the boundaries of the United States was largely an unknown wilderness. Elk, now practically extinct east of the Rocky Mountain regions, once fed in the Adirondacks; prairie chickens were plentiful in Massachusetts; the great auk of New England is no longer found upon the face of the earth; the wild pigeon is a mem-

ory; and many mountain streams, once filled with jumping trout, long since gave up their last fish.

The Connecticut River is a concrete example of the effect of civilization upon fish. In colonial times the river was annually crowded with great schools of salmon, which worked their way into its headwaters and tributaries in Massachusetts, New Hampshire, and Vermont, where they spawned in the cold waters of ripples and pools, and were so numerous that they literally bridged the ripples and crowded in masses in the pools. There is an old story that apprentices to the fishermen in the lower river stipulated in their articles of apprenticeship that salmon should be served them at mess not oftener than three times a week and fishermen required their customers to take one salmon with every shad purchased.

This condition prevailed until 1789, when a mill dam was built across the river at Millers Falls, Massachusetts. The following season salmon were literally piled upon one another in the pool below the dam, which blocked the way to their spawning grounds. This was the beginning of the end of salmon in the Connecticut. They began immediately to disappear, and eight years later not one salmon, so far as the records show, went up from the sea. They had gone forever. The history of Connecticut River salmon has been repeated in every New England river, all of which were at one time magnificent salmon streams.

Dams on inland streams, sawdust from lumber mills, and dyes and litter from factories have been equally destructive to native trout and bass and other fresh water fish. Trout pass to the headwaters of streams where the water is cooler in summer, and when they

spawn, in late autumn, turn down again to the lower and deeper waters. When once they drop below the dams they can never return, and the streams are soon depopulated.

Neither will trout thrive in the shallower brooks whose banks have been denuded of the shade that once cooled them by protecting them from the direct rays of the sun. For this reason, and because the majority of brooks in peopled regions carry much less water than when the region through which they course was wooded, frequently becoming dry during seasons of drought, such brooks have lost their trout, though once well stocked. I recall a brook of this character that wound through my father's farm when I was a boy. Within the recollection of the older inhabitants it had been a famous trout brook, but before my day the last fish had vanished.

The Coming of "Civilization"

This illustrates how, aside from the great numbers netted or trapped or caught by anglers, civilized man with his contrivances, his befouling of the streams, and his destruction of the forests, diminishes the supply of fish, just as his coming has displaced the wild animals. And so with the settlement of North America the destruction of game and fish has gone on until it has become complete in wide areas of the continent, and so far as game is concerned is to-day far advanced in even the most thinly populated parts of the country.

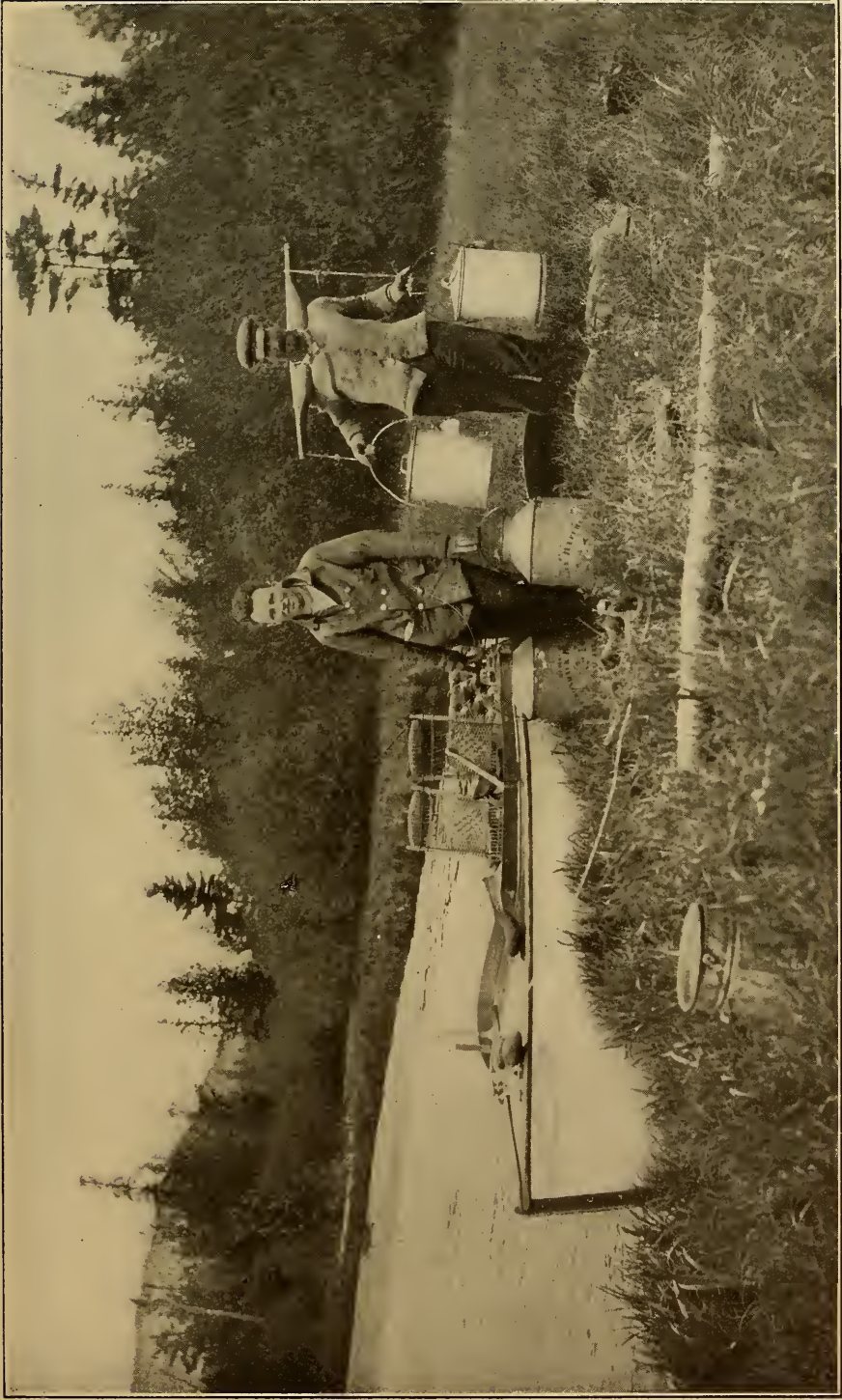
For a long time little thought was given to the preservation of forests, game, and fish, even in those extensive regions which are as yet unadapted to settlement and civilization, or of any other present value than as game covers. Finally we awoke to the necessity of conserving these valuable resources and began making laws looking toward the restriction of wanton and inexcusable waste and the preservation of what remained. As yet our game laws are in chaos, and the game animals are shrinking gradually in numbers, despite closed seasons and restrictions, and we are far from solving the problem in a practical manner.

Better results, however, have been reached in the direction of fish preservation and culture. It may be said, indeed, that the problem of fish preservation has been solved. This no doubt has come about because of the greater interest civilized man has in a regular and undiminished supply of fish than in a supply of wild game, and this interest led to an early study of the subject, founded upon thorough scientific research and experimentation. Domestic cattle and fowls of civilization take the place of deer and wild fowl of the wilderness, and the average individual finds no hardship in substituting the former for the latter. But there is nothing to take the place of fish. Therefore, because of greater necessity and demand, the science of fish culture has advanced far beyond that of game protection.

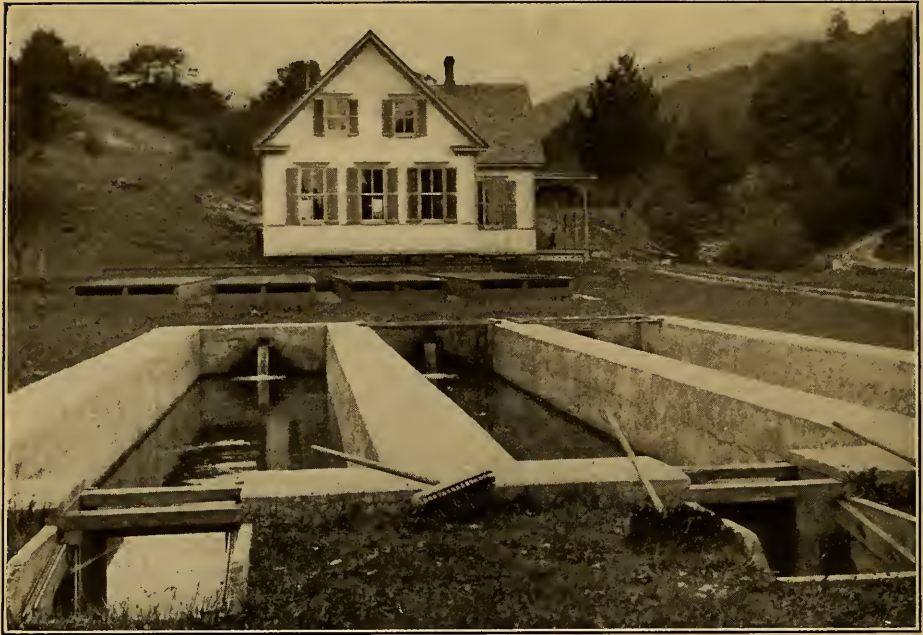
One often hears the charge made that our game and fish departments, working for conservation and increase, are maintained chiefly for the benefit of the rich, and to supply a holiday for the wealthy sportsman. This charge is cant coming from the mouths of cynics who never go into the field; of demagogues who appeal to those who take no interest in sport; or of those improvident ones who have no thought of to-morrow and can abide no restraint upon shooting or angling when they will. But angling is not a sport to be afforded only by rich men. It is in truth the poor man's chief recreation in the open. A thousand wage-earners whip the pools of mountain streams and cast their lures in the lakes for every angler whom circumstance does not compel to earn his bread with his hands.

But sport with the rod is not the main basis upon which our Federal and State departments of fish and fisheries are built. At least one-half of the population of the country, taken as a whole, is dependent upon or interested, directly or indirectly, in this extensive industry, and this is why it was so necessary to solve the problem of fish propagation and to devise means by which an assured continuance of the supply could be had.

Domestic animals and fowls must be fed at a considerable expenditure of money and time. Fish require no feed-



INCREASING THE POPULATION OF A STREAM BY THE PAINFUL



ONE PLACE WHERE FISH ARE HATCHED IN HUNDREDS OF THOUSANDS BY THE STATE OF NEW YORK

ing. Therefore fish can be placed upon the table at much lower cost than meat or fowl; it is the poor man's food, and at the same time a most wholesome and delicious food. When in the wilderness I have for weeks at a time depended upon fish which I caught with rod or net as the chief part of every meal, and under these conditions always have enjoyed unvarying good health.

Incidental, therefore, to the settlement of a new country there naturally comes a constantly increasing demand for fish as the population grows, and larger and ever larger numbers are taken from the waters to supply the demand. With every spawning shad killed approximately one million eggs are destroyed; with every spawning trout about twelve hundred eggs. Thus the destruction of every spawning fish means the destruction of hundreds that might have hatched and grown to maturity. Not only the fish already in existence, but the natural and normal increase pays toll to man's demands. It will readily be seen that this, together with destruction caused by making certain waters uninhabitable for aboriginal species through civilization's

conquest, would quickly result in extermination of fish in inland waters unless action were taken to counteract. It became evident that to overcome these influences, and save fish from extinction, there were four things to be done:

1.—Limit the period during which fish might be caught each season.

2.—Prohibit wasteful or extravagant fishing and the employment of particularly destructive and unsportsmanlike methods in their killing.

3.—Preserve inland waters in as nearly their natural condition as possible.

4.—Establish hatcheries in which to breed fish artificially; plant young fish bred in the hatcheries or otherwise obtained in suitable waters; and in waters which through changed conditions are no longer adaptable to aboriginal species, introduce new species which are suited to them.

In placing a limitation upon the annual fishing season it is necessary to know something of the habits of the various species. The object in prohibiting fishing during a portion of the year is not alone to prevent over-killing of adult fish, but also to prevent encroach-



SHOWING HOW THE HATCHING TUBS ARE ARRANGED IN THE INTERIOR OF A HATCHERY

ment, so far as possible, upon the spawning season and to eliminate destruction of fish that might otherwise spawn. Therefore the majority of States permit trout fishing between the first of May and the first of September, thus closing the season before spawning begins.

Fish may be classed as migratory and non-migratory. Those belonging to the former class wander, or change their locality, with each season, while the latter remain in the same locality, generally, throughout the year. Species of each class inhabit both the sea and inland waters. The bluefish and the mackerel belong to the migratory class that keep to the sea; whitefish and trout are migratory fresh water fish; while the salmon, shad, and some other species live in the sea a portion of the year but ascend to the head of fresh water rivers to spawn. Flounders and sea bass are representative of non-migratory sea fish; perch and pickerel of non-migratory fresh water fish. In northern latitudes even these seek deeper water in winter. Some species, like the carp, which lies dormant in its mud burrow in winter, are hibernating. Hibernating fish may

sometimes be frozen solidly in the ice in winter, to emerge uninjured by the experience in spring.

Deep sea fishes pass generally beyond the jurisdiction of legislatures, save those like the shad and salmon which enter fresh water rivers. These can be caught only while in the rivers, en route to the spawning beds, and the method of protecting them is to require fishermen to remove their nets during a few hours each week while the fish run, usually from Saturday night until Monday morning.

The legal prohibition of wasteful or extravagant fishing limits the mesh of nets set for salmon and similar fish. California, for instance, stipulates that no salmon net shall have a mesh smaller than six and one-half inches, and striped bass nets must not be smaller than five and one-half inches. This protects immature fish. In the case of trout, black bass, and other game fish, nets are generally prohibited, and the laws also designate the smallest fish that may be taken, as well as frequently limiting the catch for any one day. Particularly destructive appliances and unsportsmanlike

methods include explosives for all fish and traps for game fish.

It has been found exceedingly difficult to preserve inland waters, particularly streams adapted to power plants, in a condition approaching the normal. The chief destructive force on inland streams is the dam. Fishways (sluiceways) have been built around dams in the more important streams, in the hope that migratory fish would pass up them and thus overcome the obstruction, but fish do not take well to them, and on the whole they have been found very unsatisfactory. The great mistake has been too long delay in constructing them, and in most cases the fish have sadly diminished in numbers before sluiceways were resorted to. Dams and defilement of streams are now a decided hindrance to the great salmon fisheries of Washington, though the supply of salmon is still maintained and will probably be increased through scientific hatching and planting.

Producing fish by artificial means is then to be the salvation of the fish. While protective laws are necessary for game fish, fish culturists find that it is cheaper to propagate fish than to protect them.

Fish culture is accomplished by two methods. One is the transfer of living fish from waters where they are plentiful to waters where they are lacking. China and other countries of the old world have practiced this for many centuries. Benjamin Franklin conducted some experiments in the transplanting of fish as early as 1770. In the year 1878 the United States Commission of Fisheries imported live carp from Bavaria, and to-day, through this importation, every State in the Union has carp distributed through its waters.

Carp are mud suckers. They are coarse of flesh and not comparable in quality with our native fish. In muddy ponds and lakes where better species will not thrive the carp is doubtless a valuable acquisition, for it is edible, it grows to large size, and in cases where it utilizes waters that would otherwise be unstocked, it is of value. But placed in lakes where it can destroy the spawn of better species it is nothing short of a

nuisance. This has occurred in innumerable lakes and ponds and rivers throughout the country. In Utah Lake, for example, it is by far the worst enemy of the black bass.

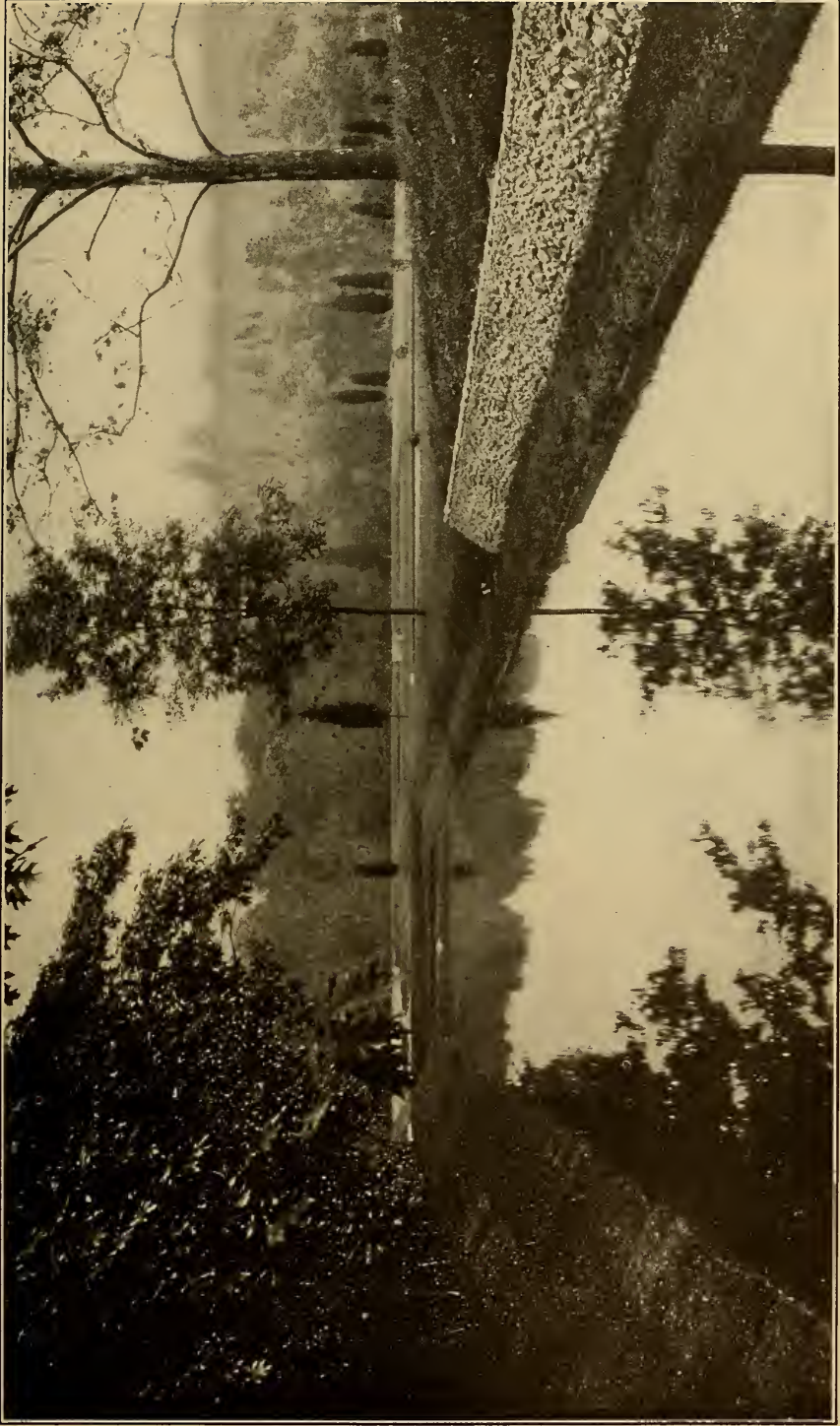
In the year 1854 an engineer on the Baltimore and Ohio Railroad placed thirty small-mouthed black bass six inches long in the tank of his locomotive, carried them across the Allegheny Mountains, and planted them in the Potomac River, near Cumberland, Maryland. There they flourished and multiplied, and thus was the upper Potomac and its tributaries stocked. The capture and transplanting of certain species of fish is practiced extensively by our fish culturists, where artificial hatching has not proved productive of good results, and by this method many inland waters have been stocked.

A German Shows the Way

But fish breeding, the other method of fish culture referred to, is by far the more important. In the year 1725 Stephen Ludwig Jacobi, a German youth of seventeen years, conceived the idea of artificially fertilizing fish spawn with a view to restocking the waters of his country. During a period of sixteen years he conducted his experiments privately, and in the year 1741 hit upon the proper method. It was not, however, until 1763 that his discovery was announced. No practical use was made of it by Germany, though in other countries the experiments were followed up in a small way, during succeeding years, mainly by individual scientists.

In 1850 the French Government established an extensive experimental station and fish hatchery at Huningen, in Alsace, where Jacobi's discovery was taken advantage of and his experiments followed up. Here much of practical knowledge was learned, indicating that the breeding of fish was not only possible but practicable, and the interest of other governments was excited. This, in fact, marked the beginning of extensive governmental fish culture.

In the populous sections of the United States inland fish were becoming exceedingly scarce. Many lakes and streams



BASS ARE BEING BROUGHT TO MATURITY IN THIS POND

were depleted or quite emptied, and this led to deep popular interest in the result of the French experiments. The interest was so great, indeed, that it led to the establishment in 1871 of the United States Commission of Fish and Fisheries and the beginning of extensive fish breeding stations, not only by the Federal Government but by practically every State in the Union.

Beginnings in America

The Act creating the Commission set forth its duties as follows: "To prosecute investigation on the subject, with the view of ascertaining whether any and what diminution in the number of food fishes of the coast and the lakes of the United States has taken place; and, if so, to what causes the same is due; and also whether any, and what, protection, prohibitory or precautionary measures should be adopted in the premises, and to report upon the same to Congress."

The Commission at once engaged a corps of trained specialists, and the most complete experimentation and the most extensive operations in fish culture that the world has ever seen were begun. In establishing the Commission it was provided that its head should not alone be a man possessing *practical* knowledge of fish and fisheries, but that he should be a *scientist* and specialist as well, of proved ability and established reputation. This requirement lifted the work out of the slough of politics. Its head could not be a mere politician appointed as a reward for political activity, for no such man could possess the stipulated qualifications. This assured success to the undertaking from its inception.

There was a vast amount of work to be done. The mere establishment of retaining ponds and hatcheries, the application of Jacobi's discovery, and the dumping of fry into streams was not its object and would have resulted in nothing of importance. It was necessary to study carefully the habits and life history not only of the food fishes but others as well; the character of the waters in which each species flourished; the plants and animal life upon which

they fed; their enemies and their own instincts to destroy; their habits of migration or non-migration; the character of the spawning grounds of each species; the development of the eggs—in fact everything connected with the life of each individual species from its inception to its end.

Then came a careful study of the waters of the United States, their temperature, currents, and adaptation to the various food fishes, and the introduction into them of fish particularly adapted to them. The investigation and work of the Commission naturally led to a study of fishing methods past and present, the destructive character of appliances, and the prohibition of such apparatus as imperiled the existence of any species.

One after another most of the States followed the Federal Government's plan, established departments of fisheries on scientific lines, built hatcheries, employed scientific culturists, and, assisted by the United States Commission of Fish and Fisheries, are now restocking and supervising their waters.

All this has resulted in a maintenance of the fish supply, not only of commercial fish, such as shad, salmon, and whitefish, for the market, but of game fish for the angler. There is a better supply of shad to-day than there was twenty years ago, and the same may be said of other market fishes. Our fish culturists have the situation completely under control. Percival Chrystie, one of the Fish and Game Commissioners of New Jersey, told me not long since that many of the streams in the New Jersey highlands which had no trout a few years ago are now fairly well stocked and offer excellent sport. The same is true of nearly all of our Eastern and Middle Western States. Through fish culture the Rocky Mountain States are increasing the numbers and varieties of game fishes in their streams, and in many instances what were formerly barren waters have been stocked. It is quite safe to prophesy that in spite of a steadily increasing army of anglers we shall have better angling ten years hence than we have to-day.

Scientific fish breeding is a decided improvement upon nature. It has been

estimated by careful observers that not to exceed two per cent of the eggs deposited by the female trout under natural conditions become impregnated, and on an average not above one-quarter of one per cent of the young trout that hatch live to maturity. The parent trout does not protect her young. She is a cannibal and will in fact eat her own offspring. From the moment she de-

remaining four thousand five hundred—a difference so great as to be almost incredible.”

In breeding establishments eggs are obtained by pressing the sides of a ripe female and stripping the eggs into a shallow pan. This process is very simple and is accomplished by passing the thumb and finger down the sides, with slight pressure. Fertilization is generally ac-



THIS IS A VIEW OF THE INTERIOR OF A HATCHERY AT CONSTANTIA, NEW YORK

posits her eggs in their sandy bed her progeny are open to attack. Nearly every water creature feeds upon the eggs themselves and upon the young when they are hatched. During the first month or six weeks after hatching the young trout is quite helpless, living by the absorption of the yolk sack which clings to the gill openings. Then, as fry, they become active and imbued with their natural instincts to hide and retreat from their foes.

One prominent fish culturist writes: "Of ten thousand eggs deposited in the natural method, only twenty or thirty hatch. One-half of these (supposing that one-half of all fishes that are born perish before attaining a marketable condition) would give us but ten or fifteen full-grown fish; whereas, with the care of man, nine thousand can be hatched, and if one-half perish, we should have

completed by squeezing the milt of the male upon them and keeping the receptacle containing the eggs in motion until impregnation takes place. Mr. A. A. Townsend, of Salisbury, New York, describes the following method discovered and practiced by him, claiming that twenty per cent more eggs are fertilized by his method than by the other:

"Take a flour barrel, make a thin funnel the size of the top of the barrel; have it run down into the barrel fourteen inches, tapering it down to a one-half inch hole at the bottom. Cut a hole in the side of the barrel, so you can get a pint dipper under the end of the funnel. A board can be placed in the barrel for the dipper to rest on. Then take the eggs and milt in the funnel and they will run down into the dipper. When the dipper is three-fourths full, take it out and stir the contents lightly with

your finger, then set it on one side and put one more dipper under the end of the funnel, making two dippers in all. When the second dipper is three-fourths full, empty the first one in a pail, take the second one out and put the empty one back, and so on. Paint the funnel and the dippers with asphaltum varnish."

Eggs are classified as: 1.—Buoyant; 2.—Semi-buoyant; 3.—Heavy non-adhesive; 4.—Heavy adhesive.

Each of these has to be treated differently in the hatchery. Trout eggs are heavy—that is, their specific gravity is so great that they sink in water—and non-adhesive. After impregnation they are spread in a thin layer on top of wire cloth trays and several trays fitted to set closely one upon another, are placed in a box in which water is admitted at the bottom to flow through and out at the top with a constant but gentle current.

The period of incubation depends upon the temperature of the water, though it is the rule to maintain a temperature of fifty degrees with a variation not to exceed two degrees. Last year an interesting series of experiments was conducted at the Utah State hatcheries under the supervision of Mr. Fred. W. Chambers, the Commissioner, and he reports the following results:

MURRAY HATCHERY, NO. 1

Temperature of water...50 to 52 degrees
Period for eyeing.....20 days
Period for hatching.....30 days

SPRINGVILLE HATCHERY, NO. 2

Temperature of water 52 to 54 degrees
Period for eyeing.....18 to 20 days
Period for hatching.....28 days

PANGUITCH HATCHERY, NO. 3

Temperature of water.....44 degrees
Period for eyeing.....40 days
Period for hatching.....60 days

"It will be observed that the most ideal conditions prevail at the Springville hatchery, where the temperature is 52 to 54 degrees. Eastern brook trout have been raised here to measure seven to eight inches in length when seven months old, while in colder water they have been only five to six inches in length in the same period of time, having subsisted upon the same food."

Practically the same method prevails in all the States for the distribution and planting of fry. Residents desiring that streams or lakes be stocked make application to their State Department. Blanks are sent them which they are required to fill out, giving in rather minute detail the condition of the waters in question. If a lake, it is required to know its outlet, its depth and size, the temperature of the water, what species of fish it contains, and other data; if a stream, whether it is obstructed by dams, whether befoiled, into what water it empties, and other information necessary for the culturist to decide its adaptability for the fish requested.

Getting an Expert's Verdict

Sometimes a specialist is sent to examine the waters personally. It would not, for instance, be deemed advisable to plant trout in an obstructed stream, or in a stream flowing into a large one inhabited by other fish that would destroy the trout, if trout are requested. At the same time, though not adapted to trout, it might be well adapted to perch, pickerel, or some other non-migratory species.

If, however, the application is favorably passed upon, the applicant is notified that the trout will be shipped him on a certain train due at its destination at a certain hour. He is expected to be on hand upon the arrival of the train, receive the fry, which are shipped in cans of water, and deposit them in the stream at the earliest possible moment. Local game wardens frequently superintend the distribution.

The almost universal custom is to plant trout fry in rapid streams in order to secure the most thorough food distribution. Mr. F. W. Chambers, the Utah Game and Fish Commissioner, held that this was not the natural method, and last year adopted the plan of planting in shallow headwater tributaries, with more gentle currents, thus placing the fry above and beyond the destructive adult fish. Planting was conducted under the direct supervision of wardens or deputy wardens. These shallow tributaries contain usually much



A STATION WHERE THE EGGS ARE STRIPPED FROM THE FISH AND FERTILIZED

water cress harboring a multitude of insects suited to the food requirements of the young fish. A dam of brush and other debris was placed across the stream below to prevent the larger trout ascending, and the dam permitted to remain for three months after planting, when the young fish were deemed old and large enough to care for and protect themselves, and it was then removed. Experience actually proved that a much larger proportion of the fry survived and thrived under this method than when planted in the usual way.

California, too, has initiated a new method of distribution in the installation of a car possessing every facility for keeping fry in condition until they reach their destination.

One important and much prized species of game fish, the black bass, culturists have been unable to incubate by the usual methods. The eggs are enclosed in a glutinous sack, and all experiments to remove them from the female uninjured have failed. Therefore it is only possible to secure adult fish and let them spawn naturally in prepared spawning ponds, transplanting the young fish when hatched. The black bass is a native of the eastern seaboard States, the basin of the Mississippi, and the Ohio and the St. Lawrence River basins, but by planting it has been distributed

over nearly every State in the Union. Each year when the Mississippi overflows its banks and later recedes, many fish are left stranded in pools. Fish and game wardens watch the conditions and preserve as many of these stranded fish as possible, planting them in other waters. In this way many black bass, as well as other varieties, are obtained by the States bordering the river.

It would be quite impossible in the limits of a single article to detail even briefly the methods employed by culturists with the many distinct species of fish, or the methods employed by the individual States in distributing them. It may be said, however, that we have exchanged species with Europe, and that our Eastern trout, like our bass, have crossed the Rocky Mountains; in fact, that the fish of one section may almost be considered the fish of all sections where similar climatic conditions prevail.

One notable exception is the Michigan grayling, which in its native State has become almost extinct. Numerous attempts to propagate it met only with failure, until Dr. James A. Henshall, culturist in charge of the United States hatchery at Bozeman, Montana, finally met with success, grew artificially hatched graylings to maturity, and from these mature fish secured fresh eggs for

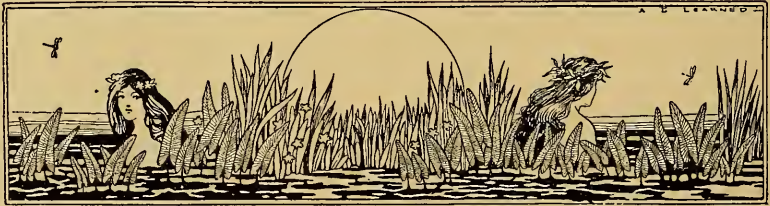
incubation. This is regarded as one of the most notable feats of the fish culturists. If these graylings continue to thrive and become acclimated to other waters, we shall owe to Dr. Henshall a lasting debt of gratitude for preserving to us one of the gamest and most prized species.

That we may realize the extent of the culturists' work, let it be said that in the year 1910 the State of New York planted 521,041,580 fry and fingerlings of varieties other than game fish, and in addition 9,235,641 fry, fingerlings, and adult game fish. In this classification only brook trout, brown trout, black spotted trout, lake trout, land-locked salmon, and black bass are included as game fish. Of the number, 1,320,012 were lake trout, 28,000 land-locked salmon, and 151,837 black bass, the remainder being made up of the four varieties of trout.

During the same year Colorado distributed from her hatcheries 7,316,200

trout; Utah distributed 5,197,000 trout; Pennsylvania distributed of all species 91,385,900.

This will illustrate the extensive work in fish culture being carried on throughout the United States, and as one further illustration it may be cited that in California alone 10,256,600 pounds of salmon were caught and tinned in the year 1910. This does not include an immense amount of salmon shipped fresh to market. In 1893 the tinned salmon of California amounted to but 3,950,373 pounds; in 1894 it had grown to 4,494,618 pounds, and in 1896 it fell to 3,276,587 pounds. This shrinkage was due to insufficient hatcheries, just as the immense growth of last year's output is due to increased facilities and to the work of fish culturists. But for artificial fish breeding it is safe to say that long ere this the salmon of California would have gone the way of those of Connecticut.



GOLD RIFLE SIGHTS AGAIN

IN THE days of the muzzle loading rifle gold and silver front sights were in common use. They were believed to be the most quickly caught, and the most easily defined against a black background or game. Later military and sharpshooters decided that such sights reflected too much light, they glittered, and were not adapted to fine work at the target. For game shooting ivory quite replaced gold and silver, and was

said to be superior to either for really fine shooting.

Now the gold sight is coming back again, a gold bead in a setting of iron being a most popular sight with hunters. It seems that fashion merely swings round in a circle, bringing all things back to us again sooner or later. Perhaps we will again sometime see the old bar sights, fixed flat on the barrel after the style of Cooper's Leather Stocking rifles.



A SLOPING CANVAS ROOF WILL KEEP OUT THE DAMPNESS AS EFFECTUALLY AS WILL ONE MADE OF TIMBERS AND SHINGLES OR TILE

MAKING A HOME FOR THE MOTOR BOAT

BY LAWRENCE LARUE

Illustrated with Photographs

EVERY motor boat, no matter how small or cheap, deserves a home of some kind where it may be sheltered from the rain and dew. This need not be an elaborate or expensive structure, nor, in fact, is it necessary that it should be a building at all, for a sloping canvas roof will serve as effectually to keep out the dampness as will one made of timbers and shingles or tile.

The man who already owns a motor boat, skiff, canoe, or sailboat will probably have some form of dock or landing stage projecting into the river or lake. If this dock is in the form of an uncovered slip between the piers of which the craft may be run, the construction of a simple shelter is an easy matter. This will consist of a strip of heavy canvas

stretched over iron bows, or hoops, that straddle the slip. In order to make a substantial framework, one of these hoops should be set in the slip at a distance of about every three feet, and each may be held securely in place by means of sockets into which the ends slide.

Screw rings, or eyes, should be attached to the sides of the slip above the sockets to serve as guides, and if the sockets are provided with stops for the ends of the hoops, no clamps will be needed to hold the framework in place. The hoops should be sufficiently long so that the heads of occupants of the boat will not strike the top of the framework at high water, although if this distance is made unnecessarily great, an undue amount of canvas will be required and the cost of the shelter will not be kept as low as would otherwise be the case.



A "LEAN-TO" ADDED TO THE BOATHOUSE WILL PROVIDE ADDITIONAL PERMANENT SHELTER AT SMALL EXPENSE

The canvas should be sufficiently wide to surround the hoops completely from one side to the other where they project above the docks. The edges of the canvas may be either laced or hooked down to the top of the docks or sides of the slip, and for this purpose, grommets, or brass rings, should be sewed into the material. The covering may be attached to the hoops either by lacing or by means of sliding rings sewed into the canvas, but as the latter permits the shelter to be raised along the side when it is desired to admit more light or air, this is probably the better method of the two. Flaps should be provided at both the water and shore ends of this "tunnel," and these should be furnished with lacing or buttons that will render them rain and wind tight when closed.

If wide docks form the slip over which the shelter is erected, entrances may be cut in the canvas on either side of the covering. These should be in the form of flaps between two of the hoops, and the loose canvas may be buttoned or laced down when it is desired to "close the doors." Such a side flap is useful for entering or leaving the boat, for there is no dock space provided inside of the canvas covering.

If there is no uncovered slip over which this canvas shelter may be erected, and if the only landing consists of a dock that juts into the water a sufficient distance, an additional pier will need to be constructed. This, however, need not dampen the ambitions of the man who desires to erect a shelter for his boat, as the building of a small pier is not as complicated or serious an undertaking as it may sound. The pier need only serve the purpose of furnishing a substantial anchorage for the other end of the hoops forming the framework for the canvas, and it is not even necessary that a platform be built along the top, as the entrance to and exit from the boat would be made from the dock side.

If the river or lake bottom is sufficiently soft, the simplest pier would be formed of a line of piles driven into the mud and a heavy timber laid across the top and secured to each one. The guides and sockets for the hoops could then be attached to the timber and the proper piles, respectively.

If the river bottom is too rocky to enable piles to be driven in, "cribs" should be built on the bottom of posts of the proper length. These posts may then be placed in position to form the pier,



SOME BOATHOUSES ARE BUILT SEVERAL STORIES IN HEIGHT, THE UPPER FLOORS BEING USED AS A SUMMER RESIDENCE

and if the cribs at their ends are loaded with stones and the tops secured to the heavy timber as already described, the resulting structure will be sufficiently well anchored to form a solid support for the canvas framework and covering.

Many boathouses are constructed with docks on all sides, and in this case, such a landing stage may be used in connection with the above-mentioned pier to form a canvas-covered shelter for an extra motor boat. If there are no docks along the sides of the boathouse, or if the water is not sufficiently deep for the accommodation of a motor boat, two pile-piers may be built out from the front of the building and the slip thus formed may then be covered with the canvas shelter.

This is a simple method of providing for the accommodation of more craft than the boathouse is capable of holding, but the objection will at once be raised that the shelter includes no dock alongside of which landings may be made. This, of course, is true, but if a small platform is built across a bow corner of the slip from the shore end of a pier to the boathouse, entrance to the craft may be effected from the forward deck. If the boathouse was designed for the ac-

commodation of skiffs or canoes only and consequently is floored over completely inside, it will be well to build the covered slip for the motor boat directly out from the water-front door and thus do away with the necessity of constructing an outside dock or platform.

A motor boat is a necessary adjunct to every house boat, for not only will it act in the capacity of messenger between this water residence and a base of supplies, but it may also serve as the motive power for towing the larger craft from one resting place to another. This nomadic existence of such a motor boat renders the problem of its proper shelter rather a serious one, and oftentimes a cockpit cover forms the only protection that the craft will find for an entire season. If a house boat can be towed from place to place, however, there is no reason why a boathouse having such transient properties might not also be constructed.

Such a floating shelter may consist of a canvas covering and framework such as has already been described, but instead of mounting the iron hoops on permanent piers, a special construction is required. The simplest form of floating support for the framework is composed of a sufficient number of watertight bar-

rels or kegs held together in two parallel lines by heavy timbers attached to each. These two lines should be braced at their forward ends with an extra timber so that they will be kept at the proper distance apart, and as an added precaution, the stern hoop should be made especially heavy to help maintain this position.

There are many substantial boathouses built with a "solid floor" for the accommodation of skiffs or canoes, and

uation of that over the main boathouse, at a decreased angle, if necessary, to allow the proper mount of head room. The rafters may be attached to the projecting eaves of the main roof and supported at the other end by the siding that should be erected on the dock built for the purpose.

If the dock has been built wide enough, it is well to erect this siding on the center line so that there will be platform space both inside and outside the



IF A MOTOR BOAT IS AN ADJUNCT TO THE HOUSE BOAT HOME A FLOATING SHELTER CAN EASILY BE BUILT

it may be that some of these, on account of their construction, cannot be converted into motor boat garages. A shelter for the boat, however, that is more substantial and permanent than the canvas covering, may be added to such a boathouse at small expense in the form of a "lean-to." Such a lean-to, of course, cannot afford a large amount of interior space, but as it is intended to serve merely as a permanent shelter for the boat, a slip large enough to accommodate the craft will furnish all of the room necessary. A dock should be built out from the shore parallel with the side of the boathouse and at a distance from it equal to the width of the desired slip. The roof over this slip may be a contin-

lean-to. Otherwise, it is probable that the dock will be more useful outside as a landing place than it will inside of the lean-to, as the floor space of the main boat house will serve all interior platform purposes. One or more doors should be cut through the old boathouse partition against which the lean-to is built. It is obvious that such an addition to a boathouse is suitable only for the accommodation of open motor boats, as there would not be sufficient ceiling space afforded for those having permanent canopy tops or cabins.

The "homeless" motor boat that has been purchased before provision has been made for its shelter, need not be left entirely unprotected, especially if a cock-

pit cover has been obtained with it. This cockpit cover should be made to button down snugly over the coaming and should be raised throughout its length in the middle by means of a notched stick that rests over the bow and stern ends of the cockpit. This gives a sloping side effect to the canvas cover that enables it to shed the rain, even though the material is not absolutely waterproof.

In order to prevent the wind and waves from striking the boat against the

and lubricating oil that lie in unguarded craft make profitable loot for these modern, though petty, buccaneers. A canvas covering may protect the cockpit of the boat from rain and dew, but it cannot guard the contents from the covetously-inclined prowler, and the owner who erects a boathouse in which his craft may be kept under lock and key will be able to pay more than interest on his investment by the saving on his battery and spark plug bills alone. But it is not only



PLENTY OF DOCK SPACE AFFORDS ACCOMMODATION FOR VISITING CRAFT AND LENDS AN AIR OF HOSPITALITY TO THE WATER FRONT

dock, the stern of the craft should be made fast to the end of the pier and the bow to some point on shore that is out of line with the side of the dock. An extra boat may be kept indefinitely in this manner if it is inadvisable to build an addition to the boathouse for its accommodation, but of course the necessity of replacing the cockpit cover whenever the boat is not in use is a disadvantage that makes preferable the erection of some more stationary shelter.

Even though the black flag was long ago hauled down, the motor boat owner realizes that piracy exists to a greater or less degree along our waterways and at the summer resorts where a set of batteries, easily-"borrowed" tools, expensive cork-filled cushions, and even gasoline

the owner who has suffered losses of the movable property of his boat who will profit by housing his craft in a substantial building; a well-designed boathouse is of great convenience in other respects, and as a storehouse in winter and a repair shop in summer it is a "*mulum in parvo*" of no mean consideration.

As the enthusiast who has graduated from skiff, canoe, or sailboat to motor boat has made the change by degree, so it is probable that he will not care to bear the expense of a brand-new motor boat garage as a matriculation fee. This is not necessary, however, for with his old skiffhouse or canoe shed as a nucleus, the owner may evolve a habitation for his craft that will be in keeping with his progression as a nautical sportsman.

This, of course, does not apply to the man who, as a first venture, invests in a forty-footer, but is directed only to the owner whose purchase is a runabout no longer than an ordinary-sized boathouse.

If the original boathouse sets out from shore a sufficient distance, the water under its floor will be deep enough for the



THIS TYPE OF SHELTER WILL WITHSTAND ANYTHING SHORT OF A HURRICANE AND IS NOT EXPENSIVE

accommodation of the small motor boat, and the planking need only be cut away to form a slip. The beams on which the floor rests will, of course, need to be rearranged, and it is possible that an extra pier or two will be required at the sides of this new slip for the support of the stringpieces.

If the boathouse rests on but four piers—one at each corner—it will be an easy matter to cut a slip, as there will then be no obstruction at its entrance. A third pier at the front of the boathouse, however, will seriously interfere with the construction of a central slip and will need to be replaced with two small ones—thus forming two piers at each side of the entrance.

As three piers at the front would probably only be used to support a moderately large boathouse, it would be well to cut the slip between two of these piers and thus preserve the remaining half of the floor space intact if the boat to be accommodated is a small one. It should always be remembered, however, that a "tight fit" between boat and slip is in-

advisable and that the latter should always be several feet wider than the beam of the craft it is to receive. Consequently, it may be necessary to remove the central pier in order to construct a slip that will be sufficiently wide.

If the boathouse does not set far enough out from shore to afford a sufficient depth of water when the slip is cut in the floor, the nature of the bottom will determine the advisability of dredging or moving the building. Even though a small boat will not draw over two or three feet of water, provision should be made for a variation in the level of the surface of the stream or lake on which the boathouse is situated, and a depth of five or six feet under the stern is none too great for the accommodation of an ordinary craft. If the bottom is soft, it will, of course, be an easy matter to dredge the slip to the desired depth, but the action of the waves will probably soon refill the excavation and make it necessary to repeat the operation several times in a season.

The motor boat owner who is willing to begin at the beginning and erect a boathouse especially for the accommodation of his craft may spend more money than will he who remodels an old shed, but the greater investment will be more than justified because of the fact that the building can be arranged and designed properly from the "bottom up," there need be no "make-shifts," and the enthusiast may have a motor boat "garage" that will serve him for a lifetime. But let him not make the mistake of building only for present needs, even though he has assured himself and his friends that the one boat is to be his only "extravagance" in this direction, for motor boating inevitably obtains such a hold upon its followers that few there be who are long satisfied with a single "utility" craft. The cruiser, the runabout, the racer, and the yacht in a variety of forms and guises offer a selection hard to resist after a restriction to one boat for a few seasons, and it is poor economy to be forced to add to or rebuild the boathouse for every change in the model of its occupant or for each addition to the "fleet."

Whether cruiser or racer is ultimately purchased, the services of the little run-

about will always be needed, and it is well to provide for the accommodation of one of the latter as a first consideration and basis of the boathouse plans. Such a slip should be at least twenty feet long and five feet wide, even though the runabout owned at present should be considerably smaller than these dimensions. The main portion of the boathouse should be devoted to the provisions for accommodating the prospective larger craft, while the slip for the runabout may be placed in a connecting lean-to formed by an extension of the roof at an angle different from that at which it slopes on the other side. As it is not beyond the bounds of probability that a forty-foot racer or cruiser will be the "ultimate purchase," it is well to build the main portion of the house at least fifty feet long. The large slip can be covered over with planks which have been cut to fit into it and rest on cleats secured to the sides. This will form a smooth, level floor which can be taken up as soon as it is desired to use the slip. If the slip is not cut when the house is built, provision should be made for this to be done at any time by so locating the piers that none will be placed directly at the entrance when the floor is reconstructed.

A boathouse designed to accommodate a large "fleet," from yacht or cruiser down to a small runabout or tender, should be built with the largest slip in the center under the peak of the roof and those of the successively smaller sizes on either side so that the individual slips for the "youngsters" are under the eaves. This design is necessary on account of the practice of using tall signal masts on yachts and large cruisers.

There should be plenty of floor space between the slips and the entire building should extend several feet beyond the end of the longest. Rather than build the slips at the sides of just the size to accommodate the small boats, and thus restrict their capacity, it is better to construct one or two larger slips and in these keep all the runabouts, work boats, and tenders not sufficiently large to require an individual slip. This will thus furnish an emergency or "guest" slip.

Boats equipped with signal masts re-

quire all of the available roof space, of course, and it is consequently impossible to build a loft in the boathouse. If it is certain that a boat of this size or type will never be purchased, however, it is well to design the boathouse with a loft. This is not only useful as an extra room for the storage of spare equipment, tops, fenders, chairs, canvas, rope, and the like, but the interposition of this top flooring between the boat and the roof protects the hull from being unduly dried out during the hot days of spring before the craft is made ready for the water.

If the cottage is located on a very small island, the abode of the boat becomes of almost as much importance as does the shelter of its owner, and in such a case it is often of advantage to combine the two buildings in one. Some boathouses are built several stories in height, the upper floors being used as a summer residence for the owner and his family. This is an economical construction, but it may be that there will be an objection to living "perched out over the water," and no matter how much time the owner may spend in his motor boat, he may desire to sleep on land.

Getting the Boathouse Close Home

The boathouse may be built as a part of the cottage, however, by designing it as a sort of lean-to attached to the larger shelter and using a continuation of the main roof in its construction. With the correct architectural construction, this may be made a very pleasing design, and the advantage of placing the boathouse and workshop close to the main dwelling with interior connection making it unnecessary to go out of doors is obvious if there is but a small amount of land at the owner's disposal.

When the piers for the boathouse are built, it is well to make these considerably larger than is necessary for the support of the building alone, and use the foundation thus afforded for the construction of ample and substantial docks. A boathouse with no outside docks is as poorly designed as a country home with no porch. In fact, docks should be built, not only on both sides of the boathouse,

but in front as well, and the motor boat garage having the greatest amount of "wharfage" is, in some respects, the best designed. Plenty of dock space not only affords accommodation for visiting craft and lends an air of hospitality to the water front, but the owner will find every square foot of it useful at various times for his own boat.

If the boat has been running in a heavy sea or a severe storm, the interior, top, curtains, and the like may be dried to much better advantage if the craft is left outside where sun and wind will help the process. Then, too, in making repairs to the motor or painting a part of the hull or top, it may be advisable to move the boat out where sun, air, and light will be more abundant, and then the dock on the side on which the conditions are the most favorable may be selected,—and the advantage of having a choice will be appreciated.

From Every Wind That Blows

Even in the strongest wind, the boathouse may prove itself a substantial shelter and breakwater and the dock on the lee side will afford a safe refuge when it would be impossible to land at the opposite platform on account of the high seas. A large amount of dock space that will be sheltered from almost any wind that blows can be obtained by building a "basin" or open slip parallel with the shore line and at a sufficient distance from it to afford the proper depth of water. This basin should be built large enough to receive several small boats, and the outside of the large pier which serves as a breakwater may be used for the accommodation of a long craft.

By using the platform at one side of the boathouse to form the end of the slip, but one or two additional docks need be built for the construction of this sheltered basin and the maximum amount of water frontage is thus obtained on a comparatively short shore line and at a minimum cost. The construction of the dock forming the land side of the slip should not be difficult, as one end of the cross floor beams may rest on shore while the other end can be supported on piles or piers built only far

enough out to obtain a sufficient depth of water. When one or more such slips are covered over with a well-designed shingle or tile roof, an attractive "guest shelter" is provided that may even serve as a temporary accommodation for the owner's boat.

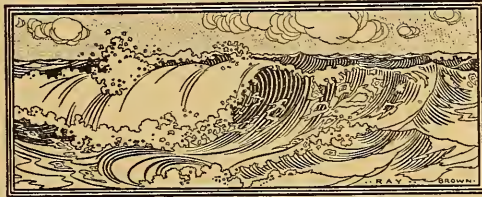
Small platforms at the front of the boathouse between the slip entrances may often be used to good advantage for small boats or for reaching the stern of the craft inside, and as they require no extra piers, but can be supported by those forming the foundation of the boathouse, the expense involved is almost negligible. If the boat occupying the slip is rather a "tight fit" and there is not sufficient room to allow for erratic steering or a slight miscalculation on the part of the pilot, it is well to cut off the corners of the outside docks guarding the entrance. The docks on either side of the slip will then act as a sort of guide that will enable the boat to enter its berth with ease.

No matter how simple or how elaborate may be the construction of the boathouse, precautions will need to be taken against the devastations of winter if the structure is located on a stream or body of water on which ice forms every year. Ice and high water show no favors, and many a man has returned to his summer home the following year only to find his boathouse tilted up at one corner and down at the other and the position of the front piers changed so that the doors to the slip cannot be opened. The weakest point of the foundation of the boathouse, and at the same time the one most open to the attack of the ice, is the forward line of piers separating the slips. These cannot be strung together with heavy cross-pieces, as is the case with those supporting the floor, and in consequence the ice is liable to move the forward piers independently of the boathouse.

To provide against this, the end piers should be tied together when the boathouse is closed for the winter, and this is best done by the use of two heavy rods joined at the ends by means of a turn-buckle. The outer ends of the rods should be in the form of hooks which are to fit into eyes screwed into the heavy

timbers of each pier. The eyes should have been so placed that the tie rod will come about level with the surface of the water, and after this has been hooked in place, it should be tightened with the turn-buckle. If such a rod is placed

across the end of each slip, the piers cannot move away from each other and the boathouse will be found in much better shape than would be the case were the ice and high water allowed to have full sway.



HOW TO BUILD A KNOCKABOUT

BY CLAY EMERY

Illustrated with Diagrams

THE first thing to be done in building a knockabout is to "lay down" the bottom plan of the boat, full size, from which the molds are to be made. To do this, take as many pieces of white pine, spruce, or any light-colored soft wood, cut in three-foot lengths, as are required to measure two feet in width, and fasten them together

edge to edge by means of battens, as in Fig. 1. (Page 597.)

Plane the side away from the battens to make a fairly smooth surface, and on the smooth side make a copy of the body plan, using the dimensions given in the offset table. As soon as this has been done, you are ready to make your molds. These can be made of white pine or spruce, about three-quarter inch thick, as follows: Take a strip of pine one-eighth

TABLE OF OFFSETS									
FEET, INCHES AND EIGHTHS									
HALFBREADTHS			HEIGHTS ABOVE BASE				DIAGONALS		
	DECK	W.L.	KEEL	SHEER	RABBIT	BOTTOM OF KEEL	1 DIAG.	2 DIAG.	3 DIAG.
SPEN	0-0-4-1			1-6-4					
A	0-6-0		0-0-5	1-5-3	0-11-0		0-8-5	0-7-5	0-7-0
1	1-3-2		0-1-4	1-4-1	0-6-0	H U B B L E K E E L	1-2-5	1-4-0	1-4-3
2	1-10-4	1-3-4	0-2-6	1-2-7	0-3-0		1-7-2	1-9-4	1-11-2
3	2-3-7	1-11-6	0-3-4	1-1-6	0-0-7		1-9-6	2-1-0	2-4-3
4	2-6-0	2-2-6	0-3-5	1-1-0	0-0-4		1-10-5	2-2-7	2-6-5
5	2-5-0	2-1-6	0-3-5	1-0-7	0-1-1		1-9-7	2-1-6	2-5-5
6	2-1-7	1-7-6	0-3-3	1-0-7	0-3-0		1-7-5	1-11-0	2-2-0
7	1-8-6		0-2-5	1-1-4	0-6-0		1-4-3	1-6-7	1-9-2
8	1-2-6		0-1-7	1-2-3	0-9-5		1-0-3	1-2-3	1-4-1

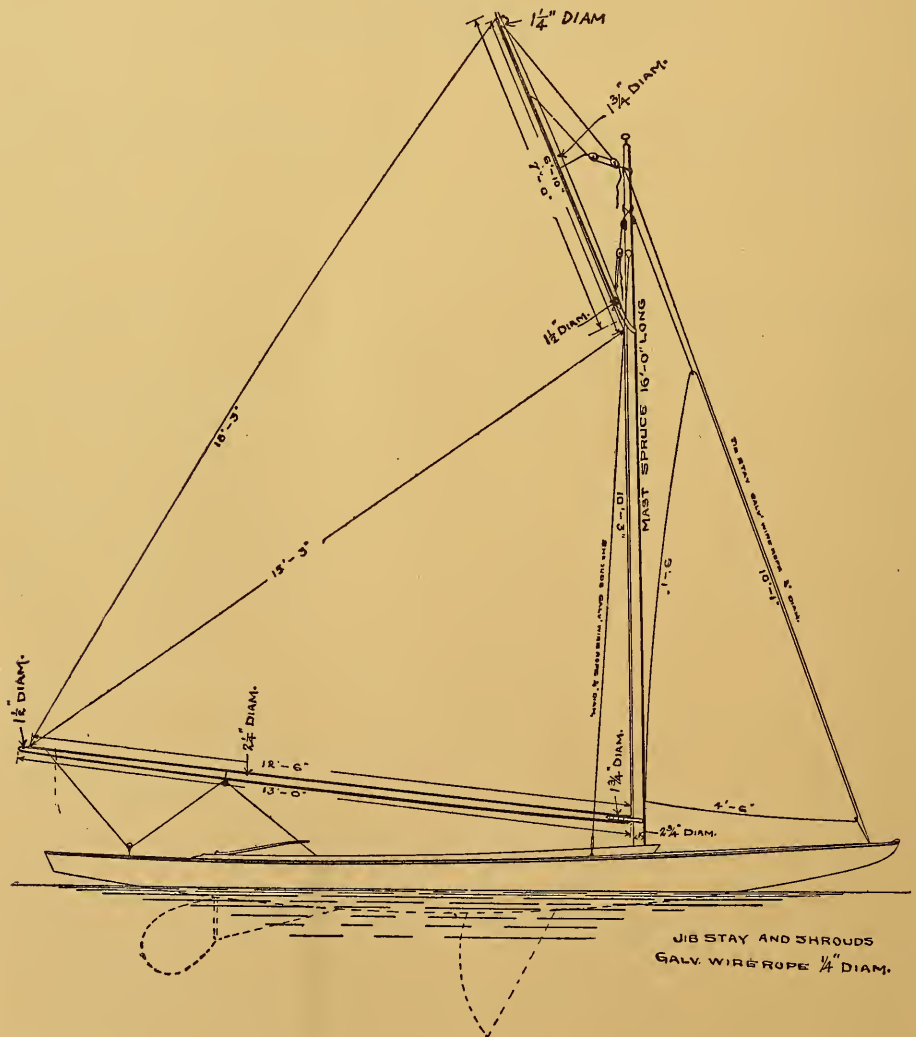
SHOWING HOW THE MEASUREMENTS SHOULD BE MADE FOR LAYING THE KEEL

inch thick by three-quarter inch wide and bend it to the section on the body plan, to which you are going to make the mold, holding it in position by means of one inch wire brads driven one on each side of the strip, so that the head of the nail does not project above the upper edge of the strip, as in Fig. 2.

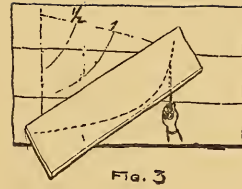
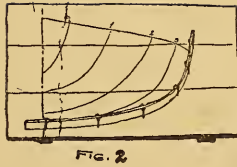
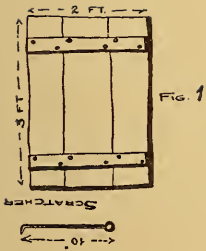
On top of this strip, after it has been bent to the line of the section, lay a piece of board, and with a scratcher made from a piece of one-eighth inch wire scratch around the strip on the under

side of the board, as shown in Fig. 3. Now saw the board to the line made by the scratcher and mark out and saw a mate to it. When this is done, fasten the two pieces together in this wise, Fig. 4.

Proceed in the same way for each section until all the molds have been made, numbering from 1 to 7. Having your molds made you are now ready for the keel. The first thing to be done is to get the length and the correct spacing of the molds. To do this, you must make

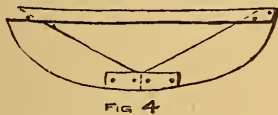


THE DIMENSIONS FOR SAILS AND SHROUDS OF AN EIGHTEEN-FOOT KNOCKABOUT WITH A FIVE-FOOT BEAM



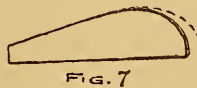
a full-sized drawing of the keel line, as shown in the sheer plan. Take a chalk line and with it snap a straight line on the floor; on this, set off your stations for molds and mark the position of the fore end of the keel. Now take a batten that will bend readily to the shape of the keel outline and bend it around to the

set table under heading, "Keel half breadths." Through these points draw a line and shape the keel to it. Between the marks for the centerboard slot make a mortise one-half inch wide and the full length between the marks. The keel is now ready to receive stem and stern board and to be set up to receive the



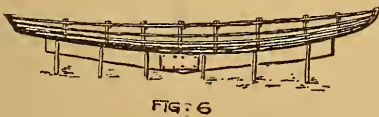
line representing the bottom of the keel, letting the batten come on the upper side of the line and holding it in place with a few small nails.

With a pencil, make a mark on the batten at the forward end of the keel and at each mold station, and also at each frame station and the forward and after ends of the centerboard slot. When this has been done, take up the batten and lay it on the piece of oak you have chosen for the keel, which must be seventeen feet seven inches long by eight inches wide and three-quarter inch



molds. We now have to make the stocks upon which to set up the keel. Take some rough pine or spruce boards and shape them to the curve of the bottom of the keel, fasten them together and set them up on blocks and brace them firmly in the manner shown in Fig. 5.

Now take the keel and spring it down into the curve of the stocks, fastening down by means of screws, so that it may be released easily when required. Now set up the molds on the keel and stay them with strips to hold them firmly in position. We

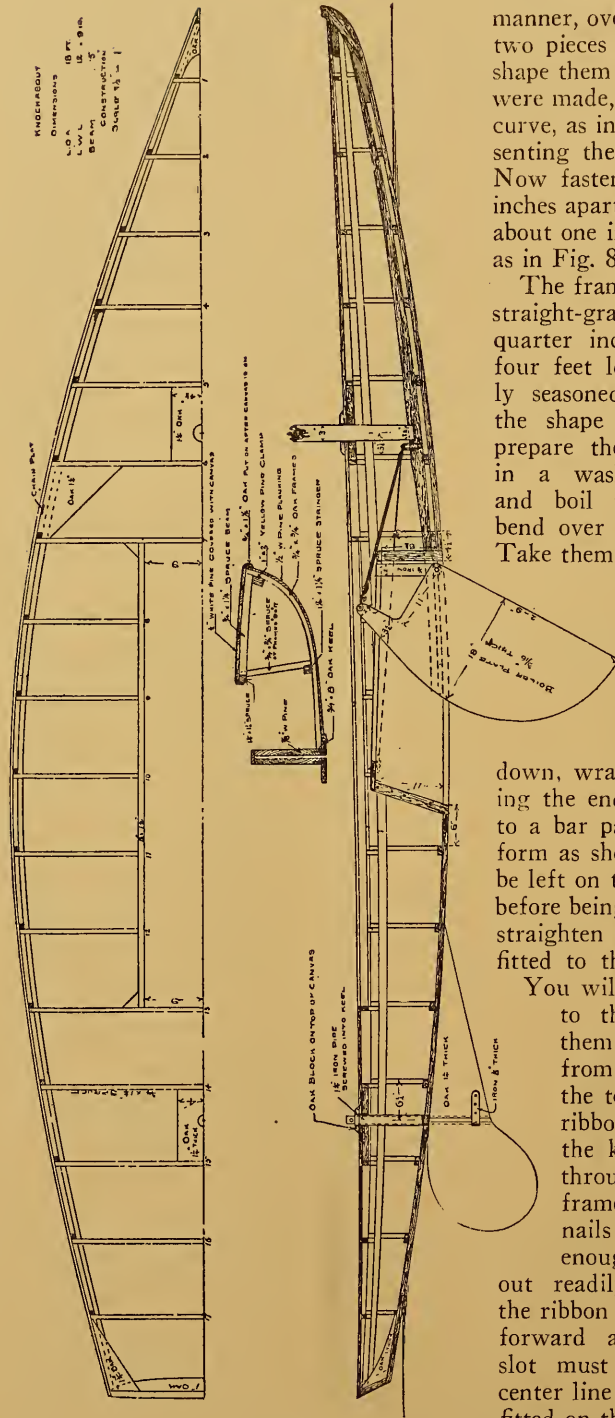


thick. Transfer the marks on the batten to the keel piece, making a mark square across the piece for each frame and mold. Now, with the chalk line, snap a line through the center of the keel from end to end.

Then at each of the mold stations measure from the center line each way the keel half breadths, as given in the off-

are now ready to run ribbons, which are made by sawing from the edge of clear, straight-grained pine boards, three-quarter inch thick, strips about five-eighth inch in width. These ribbons will be screwed to the molds and stem and stern board in the positions shown in Fig. 6.

The ribbons being all in place, you are



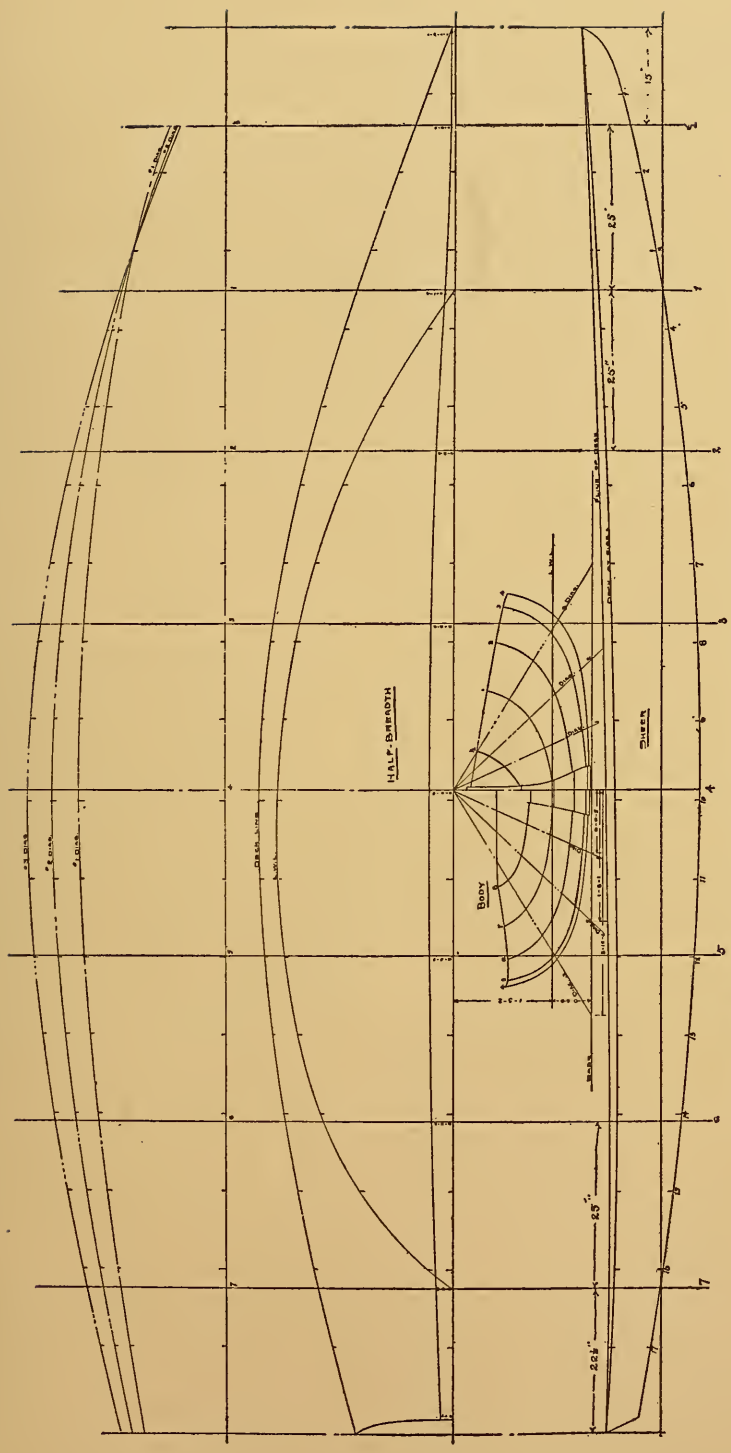
ready to bend your frames. To do this a mold must be made in the following manner, over which to shape them: Take two pieces of spruce or pine board and shape them in the same way as the molds were made, but with a somewhat smaller curve, as in Fig. 7, the dotted line representing the curve of the midship mold. Now fasten these pieces about eighteen inches apart, connecting them with strips about one inch by one and one-half inch, as in Fig. 8.

The frames must be sawed from clear, straight-grained oak, and should be three-quarter inch by three-quarter inch by four feet long, and if they are partially seasoned they will bend and hold the shape better than if green. To prepare them for bending, place them in a wash boiler of boiling water and boil them until soft enough to bend over your form without breaking. Take them from the boiler one, or if you

find you can bend them easily enough, two at a time, and passing one end between the form and the bar shown at the end, wedge them tightly and, pressing the other end

down, wrap them around the form, tying the end down with a piece of cord to a bar passed through the end of the form as shown. The bent frames must be left on the form until thoroughly dry before being released, otherwise they will straighten out, and will not be easily fitted to the inside of the ribbons.

You will now begin to fit the frames to the keel and ribbons, trying them in one at a time and cutting from the lower end until they fit the top of the keel and touch each ribbon when they can be nailed to the keel and a small nail driven through each ribbon to hold the frame in place, the heads of the nails in the ribbon being left out enough to allow them to be drawn out readily when you want to take the ribbon off. The heels of the frames forward and aft of the centerboard slot must be butted together at the center line of the keel and a floor timber fitted on the forward side, making a lapping piece to tie the frames together, be-



DESIGNS FOR KEEL, SHOWING IT IN CROSS AND LONGITUDINAL SECTIONS

ing fastened to the keel and each frame. The floor timbers should be about two feet long and the same size as the frames. In the way of the centerboard slot the heels of the frames must be cut one inch away from the edge of the mortise to allow room to seat the centerboard trunk.

Having your frames bent before they are fastened to the keel and ribbons, you will make your centerboard trunk and fasten it in place, as it will be easier to fit now than it will after the frames are in place. Take two pieces of white pine board without knots or shakes and shape them, as shown on the construction drawing. Now get out two pieces of pine one-half inch thick by one and one-half inch wide, shaped as shown in the construction plan, to go between the sides of the trunk at the ends, allowing them to project one inch below the lower end of the side pieces, and fasten with copper nails through both sides and end piece, riveting the nails on copper burrs. When this trunk has been fastened together thoroughly it must be fitted accurately to the top of the keel, allowing the projecting ends of the end pieces to pass through the slot in the keel. Fasten both sides of the trunk from the bottom of the keel with two-inch No. 12 brass screws; countersink the holes in the keel just enough to let the screw heads finish flush with the bottom of the keel.

Putting on the Planks

As soon as the frames and floors are all fitted and fastened, a strip of wood about three-quarter inch by one inch must be fastened across the boat from one side to the other at the head of every third frame to keep the frames from spreading when the molds are removed, which is the next thing to be done. The molds having been taken out, you can now commence planking, beginning at the keel and working toward the top, the sheer strake being the last to go on. For your planking you want white pine or cedar one-half inch thick and eighteen to twenty feet long, as clear of knots as it is possible to get. Cedar is better than pine, as it is lighter in weight and easier to work to the shape required, but pine will make a very good boat.

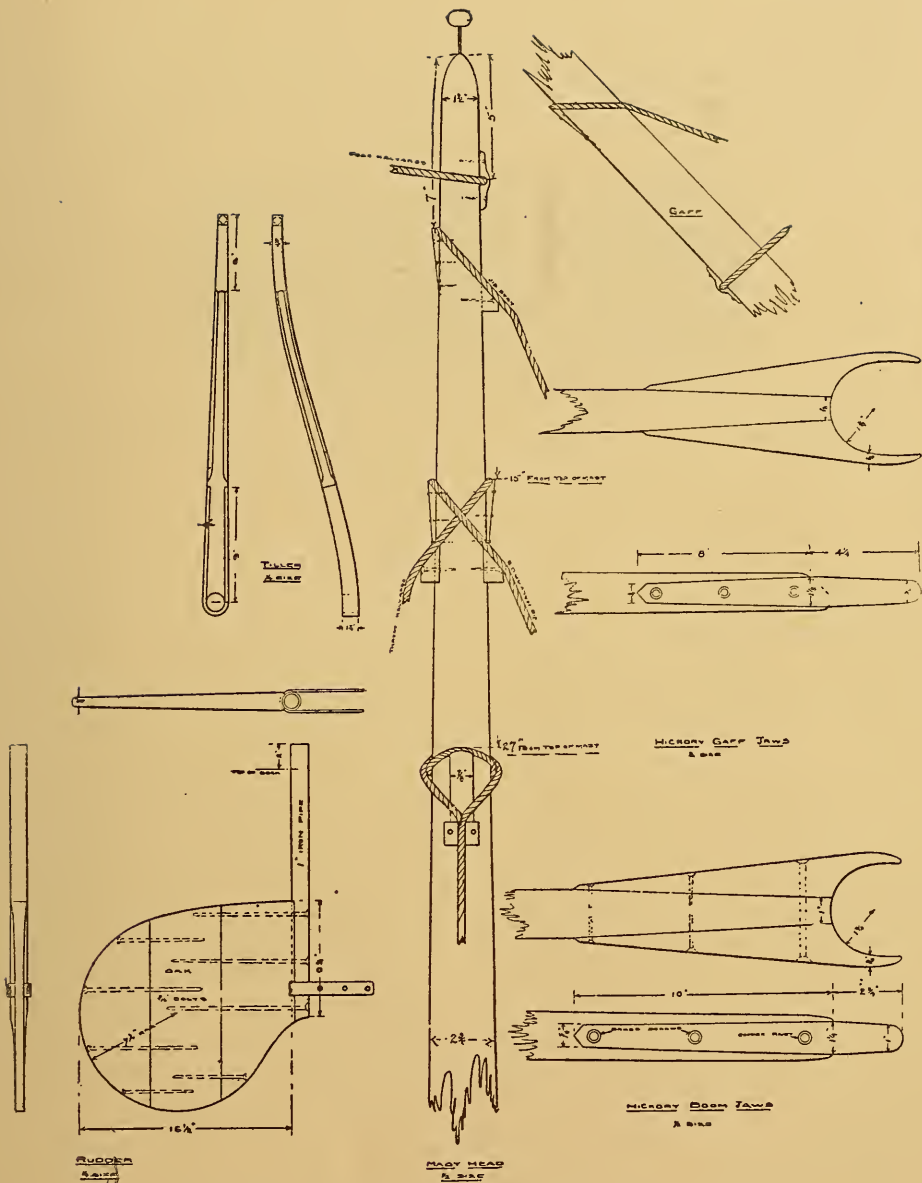
To get the shape of each plank take a piece of pine or cedar three inches to four inches wide and about one-eighth inch thick, called a spiling board, and lay it along the frames where your plank is to be fitted, tacking it fast to the frames or holding it in position with small clamps, being careful not to spring it edgewise. Now take a rule and measure at every frame the distance between the edge of the spiling board and the keel (for the first strake) or the edge of the last strake fastened on, and mark with chalk on the spiling board the measurement taken. Then take the spiling board from the frames and lay it on the board you have chosen for your piece, measuring from the edge of spiling board the dimension called for at each frame station.

After the Planks

When the measurements have all been laid off, tack a batten to the marks and mark with a pencil along the batten. As soon as this plank has been cut to shape lay upside down on another board and mark off a duplicate of it for the other side of the boat. Now clamp your plank to its place and fasten to stem and stern with brass screws and to frame with copper nails one inch long, the nails to pass right through the frames and be riveted on burrs on the inside of the planking.

After the planking, the next in order are the clamps put in the position called for in the construction plan and fastened through frames and planking with copper nails riveted on burrs. As soon as the clamps are in place and fastened, put in the deck beams, as shown in deck framing plan, the beams to be fastened through the clamps and triangular pieces put in where shown to stiffen up the framework.

Now comes the deck of one-half inch pine or cedar any width that is convenient, fastened to the deck beams with brass screws about one inch No. 10, the edges of screws to be turned in flush with top of the deck. Paint the deck with a good coat of white or lead color paint, and cover with six ounces cotton duck drawn over the edge of the deck all



DESIGNS AND DIMENSIONS FOR TILLER, MAST AND BOOMS

around and fastened with copper tacks. The edge of the canvas around the outside of the boat should be covered with a half-round molding, as shown in mid-ship section.

The boat can now be taken off the stocks, turned upside down on blocks or trestles and the outside planed off and the seams caulked with cotton forced in

with a caulking iron and mallet, after which she is to be smoothed up and painted. Then a triangle piece of dead wood to be fitted with the after end just at the rudder hole. This piece to be fastened to the keel with screws about two and one-half inches long, No. 16, turned in from inside of keel. The rudder and centerboard to be made as shown

on detail sheet. The expense of sails is so small, and as the set and fit is such an important factor toward the success of the boat, we recommend that they and the blocks be purchased from a regular sailmaker.

By cutting out the plans from this issue and forwarding them with your order to a sailmaker he will be able to make you a proper set of sails from them.

Spars of spruce according to the dimensions given.



CARING FOR THE CLUTCH OF THE AUTOMOBILE

BY HAROLD WHITING SLAUSON

THE clutch is one of the most important parts of the automobile and yet one which probably receives less attention from the owner or driver than any other portion of the mechanism. The valves will be ground, the cylinders freed from carbon, the ignition system adjusted and the differential and transmission cases cleaned and refilled with fresh lubricant while the clutch remains untouched, and yet it is expected to do its share of the work without, literally, so much as a murmur. It is to the credit of the average well-designed clutch that it does not require attention in proportion to the amount of work that it performs, and some may be almost neglected for thousands of miles without being damaged seriously. The clutch, however, should not be kept in condition for its own sake alone, but for that of the motor, transmission and tires as well, for upon its proper operation depends the amount of strains and shocks that will or will not be imparted to the remainder of the power plant and running gear.

The purpose of the clutch is obvious to anyone who has ever driven a car, for he realizes that it would be impracticable to stop the motor each time the automobile stops and yet this would be necessary were there no mechanism by means

of which the one may be disconnected from the other. Furthermore, a gasoline engine cannot be started "under load" and consequently the rear wheels which drive the car must be disconnected from the crankshaft of the engine so that the latter may be allowed to run "free" during its first few revolutions. In addition to these reasons, the gears of the sliding transmission cannot be shifted and the various speeds obtained unless the motor is disconnected while the change is being made and thus the clutch will be used much more than will the brakes or the gear shift lever. Of course, the motor is generally cranked when the transmission is in the neutral position, in which case the clutch may be left engaged, but the gear change could not have been made without first disconnecting the crankshaft and consequently it may be said that the use of the clutch must always precede the starting of the engine.

The work that the clutch is called upon to do precludes the use on an automobile of what is really the simplest type, the complications in design being necessary because of the fact that the load must be applied gradually. A positive clutch, such as one of the jaw type, is strong and simple in construction, but is unsuitable for use on an automobile because the load cannot be applied while

the motor is in motion. In other words, there is no "half-way" position for the positive clutch and the entire load must be either on or off. It is evident that the sudden application of a maximum load to a motor that is running would be disastrous in at least two respects: the engine would be brought to an abrupt stop or "stalled" and the attendant strain and shock that would be transmitted to the gears, shafts and tires would cause serious damage.

Consequently any form of positive clutch is out of the question for use on an automobile and designers have almost universally turned their attention to the friction type, in which the load is "taken up" slowly by the gradual increase in pressure between two rubbing surfaces. If the clutch is so constructed that this pressure or friction may be regulated by the driver, the load may be applied or removed as gradually as desired and the strain on the motor and running gear will thus be reduced to a minimum.

No matter what type of clutch is under consideration—and there are many—it must consist essentially of two parts, one of which is positively connected to the end of the crank shaft of the motor and revolves with it, while the other is attached to the driving shaft through the medium of the transmission. The portions of these two parts which come into direct contact with each other have special friction surfaces which receive the greater part of the wear of the clutch. These rubbing surfaces of the clutch are normally held in contact by means of a stiff spring and are separated only by the movement of a pedal or a side lever.

When the friction surfaces are in the proper condition, this spring is sufficiently stiff to hold the two parts of the clutch so tightly together that no slipping will take place and the crank shaft and driving shaft revolve together as a unit in the same manner as though they were connected by means of a positive coupling. When the two portions of the clutch are moved apart so that no contact between the friction surfaces occurs, the clutch is said to be disengaged and the motor may revolve independently of the transmission.

If the lever or pedal which disengages the clutch is released slowly, the spring will gradually force the two parts together with increasing friction until, finally, the entire load is applied and the portions of the clutch are revolving as a unit with no slipping taking place. Of course, when the two parts are first brought together, slipping must take place until the motor has "picked up" the load, but it is this very flexibility of the friction clutch that makes it so well adapted for use on motor cars on which a positive clutch would be an absolute failure.

The nature of the friction surfaces of the clutch is an important consideration, and substances must be chosen for the rubbing contact which will have a sufficiently high "coefficient of friction," or "grip" upon each other, and yet which will be able to withstand the immense amount of heat generated by the slipping. Leather has proved to be a tried and true friend of the clutch designer, and it has been used as a friction surface as long as the gasoline automobile has been on the market.

On the "Cone" Clutch

It is on the common form of clutch known as the "cone" type that leather forms the friction surface, and it has been found that aluminum or cast iron makes the best companion rubbing surface. The leather, of course, is only a covering which is riveted to a disc having a beveled periphery, thus giving it a shape similar to that of a thin frustum of a cone. This portion of the clutch is mounted on the forward end of the transmission shaft by means of a "feather key" or square shoulder that causes the two to turn together and yet enables the cone to slide longitudinally for a short distance. The second member of the clutch is mounted on the rear end of the crankshaft of the motor and consists of a disc having a recess in its face into which the cone will fit tightly.

That is, the sides of the circular recess in the second member are cut at an angle corresponding to the bevel of the periphery of the cone, and thus when the two parts are forced together by the

spring, the first portion fits "flush" into the second and the entire leather surface is in contact with the aluminum or cast iron sides of the recess. It will be seen that the cone-shaped parts constitute a wedge-like action which enables the leather to grip the second surface with a force of friction almost equal to that of a positive clutch, and yet by withdrawing the cone member a certain amount, the pressure is reduced and any degree of slipping can be allowed to take place.

This action, of course, is reversed when the clutch is first engaged, for the leather comes into contact with its friction surface gradually and slowly reduces the slipping until the two parts of the clutch are finally revolving as a unit.

There are two extremes of clutch behavior, neither of which is desirable. As in many other cases, it is the "happy medium" from which the best results will be obtained, and as this depends upon the condition of the friction surface, the attention to the leather of a cone clutch is an important matter. These two undesirable extremes of clutch action consist of slipping when the parts are fully engaged, and of the harsh and sudden seizing of one member upon the other. The one is caused by too smooth or greasy a leather, while the other trouble may be laid to a friction surface that is abnormally rough. On account of the friction and the attendant heat generated in a clutch, the leather must be properly lubricated, but an excess of oil will be as productive of undesired results as will an insufficient supply.

The man who drives a car will become accustomed to a certain relation between the sound of the motor and the speed of the machine. When the motor appears to be running faster on the "high" than the speed of the car would seem to warrant, it is evident that the clutch is slipping, for this is the only portion of the mechanism in which there is not a *positive* connection between the moving parts. As was stated in the preceding paragraph, this slipping will probably be due to an excess of lubricant and is a condition that may exist even though no more oil than that called for by the instructions is applied to the clutch.

Leather is more or less absorbent, and the continued application of oil will gradually saturate the substance until the clutch can no longer "hold."

If the leather is not badly worn when slipping first begins to take place, a small amount of rosin judiciously applied to the surface may remedy matters, but care should be taken not to administer an overdose, or a "harsh" clutch will result. Just before the rosin is applied, it is a good idea to remove the excess oil from the surface of the leather and the sides of the recess of the second member. If gasoline is used in this cleaning process, enough of the excess oil possibly may be removed to render the application of the rosin unnecessary.

When to Replace the Leather

Owing to the wedge action of the cone when it fits into its recess, the wear of the leather is, to a certain extent, taken up automatically. Continued use, however, will so reduce the thickness of the leather that the cone may be forced as far as possible into the other member without the application of sufficient pressure between the friction surfaces, and in this case, the old leather will need to be replaced with a new piece. This is not a difficult operation, but if it is done by the amateur, he will need to exercise great care in cutting the leather to exactly the proper size and shape so that it will fit smoothly and snugly throughout its length and width.

The rivets that hold the leather in place should be countersunk so that their heads will set well below the surface and will not come in contact with the second member of the clutch. A slipping clutch may sometimes be cured temporarily by tightening the spring that holds the two parts together, but this is only a makeshift, for the fact that the clutch slips at all is generally conclusive evidence that the trouble lies with the friction surface.

Annoying as is a slipping clutch, one that is "ferce" is a greater evil, for it can do serious damage to the motor and running gear, as well as make riding exceedingly unpleasant for the occupants of the car. A clutch of this tempera-

ment cannot be engaged gradually but will "take hold" suddenly and with a viciousness that will not only jerk the car but will strain the motor and running gear, as well. In such a case, care on the part of the driver is of little avail, for no matter how gingerly he may release his foot from the pedal, the harsh friction surface will grip rigidly almost as soon as the contact is made between the two parts of the clutch. If it is a cone clutch that is giving this trouble, it is probable that the leather has become too dry.

If the heat of friction has not abraded the surface too severely, the action of the clutch may be improved greatly by the application of a small amount of castor oil to the leather. This should be distributed evenly and worked in by operating the clutch a few times while the motor is running. Neatsfoot oil may also be used as a cure for a "fierce" clutch. Whichever oil is used, however, care should be taken to apply it sparingly, as an excess will cause the clutch to slip.

In order to make the contact between the two parts more gradual, some clutches are designed with small springs set at frequent intervals under the leather. The leather is forced out in the form of a small "hump" over each spring, and these protruding surfaces first come in contact with the second member of the clutch when the pedal is released. Thus it will be seen that the area of the friction surface increases as the pressure against the cone becomes greater.

The layman would not expect cork to form a good friction surface for use in a clutch, and yet this substance possesses properties that render it exceedingly well adapted for such purposes. Its "co-efficient of friction" is high, which means that, with sufficient pressure, it can obtain a good grip upon its companion rubbing surface. In addition to this, cork is compressible and will stand a high degree of the heat of friction without becoming harsh or injured in any other way. These properties are used to good advantage in the "cork insert" clutch.

Such a clutch may be of the leather-

face cone type having corks set into the periphery at frequent intervals. These corks project about 1/64 of an inch above the surface of the leather and are consequently the first portion of the cone to come in contact with the second member when the clutch is engaged. The cork surface will withstand the friction and heat of the attendant slipping, and thus somewhat the same effect is obtained as though the small springs were used under the continuous leather covering. As the push of the main spring against the cone increases, the corks are compressed until they are flush with the surface of the leather and the entire area of the cone is in contact with the second member of the clutch. This cork and leather surface has been found to be very efficient in transmitting the power from the motor to the running gear of the car.

The Use of Cork Inserts

A cone clutch provided with cork inserts will probably not need as much oil as will one of the full leather type, as the cork surface will withstand a surprising amount of wear and heat. The renewal of the leather will be somewhat difficult, however, as the holes must be cut to "register" exactly with the recesses in the cone casting. The renewal of the corks should not be necessary, even after thousands of miles of use, but if any should become unduly worn, they should be replaced at the factory or at a shop at which the services of an expert can be obtained. The corks are forced in place under great pressure and are cut accurately so that exactly the proper length will project beyond the surface of the leather.

Anyone familiar only with the construction of the cone clutch would scarcely recognize in the disc type a mechanism that serves the same purposes. Different as is the construction, however, the principle of the two types is the same as both rely on the friction between two surfaces to regulate and carry the power from the motor to the transmission. Instead of the cone and recessed member into which it fits, the disc clutch consists of a series of flat

plates, alternate ones of which are attached to the end of the motor crankshaft, while those between are fastened to the driving or the transmission shaft. Thus there are two sets of "interlacing" plates, and as the individual members can slide independently for a short distance along the shaft to which they are attached, the entire series may be either compressed or separated.

It will be seen that if these plates are held closely together by means of a heavy spring, none will be allowed to turn independently, and consequently the two sets will revolve as a unit and will form a continuous connection between the motor and transmission. If the pressure between these plates is released slightly, slipping between the individual members of the two sets of discs will take place, and when all pressure is removed, the motor may revolve without communicating motion to the other half of the clutch.

Material for the Clutch Discs

There are several materials of which the clutch discs may be composed. A common practice is to construct one set of discs of a certain material and to use for the other set a different substance but one that possesses the proper frictional qualities when moved in contact with the first. Thus, all of the discs attached to the motor crankshaft may be composed of a special bronze or copper composition, while the plates with which these come in contact and which are fastened to the transmission may be of steel, aluminum, or whatever other metal gives the best results. In some forms of clutches there may be but three or five discs, while others may contain nearly fifty plates.

Practically all of the "metal to metal" disc clutches are contained in an oil-tight case which should be kept partially filled with a lubricant of the proper quality and consistency. The lower portions of the discs consequently revolve in oil, and this lubricant is carried to the entire surface of each when the clutch is disengaged. As the clutch spring is released and the discs are forced together, the oil is gradually squeezed

out, and thus the nature of the friction surface is changed automatically at the same time that the pressure increases.

A clutch of this type will wear but slightly and it is seldom that a new plate will be required. The clutch should be taken apart and cleaned every few thousand miles, however, and the old oil and grease replaced with new, clean lubricant. Any gummed oil which adheres to the plates should be removed with gasoline or kerosene, for if this is allowed to remain, the friction surface will be so changed that the clutch will slip,—and tightening the spring will not remove the cause of the trouble. The plates of a metal-to-metal disc clutch may, after a long period of use, be worn more in some places than in others. When the discs are examined all rough surfaces should be smoothed down with a file or coarse emery paper, for abrasions will not only wear the adjoining discs, but will make the action of the clutch harsh and difficult to control, as well.

It is probable also that the edges of some of the discs will be turned over or worn rough, and this condition will often cause the clutch to stick so that it cannot be disengaged easily. This is a bad fault and may sometimes result in accident to car and occupants if the trouble is not remedied. The cure is simple, however, and if a file is used on all of the plates that show any sign of roughness, even to the extent of beveling the edges slightly to make certain that all ridges and projections are removed, the clutch can be made as good as new.

Some forms of disc clutches employ steel plates that revolve adjacent to "cork inserts" in the second set of discs. In this case, of course, the cork insert plates take the place of the copper or bronze composition discs described above, but otherwise the action of the two types is the same. There are also other combinations of discs, such as steel against a specially treated steel, steel against fiber compound, and steel against an asbestos preparation.

Some of these forms are known as "dry plate" clutches for the reason that they require no oil, but such a type, of course, demands the use of the very high-

est heat-resisting materials obtainable. Although the dry-plate clutch gives better service when run without oil, it is possible that the owner of such a type, despite directions to the contrary, will endeavor to lubricate the plates. No serious damage will result from this mistake, however, as nearly all of the dry-plate clutches are provided with channels in the discs which will allow the lubricant to flow to the bottom of the case, from which it may be drained as soon as the driver discovers his mistake.

The "floating ring" clutch is similar in principle to the types just described, except that a single ring replaces one set of discs. There is another type of clutch, however, which is quite different from either the cone or the disc form. This consists of a cast-iron, steel, or aluminum rim attached to the rear end of the crankshaft of the motor. This rim, or drum, revolves near a band or shoe that can be made to clamp the moving surface and thus turn the transmission with the motor.

In one form, a spring operates a series of levers or racks which expands, or moves outward, a jointed shoe around which the rim revolves. This shoe is generally of brass or bronze, and as it grips the interior of the rim with a constantly increasing pressure when the pedal controlling the spring is released gradually, the two portions of the clutch finally revolve as a unit. This is known as the "internal expanding" type.

The "external, contracting clutch" operates on somewhat the same principle as the type just described, except that a band surrounds the outside of the drum, or rim, and can be made to constrict until a sufficient grip is obtained to cause the two parts of the clutch to revolve as a unit. This constricting band may consist of a strip of flexible steel to the inside of which is attached a specially-treated fiber or canvas which possesses the proper frictional and heat-resisting qualities.

The amount of oil necessary on either the expanding shoe or the constricting band type of clutch depends upon the nature of the materials used as friction surfaces, but it may be said in general that neither of these forms is intended to be run entirely "dry." If undue wear takes place in either the band or the shoe, the part may be replaced easily, as one of the main features of design of this type of clutch lies in the accessibility of all portions. Adjusting nuts and screws are provided by means of which a certain amount of wear may be taken up.

No matter how well-designed and smooth-acting a clutch may be, the personal equation enters largely into its operation, and, if not handled properly, the most perfect mechanism of this kind may give results no better than those obtained from an old and worn out clutch. The ordinary friction clutch is *not* automatic and the controlling pedal must never be released suddenly when the motor is running. A sudden engagement of the clutch may, at the time, seem to do no more than cause the car to "rear up on its hind legs," but strains will surely be induced in the motor and running gear that will eventually make a worn-out machine of one that should, if properly used, give several more years of active service.

Furthermore, continued abuse of the clutch may serve so to strain the shafts that the two members will be thrown out of alignment, thus preventing a uniform distribution of the friction and pressure. This may result in a "jammed" clutch, or one which cannot be disengaged, and it is evident in such a case that the driver will be unable to control the car properly and that the passengers and machine are in great danger if the automobile is run under these conditions. Although rare, such accidents have occurred a sufficient number of times to render a warning of this kind worthy of notice on the part of the carelessly-inclined driver.



THE CAMP SUPPER

BY HARRY H. HOLMES

SEPTEMBER, when roasting ears are plentiful and evenings are often bracingly cool, is the ideal month for camp suppers. They are easily planned, but how few people can manage one cleverly. Nine out of ten burn the corn and char the outside of the potatoes, leaving the interior nearly raw and, as for broiling a steak primitive style, they give it up as a difficult ideal and use the prosaic skillet. The more helpless have been known to substitute an alcohol lamp for the wood fire.

But if you would enjoy a camp supper to the full, do it in crude and clever fashion. The savage, you know, is an artist in woodcraft. Build the evening's success on the fire. Pile up, layer fashion, two parallel walls of stone a few feet long, nearly a foot high, and not more than a foot and a half apart. Throw a few sods against the outer sides of the walls to keep in the heat, and the fireplace is ready. Break up dry brush, driftwood, bark, and any sticks not more than two inches thick. This will make a roaring fire between your two walls and will quickly collapse into a great bed of hot ashes and glowing embers, the ideal fire for woodland cooking.

Now rake most of the embers to one end of the alley and drop the roasting ears, husks on, one layer deep on the remaining ashes. Rake back over the corn enough embers from the other end to cover them completely. In the same way fill the opposite end with corn, putting potatoes, of good size, in the middle where it is hottest. As a rule, the potatoes will require ten minutes more time than the corn.

There must be a good mixture of ashes

with the glowing embers or everything will scorch. Roasting ears will bake in half an hour or a little longer. They should cook until a delicate brown spreads over all the grains. This imparts a delicious nutty flavor not found in boiled or half baked corn. It is best to rake out an ear every few minutes to be sure it is not scorching or that the ashes are hot enough. A few fresh sticks on top will hurry them up.

Now for the steak. Buy a cheap wire broiler and nail it to a six-foot hoe-handle. Skewer a few strips of bacon on both sides of a thick sirloin for flavor and clamp it firmly in the broiler. Now the cook can stand comfortably to one side of the wall and broil the steak, not his face, as most amateurs do. As the melting bacon fat drips off, quickly turn the steak, keeping this up perhaps fifteen minutes. That steak ought to be superb.

Coffee? By all means. Rake a small pile of embers between two flat stones and you have a splendid stove for the coffee pot.

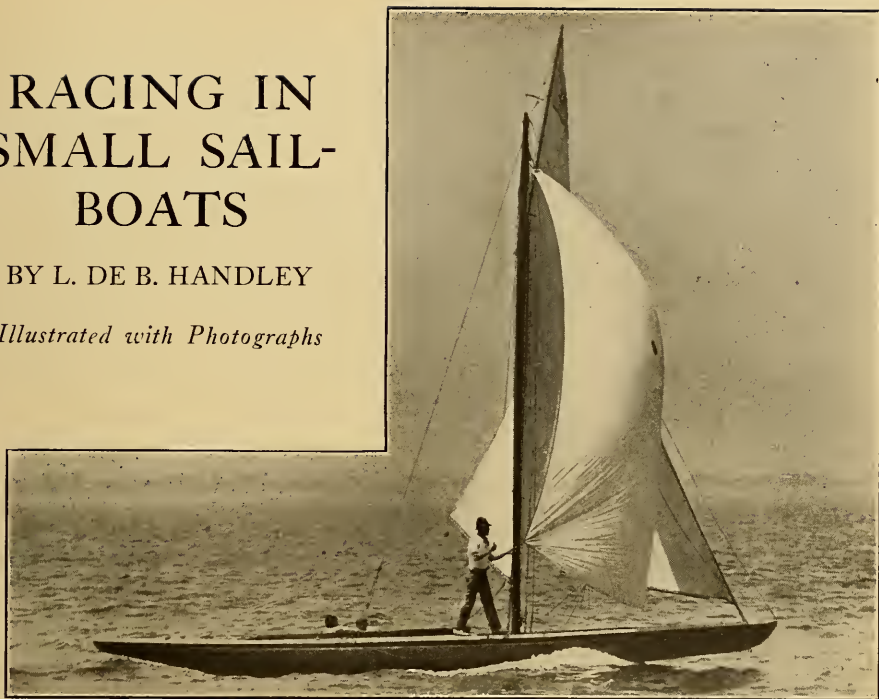
Time everything so the corn will be eaten first. Follow with potatoes and steak, capping the climax with strong, black coffee. No plates for the potatoes. Break them open and let everybody eat out of the half-shell. A lump of butter soon melts in such a cup. As for the roasting ears, the husks should be stripped back for a handle and the rest is a delight. Serve the steak as you will, though clean, flat rocks have served as platters.

The advantage of building the fire in the manner described will be evident after trying it. Heat is kept in the ashes much better when confined and cooks can approach the fire without being scorched.

RACING IN SMALL SAIL- BOATS

BY L. DE B. HANDLEY

Illustrated with Photographs



A SPINNAKER BREEZE

EVER since the introduction of the power boat into the field of racing, alarmists have been predicting the early disappearance of the competitive sailing yacht, but somehow, as season follows season, there appears no indication of the ill prophecy coming true. In fact, interest in the sport seems to be growing yearly; more and more men are taking it up, and the number of racing sailboats is increasing instead of decreasing.

One has but to glance over the newspaper files of 1910 to verify the correctness of this statement. Not only was the season the most successful in history, but the Larchmont Week Regatta, which may well be taken as the barometer of yachting matters, brought together a record fleet of one hundred and twelve boats, the greatest ever chronicled.

It may suit the pessimist to see in the abandonment of the huge racing freak of former days a sign of the decadence of the sport, but the growing popularity of the smaller classes proves conclusively how biased is his judgment. The gigantic

speed machine is an anomaly, justifiable only under the plea of international competition, as a test of world supremacy, if at all; it has no place in everyday sport. The cost of building and running it is out of all proportion to the pleasure it affords. Besides which, the constant changes in rating rules, brought about by a praiseworthy effort to develop sane and seaworthy types of racing craft, make its period of utility problematic and often very short.

But, apart from these considerations, yachtsmen have come to realize that other advantages are derived from the change to smaller boats. Chief among them is the securing of absolute command of one's craft, which is neither practical nor advisable in the larger classes. The great spread of canvas on anything above a forty-footer makes it almost imperative for the helmsman to entrust to another the task of directing the setting and trimming of sails, and this division of authority often proves a cause of annoyance, for it is not in human nature to share power without disagreement, and differences of opinion

lead to argument and impair one's chances of victory.

On craft of, say, the P class size, or below it, the owner or skipper is absolute master. While at the tiller he can form and carry out his plan of campaign without aid or interference, and he knows that upon his skill and generalship must depend the issue. This is a great source of satisfaction, for every man likes to feel that, win or lose, he is in full control of his ship and all credit and blame must go to him.

Plenty of Competition

Another good feature of small boat racing is the assurance one has of keen competition and plenty of it. The big fellows could never rely on more than one, or possibly two opponents. In the smaller classes, instead, several starters are the rule rather than the exception. Take, for instance, the New York Yacht Club thirty-footers and the new Larchmont Yacht Club monotypes launched last year; it is a rare occurrence when half a dozen of the former and a dozen of the latter fail to report for a regatta, and the majority are so well handled as to make the contest a fine battle of wits in which every trick of seamanship has to be brought into play and the least error may be responsible for defeat.

And what racing it is! At start a sharp tussle in close quarters for the honor of crossing the line first; then an exciting neck to neck struggle over the course, with every sense on the alert to anticipate unexpected moves from one's rivals and to take advantage of every opportunity; a thrilling fight to the end, with every antagonist a probable factor until the home mark is reached. To the keen sportsman such racing is ten times more exciting than the dual encounters of the lordly ninety-footers.

The belief, once deeply rooted, that to race yachts enjoyably and successfully one must have unlimited means no longer obtains. Its fallacy has been demonstrated; the game is open to all. There are seen everywhere, nowadays, enthusiasts who, though unable to afford expensive craft, follow the sport with as much zest and pleasure as their more

fortunate brother yachtsmen. They own little open dories, diminutive decked-in sloops, and other tiny cockles that require but a few hundred dollars to build and can be maintained at really nominal expense, yet they have as much fun with them as if they were handsome yachts. There is evidence of it in the regularity with which the dories attend in full force the regattas of Massachusetts Bay, Long Island Sound, and New York Bay. Indeed, the keen rivalry among skippers is hardly surpassed in the larger classes. And, after all, it is the spirit of competition which appeals to the true sportsman, not the size or type of the craft.

It is indicative of the development of sailboat racing that many confirmed cruising yachtsmen have of late taken it up. Nor can one feel surprise at their conversion. There is a fascination about racing totally lacking in cruising. Sailing quietly from port to port, with no greater incentive than to get there, is at best a tame pastime. One is often too lazy or unconcerned even to trim sheets or set light sails, and a boat comes to be a mere means of transportation. How different in racing! There is no room on board here for the drones. Every man's services are in demand as crew, he is raised to the dignity of able seaman with particular duties allotted to him, and the voice of the skipper keeps him constantly on the jump, for there is something to be done every blessed moment.

The handicap classes have done a lot to popularize small boat racing, particularly among the cruising men, for they have made it possible for craft of almost any build to compete with prospects of success. Time allowances are not calculated on hull measurement and sail area in these classes, but on actual or estimated performance, and boats sail in separate divisions, determined by and according to their speed. At first the system did not meet with general favor, for it was at times necessary to match a big under-rigged cruiser with an out-classed racer half its size, and this incongruous pairing caused ridicule that men were often unwilling to face. Some braved it, however, and reported such good sport that little by little the ranks grew



LETTING HER HAVE IT



A WELL BUNCHED START IN A LIGHT BREEZE

until it was possible to give a certain homogeneity to the divisions, then prejudice fled and the membership increased rapidly.

There are at present handicap classes in all Eastern yachting centers. That of Long Island Sound is the most flourishing. Last year its fleet numbered forty-four sails, formed into five divisions, and they gave three hundred and sixty-seven starts and won one hundred and seventy-two prizes. Rather a healthy organization.

There are two different and distinct kinds of races indulged in by sailboat men: Short ones, around triangular courses; and long, or cruising ones. They are totally apart from each other, require different attributes in skipper and crew, and as a rule are fostered by different men, though a few enjoy both.

Triangular racing appeals most to those who cannot afford to leave their interests for any length of time and to yachtsmen who do not care to subject themselves to any inconvenience. It takes but a few hours of the afternoon to cover the ten or twelve mile courses prescribed and one can generally count on getting home for dinner. Also the

regattas are usually held on Saturday so that little or no time has to be taken from business.

It is a most pleasant way of spending the half holiday. There is something very attractive, even gay, about the reunion of the fleet around the committee boat before starting. It is like a big social gathering. Most of the skippers and crews know each other and one notes on every side a friendly exchange of greetings, a jolly bandying of quip and repartee, as the boats cross and re-cross, or move along rail to rail, awaiting their signal. And all about are non-racing craft of every description, often dressed in multicolored flags in honor of the occasion, that give to the scene a festive and striking appearance.

Not the least charm of racing lies in its uncertainty and ever-changing phases. You may find a bright, sunny day, with smooth sea and gentle zephyrs, or you may run into lowering skies, rough water, a howling gale, and possibly drenching rain. And while one enjoys the fair weather it is the battle with the unchained elements, the close proximity of danger that really fascinates. One learns to love the sound of the wind



A START LIKE THIS TAKES NERVE

shrieking through the rigging and the feel of the salty spray cutting the face, as the boat plows along with deck awash, every rope straining to the breaking point. It is a man's game, then, a game that appeals wonderfully to anyone with a drop of fighting blood in his veins.

Success in triangular racing depends a great deal on the watchfulness and promptness in action of skipper and crew. It is often necessary to meet the unexpected move of a rival on the spur of the moment and rapidity in maneuvering is essential. The crew, which is frequently composed mainly of corinthians, is an integral part of the racing machine and unless it is well trained and working in perfect harmony, good results cannot be hoped for.

I once witnessed crew-work in its ideal form in a race aboard one of the Massachusetts twenty-two-footers and it was a revelation. The men, all amateurs, had been sailing together so long that they did things instinctively, almost unconsciously, and they went about it with a vim that was inspiring. The only order one heard from the skipper was, "Ready about" or "Ready to jibe." For

the rest, whether it was to set spinnaker or balloon, trim sails, or anything else, everyone knew so accurately when and how to do it that it was quite unnecessary to tell them. This boat won almost every race she entered with the original crew handling her, but never showed at all after changing owner.

And looking on the other side of the medal, an episode of the season of 1909, in Long Island Sound, will illustrate how a slight error on the part of a crew may account for defeat. The *Crescent* and *Bobtail* had been fighting all summer for supremacy in their class and met off Larchmont in one of the late and deciding regattas. It was one of those days of steady breeze in which flukes are unlikely to occur, and the two boats made a great race of it. Side by side they covered the course, not fifty yards dividing them at any time.

On approaching the last mark, from which it was a reach home, both carried spinnakers. The *Bobtail* was leading by a few feet, but the *Crescent* could out-reach her and it looked like a sure thing for her. The order to take in spinnakers came simultaneously from both skippers. On the *Bobtail* it dropped neatly and she

rounded the mark nicely, but on the *Crescent* the man who was to lower the halyard allowed a couple of feet of it to slip through his hands before the pole was in and the next minute the stick had caught the water and was jammed against the shrouds.

At the speed the boat was traveling it was a difficult thing to free it and some time elapsed before the big sail was gathered in. By then the *Bobtail* had gained a big lead and although the *Crescent* cut it down considerably on the reach home she was beaten by fifty-eight seconds. Barring the accident, she would undoubtedly have won. Of course, this is but one of the hundreds of things which a crew man can do to handicap and hurt a boat's chances.

Coolness and Nerve Demanded

A racing skipper must have presence of mind, know every trick of boat-to-boat sailing, be able to see opportunities at a glance and know how to take advantage of them, have perfect control of his crew and craft, and possess the cool head and nerve necessary safely to take a risk when the occasion demands. One is working so close to an adversary, at times, that only inches separate when one alters course or goes about, and it takes a sure eye, a steady hand, and plenty of courage to maneuver in such instances. The slightest miscalculation will cause a collision that is punished by disqualification and may also do considerable damage.

Presence of mind is a very valuable asset. Most sailing men know what they ought to do under given conditions, but it is the man who thinks first and acts quickest who secures the advantage. An instance, out of the thousands which might be cited, will illustrate. If memory serves me, it was in 1903 that the Herreshoff thirty-footer *Alert* entered the field against the *Oiseau* and *Flosshilde*, then the leaders of the class. In one of the mid-summer regattas the *Oiseau* came late to the line and the other pair were a few hundred yards away before she crossed.

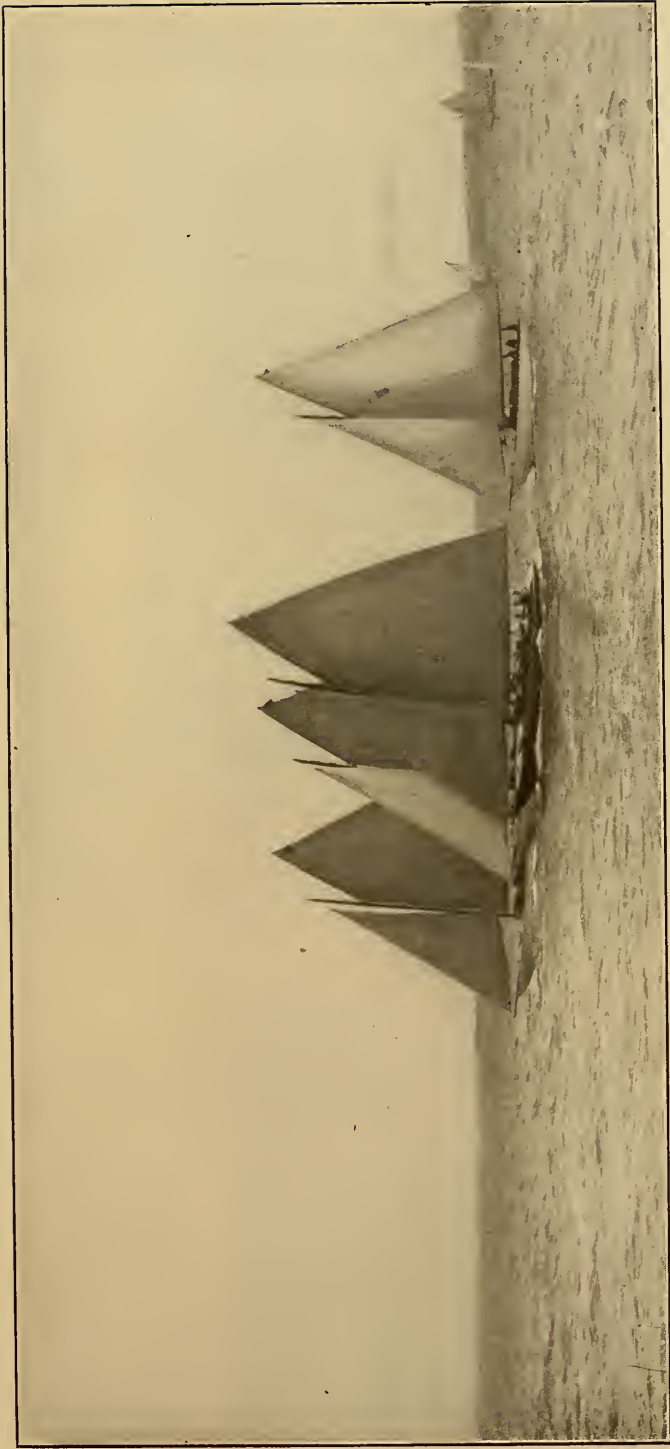
A light air from the west enabled the fleet to lay the mark and make slow

progress against the incoming tide. Off the turning buoy the wind petered out completely and the boats began to fall back. Elementary seamanship should have told every skipper to anchor and hold his ground, but somehow only the *Oiseau's* captain seemed to think of it. He quickly dropped a small hook and the others soon drifted back to him. They then saw their mistake and followed suit, but it was too late. When a fresh afternoon southerly sprang up the *Oiseau* was first to get it, and the lead she gained by it brought her home in front. Her victory was due solely to presence of mind.

Trickery, or let us say strategy, also plays an important role. Every experienced racing man has an infinity of little dodges stowed away in his head, which he makes use of when the chance presents. I saw Billy Swan win a race with the American Yacht Club monotype *Hobo* in a manner that demonstrated the value of a fertile brain. On the latter part of the last leg, a spinnaker run, he was rapidly overhauled by the *Jolly Tar* and it looked as if he would soon be blanketed and passed. Swan waited until his rival was nearly alongside then dropped spinnaker and rounded up, forcing the other off his course. Thus they proceeded until in range with the committee boat when the *Hobo* suddenly jibed and found herself nearest to the line and to windward so that she had no difficulty in crossing first. Had Swan held his course he would probably have been beaten.

Knowledge of conditions, ability to anticipate changes in tide and wind, and constant watchfulness are often deciding factors. Fluky breezes predominate in Eastern waters during the hot months and one needs to be perseveringly on the *qui vive*. Over and over again events have been won by those who were on the lookout. Only last season, in one of the Larchmont regattas, the fleet was lazily drifting from Red Spring buoy to a dory off Sands Point, with hardly breeze enough to fill the sails, when a dark line on the water, near the shore, heralded the arrival of the usual southerly.

The yachtsmen who were watching



CLOSE WINDWARD WORK WITH THE NEW YORK 30-FOOT ALL DESIGN CLASS. ALL THE "TRICKS OF THE TRADE" ARE NEEDED HERE

for it saw it first and unhesitatingly went to meet it. A few minutes later they were speeding along with rail under, while those who had held to a straight line were left helplessly behind and were beaten beyond hope by the time the wind reached them. A good sailor will go a long way out of his course to find wind on such a day.

Sound judgment and perfect control of one's craft are indispensable not only to success, but to safety. A racing skipper often finds himself in very nasty holes, particularly in jockeying for a start and rounding a mark, and it takes a level head and a firm hand to avoid setbacks and possible accidents. In the elimination trials held at Oyster Bay in 1907, in anticipation of the Jamestown Q class races for the King's Cup, nine boats reported and found a half gale blowing. Some pretty work was seen while they waited for the early signals, but it became sensational as the time for the start approached. All nine boats were aiming at reaching the extreme windward end of the line at exactly the same second and the way they maneuvered in close formation, heeled to a dangerous angle, in a smother of foam, was a sight to behold.

Fifteen seconds from the gun the *Vingt Trois* was under the lee of a rival, close hauled, and seemingly hopelessly pocketed, for she hadn't room to go about and jibing was out of the question. It was

one of those cases when a chance had to be taken and the skipper realized it. Bearing off a trifle he opened the gap a little, then jammed the tiller down hard and spun around. It was so close that an involuntary cry escaped both crews, but it was calculated to the inch. The bowsprit swung within a hair of the other's mainsail, without touching it, and as the gun boomed, the *Vingt Trois* went over in splendid position. It was as pretty a piece of work as the writer ever saw, and as dangerous, for at the rate both boats were traveling a collision would have meant disaster.

It is the wise man who can estimate when to take a risk and when not to. Recklessness and foolhardiness are the negation of good seamanship and seldom do one any good. In a race I witnessed in 1910 a reckless skipper lost a prize and a spinnaker by poor judgment, and hundreds of others have probably fared worse. In this case four of the New York Yacht Club thirties were tearing before a gale on the last leg of the course, almost on a line. It was a question which would get over first. It was blowing entirely too hard to set light sails and none carried spinnaker, but as the finish floats hove into sight the captain of the second boat decided that to win he must do something unusual and the only thing that occurred to him was to crowd on sail, so the order went forth to set spinnaker.

It was madness to attempt it, and the crew protested, but to no purpose, so up went the sail in stops and out the pole. As might have been predicted, no sooner did the huge bit of canvas break out than the howling wind got hold of it and tore it to ribbons. In a minute all was confusion on board and before the wreckage had been cleared the foolhardy skipper found himself relegated to fourth place and so he crossed the line. It is a wise saying of old salts that any landlubber knows when to put on sail, but only a good sailor when to shorten it.

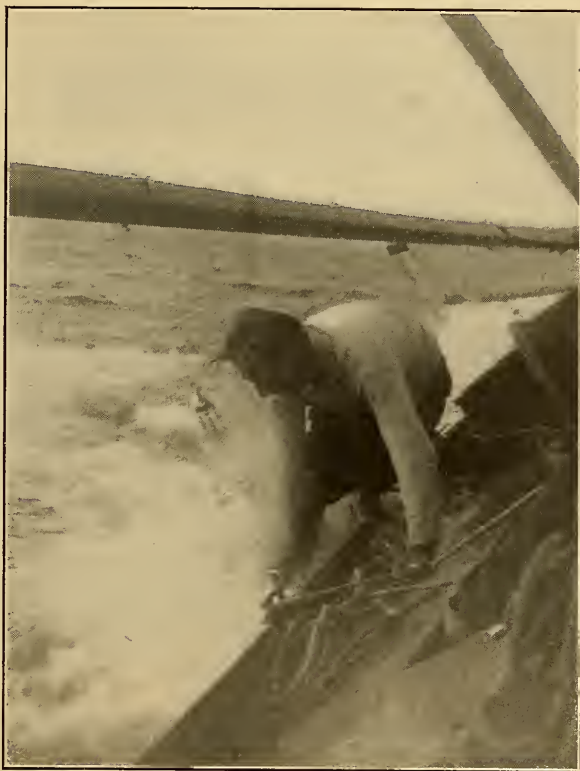


A PICK-UP MEAL WHILE RUNNING BEFORE THE WIND

The spirit of sportsmanship is prevalent among racing yachtsmen and makes things very pleasant. There are, of course, a few black sheep, as there are in every sport, but not many. One will often see a class wait for a belated member after the signal to start has been given, and I have had several personal experiences which show how general is the feeling of not wanting to take unfair advantage of an opponent. Last year, for instance, I went to the line shorthanded one day during Larchmont Week, and mentioned my plight to the owner of *Wander IV*, a rival craft. He immediately asked me to take one of his own crew men and generously deprived himself of the latter's services to help me out.

The season before I lost the *Crescent's* jib in one of the Oyster Bay regattas, on Saturday, and it looked as if I would be kept out of Monday's race, at Larchmont, but the skipper of *Bobtail*, a feared opponent, promptly tendered one of his and enabled me to compete. Again while sailing on the raceabout *Rascal* we split our spinnaker on the first round of the course and the owner of the *Busy Bee*, racing against us, magnanimously came alongside to offer an extra one that he had on board, although he lost considerable ground in so doing. Doubtless every racing man has had similar experiences.

In long distance or cruising races, trickery does not play a conspicuous role, for the simple reason that the boats are seldom grouped. They often part company soon after the start, to follow different routes and at times do not come together during the entire contest. Some look upon this feature as a most unsatisfactory one and claim that it detracts from the zest of competition, but anyone who has waited for the first clearing of



LETTING GO THE LEE RUNNER WITH THE RAIL UNDER

dawn to scan the horizon with glasses, in search of the rest of the fleet, knows how keen is the interest throughout.

To be successful in long-distance racing, the most essential attribute is understanding of at least pilot water navigation. This knowledge many have acquired practically in pleasure cruising, and it stands them in good stead. Familiarity with tides, lights, fog signals, winds, charts, and compass sailing gives a tremendous advantage. But above all it is necessary to be able to steer by feel, on the wind, during the hours of darkness. It is a rather rare accomplishment that only comes after long practice.

Endurance is also indispensable. The men are most valuable who can stand the strain of continued work at the tiller without allowing their attention to wander from their task and who will shoulder without a murmur the burden of changing and trimming sails when tired. It is no sinecure to be in harness



ALL KINDS OF LIGHT CANVAS

day and night, ever ready to respond to the call of "All hands on deck," and frequently with only a snatch of sleep taken now and then, and no solid meals. The time comes when nature clamors for rest, and no end of will-power is needed to stick to one's duties. Particularly in heavy weather, when skipper and crew have no respite, there are hours when drooping lids and aching muscles cry out for mercy and it becomes punishment to perform even the slightest task.

It is poor policy to waste too much energy in the early part of a long-distance race. Human endurance has its limitations. You will usually see the veteran leave the work to the eager novice, at first, for he knows where over-anxiety leads. It is when the other begins to give out that he jumps into the fray. And it is the wise skipper who establishes rigorous discipline on board, and after dividing his crew into two watches insists on each being below deck during the hours off duty. A crew that remains fresh to the end increases the likelihood of victory tenfold.

It must not be imagined, however, that it is all work and no pleasure. A few congenial companions manage to

knock no end of fun out of these trips. Men who sail are generally of the happy-go-lucky type who can take with a smile good fortune and ill, and after all, with a light heart and a fair sense of humor it is not hard to turn small inconveniences and even mishaps into a laugh.

And there are compensations. What of those wonderful days when the sky is blue, the sunshine bright, the water sparkling, and the wind steady and true? What of those incomparable nights, soft and mellow, when the white sail glistens in the moonlight and one lies comfortably on deck drinking in the beauty about and listening to the gentle swish of the water under the bow? What of those thrilling sails in the darkness, when the wind sings a mad song through the shrouds, the waves crash over the side, and one feels the boat leap like a living thing through the inky blackness, seemingly eager herself to rush on to victory? Sport? Why there is nothing like it.

The sport is still in its infancy, but it is developing fast, and rapidly making recruits. Time was, and not many years ago, when one spoke with befitting respect of the few who dared venture outside of sheltered waters in supposedly



AGILITY MEANS MUCH IN SMALL BOAT RACING

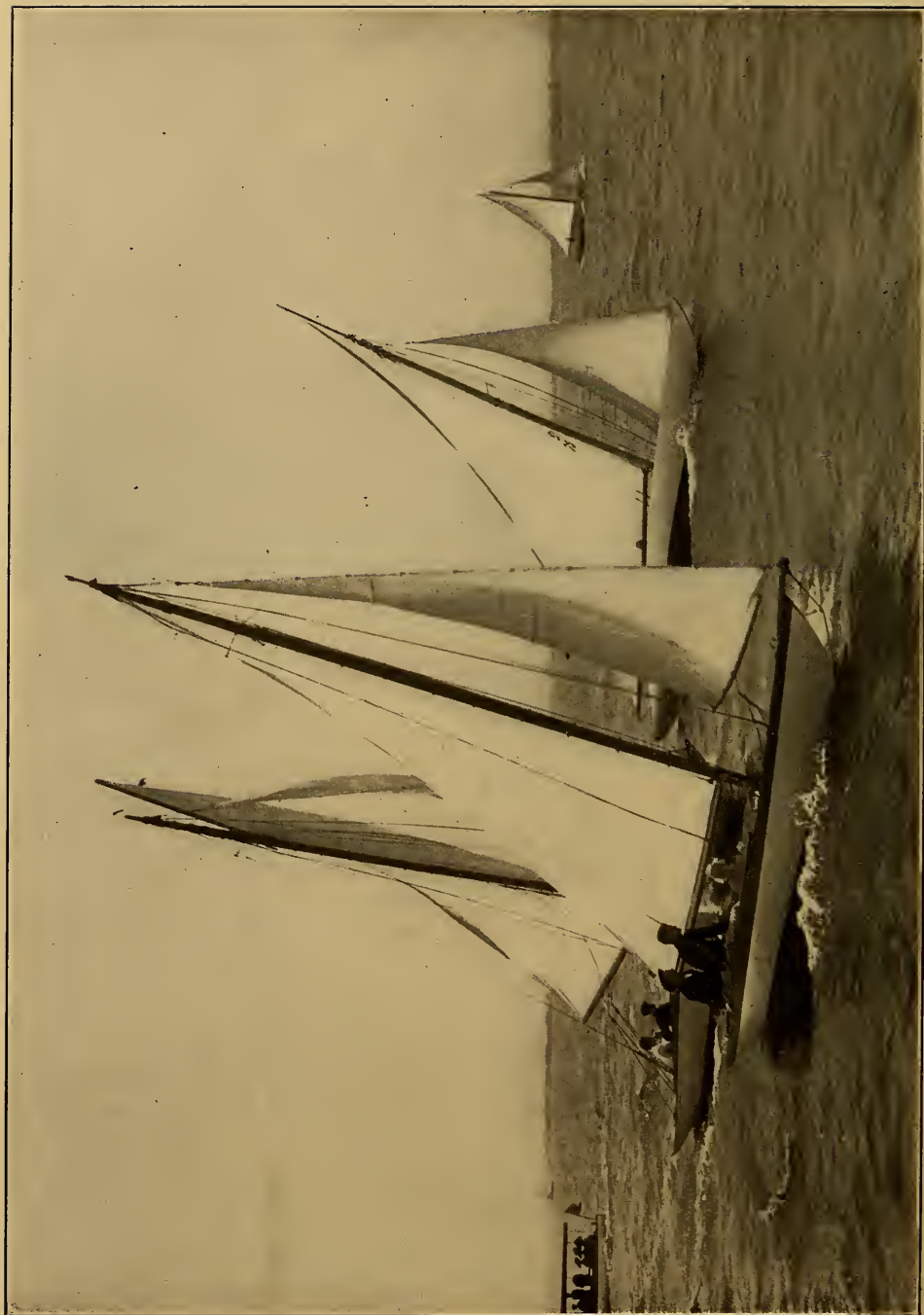
frail and unseaworthy racing craft. But things have changed. Yachtsmen have come to appreciate how much a well-built little boat will stand, if properly handled, and it has given them confidence. They have also perfected themselves in the art of navigation and lost all fear of unconfined horizons. One has but to compare the early fleets that took part in the Block Island race of the New York Athletic Club, now the classic small-boat feature of the Eastern season, with those of to-day, to note the remarkable progress made. Six boats took part in the event at its introduction, and nearly fifty crossed the line last year.

But even more conclusive was the contest for the yachting cups of 1910, which were competed for over a two-hundred-and-ten-mile course that circled Long Island. Most of the distance was covered in the open ocean in sight of a dangerous coast which for some seventy-five miles offers no harbor or shelter to put into in case of storm. Nevertheless, thirteen boats under forty-two feet on deck, most of them of an out-and-out racing type, completed the long journey successfully.

The memorable trip of the thirty-foot-

er *Mimosa III*, in the Cape May Race of 1908, afforded a striking example of the seaworthiness of the modern racing craft and of the ability and fearlessness of our corinthian sailors. Manned entirely by amateurs, the little ship went out bravely into weather so fierce that several larger and heavier-timbered boats had to put back to port, and for an entire night beat into the teeth of a tearing gale, hammered by seas that tested the best staying qualities of the big schooners against her. Yet she stood it undaunted and emerged from the test without showing a mark of the terrific pounding she had received.

There are now held yearly in the East about a dozen important long-distance races open to all, besides many club cruises which are also competitive, and the boats that take part in them are drawn principally from the triangular racing classes. In some of these events professional crews are allowed, but in others only corinthians may be used. Skippers seem to prefer good amateurs, anyhow, when they can get them, for they take keener interest in the contest and are generally more willing to spare no pains to win.



A SCRAP FOR THE WINDWARD BERTH

There is evidence of the growing popularity of long-distance racing in the number of yachtsmen who will any day abandon triangular courses for it, and it is not difficult to explain the preference, for there is a great deal more to it, a far greater variety of happenings. Conditions are often met which one seldom, if ever, encounters in afternoon racing, and weather of several different kinds may be one's lot in the same race.

A brief outline of last summer's contest for the Brooklyn Yacht Club's Ocean Cup, in which the writer sailed on the *Waiialua*, will serve to give a good idea of the diversity of experience one may enjoy on such trips.

The course lay from off Echo Bay to Vineyard Sound Lightship and around it, then outside Block Island and Long Island to Sheepshead Bay, a distance of two hundred and eighty nautical miles. The first part of the journey was covered under spinnakers, with a moderate breeze and ideal fair weather. Up to Horton's Point the wind held and the fleet kept together. Then came night and a dead calm of several hours. Morning brought fluky light airs from every point of the compass, and the boats scattered in every direction. By evening a dense, blinding fog had closed in, and for nearly five hours skippers had to sail dangerous waters entirely by dead reckoning, for lights could not be seen and fog signals were indistinguishable in the babel of horns, sirens, and whistles, sounded by passing steamers.

The course lay along the route of vessels plying between New York and Eastern ports and an infinity of them seemed to be seeking the lightship about the time we approached it. For a stirring and exciting experience commend me to beating up to a light that cannot be seen a hundred yards off on such a night, with the danger ever present of being annihi-

lated by one of the nearby monsters whose deep-throated bellows and throbbing engines can be heard on every side. We escaped, however, and finally located our mark about midnight, got safely around it, and struck for the open sea, anxious to get out of harm's way.

By dawn the fog had lifted, but ominous clouds on the horizon and a falling barometer gave promise of storm. It came sooner than we expected, and a healthy young squall it proved to be. For about an hour the wind kept us on the jump, while the rain poured down on us. Then the storm passed swiftly, leaving a heavy swell and a light head wind, a combination against which it was almost impossible to progress. Before noon a spanking breeze set in, though, and took us in short tacks to Montauk Point, off which we found big-crested waves that it was necessary to go through. They gave us a bad quarter of an hour and an alarming pounding.

Outside Long Island we ran into a half gale sweeping over the hills in such ugly puffs that we had to reef. Then the wind moderated and allowed us to resume full sail, only to blow harder than ever about an hour later, forcing us to cut down the canvas to the second points. Even so it was heavy going and the tiller pulled so hard that we had to take turns at it and make the tricks very short. But all's well that ends well. By sundown a nice, steady, reaching breeze had set in and with balloonier kiting we tore off the miles under perfect conditions throughout the night, hardly touching a sheet until the bend in the coast made us round up close-hauled. We crossed the line at day-break with the wind still holding true.

There may be more fascinating sports than small sailboat racing, but it is not the yachtsman who has experienced its thrills who will admit it.





Photograph by Levick

THE ENGLISHMEN RUSHING DOWN THE FIELD IN THE FIRST OF THE INTERNATIONAL POLO MATCHES AT MEADOWBROOK



Photograph by Levick

SHOWING THE FINE AMERICAN TEAM WORK. PAYNE WHITNEY RIDING OFF CAPT. CHEAPE. LAWRENCE WATERBURY
TAKING THE BALL



Photograph by Levick

"MONTY" WATERBURY TAKES THE BALL AWAY FROM CAPT. LLOYD

DAMPIER, PIRATE, EXPLORER AND AUTHOR

BY JOHN R. SPEARS



As the American frontier was pushed across the prairies from the Mississippi to the Rocky Mountains it was observed that among the more lawless men of the border line one was found, now and then, who became a horsethief, not so much because of the money to be obtained or because a horse was wanted, but through the love of an exciting adventure. They knew they were alive with a sheriff on their trail, as one of experience said to the writer. Of a similar spirit was William Dampier, the buccaneer, of whom it has been written that "It is not easy to name another voyager or traveler who has given more useful information to the world, or to whom the merchant and mariner are more indebted."

Dampier was born on a farm in Somersetshire, England, about the year 1652, and he was receiving a classical education when his parents died and he was apprenticed to a shipmaster. His first voyage was to France and his next to Newfoundland. He suffered so much from the cold in the latter voyage that he decided to abandon the sea. But "the curse of the wandering foot" was upon him—he was only eighteen—and having been invited to join an East Indiaman, "the prospect of a long voyage and a warm one" carried him to sea again. While Morgan was leading the buccaneers to the destruction of Panama, Dampier was a sailor before the mast in the East Indies.

After this voyage Dampier was for a time a naval sailor and then the manager of an estate in Jamaica. In August, 1675, he shipped on a Jamaica coaster, and thereafter his career lay fair before him. As a West India sailor he

was thrown among the buccaneers from the first, and the one thought of the buccaneer mind was an incursion into the Forbidden Land.

To appreciate Dampier's feelings it should be remembered that the Spanish allowed no foreigners to trade with their American possessions, save only as the Genoese were their purveyors of negro slaves. To the British the Spanish Americas were unknown lands until the buccaneers opened the trails, and as the buccaneers told Dampier about their adventures even their greatest hardships seemed covered with sunset glories.

Going to the coast of Campeachy, Dampier joined a band of buccaneers who were cutting logwood, while waiting for some leader to announce an expedition against the Spaniards, for logwood could be sold for fifteen pounds a ton on the beach. While hunting in the interior, Dampier lost his way and was in much peril for twenty-four hours. While walking along a river bank he stumbled over a man-eating alligator and was so badly frightened that he fainted. Finally a hurricane brought a tidal wave into the forest and floated the whole band with whom Dampier was associated from their camp and destroyed all their provisions. But having saved their canoes and their arms, they were neither distressed nor downhearted.

Leaving the flooded site of their camp they paddled away along the coast, stopping at every small settlement for such plunder as they could find, and at the end of a year reached Alvarado. This town was large enough to afford perhaps two hundred fighting men, and the buccaneers numbered only sixty, but an attack was made and the town carried after a loss of ten men.

Although the people escaped with

their gold and silver, the buccaneers obtained two very good coasters with an abundance of provisions, and then sailed from the river in hopes of improving their fortune rapidly. But as they reached open water they saw seven Spanish warships coming down wind to exterminate them. The flagship carried one hundred men and ten cannon, while the smaller vessels carried crews of from sixty to eighty—there were five hundred Spaniards all told in pursuit of fifty buccaneers in two unarmed coasters. But the buccaneers by superior seamanship dodged to and fro until the Spanish ships were separated and then united in an attack upon the flagship which drove it away to leeward and allowed them to leave the coast unharmed.

A Sure Enough Pirate

After some further experience as a logwood cutter, Dampier visited England, and then after returning to Jamaica embarked for Campeachy once more. But the ship having put into a harbor in the west end of the island, Captains Sawkins, Harris, Coxon, Sharp, and a number of other buccaneer chiefs were found at anchor there, discussing an expedition to the Spanish Main. On learning this, Dampier and every one of his mates left their ship to join the raiders. From this harbor the buccaneers sailed by different routes to Boca del Toro. On the way Sawkins and Harris captured Porto Bello.

There followed the gathering of the fleet at Boca del Toro, the crossing of the Isthmus and the adventures of the buccaneers in their first voyage upon the Pacific, and the further story of Dampier's own career begins with his return across the Isthmus after finding that Sharp showed "neither courage nor conduct" as a leader. In this tramp, Dampier had some notable associates. Captain John Davis, who led a band of buccaneers to Granada, Nicaragua, and secured 50,000 pieces of eight by a night attack was one of them. Captain John Cook, who was to make a name, was another, and Surgeon Lionel Wafer was a third.

While Wafer was among the Isthmian

Indians because of a badly burned knee, Dampier and the others went cruising around the Caribbean, at first with a French buccaneer named Tristian and then with the Captain Wright, who first made friends with the Indians of the Isthmus. Then Wafer joined the company and after capturing a number of Spanish ships the company broke up. Dampier and nineteen others went to Virginia in one of the prizes and found a good market for their plunder on the shores of the Chesapeake. Here after a time Wafer joined Dampier and then in August, 1683, Captain John Cook and Captain John Davis appeared there also.

Cook and Davis had remained with Captain Tristian when Dampier left him, and Cook was made chief officer. Then, a good prize having been captured, Cook was made captain of it according to the usual buccaneer custom of promoting. This promotion took place while several French buccaneer ships were lying together and as soon as Cook was in command of the new ship all the British sailors in the fleet joined him. This action roused so much feeling among the Frenchmen that they united to rob Cook of the ship and the plunder it contained and marooned him and all hands on *Isla de la Vaca*.

When the fleet had scattered, Tristian, who appreciated the worth of British fighters, returned and took off Cook, Davis, and six others to augment his crew. Therein Captain Tristian made a mistake, for when he anchored at Petit Guaves some time later and with most of the crew had gone ashore, these Englishmen assisted the Frenchmen remaining in the ship to follow their captain, slipped the cable, sailed back to *Isla de la Vaca*, took on board their mates who had been marooned there, and headed away for the Chesapeake. On the way up the coast they fell in with a French privateer carrying eighteen guns and captured her. Then a French ship loaded with wine was taken. The merriest crew of pirates that ever entered the Chesapeake was that under Captain John Cook and Chief Officer John Davis.

Dampier and Wafer at once joined the merry-makers, and after the usual

sprees they fitted out the armed Frenchman under the name of *Revenge*, sold the other ships, and headed for the Pacific by the way of the Cap de Verde and the Horn. At the Cap de Verde a well-laden Dutch ship was looted of such wines and provisions as the buccaneers wanted. Then, leaving port, a storm drove them to the coast of Sierra Leone where they found a Danish ship carrying thirty-six cannon lying at anchor. She was of double the buccaneer force, but Captain Cook disguised his ship as a merchantman, sailed down within striking distance, and ordered the man at the helm to luff. The man put up the helm instead, according to previous orders, and when the *Revenge* struck the Dane the buccaneers boarded and won with but slight loss.

Sending the Danes ashore, the buccaneers renamed their prize the *Bachelor's Delight*, burned the *Revenge*, and headed once more for the Horn.

In discussing the deeds of the buccaneers, the historians have usually found some excuse for their acts in the exclusiveness of the Spanish, and the treatment which foreign sailors experienced when they ventured into a Spanish-American port on any errand whatever. But looting the Dutchman and the Dane was bald piracy—Dampier was a pirate as Captain Kidd and Blackbeard were.

In the Pacific the crew of the *Bachelor's Delight* found bad luck awaiting them. The Mosquito Indian whom Watling had abandoned on Juan Fernandez was taken from his lonely abode. Then they sailed north as far as the Gulf of Dulce without obtaining any prize of value. A descent upon Santa Maria was equally vain, and while there they learned from prisoners that a company of buccaneers had recently crossed the Isthmus and had gone afloat in canoes, in consequence of which the Viceroy of Peru had destroyed all live stock on all islands along shore, burned all merchant ships not well guarded under heavy forts, and had even deprived the coast towns of all provisions except such as were needed from day to day.

"With the lambs all getting out of the street" in this fashion, if one may

say so, the buccaneers became very despondent. But on sailing down to La Plata Island hope revived, even if luck did not change. For at this rendezvous they found the ship *Cygnets*, Captain Swan, with a small bark alongside, in which were the buccaneers who had recently crossed the Isthmus. The buccaneers were under Captain Peter Harris, a nephew of the Peter Harris who had crossed the Isthmus with Sawkins and had been killed in the fight off Panama. Moreover, among the crew of the *Cygnets* was Mr. Basil Ringrose, the buccaneer historian. The *Cygnets* had come to the coast to do a smuggling trade with the Spaniards, but the Spaniards had declined to trade, and Captain Swan had been persuaded to turn buccaneer.

Ashore in Peru

Combined, the three crews captured Paíta, Peru, which was a noted whaler resort in the nineteenth century, but they did not get so much as a drink of water there, and after six days waiting for the inhabitants to bring in a ransom they burned the place. Then they tried Guayaquil, but when within a mile of the town, Swan's crew, who had not learned the buccaneer way of attacking superior forces, became so faint-hearted that neither jeers nor curses could brace them for the assault, and the attack was abandoned.

They captured one thousand slaves in ships in the harbor, however, and Dampier wanted the buccaneers to take them to the Isthmus and work the gold mines there. He saw that if this was done enough buccaneers would soon come to them, not only to hold the region against all Spain, but to add the territory to the British possessions. In fact, he had Paterson's idea of making the Darien trail a highway for the commerce of the world, and it is likely that he and Paterson had discussed the matter together in that first trip across the Isthmus. But the buccaneers were out for loot, not for colonization, and the slaves were left at Guayaquil.

Instead of getting loot, however, the buccaneers next found themselves in the greatest naval battle known to the an-

nals of the Brethren of the Coast. From a mail boat bound from Lima to Panama they learned, January 1, 1685, that the triennial plate fleet from Callao was about to sail for Panama. They had already learned that the Spaniards had been fitting out a squadron of ten heavy frigates to clear the seas, thereabouts, and they supposed this squadron would convoy the treasure. But with buccaneer assurance they sailed to the Pearl Islands to refit for an attack upon this convoy.

As it happened, the spirit of enterprise was having a great revival among the buccaneers of the Caribbean, just at that time. Soon after this band reached the Pearl Islands two hundred French and eighty British buccaneers crossed the Isthmus under a Captain Groignet and came to the Pearl Islands in dugouts. A few days later another band of two hundred and sixty-four arrived under Captains Rose, Desmarais, and Picard, the latter a veteran who had served under both Morgan and L'Olonois. Among the Picard gang was the Sieur Ravenau de Lussan, the buccaneer historian. Finally, on March 3d, another band numbering one hundred and eighty appeared under a Captain Townley, a man who, after having unprecedented good luck followed by luck equally bad, was to die of wounds received in a fierce battle off Panama.

Altogether, not far from one thousand buccaneers gathered at the Pearl Islands at this time and it was the most powerful horde of them ever seen on the Pacific. It was only by constant raiding on the islands and by keeping the coppers boiling day and night that the gang could be fed. While raiding they managed to secure enough merchantmen to set all afloat in something better than canoes, and in spite of the fact that the *Bachelor's Delight* with her thirty-six guns and the *Cygnets* with her eighteen, were the only armed ships they had, the buccaneers were enthusiastically confident of taking the treasure ships, no matter what war force might guard them.

It was while in this state of mind, at about eleven o'clock on the morning of May 28th, 1685, that the buccaneers first saw the great fleet for which they

were waiting. A heavy rain squall had passed over the bay and as it thinned away the Spaniards came reaching along in its wake. Their flagship was armed with forty-eight guns and five other ships carried forty, thirty-six, twenty-four, eighteen, and eight guns respectively. The six were manned by one thousand nine hundred and sixty men all told, and the unarmed ships of the fleet carried eight hundred more. In men the buccaneers were outnumbered nearly three to one; in guns by one hundred and seventy-four to fifty-four. To make the disparity still greater, Captain Groignet with three hundred and eight men in a merchantman fled as soon as the Spaniards appeared.

The Glory of Spain Departed

Time had been when Spanish naval sailors dominated the ocean, but in 1685, in spite of their optimism and self-confidence (qualities in which they have been surpassed only by the Yankees), they had degenerated through commercialism until this squadron with all its superiority of force would not attack the buccaneers they had come to exterminate. Because the buccaneers happened to have the advantage of the wind the Spanish admiral maneuvered until sunset and then got to windward by a trick. As night came on he hung out a light to which his ships might rally, but when darkness had fully covered the sea he transferred the light to a merchantman, which he allowed to drift with the tide. The buccaneers drifted with the ebb during the night but gave the matter no thought because they could see what they supposed was the Spanish rallying light in the same relative position all night. When morning came they found themselves far alee.

This loss of position was a most serious matter. The only chance the buccaneers had of winning was in running their ships alongside the enemy and then boarding to fight it out with the cutlass. But while the Spaniards held the wind it would be and was impossible to get alongside. Anglo-Saxon contempt for the enemy had really lost the battle before a gun was fired.

Of course the buccaneers tried to work to windward; many of them had thrown their hats into the sea for very joy at sight of the Spaniards. The *Bachelor's Delight* and the *Cygnets* closed in to cannon range. Every sail on every buccaneer ship was stretched till the bolt-ropes creaked. The unarmed bark which young Peter Harris commanded was driven toward the Spaniards until she had received one hundred and twenty cannon shot in her hull and did not then draw out of range until the water was five feet deep in her hold. The other buccaneers were almost all equally desperate in their valor, but the Spaniards, by holding the wind and by a skilful concentration of gun fire, gradually drove them clear around Panama Bay. Then instead of finishing off the job man-fashion, the Spaniards sailed away to the anchorage at Panama and left the buccaneers to ravage the coasts in search of plunder.

It is a notable fact that here, as on a former occasion, the Spaniards had prepared for defeat by landing some of their most valuable merchandise before meeting the buccaneers. They supposed it was entirely safe on shore, but they were mistaken, as shall appear.

Having failed to capture the treasure ship, the buccaneers raided Pueblo Nuevo (Aguadulce), but found it deserted and swept clean of all valuables. The coercion of an enemy by embargo and self-strangulation as a national policy had a full and fair trial among the Spaniards of the Pacific. The buccaneers burned this town as they had burned Paíta. Then the Frenchmen and the British quarreled.

"One of the chief reasons that made us disagree," says the *Sieur Ravenau de Lussan*, in speaking of the British, "was their impiety against our religion; for they made no scruple, when they got to a church, to cut down the arms of the crucifix with their sabers, or to shoot them down with their pistols or fuses, bruising and maiming the images of the saints with the same weapons in derision to the adoration we Frenchmen paid unto them."

The British, including Dampier, went to Leon, Nicaragua, but they got no

plunder. It is a curious fact that the British buccaneers on the Pacific failed to extract ransoms from captured towns simply because of their humanity. Morgan by a relentless application of the rack compelled his prisoners to bring in their wealth. But from the time of Sawkins onward there is no record to show that the British applied torture. Lussan says that the Frenchmen with whom he associated applied the rack and cut off heads with success. Obviously in buccaneer financial operations mercy is mere weakness.

"A Merry, Hearty Old Man"

From Dampier's notes on the Leon raid one picture of buccaneer life seems worth preserving. Speaking of one of his comrades who was killed, he said: "He was a stout, old gray-headed man, aged about eighty-four, who had served under Oliver Cromwell in the Irish rebellion; after which he was at Jamaica, and had followed privateering ever since. He would not accept the offer our men made him to tarry ashore, but said he would venture as far as the best of them; and when surrounded by the Spaniards he refused to take quarter, but discharged his gun among them, keeping a pistol still charged. So they shot him dead at a distance. His name was Swan. He was a very merry, hearty old man."

After the failure at Leon the British ships separated. The *Bachelor's Delight*, with *Historian Wafer* on board, returned to the South American coast where much plunder was obtained. Swan in the *Cygnets*, and *Townley* in a captured merchantman, went to the Mexican coast, and with them went Dampier "to get some knowledge of the northern parts of this continent."

From the buccaneer point of view this Mexican venture proved disastrous. No plunder was secured and on landing in Jalisco for provisions the men, while wandering around in their usual heedless fashion, allowed an overwhelming body of Spaniards to surprise them.

"We had about fifty men killed," says Dampier, "and among the rest my ingenious friend, Mr. Ringrose, was one. He had no mind for this voyage,

but was necessitated to engage in it or starve."

The plunder which Ringrose had obtained while cruising under Sharp had not lasted long in London.

In the meantime Captain Swan had headed the *Cygnat* across the Pacific, March 31, 1686, and Dampier went with him, as anxious as ever "to get some knowledge" of unseen parts. While among the Ladrone Islands, the Manila ship bound for Acapulco was seen. In fact she grounded on a reef and was there for four days, but Swan, who preferred smuggling to buccaneering, frightened his crew out of making an attack upon her. As Dampier learned from her boatswain afterwards, she might have been captured easily while on the reef. At Mindanao, in the Philippines, the crew of the *Cygnat* mutinied and left Swan among the natives, by whom he was afterwards killed. Dampier sailed away with the mutineers, but his journal from that time until the end of the voyage, though of the greatest value to sailors of his day, is of no special interest to this history of the buccaneers. He reached England on September 16, 1691.

End of His Buccaneering

This was the last of Dampier's buccaneering, properly so called, though two voyages subsequently made should be mentioned. In 1697, being inspired, no doubt, by the public interest in the buccaneering tales told by Esquemeling, Ringrose, and Sharp, Dampier wrote from his diary his "New Voyage Around the World." Four editions of it were sold within three years. Two other volumes were written to supplement the first, and all were found "among the best sellers."

In the meantime, 1699, Dampier went on an exploring expedition to New Holland, during which he lost his ship. In April, 1703, he sailed for the Pacific in two lawfully commissioned privateers. It was the captain of Dampier's consort (Captain Straddling) who marooned Alexander Selkirk on Juan Fernandez, the story of whose adventures afterward inspired DeFoe to write the immortal "Robinson Crusoe."

As a privateering venture this cruise was an entire failure. The two captains quarreled and parted company. Then Dampier quarreled with his chief officer who ran away with twenty-one men in a small tender. Though now undermanned, Dampier went to the coast of Mexico in search of the Manila ship, and found her. But instead of dashing alongside, as he might have done, to carry her by boarding, he opened fire with his little battery of five-pounders. The Spaniard cast loose twenty-fours and then Dampier was glad to limp away to the South American coast, where his ship failed him altogether and he had to embark in a captured brigantine. With this, however, he crossed the Pacific and returned home by the way of Cape of Good Hope.

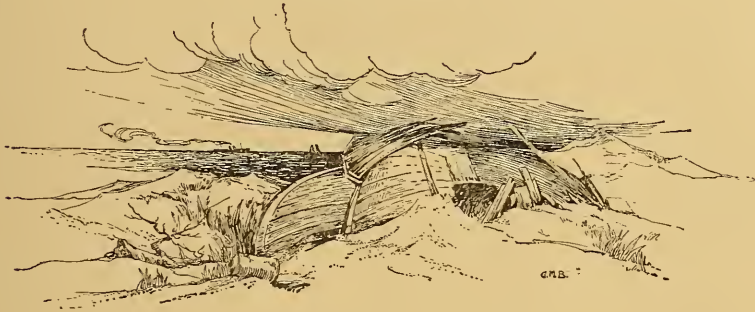
In spite of a well-filled diary, Dampier now lived in extreme poverty until 1708 when he went to sea as pilot of two privateers bound for the old buccaneer cruising ground on the Pacific coast of South America. Captain Woodes Rogers, commanding the expedition, was a capable man for the place. Plunder amounting to \$750,000 was secured and Dampier was chosen by the crew to divide it into shares. The expedition also took Alexander Selkirk back to England. Dampier's share of the plunder must have been a tidy sum—perhaps enough to last him for the rest of his days. At any rate, he did not go to sea again, so far as is known. When and where he died is not a matter of record.

As a buccaneer serving before the mast, though undistinguished, Dampier was probably as good as the average. As a buccaneer commander he was an entire failure. Apparently he thought he could divide his energies between buccaneering and the making of a valuable journal, but he found that buccaneer finance is an inexorable master, willing to reward only those who serve with singleness of purpose.

But while buccaneering operations brought Dampier only vexations and distress (he had no special pleasure even in buccaneer carousals), every stroke of his pen was of value. In the days of La Salle and Frontenac and Iberville—when the French were vainly exploring

the interior of North America for an all-water route to China, William Dampier, with note book in hand sailed around the world three times. As a traveler and explorer he was without a peer in his day; and if all the cir-

cumstances be considered, it is seen that while the world has since been mapped and described to the last habitable nook and corner, no one has ever equalled or ever can equal the exploring record of this British pirate.



A MIXED BAG

HAD HUNTED HIMSELF—CERTAINLY DRY—PETER'S TRUE BEAR STORY—
PRESERVING THE LAKES—OF COURSE—ALL IN KNOWING
HOW—FIRST AID TO INJURED PLOVER

HAD HUNTED HIMSELF

BELMORE BROWNE, mountain-climber and hunter of big game, tells this story. It happened several years ago when Mr. Browne was a lad of seventeen or eighteen. He was camping in the Cascades with a party of older men and had been sent down to the canoe landing to bring up some duff. In the list was a rifle, as the party expected to stay until the hunting season opened. On the way back to camp Mr. Browne met an old man, gray-bearded, stooped, wrinkled, a veritable "old-timer."

"Hello, son," quoth the old one. "Where you goin' with the gun?"

The boy explained and the old man smiled reminiscently. "I used to be something of a hunter myself," he said. "I kin remember my first deer hunt. I was a kid of about your age, back in Minnesota. We used to hunt with dogs in them days an' shoot the deer from stands. One day I went out with some neighbors of ours an' they put me on a

little knoll at the edge of the woods an' told me to wait there till I heard the dogs.

"I had an' old Sharps single-shot an' down I set on a log an' waited, with extry ca'tridges stuck between my fingers so's I'd be ready for mister deer. Bime-by I heard the dogs a long way, but comin' nearer. I stood up, feelin' the way a man does when he's goin' to be married—glad it was comin' an' wishin' it was over.

"The dogs kept comin' nearer an' purty soon I heard a smashin' in the underbrush an' out jumped a big buck about fifty yards away. I pulled down on him an' cut loose. He jumped about six feet in the air an' I knew I'd shot under him. He whirled an' broke back into the brush, swung around a little hill, an' come out into a little clearin' on the other side—this time about eighty or ninety yards away. Then darned if he didn't stop again an' stand listenin' to the dogs. Didn't seem to think much of my shootin'.

"That riled me an' I let him have it agin—high this time—too high for I seen a little tuft of hair fly just off the top of his neck. I didn't even crease him an' he made off up an old toteroad that crossed the clearin', goin' about a mile a minute. By the time I got another ca'tridge in he was a good two hundred yards away an' gettin' farther every minute.

"But I held as stiddy as I could an' let drive. Mind you, he was a good two hundred off an' runnin' straight from me."

"Yes!" interjected the breathless boy. "Yes! You let drive and——"

"Yes," repeated the old man, "I let drive an'—damned if I didn't miss him again."

CERTAINLY DRY

A FEW days ago as the overland train stopped at a "dry" town in northern Idaho a thirsty looking individual rushed out of the day coach and into a building across the track above which appeared the sign SA-LOON. In a few moments he reappeared, the thirsty look replaced by one of extreme disgust. He accosted a "lumber jack" who was leaning against a post.

"Stranger, is this a dry town?"

The "lumber jack" looked at him a moment and drawled, "Dry? I should guess it is dry. Say, pardner, this town is so dry there's bullfrogs here three year old that hain't learned to swim yet."

PETER'S TRUE BEAR STORY

ONE tam you know I live over on the settlemint on the Big River. I young fellar them days. Wall, Mr. Gray here he say, 'Petair, you go helper for me dis fall for de gentlemins.' I say, 'All right.' So de fall she come and Petair he go up de Batterst River—Pissiguit River—ah—all right! No guide dem days; just pack de provision and carry de wood, and machine of jam.

"Wa—all, Sunday she come and de gentlemins he say, 'Petair, I tink we get come more provision from the main

camp—de bear house dat is—we build him solid for sure so de tam bear he no get in in de spring.'

"I say all right. So I get me de lunch and bumby I say we go. De gentlemins he naiver been on the woods before and he say, 'Petair, are you no scaire to go through de woods with nothings?' I say, 'Why I scaire,' for I young fellar den. We—all, he say, 'Maybe you meet one bear,' and I just laugh. 'Here,' he say, 'tak' dis peestal in case you meet de bear.' I say I no take peestal; I keel myself. So he look round and he say, 'Den you tak dis beeg boocher knife.' So I tak' de boocher knife and stick him in my belt and I start ovair de hill for de provision.

"So I walk and walk and think on the girl at de settlemint, you know, and bumby I stop and look up and, By Gosh! dair in de middel of de path is one great beeg bear. Well! well! Wa—all, I look at de bear and I think de best ting I do is get out de way. Right longside is one great beeg pine tree. You know she all burnt and hard and smooth and hollow. I tell you I jus' go up dat tree like—like dat!

"By Gosh, I say, I fool dat bear. Dere I seet near de top of the tree and dat goldarn bear seet on de ground and he tink and tink. Well, sir, I look down and what you spose dat goldarn bear do but commence to clamb de tree. I say now I be keel for sure. I might just well stay down below.

"So de bear he climb and climb, and bumby he dat close I say, 'Petair, you gone for sure.' So I climb leetle higher up and dat bear he climb too. I sure am in a feex. So I drop inside dat tree and de dust she get in my eyes and I dat tight I no turn round nohow. I tink now I in worse feex dan before. My arms, you know, dat tight and all I kin do is just look up at the round light on the top of that tree and bumby dere no light dere, *dat goldarn bear he come down, too.*

"You fellars kin laugh all you want, but By Gosh! eet was no joke for Petair in de bottom of de tree.

"So de goldarn bear he slide down inside dat tree, and Petair he tink and tink, and now I say I be keel for sure.

Just den I tink of beeg boocher knife and I give myself one queeck turn, jess like dis, and I pull out de boocher knife and just as de bear get dat close I up wiz de boocher knife and I give heem one dab—jess like dat, and with de other hand I grab de bear by the hind foot and dat goldarn bear he lif' me ten feet for sure. So I tink dat pretty good chance, and I jess give heem another and another, and that goldarn bear he that crezzy he jump clean out de top of dat tree and fall on de ground and keel himself and I get ten dollar for de skin. Dat true story."

PRESERVING THE LAKES

IN Southern California they create artificial lakes by running water from an irrigating ditch into a depression. These lakes don't amount to much but they are all they have. Not long since a tourist approached a man engaged in building a high board fence about one of these ponds.

"What's that fence for?" he asked of the workman.

"Oh, that's so some of you tourists won't come along with a sponge and wipe this thing dry," was the response.

OF COURSE

THE Old Trailer was relating his experiences among the Indians.

"Onct I were chased by th' Blackfeet. It were up in Montana an' I were ridin' a Gover'mint mule. When I see th' Blackfeet comin' I lit out f'r camp, but they kep' gainin' 'till I see I wa'n't goin' t' git away fr'm 'em, so I turned off th' trail an' headed f'r a long narrer rocky ridge, expectin' t' find a rock t' hide behind. There wa'n't any rocks that looked big 'nough so I kep' on going an' the ridge kep' gittin' nar-rer and nar-rer and steeper an' steeper an' the Injuns kep' gittin' closer an' closer, till finally th' ridge come to an end, an' there I was.

"I jumped offen th' mule an' she lit out hell bent back tords th' Injuns. I looked over th' side an' see a nar-rer ledge 'bout ten feet down; I see it were life or death so I jumped down onto th'

ledge an' lay down right up 'ginst th' face of th' cliff. Th' Injuns come chargin' down an' one of 'em looked over an' see me. He pulled up his bow an' arrer an'——"

The old man stopped, searched in his pocket for a match, found one, and lighted his pipe.

"What happened then?" someone asked.

"Oh, he pinned me t' that rock with his arrer an' I'm there yit."

ALL IN KNOWING HOW

"THEY tell y'u that a loon hain't good t' eat," remarked Uncle Eseck as he filled his corn cob pipe and lighted it with a coal from the camp-fire, "but a loon's ez good as enny other fowl if yu' know how t' cook one. All yu' got t' do is t' put th' loon int' yore pot with plenty of water an' a rock 'bout th' size of a hen egg. Yu' bile the loon an' th' rock till yu' c'n stick a fork int' th' rock an' by thet time th' loon is done and he is shore fine eatin'."

FIRST AID TO INJURED PLOVER

TWO Hartford City, Indiana, hunters witnessed a remarkable exhibition of bird sagacity and comradeship, while hunting on Bulls-k-in prairie, north of the city. The hunters were out after jacksnipe and plover. They had good shooting and had started for their rig, intending to return to the city, when a large flock of golden legged plover swept into view from the southeast. It was the first bunch of golden-legs they had seen. They were flying low and the hunters waited, keenly alive to the fact that the migrants approaching are the swiftest of all birds and they could hope for but one shot. Six plover dropped, at the discharge of the guns. One bird flew straight up after the manner of game birds, hit in the head. It rose a hundred feet above the plane of flight and then fluttered downward, apparently about to fall, yet struggling to maintain its flight.

Its comrades circled back and formed

a compact body underneath the hurt one and carried it forward a hundred yards. The wounded bird tried it again and was again rescued from a fall and carried forward upon the wings of its loyal

comrades. The hunters saw the plover circle back and carry the wounded one on their wings for the third time, before they were lost to view in the distance and gathering twilight.



AMERICA KEEPS THE POLO CUP

IT was admittedly the best team that won in the international matches for the polo cup at Meadowbrook, but that implies no criticism of the English playing. At no time was the result sure until the gong sounded for the close of play. The visitors rode hard and hit with wonderful accuracy. Their team play was far above the standard they had set in preliminary practice—so far above that in the first game they swept the Americans off their feet in the first four periods and forced the playing into American territory constantly. A little more accuracy—or luck—in long drives for the goal, and there would certainly have been a third game, if not an English victory in the match.

It was team play that won. In individual work, man for man, the English were nowhere outclassed by the Americans, except possibly at back, where Milburn shone resplendent. In the second game the Americans had a shade the advantage in covering their men and riding off, but they had nothing on their opponents when it came to mallet work. The Englishmen seemed to be able to hit the ball in any position and at all speeds. Edwards' goal in the second game from at least sixty yards out and at a very narrow angle was an example of the way they were knocking at the American door. Less than two minutes later Larry Waterbury duplicated the feat from almost the same position and angle—and

those plays were an apt epitome of the ways the games were won. No matter how hard and well the visitors played, their opponents had just a shade more in reserve—when the crisis came.

The same thing was true of the ponies. Although there was nothing like the superiority in evidence that had been claimed for the American string, the sleek, nervy little four-footed players that Mr. Whitney had got together were just a trifle quicker in midfield scrimmages and as a rule a trifle faster in open field rushes. In the second game this was not so much the case, especially in the first half of the game. It was then that Edwards got loose in the middle of the field and rushed the ball the whole way to the goal with the entire American team straining after him in unavailing pursuit. The Englishman literally ran away from the field and carried the ball with him by hard, accurate driving.

A noticeable feature was the closer, tighter seat of the Englishmen. The Americans frequently swung wide of their ponies in hard drives and one of Larry Waterbury's tumbles seemed to be at least partly due to this peculiarity. From the stands it appeared to more than one that he had actually swung his pony off his feet.

The final lesson of the game was that of the value of pace. The Americans had the speed when they needed it. They seemed never so extended that they could

not "hit it up" a little more when it was necessary. And as the pace increased the team play tightened and the defense became impregnable. This is what wins games of any kind and is the proper, legitimate definition and application of team play.

Incidentally the favored thousands who saw the two international matches witnessed what was probably the finest polo that has ever been seen anywhere. That means the highest exhibition of sport and sportsmanship that it is possible to imagine.

THE CURSE OF CIVILIZATION

THE gradual spread of the white race over the surface of the earth has been accompanied by a corresponding recession of the savage races that oppose it. In other days it was the custom to regard this as the inevitable beating back of the unfit by the fit—tragic, pathetic, or desirable as the case might be, but inevitable always.

We are beginning to doubt this now. Every new bit of evidence seems to indicate that it is not the strength of the white man but his weaknesses, and most of all his diseases, that is doing the mischief. A report to the *Medical Record* from New Guinea declares that in many of the South Pacific islands the population has decreased fifty per cent in the last ten or twelve years, mainly on account of the inroads of tuberculosis and other pulmonary diseases. Smallpox and beri-beri also have contributed their share.

In the Philippines the native population is increasing since American occupation—a sincere tribute to the improved sanitation that the conquerors have brought with them. In other islands, however, where the traders have had full sway the toll of death is being taken at an increasing rate.

We are not strong for imperialism and the extension of our borders, but the trading nations of the world have here a grave responsibility that cannot be evaded. If our traders are to be free to enter where they please, it would seem to be wise that the flag—and the physician—should follow not far behind.

FOR THE SOUTH POLE

MENTION has already been made of Captain Roald Amundsen's expedition to the South Pole. In a long letter to the *London Times* recently, Captain Amundsen describes the voyage from Funchal to the Antarctic. His ship, the *Fram*, is now anchored safely in the Bay of Whales, which was reached January 14. One hundred and fifteen dogs have been put ashore on the great Ice Barrier, and winter quarters have been established in longitude 164 degrees west, latitude 78 degrees, 40 minutes south. His expedition consists of nineteen men, and it is his intention to lay down a main depot at 80 degrees and a smaller one farther south, at 83 if possible.

The closing sentences of Captain Amundsen's letter are admirable for their modesty. He says: "I can say nothing more with regard to our future prospects. We shall do what we can." A blessed relief is this from the blasts of charges and counter charges, of high pretense and inadequate explanations, to which we are often treated from explorers.

AMEN TO THIS

WE cannot forbear quoting from a recent editorial in the *Chicago Record-Herald* apropos of automobile racing: "It is devoutly to be hoped that the Indianapolis automobile race is the last of its kind. The toll of dead and severely injured claimed by such races renders them a menace rather than a benefit to the great industry whose steady expansion and development all rejoice to see.

"The automobile is tested by constant and hard use under all conditions. Terrific speed, in a race which inevitably maims and kills, tests nothing and demonstrates nothing, except the thirst for thrills and the indifference to risks felt by many patrons of such spectacles.

"Science, art, industry, and invention must march, and necessary or unavoidable sacrifices must be submitted to with resignation. But recklessly to court peril, deliberately to pander to the speed mania, is to reflect discredit on our otherwise

humane age and civilization. We must do nothing to increase the amount of cruelty and brutality in modern society; the whole trend is toward conservation, amelioration of social conditions, increase of safety and comfort and happiness. Reckless races mean reckless driving at other times, disregard of public and private rights, the taking of dangerous chances in the routine of life.

"The automobile intensifies the joy and pleasure of life and makes for health, convenience, variety. Why debit it with death, injury, and savagery?"

THEY DID AND THEY DIDN'T

FIRST the Audubon Societies said they would accept the gun-and-powder-makers' offer of twenty-five thousand dollars a year for five years for the protection of game and song birds; then they said they wouldn't. So the matter stands. One explanation of the change of mind is that the offer was made on condition that the Audubon Societies cease their agitation against the use of the pump gun. The gun-makers deny that any such condition was attached or contemplated. Others point out that the Audubon Societies have taken no part in the fight on the pump, preferring to give their attention and money for the preservation of song and non-game birds.

To some of us there is no inconsistency in the thought of makers of guns being interested in game preservation. It's about the only chance many of them have of continuing in business for long. Incidentally it might be pointed out that for every pump gun that is bought for use in the field probably half a dozen are devoted entirely to trap-shooting. Trap-shooting is very good sport and clay pigeons are in no immediate danger of extinction.

THE VALUE OF GOLF

MUCH has been said of the value of golf for busy men. It is the ideal exercise for the man of sedentary habits whose work keeps him chained at a desk through the working days, whose age will no longer permit

him to indulge in the more strenuous games of youth, or whose pocketbook or business will prevent him from taking long vacations away from the scene of his money-making labors. All these things are true as many of us can testify, yet they are not all of golf. There is even more than that in the game, great as are these qualities.

For one thing, it is a great revealer of character, as Arnold Haultain declares in "The Mystery of Golf." In the words of Mr. Haultain, "Golf seems to bring the man, the very inmost man, into contact with the man, the very inmost man. In football and hockey you come into intimate—and often forcible enough—contact with the outer man; chess is a clash of intellects; but in golf character is laid bare to character.

"This is why so many friendships—and some enmities—are formed on the links. In spite of the ceremony with which the game is played; the elaborate etiquette, the punctilious adhesion to the honor, the enforced silence during the address, the rigid observance of rules, few if any games so strip a man of the conventional and the artificial. In a single round you can sum up a man, can say whether he be truthful, courageous, honest, upright, generous, sincere, slow to anger—or the reverse.

"Of these arcana of golf the uninitiated knows nothing. Yet if ever that onlooker is initiated into these Eleusinian mysteries, he changes his mind and sees in the links a school for the disciplinary exercise of a cynical or stoical self-command rivalling that of the Cynosarges or the Porch."

That is by no means all there is to golf as an ethical exercise, but it will do for the present. Furthermore it is mighty good fun and a game that is well worth playing for its own sake.

THE English sporting papers say that "Chick" Evans, the American golfer, made many friends at Prestwick by his "cheerful, genial manner." Can this have been called forth by recollection of another British amateur championship in which an American competitor seems to have won everything but friendship?

TRAINING AND BOILS

JUST before the Poughkeepsie races, word came that several of the oarsmen were suffering from boils. The Wisconsin crew were the worst offenders in this respect, at one time only one man in the varsity boat being free from these distressing ailments. In the July number of this magazine Dr. Woods Hutchinson, speaking of the too great restriction of water in training diets, said:

"All the flushing of our body sewers must be done with water, and cutting down the amount of fluids drunk, combined with the prohibition of fresh vegetables and fresh fruits, not infrequently results in distressing eruptions upon the skin, and particularly in crops of boils, which were the dread of every training gynasium or college training table under the old regime."

Can it be that Harry Vail is still under the blight of the old regime?

COLLEGE BALLOONING

PENNSYLVANIA has won the first college ballooning flight. Dartmouth and Williams were other contestants and the academic aëronauts started from North Adams, Massachusetts, June 4. The winners, A. F. Atherholt and George A. Richardson, covered 115 miles in a little over seven hours. It is not likely that ballooning will ever compete seriously with football or rowing for college favor, but this contest is at least significant of the interest that is being taken in the navigation of the air. This reminds us to inquire what has become of the college aëroplane clubs of which we heard considerable a year ago. Aërial navigation offers a promising field for undergraduate study.

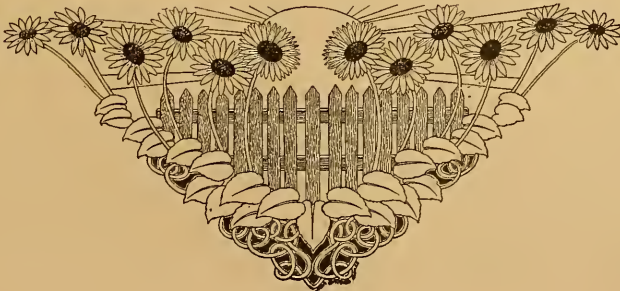
STOPPING THE SALE OF GAME

NEW YORK has at last put the lid on market gunning. After a sporadic attempt to permit a revival of spring shooting on Long Island, the legislature has seen the light and late in June passed the Bayne bill, prohibiting the sale or importation for sale of all kinds of American wild game with the exception of hares and rabbits. Certain species of game that may be reared in captivity are permitted to be so reared and sold for market under express restrictions.

A license may be procured from the state on payment of a \$50 fee and all game sold must bear official tags which are not to be removed until the game is in the hands of the consumer. The following species may be so reared: elk, white-tailed deer, mallard duck, black duck, and Old World pheasants of all species. These varieties of game may be imported for sale: European red deer, roe-buck and fallow deer, Scotch grouse, black game, black plover, European red-legged partridge, and Egyptian quail.

It is to be hoped that this is merely the beginning. The more states fall in line behind this movement, the better for the wild life of the country and the more the lovers of it will be pleased.

The legislature is to be congratulated on not consenting to any half-hearted or indefinite measures such as permitting the killing of certain kinds of game in certain sections on the supposition that their presence there proved them to have been hand-reared. The only way to close the door is to close it. So long as a possibility of evasion remains so long will the evil be unremedied and a way be found around the law.



NEWS OF THE OUTDOOR WORLD

Aviation

JUNE 1st Andre Beaumont and Roland Garros met in Rome, having completed the Paris-Rome stage of the Paris-Rome-Turin flight.

The German aviator Frey started from Rome June 13th on the last stage of the Paris-Rome-Turin race, the other contestants having given up. A few miles out of Rome he fell, breaking both arms and one leg.

In the German aviation circuit Karl Mueller, in attempting a landing at Magdeburg, June 13th, fell 125 feet with his biplane and was seriously injured.

Lieut. de Malherbe, the French military aviator, flew from Paris to Sedan June 26th, covering the distance of 177.6 miles in 1 hr. 44 mins. 35 secs.

On June 18th at the Vincennes aviation ground, Paris, three tragedies marred the start of the Paris *Journal's* circuit race. Of the twenty-nine starters Le Martin fell with his Bleriot monoplane and was killed almost instantly. At Issy-les-Moulineaux Lieut. Princeteau was preparing to leave for Vincennes when the carburetor of his machine set fire to the aviator, while 75 feet in the air. The gasoline tank exploded and the aviator was burned to death. M. Landron in a Pischof monoplane fell at Château Thierry and was killed by the explosion of his gasoline tank. Lieut. Gaubert, flying under the name of D'Anger, fell near Soissons and was injured, but not seriously.

Lincoln Beachey, flying at a height of two thousand feet, crossed to the Canadian side of Niagara River in a biplane, June 27th.

Harry N. Attwood, flying at New London on June 30th with Mayor Bryan F. Mahan as a passenger in his Burgess-Wright biplane, covered the distance of 135 miles (Boston to New London), in 2 hrs. and 10 mins. This is the longest American cross-country flight. July 1st, Attwood continued his flight to New York City, circling over Manhattan Island and landing on Governor's Island. July 4th he started for Atlantic City against a strong head-wind, completing the flight after landing three times for gasoline.

Baseball

A TEAM made up of American Rhodes Scholars defeated the National Baseball Association by a score of 16 to 5 at Oxford, England, June 8th.

Arthur Nehf, the freshman pitcher at Rose Polytechnic Institute, of Terre Haute, Ind., has made a record apparently. He pitched in nine games, allowing 17 hits and 18 runs and struck out 101 batters. He batted 47 times and of the 22 hits made 4 were home runs, his percentage being .468.

At Toledo, O., June 19th, a record was marked in the game between Melvin semi-professionals of Toledo and Oak Harbor, played at Oak Harbor and won by the Melvins 2 to 1. Luebke, of the Melvins, and Kolath, of Oak Harbor, each struck out 21 batsmen.

In a game between Charleston and Huntington teams of the Virginia Valley League, at Huntington, W. Va., June 8th, neither team made a hit until the 11th inning.

Intercollegiate games played during June resulted as follows: Princeton, 5—Yale, 2; Dartmouth, 10—Harvard, 5; Syracuse, 1—Columbia, 0; Phillips Exeter, 2—Phillips Andover, 1; Amherst, 2—Brown, 1; Army, 5—Bucknell, 2; Chicago, 9—Waseda, 6; Williams, 5—Cornell, 0; Michigan, 3—Keio University (Japan), 1; Williams, 2—Holy Cross, 1; Tufts, 8—Syracuse, 1; Pennsylvania, 10—Dartmouth, 7; Dartmouth, 9—Vermont, 3; Harvard, 2—Pennsylvania, 1; Amherst, 11—Princeton, 2 (rain—game called); Massachusetts Agricultural College, 12—Syracuse, 1; Vermont, 13—New-York, 1; Yale, 6—Princeton, 3; Army, 5—Columbia, 1; Brown, 7—Harvard, 2; Syracuse, 2—Amherst, 1; Lafayette, 5—Lehigh, 0; Princeton, 1—Yale, 0; Harvard, 10—Holy Cross, 5; Brown, 6—Amherst, 0; Yale, 1—Cornell, 0; Harvard, 5—Williams, 3; Brown, 4—Tufts, 1; Chicago University, 12—Waseda University, 11; Massachusetts Aggies, 1—Amherst, 0; Wesleyan, 3—Trinity, 1; Pennsylvania, 8—Cornell, 6; Williams, 17—Wesleyan, 1; Harvard, 8—Yale, 2; Cornell, 4—Pennsylvania, 2; Harvard, 4—Yale, 1.

Golf

JEROME D. TRAVERS, representing Upper Montclair Country Club, regained the New Jersey State Golf Association championship, defeating Oswald Kirkby, of Englewood, 5 up and 4 to play in the 36-hole final, June 7th.

Oswald Kirkby, of Englewood, won his first tournament in the metropolitan district by defeating Louis Livingston, of Westbrook, at the Tuxedo Golf Club's meeting, June 10th, 4 up and 3 to play.

H. C. Richards, of St. Andrew's, defeated C. P. Eddy, of Ridgewood, in the final round of the invitation tournament at Montclair by 7 up and 6 to play.

Oswald Kirkby defeated Walter J. Travis by 2 up and 1 to play in the final round of the Apawamis Club's invitation tournament June 24th.

At Newton, Mass., Mrs. Ronald H. Barlow, of the Merion Club, Philadelphia, won the Women's Championship (Eastern Golf Association) June 7th with an aggregate score of 272. Mrs. Caleb S. Fox, of the Huntington Valley Club, Philadelphia, was second with an aggregate of 276.

The Country Club of Cleveland won the Morris Memorial trophy with a score of 19 down to par, playing at Cleveland, June 16th. The Exmoor Country Club, of Chicago, turned in a score of 28 down.

The women golfers representing Boston retain the Clement Acton Griscom cup for another year by defeating Philadelphia in the foursome match at the Brae Burn Country Club, Newton, Mass., June 9th. The final score was: Boston, 11; Philadelphia, 10.

Tennis

WALTER MERRILL HALL won the Felipe Challenge Tennis Cup at the N. Y. Tennis Club on June 3d, defeating Theodore R. Pell in the finals (previous holder) 8-6, 6-love, 6-1.

Edward P. Larned won the Englewood Challenge Cup in the Englewood Field Club final June 10th from Charles M. Bull, Jr., by the score of 4-6, 6-1, 11-9, 6-3.

The Women's National Lawn Tennis Championship remains in California for another year by the victory of Miss Florence Sutton, of Los Angeles, over Miss Eleanor Sears, of Boston, 6-2, 6-1, at Philadelphia on June 16th.

Beals C. Wright and Frank G. Sulloway won the doubles lawn tennis championship of Massachusetts June 7th at Newton, defeating in the challenge match N. W. Hughes and A. S. Dabney, Jr., last year's holder, by 6-4, 6-2, 6-3.

The Dartmouth tennis team beat Columbia by 5 to 1 at Hanover, N. H., on June 6th.

Automobiling

AT New Haven, Conn., June 10th, David Bruce-Brown, Jr., the amateur pilot, drove a 200-hp. Fiat car over the hill-climbing course (9-10ths of a mile) in 48 seconds, breaking the record by 3 seconds, at the meeting of the Yale Automobile Association.

Jake de Rosier made a circuit of 38 miles in 43 minutes on a motorcycle practising at the Isle of Man, England, June 10th, marking a new record.

Bob Burman drove his 200-hp. Blitzen Benz at Grand Rapids to a new record, June 28th, making the circular mile in 51 secs. The three and ten-mile records were also lowered by Burman in 3.01 for the former and 9.20 2-5 for the latter.

Lacrosse

THE Toronto Athletic Association defeated the Crescent Athletic Club at Brooklyn June 17th by 5 goals to 1.

On June 24th at Bay Ridge the Crescent Athletics beat the Toronto A. C. by 7 goals to 3.

At Bay Ridge June 8th the Crescent Athletic Club lacrosse team defeated the Montreal Athletics by 6 goals to 3. President Taft and Governor Dix were present.

Miscellaneous

TWO world's records were established June 4th at Celtic Park—Bricklayers and Masons' meet—Dan Ahearn registering a hop, step and jump 51 feet 4 1-2 inches, and Jack Eller breaking the 75-yard record over low hurdles in 0:09 2-5. Abel R. Kiviat won the 1,500 meter race from Wilton C. Paull, of Pennsylvania University, in 4:03 2-5.

The American team won the first polo game of the International Series by 4 1-2 goals to 3 June 1st, at Meadowbrook. The second game was also won by America on June 9th before 25,000 people, the score being 4 1-2 to 3 1-2 against England.

The Royal Horse Guards polo team won the Harry Payne Whitney Cup, defeating the Pilgrims by 9 goals to 5 in the final match at Roehampton, England, June 3d.

At the New York Athletic Club meet at Travers Island June 3d George V. Bonhag lowered the three-mile running record to 14:32. Willie Day's previous record (25 years old) was 14:39. Matt McGrath threw the 16-pound hammer 172 feet 8 1-2 inches, his subsequent throw of 183 feet 3 1-2 inches being declared void on a technicality. He also threw the 56-pound weight 37 feet 6 1-2 inches.

William Kohlemainen, the Finnish runner, beat a field of professional long-distance men at Celtic Park June 10th, running 20 miles in 1:56:41 3-5.

Martin J. Sheridan added 2 feet to his world's discus record at Willard Park, June 17th, with a throw of 141 feet 8 1-2 inches.

The English coaching Marathon run in connection with the Royal Horse Show at Richmond was won by Alfred G. Vanderbilt's famous team of grays in the public coach class, the ribbon for private coaches going to Judge Wm. H. Moore, of New York. Manuel, the unemployed King of Portugal, presented the ribbons to the winners June 9th.

The sonderklasse boats *Beaver*, *Cima* and *Bibelot*, all Americans, won the first of the international races at Kiel, June 19th, finishing in the order stated, only seconds apart. The German entrants, *Tilly XIV*, *Seehund III*, and *Wannsee*, were left far behind.

Times: *Beaver*, 2 hrs., 49 mins., 15 secs. *Cima*, 2 hrs., 49 mins., and 18 secs. *Bibelot*, 2 hrs., 49 mins., 30 secs.

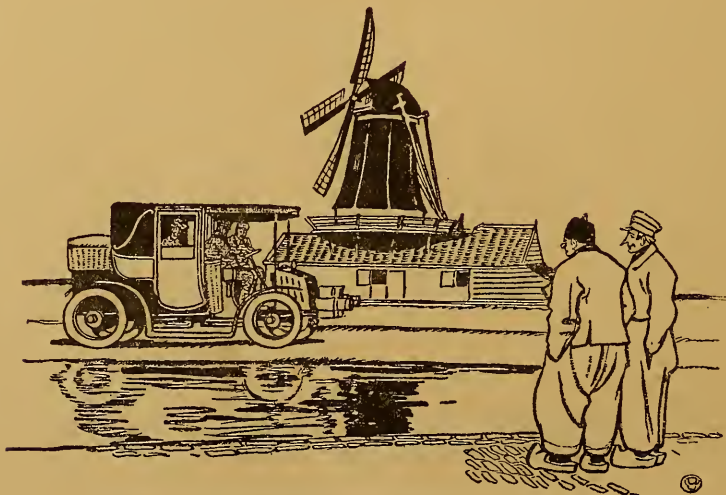
On June 20th the three American yachts finished ahead of the Germans, in the second race of the series for the German Emperor's Cup. The *Cima* won, with the *Bibelot* and *Beaver* second and third respectively. The times were: *Cima*, 2:25:31; *Bibelot*, 2:25:39, and *Beaver*, 2:26:00. The fastest German boat finished 1 min., 55 secs. astern of the last of the American boats.

Again on June 23d the American yachts won the final race of this series, capturing the first and second places, and the Emperor's cup.

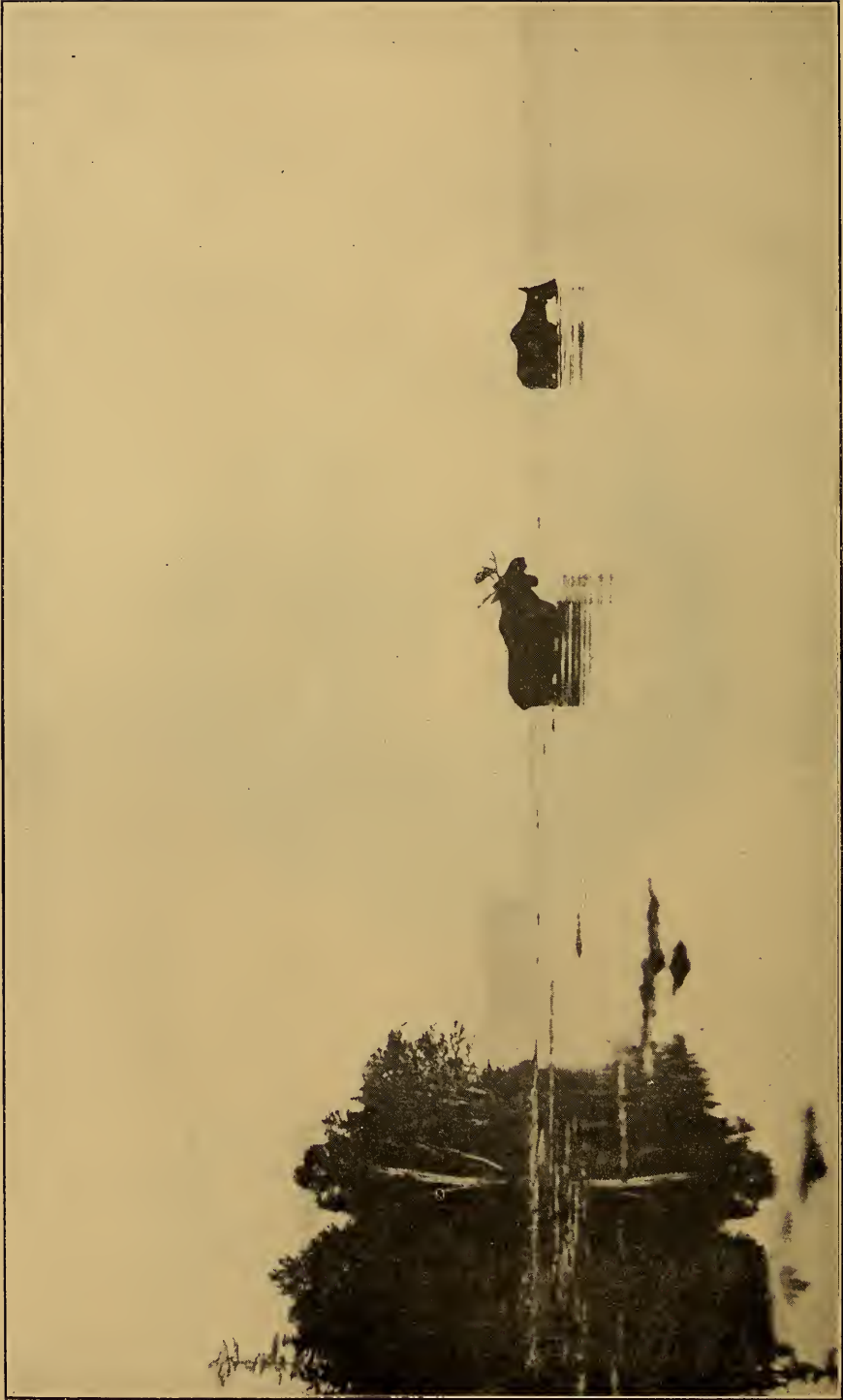
The *Bibelot* won the fifth international race June 28th, and the Emperor's Cup for the winner of the series of sonderklasse competitions having won two previous races. Her time was 2 hrs., 18 mins., 1 sec., the *Beaver* and *Cima* following second and third, respectively.

At Poughkeepsie, June 27th, Cornell won the varsity eight-oared race in 20:10 4-5, and the four-oared race in 11:35. The Columbia crew secured a victory in the Freshman eights in 10:13 1-5.

At the forty-fifth annual regatta held June 30th at New London, Harvard won the varsity eights in 22:44 mins., against Yale's time of 23:40. The two mile varsity fours also went to Harvard in 13:37 1-2 mins., Yale requiring 13:52 for this distance. Yale's only win was the freshman eights in 11:53.







Photograph by Ruth T. Colby
" . . . THE HEART OF THE DEEP UNKNOWN WHERE THE TROUT AND THE WILD MOOSE ARE"

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THE RANCH

BY STEWART EDWARD WHITE

Illustrated by Sidney H. Riesenberg

CHAPTER I

The New and the Old

THE old ranching days of California are to all intents and purposes past and gone. To be sure there remain many large tracts supporting a single group of ranch buildings, over which the cattle wander "on a thousand hills." There are even a few, a very few—like the ranch of which I am going to write—that are still undivided, still game-haunted, still hospitable, still delightful. But in spite of these apparent exceptions, my first statement must stand. About the large tracts swarm real estate men, eager for the chance to subdivide into small farms—and the small farmers pour in from the East at the rate of a thousand a month.

No matter how sternly the old Land-lords set their faces against the new order of things, the new order of things will prevail; for sooner or later old Land-lords must die and the heirs have

not in them the spirit of the ancient tradition. This is, of course, best for the country and for progress, but something passes and is no more. So the Chino Ranch and more recently Lucky Baldwin's broad acres have yielded.

And even in the case of those that still remain intact, whose wide hills and plains graze thousands of head of cattle; whose pastures breed their own cow-horses; whose cowmen, wearing still with a twist of pride the all-but-vanished regalia of their all-but-vanished calling, refuse to drop back to the humdrum status of "farm hands on a cow ranch"; even here has entered a single element powerful enough to change the old to something new. The new may be better—it is certainly more convenient—and perhaps when all is said and done we would not want to go back to the old. But the old is gone. One single modern institution has been sufficient to render it completely of the past. That institution is the automobile.

In the old days—and they are but yesterdays, after all—the ranch was per-

force an isolated community. The journey to town was not to be lightly undertaken; indeed, as far as might be, it was obviated altogether. Blacksmithing, carpentry, shoe cobbling, repairing, barbering and even mild doctoring were all to be done on the premises. Nearly every item of food was raised at home, including vegetables, fruit, meat, eggs, fowls, butter, and honey. Above all, the inhabitants of that ranch settled down comfortably into the realization that their only available community was that immediately about them; and so they both made and were influenced by the individual atmosphere of the place.

In the last two or three years they have all purchased touring cars, and now they run to town casually on almost any excuse. They make shopping lists as does the city dweller; they go back for things forgotten and they return to the ranch as one returns to his home on the side streets of a great city. In place of the old wonderful and impressive expeditions to visit in state the nearest neighbor (twelve miles distant) they drop over of an afternoon for a ten minutes' chat. The ranch is no longer an environment in which one finds the whole activity of his existence, but a dwelling place from which one goes forth.

I will admit that this is probably a distinct gain, but the fact is indubitable that, even in these cases where the ranch life has not been materially changed otherwise, the automobile has brought about a condition entirely new. And as the automobile has fortunately come to stay, the old will never return. It is of the old, and its charm and leisure, that I wish to write.

CHAPTER II

First Impressions

I WENT to the ranch many years ago, stepping from the train somewhere near midnight into a cold, crisp air full of stars. My knowledge of California was at that time confined to several seasons spent on the coast, where the straw hat retires only in deference to a tradition which none of the

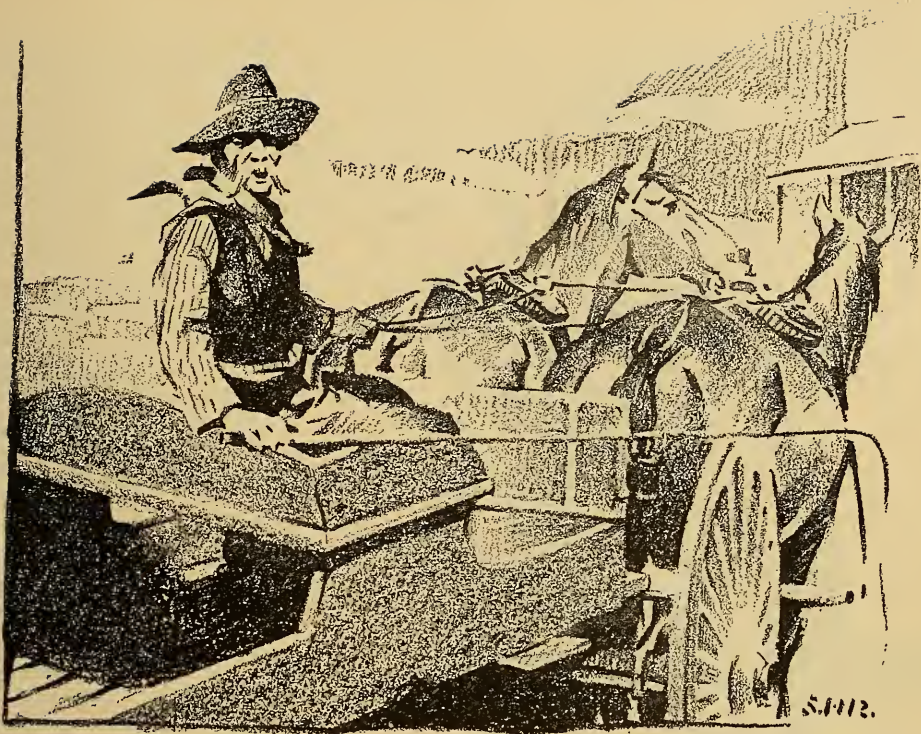
flowers seem bound to respect. As my dress accorded with this experience, I was very glad to be conducted across the street to a little hotel.

My guide was an elderly, very brown man, with a white moustache and the bearing of an army regular. This latter surmise later proved correct. Manning was one of the numerous old soldiers who had fought through the General's Apache campaigns and who now in his age had drifted back to be near his old commander. He left me, after many solicitations as to my comfort and a promise to be back with the team at seven o'clock sharp.

Promptly at that hour he drew up by the curb. My kit bag was piled aboard and I clambered in beside the driver. Manning touched his team. We were off.

The rig was of the sort usual to the better California ranches of the day, and so, perhaps, worth description. It might best be defined as a rather wide, stiff buckboard, set on springs and supported by stout running gear. The single seat was set well forward, while the body of the rig extended back to receive the light freight an errand to town was sure to accumulate. An ample hood top of gray canvas could be raised for protection against either sun, wind or rain. Most powerful brakes could be manipulated by a thrust of the driver's foot. You may be sure they were outside brakes. Inside brakes were then considered the weak expedients of a tourist-driving mercenary. Generally the tongue and moving gear were painted cream and the body of the vehicle dark green.

This substantial, practical, and business-like vehicle was drawn by a pair of mighty good, bright bay horses, straight-backed, square-rumped, deep-shouldered, with the fine heads, small ears and alert yet gentle eyes of high-bred stock. When the word was given they fell into a steady swinging trot. One felt instinctively the power of it and knew that they were capable of keeping up this same gait all day. And that would mean many miles. Their harness was of plain russet leather, neat and well oiled.



THIS SUBSTANTIAL, PRACTICAL AND BUSINESS-LIKE VEHICLE WAS DRAWN BY A PAIR OF MIGHTY GOOD, BRIGHT BAY HORSES

Concerning them I made some remark, trivial yet enough to start Manning. He told me of them and of their peculiarities and virtues. He descanted at length on their breeding and whence came they and their fathers and their fathers' fathers, even unto the sixth generation. He left me at last with the impression that this was probably the best team in the valley, bar none. It was a good team, strong, spirited, gentle and enduring.

We swung out from the little town into a straight road. If it has seemed that I have occupied you too exclusively with objects near at hand, the matter could not be helped. There was nothing more to occupy you. A fog held all the land.

It was a dense fog and very cold. Twenty feet ahead of the horses showed only a wall of white. To right and left dim ghostly bushes or fence posts trooped by us at the ordered pace of our trot. An occasional lone poplar tree developed in the mist as an object on a dry plate develops. We splashed into

puddles, crossed culverts, went through all the business of proceeding along a road—and apparently got nowhere. The mists opened grudgingly before us and closed in behind. As far as knowing what the country was like, I might as well have been blindfolded.

From Manning I elicited piecemeal some few and vague ideas. This meagerness was not due to a disinclination on Manning's part, but only to the fact that he never quite grasped my interest in mere surroundings. Yes, said he, it was a pretty flat country and some brush. Yes, there were mountains, some ways off, though. Not many trees, but some—what you might call a few. And so on, until I gave it up. Mountains, trees, brush and flat land! One could construct any and all landscapes with such building blocks as those.

Now, as has been hinted, I was dressed for Southern California, and the fog was very damp and chill. The light overcoat I wore failed utterly to exclude it. At first I had been comfortable enough, but



MARCHING AROUND AND AROUND THE TOWER,
BEATING THE LONG ROLL ON HIS DRUM

as mile succeeded mile the cold of that winter land fog penetrated to the bone. In answer to my comment Manning replied cheerfully in the words of an old saw:

*"A winter's fog
Will freeze a dog,"*

said he.

I agreed with him. We continued to jog on. Manning detailed what I then thought were hunting lies as to the abundance of game, but which I afterward discovered were only sober truths. When too far gone in the miseries of abject cold I remembered his former calling, and glancing sideways at his bronzed, soldierly face, wished I had gumption enough left to start him going on some of his Indian campaigns. It was too late; I had not the gumption; I was too cold.

Now I believe I am fairly well qualified to know when I really feel cold. I have slept out with the thermometer out of sight somewhere down near the bulb; I once snowshoed nine miles and then, overheated from that exertion, drove thirty-five without additional clothing. On various other occasions I have had experiences that might be called frigid. But never have I been quite so deadly cold as on that winter morning's drive through the land fog of semi-tropical California. It struck through to the very heart.

I subsequently discovered that it takes two hours and three-quarters to drive to the ranch. That is a long time when one has nothing to look at and when one is cold. In fact, it is so long that one loses track of time at all and gradually relapses into that queer condition of passive endurance whereto is no end and no beginning. Therefore the end always comes suddenly and as a surprise.

So it was in this case.

Out of the mists sprang suddenly two tall fan palms, and then two others, and still others. I realized dimly that we were in an avenue of palms. The wheels grated strangely on gravel. We swung sharply to the left between hedges. The mass of a building loomed indistinctly. Manning applied the brakes. We stopped, the steam from the horses' shining backs rising straight up to mingle with the fog.

"Well, here we are!" said Manning.

So we were! I hadn't thought of that. We must be here. After an appreciable moment it occurred to me that perhaps I'd better climb down. I did so, very slowly and stiffly, making the sad mistake of jumping down from the height of the step. How that did injure my feelings! The only catastrophe I can remember comparable to it was when a teacher rapped my knuckles with a

ruler after I had been making snowballs bare handed. My benumbed faculties next swung around to the proposition of proceeding up an interminable gravel walk—(it is twenty-five feet long) to a forbidding flight of stairs—(porch steps—five of them). I put this idea into execution. I reached the steps. And then—

The door was flung open from within, I could see the sparkle and leap of a fine big grate fire. The Captain stood in the doorway, a broad smile on his face; my hostess smiled another welcome behind him; the General roared still another from somewhere behind her.

Now I had never met the Captain. He held out both hands in greeting. One of those hands was for me to shake. The other held a huge glass of hot Scotch. The hot Scotch was in the right hand.

CHAPTER III

The People and the Place

THEY warmed me through, and then another old soldier named Redmond took me up to show me where I lived. We clambered up narrow boxed stairs that turned three ways; we walked down a narrow passage, turned to the right; walked down another narrow passage; climbed three steps to open a door; promptly climbed three steps down again; crossed a screened-in bridge to another wing; ducked through a passageway and so arrived. The ranch-house was like that. Parts of it were built out on stilts. Five or six big cottonwood trees grew right up through the verandahs and spread out over the roof of the house.

There are all sorts of places where you hang coats, or stack guns, or store shells, or find unexpected hooks; passageways leading to outdoor upstairs screen porches; cubby holes and the like. And whenever you imagine the house must be quite full of guests they can always discover to you yet another bedroom. It may at the last be a very tiny bedroom, with space enough only for a single bed and not much else; and you may get to it only by way of out of

doors; and it may be already fairly well occupied by wooden decoys and shotgun shells, but there it is, guests and guests after you thought the house must be full.

Belonging and appertaining unto the house were several fixtures. One of these was old Charley, the Chinese cook. He had been there twenty-five years. In that time he had learned perfect English, acquired our kind of a sense of humor, come to a complete theoretical understanding of how to run a ranch and all the people on it and taught Pollymckittrick what she knew.

Pollymckittrick was the bereaved widow of the noble pair of yellow and green parrots Noah selected for his ark. At least I think she was that old. She was certainly very wise in both Oriental and Occidental wisdom. Her chief accomplishments, other than those customary to parrots, were the ability to spell and sing English songs. "After the Ball" and "Daisy Bell" were her favorites, rendered with occasional jingle variations. She considered Charley her only real friend, though she tolerated some others. Pollymckittrick was a product of artificial civilization. No call of the wild in hers! She preferred her cage, gilded or otherwise.

Each afternoon the cage was placed on the lawn so Pollymckittrick could have her sun bath. One day a big red tail hawk sailed by. Pollymckittrick fell backward off her perch, flat on her back. The sorrowing family gathered to observe this extraordinary case of heart failure. After an interval Pollymckittrick unfilmed one yellow eye.

"Po-o-or Pollymckittrick!" she remarked.

At the sight of that hawk Pollymckittrick had fainted!

The third institution having to do with the house was undoubtedly Redmond. Redmond was another of the old soldiers who had in their old age sought out their beloved General. Redmond was a sort of all-round man. He built the fires very early in the morning and he did your boots and hunting clothes, got out the decoys, plucked the ducks, saw to the shells, fed the dogs and was always around at arrival and

departure to lend a helping hand. He dwelt in a square room in the windmill tower together with a black cat and all the newspapers in the world.

The cat he alternately allowed the most extraordinary liberties or disciplined rigorously. On such occasions he invariably seized the animal and hurled it bodily through the open window. The cat took the long fall quite calmly and immediately clambered back up the outside stairway that led to the room. The newspapers he read and clipped therefrom items of the most diverse nature to which he deprecatingly invited attention.

Once in so often a strange martial fervor would obsess him. Then the family, awakened in the early dawn, would groan and turn over, realizing that its rest was for that morning permanently shattered. The old man had hoisted his colors over the windmill tower and now, in a frenzy of fervor, was marching around and around the tower, beating the long roll on his drum. After one such outbreak he would be his ordinary humble, quiet, obliging, almost deprecating self for another month or so. The ranch people took it philosophically.

The fourth institution was Nobo. Nobo was a Japanese woman who bossed the General. She was a square built person of forty or so who had also been with the family unknown years. Her capabilities were undoubted, as also her faith in them. The hostess depended on her a good deal and at the same time chafed mildly under calm assumption that she knew perfectly what the situation demanded.

The General took her domination amusedly. To be sure, nobody was likely to fool much with the General. His vast good nature had way down beneath it something that on occasion could be stern. Nobo could and would tell the General what clothes to wear and when to change them and such matters, but she never ventured to inhibit the General's ideas as to going forth in rains, or driving where he everlastingly dod-blistered pleased, or words to that effect, across country in his magnificently rattletrap surrey, although she often

looked very anxious. For she adored the General. But we all did that.

As though the heavy curtain of fog had been laid upon the land expressly that I might get my first impressions of the ranch in due order, about noon the weather cleared. Even while we ate lunch the sun came out. After the meal we went forth into the open to see what we could see.

The ranch was situated in the middle of a vast plain, around three sides of which rose a grand amphitheater of mountains. The nearest of them was some thirty miles away, yet ordinarily, in this clear, dry Western atmosphere they were always imminent. Over their eastern ramparts the sun rose to look upon a chill and frosty world; behind their western barriers the sun withdrew, leaving soft air, purple shadows and the flight of dim far wild fowl across a saffron sky. To the north was only distance and the fading of the blue of the heavens to the pearl gray of the horizon.

So much if one stepped immediately beyond the ranch itself. The plains were broad. Here and there the flatness broke in a long, low line of cottonwoods, marking the winding course of a slough or trace of subsoil water. Mesquite lay in dark patches, sage brush, the green of pastureland periodically overflowed by the irrigation water. Nearer at home were occasional great white oaks or haystacks bigger than a house and shaped like one.

To the distant eye the ranch was a grove of trees. Cottonwoods and eucalyptus had been planted and had thriven mightily on the abundant artesian water. We have already noticed the six or eight great trees growing fairly up through the house. On the outskirts lay also a fruit orchard of several hundred acres. Opposite the house and separated from it by a cedar hedge was a commodious and attractive bungalow for the foreman. Beyond him were the bunkhouse, cookhouse, blacksmith shops and the like.

We started our tour of inspection by examining and commenting gravely upon the dormant rose garden and equally dormant grape arbor. Through this we came to the big wire corrals in which

were kept the dogs. Here I met old Ben.

Old Ben was not very old, but he was different from young Ben. He was a pointer of the old-fashioned, stocky built, enduring type common — and serviceable — before our bench-show experts began to breed for speed, fineness, small size — and lack of stamina. Ben proved in the event to be a good all-around dog. He combined the attributes of pointer, cocker spaniel and retriever. In other words, he would hunt quail in the orthodox fashion, or he would rustle into the mesquite thorns for the purpose of flushing them out to us; or he would swim anywhere any number of times to bring out ducks.

To be sure, he occasionally got a little mixed. At times he might try to flush quail in the open, instead of standing them, or would attempt to retrieve some perfectly lively specimens. Then Ben needed a licking and generally got it. He lacked in his work some of the finish and style of the dogs we used after grouse in Michigan, but he was a good all-round dog for the work. Furthermore, he was most pleasant personally.

Next door to him lived the dachshunds. The dachshunds were a marvel, a nuisance, a bone of contention, an anomaly, an accident and a farce. They happened because somebody had once given the hostess a pair of them. I do not believe she cared particularly for them, but she is good natured and the ranch is large and they are rather amusing. At the time of my first visit the original pair had multiplied. Gazing on that yardful of imbecile-looking canines, my admiration for Noah's wisdom increased; he certainly needed no more than a pair to restock the earth. Redmond claimed there were twenty-two of



NO ENGLISH, NO EMOTION, NO SINGLE RAY OF THE
SORT OF INTELLIGENCE REQUIRED TO PENE-
TRATE INTO OUR OCCIDENTAL WORLD

them; though nobody else pretended to have been able to disentangle them enough for a census.

They were all light brown in color, and the aggregation reminded me of a rather disentangled bunch of angleworms. They lived in a large enclosure and emerged therefrom only under supervision, for they considered chickens and young pigs their especial prey. The Captain looked upon them with exasperated tolerance; Redmond with affection; the hostess, I think, with a good deal of the partisanship inspired, not so much by liking as by the necessity of defending

them against ridicule; and the rest of the world with amused expectation as to what they would do next. The Captain was continually uttering half-serious threats as to the different kinds of sudden death he was going to inflict on the whole useless, bandy-legged, snipe-nosed, waggle-eared—

The best comment was offered last year by the chauffeur of the automobile. After gazing on the phenomena of their extraordinary build for some moments, he remarked thoughtfully:

"Those dogs have a mighty long wheel base!"

For some reason unknown two of the dachshunds have been elevated from the ranks and have house privileges. Their names are respectively Pete and Pup. They hate each other and have sensitive dispositions. It took me just four years to learn to tell them apart. I believe Pete has a slightly projecting short rib on his left side—or is it Pup? It was fatal to mistake.

"Hullo, Pup!" I would cry to one jovially.

"G—r—r—r!" would remark the dog, retiring under the sofa. Thus I would know it was Pete. The worst of it was that said Pete's feelings were thereby lacerated so deeply that I was not forgiven all the rest of that day.

Beyond the dogs lay a noble enclosure, so large that it would have been subdivided into building lots had it been anywhere else. It was inhabited by all sorts of fowl, hundreds of them, of all varieties. There were chickens, turkeys, geese, and a flock of ducks. The Captain pointed out the Rouen ducks, almost exactly like the wild mallards.

"Those are my live decoys," said he.

For the accommodation of this multitude were cities of nesthouses, roosthouses, and the like. Huge structures elevated on poles swarmed with doves. A duck pond even had been provided for its proper denizens.

Thus we reached the southernmost outpost of our quadrangle and turned to the west, where an ancient Chinaman and an assistant cultivated minutely and painstakingly a beautiful vegetable garden. Tiny irrigation streams ran here and there, fitted with miniature water-

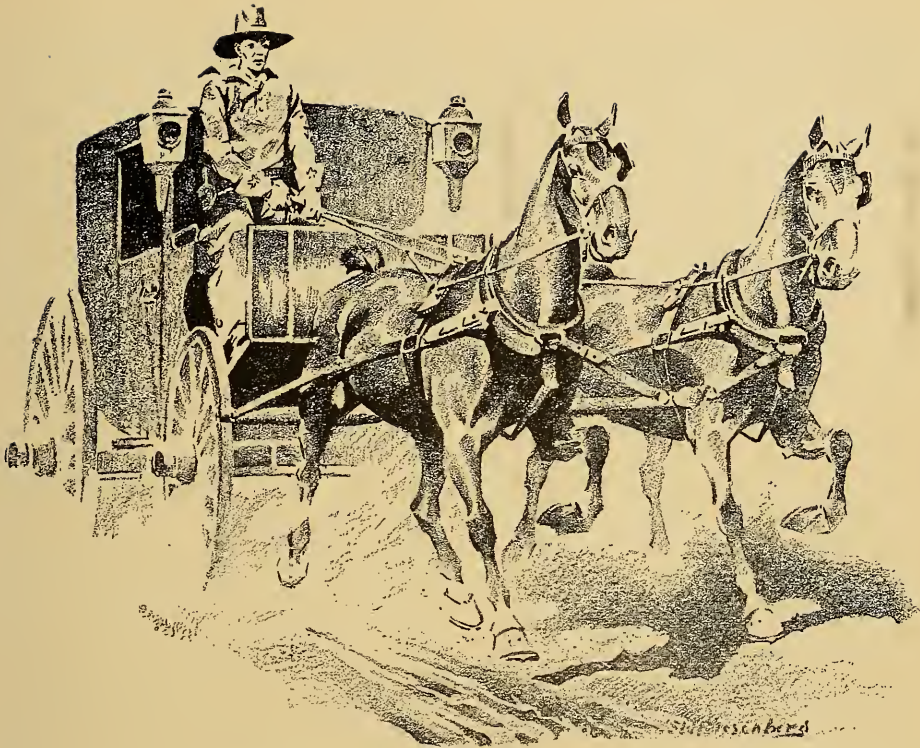
locks. Strange and foreign bamboo matings, withes, and poles performed strange and foreign functions.

The gardener, brown and old and wrinkled, his queue wound neatly beneath his tremendous woven-straw umbrella of a hat, possessing no English, no emotion, no single ray of the sort of intelligence required to penetrate into our Occidental world, bent over his work. When we passed, he did not look up. He dwelt in a shed. At least, such it proved to be, when examined with the cold eye of analysis. In impression it was ancient, exotic, Mongolian, the abode of one of a mysterious and venerable race, a bit of foreign country. By what precise means this was accomplished it would be difficult to say. It is a fact well known to all Californians that a Chinaman can with no more extensive properties than a few pieces of red paper, a partition, a dingy curtain, and a varnished duck transform utterly an American tenement into a Chinese pagoda.

Thence we passed through a wicket and came to the abode of hogs. They dotted the landscape into the far distance, rooting about to find what they could; they lay in wallows; they heaped themselves along fences; they snorted and splashed in sundry shallow pools; a good half-mile of maternal hogs occupied a row of kennels from which the various progeny issued forth between the bars. I cannot say I am much interested in hogs, but even I could dimly comprehend the Captain's attitude of swollen pride. They were clean and black and more nearly approximated the absurd hog-advertisements than I had believed possible. You know the kind I mean,—an almost exact rectangle on four absurdly short legs.

In the middle distance stood a long, narrow, thatched roof, supported on poles. Beneath this, the Captain told me, were the beehives. They proved later to be in charge of a mild-eyed religious fanatic who believed the world to be flat.

We took a cursory glance at a barn filled to the brim with prunes and the gushing, beautiful artesian well; at the men's quarters; the blacksmith shop, and



“IN A WELL-APPOINTED BROUGHAM DRAWN BY A GOOD TEAM IN PROPER HARNESS,
AND ON THE BOX SAT A LEAN-FACED COWPUNCHER IN SOMBRERO,
RED HANKERCHIEF AND BLUE JEANS!

all the rest. So we rounded the circle and came to the most important single feature of the ranch,—the quarters for the horses.

A very long, deep shed, open on all sides, contained a double row of mangers, facing each other and divided into stalls. Here stood and were fed the working horses. By that I mean not only the mule and horse teams, but also the utility driving teams and the saddle-horses used by the cowboys. Between each two stalls was a heavy pillar supporting the roof and well supplied with facilities for hanging up the harness and equipments. As is usual in California, the sides and ends were open to the air and the floor was simply the earth well bedded.

But over against this shed stood a big barn of the Eastern type. Here were the private equipments.

The Captain is a horseman. He breeds polo ponies after a formula of his own, and so successfully that many

of them cross the Atlantic. On the ranch are always several hundred head of beautiful animals, and of these the best are kept up for the use of the Captain and his friends. We looked at them in their clean, commodious stalls; we inspected the harness and saddle-room, glistening and satiny with polished metal and well-oiled leather; we examined the half-dozen or so of vehicles of all descriptions. The Hostess told with relish of her one attempt to be stylish.

“We had such beautiful horses,” said she, “that I thought we ought to have something to go with them, so I sent up to the city for my brougham. It made a very neat turnout, and Tom was as proud of it as I was, but when it came to a question of proper garb for Tom I ran up against a deadlock. Tom refused pointblank to wear a livery or anything approaching a livery. He was perfectly respectful about it, but he refused. Well, I drove around all that

winter, when the weather was bad, in a well-appointed brougham drawn by a good team in a proper harness, and on the box sat a lean-faced cowpuncher in sombrero, red handkerchief, and blue-jeans!"

Tom led forth the horses one after the other—Kingmaker, the Fiddler, Pitapat, and the others. We spent a delightful two hours. The sun dropped; the shadows lengthened. From the fields the men began to come in. They drove the wagons and hay ricks into the spacious enclosure and set leisurely about the task of caring for their animals. Chinese and Japanese drifted from the orchards and began to manipulate the grindstone on their pruning-knives. Presently a cowboy jogged in, his spurs and bit jingling. From the cookhouse a bell began to clang.

We turned back to the House. Before going in I faced the west. The sky had turned a light green full of luccence. The minor sounds of the ranch nearby seemed to be surrounded by a sea of silence outside. Single sounds came very clearly across it. And behind everything, after a few minutes, I made out a queer, monotonous background of half-croaking calling. For some time this puzzled me. Then at last my groping recollection came to my assistance. I was hearing the calling of myriads of snow geese.

CHAPTER IV

The Early Bird

I WAS awakened rather early by Redmond, who silently entered the room, lit a kerosene stove, closed the windows, and departed. As I was now beneath two blankets and an eider-down quilt, and my nose was cold, I was duly grateful. Mistaking the rite for a signal to arise, I did so and shortly descended. The three fireplaces were crackling away merrily, but they had done little to mitigate the atmosphere as yet. Maids were dusting and sweeping. The table was not yet set. Inquiry telling that breakfast was over an hour later, I took a gun from the rack, pocketed the only five shells in sight, and departed to see what I could see.

The outer world was crisp with frost. I clambered over the corral fence, made my way through a hundred acres or so of slumbering pigs, and so emerged into the open country.

In the middle distance and perhaps a mile away was a low fringe of brush; to the left, an equal distance, a group of willows; and almost behind me a clump of cottonwoods. I resolved to walk over to the brush, swing around to the willows, turn to the cottonwoods, and so back to the Ranch. It looked like about four miles or so. Perhaps with my five shells I might get something. At any rate I would have a good walk.

The mountains were turning from the rose pink of early morning. I could hear again the bickering cries of the snow geese and sandhill cranes away in an unknown distance, the homelier calls of barnyard fowl nearer at hand. Cattle trotted before me and to right and left, their heads high, their gait swinging with the freedom of the half-wild animals of the ranges. After a few steps they turned to stare at me, eyes and nostrils wide, before making up their minds whether or not it would be wise to put a greater distance between me and them. The close sod was green and strong. It covered the slightly rounding irrigation "checks" that followed in many a curve and double the lines of contours on the flat plain.

The fringe of brush did not amount to anything; it was merely a convenient turning mark for my little walk. Arrived there, I executed a sharp "column left"—

Seven ducks leaped into the air apparently from the bare, open, and dry ground!

Every sportsman knows the scattering effect on the wits of the absolutely unexpected appearance of game. Every sportsman knows also the instinctive reactions that long habit will bring about. Thus, figuratively, I stood with open mouth, heart beating slightly faster, and mind making to itself such imbecile remarks as: "Well, *what* do you think of that! Who in blazes would have expected ducks here?" and other futile remarks.

In the meantime the trained part of me had jerked the gun off my shoulder, pushed forward the safety catch, and prepared for one hasty long shot at the last and slowest of the ducks. Now the instinctive part of one can do the preparations, but the actual shooting requires a more ordered frame of mind. By this time my wits had snapped back into place. I had the satisfaction of seeing the duck's outstretched neck wilt; of hearing him hit the ground with a thud somewhere beyond.

Marking the line of his fall, I stepped confidently forward, and without any warning whatever found myself standing on the bank of an irrigation ditch. It was filled to the brim with placid water on which floated a few downy feathers. On this side was dry sod; on the other was dry sod. Nothing indicated the presence of that straight band of silvery water until one stood fairly at its brink. To the right I could see its sides narrow to the point of a remote perspective. To the left it ran for a few hundred yards, then apparently came to an abrupt stop where it turned at an angle.

In the meantime, my duck was on the other side; I was in my citizen's clothes.

No solution offered in sight, so I made my way to the left where I could look around the bend. Nearing the bend, I

was seized with a bright idea. I dropped back below the line of sight; sneaked quietly to the bank; and, my eye almost level with the water, peered down the new vista. Sure enough, not a hundred and fifty yards away, floated another band of ducks.

I watched them for a moment until I was sure, by various small landmarks, of their exact location. Then I dropped back far enough so that, even standing erect, I would be below the line of vision of those ducks; strolled along until opposite my landmarks; then, bolt upright, walked directly forward, the gun at ready. When within twenty yards the ducks arose. It was, of course, easy shooting. Both fell across the ditch. That did not worry me; if worst came to worst I could strip and wade across to them.

This seemed to me a unique and exceedingly interesting way to shoot ducks. To be sure, I had only two shells left, but, then, it must be almost breakfast-time. I repeated the feat a half-mile farther on, discovered a floodgate over which I could get to the other side, collected my five ducks, and cut cross-country to the ranch. The sun was just getting in its work on the frost. Long files of wagons and men could be seen disappearing in the distance. I entered proudly, only ten minutes late.

(To be continued)





WE LASHED THE FLAT-BOTTOMED ROWBOAT TO A JAGGED POINT OF THE ROCK

DUCKS ON THE ROCK

BY PERCY M. CUSHING

Photographs by the Author

HY is first cousin to galvanized nails. He is tough, stringy and waterproof, which qualities are gilt-edged assets when our rock is considered. It is not a far cry from our rock to the village of Larchmont on Long Island Sound. Neither is it more than a good-sized shout to New York City itself, for on clear days one perched on our rock with face turned toward the setting sun can see against the distance a haze of smoke and blur of buildings and chimneys and gas tanks.

Once every few years there is good duck shooting in the western end of the Sound, at the very back door, so to speak, of the Metropolis. Two, three, or even five autumns may pass without so much as a broadbill duck being seen on these waters before January, though there are generally many birds in the spring, when they are protected. For some reason on the autumn migration the broadbill do

not seem to drop into the Sound. Coots may be had aplenty, if one cares to shoot them, but broadbill—no.

Then after one of these barren spells comes a particularly early and cold winter that freezes up the Great South Bay of Long Island, and lo, for a few days the Sound is alive with broadbill. This last was one of those favorable winters and Hy and I happened to be right on the scene.

The Great South Bay, with its vast feeding grounds, froze over on December 8th. On the 9th the flight began to come over to the Sound to find water. For a week Hy wandered the shores of Larchmont harbor, watching through his glasses the birds drop in and grow black over the gray water in a dozen different rafts. In across the blue Long Island hills they came, from Execution Light eastward as far as the eye could reach and farther, a ceaseless sweep of dark moving wedges. The drab dawns lifting far down the Sound were sil-



MOST OF THE SHOTS WERE WIDE AND DIFFICULT AND OUR AVERAGE OF MISSES WAS EXCELLENT

houetted with whistling wings; the days showed them flashing occasionally white in the sunlight; the twilights winnowed with them passing close along shore.

For another week Hy and I watched them breathless together from our cranny on our rock with guns in hand, or from the shore with the high-powered glasses marking their flight and rafting places to guide us in the next day's sport. And then came a day when the sun fell warm across the water and the ice on the rock rotted and ran away in twisting black streaks. That was on the 30th of December, and there were no more ducks afterward. The Great South Bay had opened up.

As the season hurried to its close we picked up with the glasses straggling bunches of whistlers far out toward the middle of the Sound. Occasionally a gust of old squaws flared against the winter horizon or a crafty merganser bored across the dull water, but the broadbill had gone.

Behind them, however, they had left half a dozen days for us to remember—days that were full of thrills and heart beats, of cold and wet and of quick curved wings on smooth, bottle-shaped bodies, bursting from drab reaches of distance into our decoys. Many were

the moments I saw Hy scrambling madly over the rocks for his gun when birds swinging in caught us unawares as we were eating lunch or attending to something else that took us from our cranny. Sometimes when the weather was still and the flight was poor we watched the ducks rafting in thousands out in the deep water. And when one of the blue-billed chaps came to bag there was real pleasure in looking him over and admiring the grace that God had given him.

Many are the gunners who scoff at the broadbill, bluebill, blackhead, or whatever the local name for the scaup duck happens to be. These hunters are doing the glossy-headed, white-bellied little bumblebees of the winter water an injustice. There are no gamer little fellows than the broadbill. They are nearly as sporty as the royal canvasback, as swift almost as the teal, as beautiful when coming to decoys as any duck. Heavens, how they come! glossy black head straight out, bodies as symmetrical as winged bottles, short, crisp wings flashing like lightning, flaring first one white side, then the other, to the sunlight. They ask no odds of any fowl—and need none.

On the table they are not bad. Cooked properly and when their feeding has



BY NOON WE HAD A DOZEN BIRDS FROM TWICE AS MANY OPPORTUNITIES

been good, it might take an expert to distinguish them from their highly prized cousins, the red heads. They are all right and more power to them.

There was that red letter day when we found that rock of ours. We had rigged off a point on the shore just where the rocky feet of the village dip into the Sound. We had been unsuccessful. Off shore, a quarter of a mile, small wisps of broadbill were moving constantly. An occasional whistler beat hollowly to windward. Now and again a pair of sheldrake dropped with small splashes, like rubber balls, into the water. And for an hour we had been watching them—watching handful after handful of broadbill head in toward our decoys, waver and flare upward and away from the deserted houses that flung along the rocks at our backs.

"It's no use," Hy said. "They won't

stool here. We've got to get out there away from shore somehow."

And while we were debating the ebb tide showed us the way. Racing eastward out of the Sound, it uncovered a small point of rock, ice-sheathed and bleak, lying a few hundred yards off shore.

"That," said I, "is where we are going."

And we went. We lashed the flat-bottomed rowboat to a jagged point of the rock, swung our decoys to leeward and crouched in a crevice of the natural blind. I say we were on a rock. Rather it was a tiny island of rocks. They had started to build a breakwater there once, had dumped a heap of boulders overboard and then had given it up. At low tide this pile of stones is forty feet long and stands seven feet above water. At high tide it is submerged save for a flat shoulder just large enough for one man to sit on, with his feet

curled under him, tailor fashion.

It was about eight o'clock in the morning when we reached the tiny islet and the ebbing tide had then uncovered a sizeable section of it. The day was very cold—the coldest, I think, of the year. On the way out the water had frozen to the oars and they were sheathed in ice. Five minutes after our decoys touched the water icicles were hanging from their bills and their backs were coating over.

We had the stool rigged five on a line. There were fifteen lines and from the first decoy to the anchor was a stretch of forty feet, so deep was the water. It was cold work rigging those stool. The ice-crust fishline with which they were fastened was like red-hot wire in our hands.

Hardly had we crawled out on the rock stiffened and shivering than the

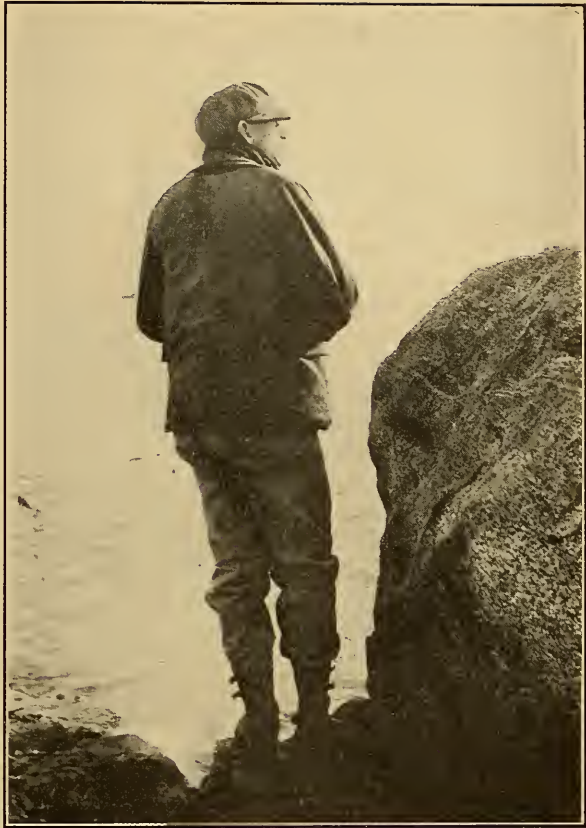
sport for which we had been longing during the early hours began to come to us. Out of the gray distances southward across the Sound bunch after bunch of broadbill were boring, circling just outside the rock and swinging westward half a mile to alight in an ever-growing raft. The majority of them paid no attention to our stool, but always enough were coming to keep our hearts pounding with hope, and every now and then a small flock or a stray bird or two would swing in to the decoys.

Most of the shots were wide and difficult, and our average of misses was excellent, but we dropped enough to keep us constantly getting ready to shoot, shooting, or going through the strenuous operation of putting out in the boat to pick up the dead.

By noon we had a dozen birds from twice as many opportunities, and then the sun, which had been shining brightly though coldly, went out under a leaden sky and the light northwest wind freshened. Instantly the cold began to draw sharper and we huddled close to each other. I began to think of giving it up, but if any such notion occurred to Hy he concealed it.

"That raft to the west will begin working up here in the afternoon and then we'll get some real shooting," he kept saying.

The wind ate through our woollens and slowed the blood in our veins. In from the eastward the shadow of late afternoon began to drift and out from the rock pushed Hy in the flat-bottomed boat. He was going to rout out that big raft to the westward as our last chance before dark and he was leaving me on the rock to benefit by that chance if there was any benefit to be had. That was like Hy. He turned westward



IN FROM THE EASTWARD THE SHADOW OF LATE AFTERNOON BEGAN TO DRIFT

away from the blanket of twilight that gathered far down the Sound and bent to his oars.

It must have been nearly a mile to the raft of birds and before Hy had got halfway to them he discovered that they were working farther and farther westward, moving almost as fast as he could row the clumsy boat.

From my cramped position on the rock I watched him grow a pin prick on the surface of the water that was now heaving and pitching in the growing wind. I could no longer see the black blot of the birds, and while I searched futilely for them with watering eyes, the blanket of dusk stole upon me and stalked westward out across the water toward the tossing speck of a boat, billowed over it, and took it from view.

The night came quickly, so quietly and quickly that uneasiness did not wake

within me until that second (it seemed no longer than that) in which the boat went out in the darkness. A moment later I was figuring how far off Hy was. It must have been a mile at least. I knew that he must have lost sight of the rock before he was shut from my view, for the night had come in from the east. I could not tell whether he had turned back as the gloom had hidden me or not—he was too far distant

gun and put them in the half-empty shell box which I had placed on a flat table of rock a little lower down on the pile of stones than the position in which I sat. I bent down to grope in the darkness for this box and as I pushed my hand forward it went into frigid water up to the wrist.

Instantly I realized the situation. The tide was rising—had been creeping insidiously up on the rock pile for an hour.



AT LOW TIDE THIS PILE OF STONES IS FORTY FEET LONG AND STANDS SEVEN FEET ABOVE WATER

and the boat too small in the waves for me to have determined.

I waited ten, fifteen minutes, half an hour, while the darkness became more intense. Then I shouted and listened in the rush of the wind. There was no reply. I shouted again and again. No answer. My uneasiness increased to alarm. Hy must be lost out there in the night. I looked over my shoulder. A faint glow came from the lights on shore three hundred yards behind me. The night was so thick I made up my mind he could see nothing of those lights.

Then I did the only thing left. I reached for my gun to fire it. Just before Hy had disappeared, realizing that there would be no chance at the raft of ducks, I had slipped the shells from the

It had mounted up over the flat stone and my shells were covered with two feet of water.

My anxiety now shifted from Hy to myself. In one, two, three hours more there would be a five-foot square of the rock pile out of water. After that there would be enough for a man to sit on in calm weather. In the heavy wind that was now blowing this remaining foot of stone would be awash with freezing water.

I stood up and shouted till my voice gave out. I was so stiffened with the cold, which had increased tenfold with nightfall, that I could barely move. The wind bit through my heavy coat and woolens. And always in my ears was the sullen swash of the rising tide on the rocks at my feet. Little by little



THE MAJORITY OF THEM PAID NO ATTENTION TO OUR STOOL BUT ALWAYS ENOUGH WERE COMING TO KEEP OUR HEARTS POUNDING WITH HOPE

the water rose about the tiny island and I crawled back toward the center. It was a mighty uncomfortable predicament, I can tell you. The houses along the shorefront were deserted, and even if my shouts could have been heard there, it is doubtful if they would have at-

tracted any attention to my whereabouts.

Concern over my own position and anxiety for Hy combined to make me put in as unpleasant an hour as I can remember. When I was in the center of the rock with six feet on either side of me above water I saw a faint dart of



"THAT RAFT TO THE WEST WILL BEGIN WORKING UP HERE IN THE AFTERNOON AND THEN WE'LL GET SOME REAL SHOOTING," HE KEPT SAYING



OUT OF THE GRAY DISTANCES SOUTHWARD ACROSS THE SOUND, BUNCH AFTER BUNCH OF BROADBILL WERE BORING

flame outshore in the darkness. A moment later I heard the muffled report of a gun. Hy was lost, too, and was waiting for an answering shot—a shot I could not return to guide him.

Using my hands as a trumpet, I shouted till I thought my lungs would split. Then I waited. Another point of fire pricked the night and another report came to me. Maybe he had heard my cries. Maybe he had not and was firing the other barrel to demand the answer he first failed to receive. I pictured him listening in the rush of the wind, half frozen, for the answer that did not come. Perhaps he was too exhausted to row, maybe he had lost an oar. Possibly he—

“Hey, you fule feller!”

The voice came from close at hand. I cried out involuntarily in surprise. Swinging about, I peered into the darkness. A grating noise and the splash of water against a boat sounded at my side. In the gloom at the edge of the rock, almost within arm’s reach, I made out a dark object.

“Yu want stay dere all night?” came the voice again. “If you do, I ban yust go on.”

“Peter,” I shouted.

“Ya, Peter,” he returned.

And it was Peter, the Yacht Club boatman. Why on earth hadn’t I thought of him? Why hadn’t I remembered he went out every night to tend the light on the end of the breakwater? He had heard my cries and stopped on the way in.

I tumbled into his boat, telling him hastily of my anxiety for Hy.

“We look,” he said, and turned his boat out into the Sound. We rowed steadily for ten minutes before a dark object loomed close upon us from the night and a familiar voice hailed us through the darkness.

“We’ll pick you up in a minute, Hy,” I yelled encouragingly. “Don’t try to row—it’s all right now, old man—we’ll tow you in.”

“Tow—hell,” chuckled the man over whom I had just wasted a warehouse full of worries. “You fellows go ashore. I’ll grab up these stool and come along presently.”

All of which might seem reiteration of the statement that Hy is first cousin to galvanized nails, stringy, waterproof and well—wonderful.



THE OLDEST GAMES OF ALL

With Photographs by H. R. Terhune

SO far as we can credit record and legend, the oldest of all forms of friendly contests are the games of track and field—the races and jumps and weights. Of course, they have the very best Greek origin—Homer sings their praises in a score of passages and the athlete finds a place in the oldest friezes and on the earliest sculptured vases. In every country where the climate permits the natives have practiced running from time immemorial and contests with the weights are of equal antiquity, from the caber of Scotland to the slings of the South Sea Islanders.

There has been no finer sport or better means of development yet discovered than these same field and track sports which antedate history. They may be practiced with the simplest form of

equipment—or with the most elaborate; in costume the most complete or the most impromptu—the North American Indian required none at all. A country road, a village street, a level field—the place is easily provided and requires little preparation.

The contest itself brings into play the finest qualities of the human body and spirit—speed, strength, agility, endurance, courage, fairness, everything that makes for good sportsmanship. So many and varied are the events that practically any healthy, well-developed boy may find one at least in which he can show a more than average degree of excellence. And when he has attained that excellence he will hardly know himself for the increased sense of bodily power and fitness that will possess him.



PUTTING THE SHOT



GETTING AWAY WITH THE PISTOL



BREASTING THE TAPE IN THE HUNDRED



POLE VAULTING IS NEAREST AKIN TO FLYING



IT TAKES INBORN SKILL PLUS A LOT OF TRAINING TO MAKE A HIGH JUMPER

IN THE TROUTLAND OF IDAHO

BY CHARLES STUART MOODY

Illustrated with Photographs

LAKE PEND D'OREILLE, in northern Idaho, was discovered and named over eighty years ago by the Jesuit missionaries, then promptly forgotten until a transcontinental railroad laid its tracks around the eastern border in 1883, when it was rediscovered by a few sportsmen having an instinctive knowledge of good trout water. Folks east of the Mississippi search guide books for a place to spend their vacations, not knowing that in Pend d'Oreille is what they are seeking. They do not know that among her sister States Idaho wears unchallenged her proud title, Gem of the Mountains. San Francisco, Seattle, Portland or Spokane will first refer the pleasure-seeker to nearby points, then reluctantly say, "For primitive nature and sure trout go to the lakes and rivers of Idaho."

The most picturesque beauty belongs to Lake Pend d'Oreille, and now that three transcontinental lines of railway touch its shores pleasure-seekers and angling devotees will be spreading the fame of this virgin water and its trout—descendants of those Adam named and placed there. This fighting line will last for years yet and will be found as game as their blue blood warrants one to expect.

As for the lake itself, no word picture can do the subject justice; you must see it for yourself, its surrounding of dark green, tree-clothed mountains that rear their lofty heads into the sky, where evening's purple shadows lend to them a soothing charm; its waters deep as the sea and clear as the blue sky that arches above them, as cold as the eternal snows that feed them; deep, land-locked bays that indent the shores and immense cliffs of black basalt that rise sheer from the water's edge; long reaches of pebbly

shore, fringed with widespreading cottonwoods beneath whose shadows you may float, and floating fish; miles upon miles of pure white strand where you may camp and "soak your soul over, hub and spoke." I can tell you these things, but still you must see them, for the picture is inadequate.

I have omitted mention of the noble streams that feed the lake, for I must speak of them more in detail in the narrative of a canoe journey we took last summer which is really responsible for this sketch.

With a tried companion, a sturdy little power canoe, and no end of time at our disposal, it was my good fortune to make a trip entirely around the lake, covering in all nearly three hundred miles of shore line.

This is a yarn about little known waters, around which still cling the mists of romance. If it is new to you, I crave permission to introduce a new fisherman's El Dorado, a place where you may become a piscatorial Midas if you so desire.

With all necessities purchased and health and dispositions attuned to our best enjoyment, we sank to rest one June night only to be hailed forth by the call boy after what seemed only a fifteen-minute interval. It was gray dawn when we reached the pier where the *Papoose* rocked at her moorings. We got aboard and shoved out into the dark water. I started the motor and the little craft bore swiftly away. Day broke. The Master Artist drew the fog's drapery from the landscape for our appreciative eyes. The smooth water mirrored the mountains in its calm depths and Wordsworth's lines fell softly from my friend's lips:

"The swan on still St. Mary's lake
Float double, swan and shadow."

A solitary loon, fishing in the middle distance, turned a bright red eye upon the *Papoose* as she drew near. Finally he concluded that we were becoming too familiar on short acquaintance and disappeared beneath the water. He came up several hundred yards away and laughed in a loud, demonic burst of mirth.

Catching Breakfast

The loon fishing reminded us that we, too, were primitive and must fish if we would breakfast. The principal fish of the lake is the cut-throat trout. There are several methods of luring this handsome game fish, but the one chosen this morning is the least labor and is abundantly productive of results. A Number 2 Wilson, or Pfeuger spoon is attached to three hundred feet of silk line and allowed to trail over the stern of the boat, the engine being slowed down to three miles an hour. The angler sits at his ease and awaits a strike.

Trolling conditions were good. A light breeze had followed the sun, crinkling the water, the sun shone brightly, flashing on the metallic spoon whirling away to the rear.

We did not have long to wait. A cut-throat saw the lure, cut through the water like a meteor, and struck it with all his might. There was a sharp tug and a message flashed down the vibrating line, "fish on!" A gleaming silver body shot four feet into the air as the fish felt the sting of the barbs. The cut-throat is a born fighter, a mass of compound energy. The stout rod bent into a bow, the excited captive tore off rods and rods of silk in his rush for liberty. A good rod and a steady hand soon ended the contest. The handsome fellow with his silver sides and bright red throat gashes was gradually towed in and lifted aboard. Others of his kind followed until conscience cried "enough," when we headed for our breakfast room among the rocks.

Our first halt was made at Contest Point, a bold, rocky headland that shoulders out into the lake just across from the city. Here a clear cold spring trickled out of the rocks, and drift, dry as tinder, lay scattered along the beach

for our breakfast fire. In a few minutes we had the fire going, the coffee on, the fish sizzling in their pan.

How do *you* cook trout? I once ordered fried trout in a New York café. The menu read "Fried Trout—Hunter's Style." Sincerely I pity the chef who was imposed upon by the hunter who told him how hunters fry trout. Our patron saint, Walton, has given us most excellent recipes for cooking most kinds of fish, but Walton never lived in the remote West. If his spirit was hovering over our campfire that morning, he probably learned something of how Westerners fry trout.

First, kill your fish as soon as it is taken from the water. A man who permits a fish to lie flopping in the bottom of the boat until death comes to its relief, besides being brutal, destroys the flavor, for the fish thus actually burns to death. In dressing use as little water as possible. If the trout is large, cut in cross sections, place a thin strip of bacon between the sections, roll in corn meal, and fry over a slow fire. Invert a tin platter over the fish so as to keep all the aroma from escaping. Cook five minutes and turn, then cook for thirty minutes. Serve hot with hunger sauce, preferably on a bit of clean cedar bark. Plates are superfluous.

Our noon camp was at Bottle Bay. Why "Bottle" deponent saith not. Here, in an evergreen grove not far from the shore, stands a spacious two-story log house, the Old Homestead, and a small stream tumbles into the lake in front of the house. It is only a brief, nameless little brook, but it is filled with the liveliest collection of brook trout one would find in a year's journey.

They are small chaps, but greedy as pigs and quick as lightning. The angler has no chance to display his skill. The sport is just to creep along the bank, peer over a clump of willows, and drop a fly into some dark pool that gurgles around the root of a great cedar, watch for the flash of a dark body, feel the thrill of the line, and lift him out, six inches of beauty, dark slate with salmon pink stripes running up and down, and the whole body covered with black freckles.

Supper beside the campfire, a pipe, a



LIGHTNING CREEK IS ONE OF THE LOVELIEST TROUT STREAMS IMAGINABLE



THE SHORE LINE NEAR THE LITTLE HAMLET OF LAKEVIEW

big bonfire for two grownup boys, then sleep beneath the stars.

The second day's voyage took us quite to the head of the lake. We passed Garfield Bay, passed the frowning battlements of Blacktail Mountain, shot by the deep curve of Squaw Bay (delightful name), and at evening entered Idlewild.

The sun was just getting him to bed as we sped between the opposing cliffs that almost meet at the entrance to the bay. The cliff swallows were skimming the surface of the water in myriads, their bills chattering like the sound of rain on a tin roof as they snapped the white insects that were playing over the water. As we entered the deep, narrow bay the hungry trout were leaping in perfect frenzy after these same insects. A few fishing boats were out casting with great success.

The method here is very much the same as bait casting for black bass, except that what is locally known as a Colorado spinner is used. With a fairly heavy fly rod one can cast seventy-five feet of line and the spinner proves a very

seductive lure. I have never seen anywhere trout as numerous as they were that evening when we pulled into Idlewild.

We camped at Idlewild for several days and spent most of the time trolling for charr around Steamboat Point, a rocky headland at the eastern entrance to the bay. The water is very deep here, how deep no one seems to know. The charr lay in the cool water beneath the shadow of the rocks. They are taken with a large, gaudy spoon attached to several hundred feet of stout linen line, the line weighted some ten feet from the spoon so that it will sink at least fifty feet beneath the surface. One man holds the line while another rows a skiff slowly along some distance from the shore.

My friend had never captured a large fish and was very anxious to turn the trick. His desire was destined to be gratified. I was rowing while he sat in the stern, his soul lost in contemplation of the majesty of the towering cliff above him. Suddenly there came a yank at that line that brought him back to earth and all but pulled him overboard, to say



ITS NAME IS GOLD CREEK

nothing of upsetting the boat. The line began to slip through his fingers at a terrible rate, scorching the skin like a hot iron as it sped. It was evident, even to him, that there were things happening down there in the depths. By dint of holding the line over the gunwale and pressing his knee against it he managed to stop the first rush. Instantly the big fish "sounded." Down toward the bottom of the lake he bored resistlessly, dragging the line with him.

I got excited. "Hold him up! Hold him up!" I shouted.

"Yes, I guess I will hold him up. Don't you suppose he has something to say about that? You get over here and try to hold him up," was the sarcastic rejoinder.

Fortunately the fish "sulked" after he had exhausted about all the line, and lay down deep. Under my instructions he was systematically "pumped" toward the surface. The boat was nearly above him when he came up near enough to see it. Away he went like an arrow across the lake. The gang of hooks were firmly fixed in his bony jaw, else he had torn them

out. With commendable consistency the fish dragged out some three hundred feet of line before he deigned to halt. Then he turned and came toward the boat like a runaway comet. When he was about fifty feet distant he sprang into the air, shaking his head like an angry dog until the spoon played a tattoo on his teeth.

He was a plucky fellow, but the constant strain told on his nerve. Gradually he weakened, his rushes became shorter and less vicious. Foot by foot my friend brought in the line until at last he turned half on his side and floated alongside. I slipped the gaff under him, gave it a quick pull, and the contest was over. He marked sixteen pounds on the scales,—sixteen pounds of honest fighting spirit that never flagged from the moment the hook struck him until he was lifted into the boat. The charr, or as he is called here, Dolly Varden, is our largest game fish and is a brave fighter, slim as a shark, swift as a flash of light, with a wonderful endurance, he puts up a fight worthy of the skill of the most expert angler.

Lakeview is the lotus-land of all who have camped on Lake Pend d'Oreille, and thither we turned the prow of the *Papoose* when we were weary with Idlewild. The twin Gold Creeks seek the lake here and into the northern one we poked the nose of our canoe, scattering swarms of young trout and frightening the wits out of a philosophic looking heron that was contemplating the scene. We made camp on the gravelly beach so as to be free from the attentions of the mosquitoes. (Yes, we have some mosquitoes here. This is not Paradise entire.)

Complete in Every Particular

Our tent was so constructed that the inquisitive little gentlemen could not gain admittance without the proper alarm and password. I would advise you to procure one of like character.

That night it simply *had* to rain. No outing that I ever took was complete unless it did. I am not content with a measly little summer shower either. I must have a good, old-fashioned downpour that makes every creature hunt its hole and even the fish creep beneath the rocks to keep out of the wet.

It rained until the creeks became sullen and brown. It rained until we could not get out of the tent, but sat huddled up in our bedding, thinking things we dared not say. On the third day it ceased. When we fell asleep the rain was falling in a deluge, but when we awoke next morning the good old sun was shining his best, the lake, that had been so sullen and dark, sparkled and shimmered in gladness, the birds sang as though their throats would burst. I stood in front of the tent and let forth one great boyish yell.

Mayhap in your evening dreams before the winter fire you have pictured an ideal trout stream. I do not mean a river where the big ones lie, but a fairish sized brook where *salmo fontinalis* live, thrive, and have their being. You may have gone forth in the spring in quest of your ideal and mourned because you found it not. If you *have* not found it I will share mine with you. Its name is Gold Creek.

We went fishing in Gold Creek, the Reverend and I, the day after the rain, wending our way up the steep wagon trail that leads from the lake shore to the little hamlet of Lakeview where lives the prophet and Nestor of the lake, Uncle John Flewelling. The old man was resting beneath a giant red fir that stands in front of his home as we approached.

"Uncle John, we've heard so much about that big trout that lives below the falls that we have come up to take him away from you. I actually believe you have used that fish for an advertisement so long that you have grown into a perfect Croesus off the people who come up here trying to catch him."

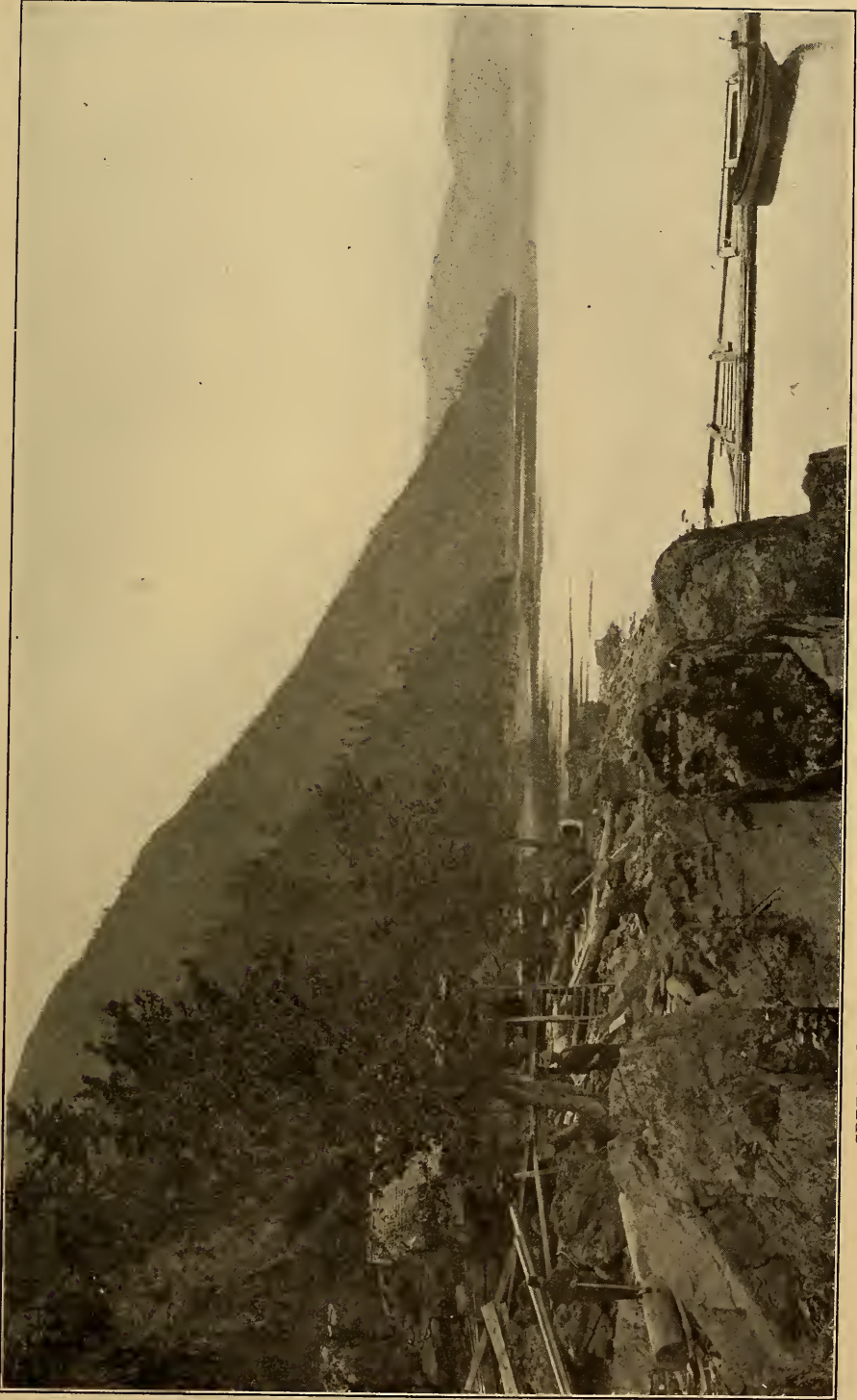
The old man eyed my four-ounce greenheart rod, then broke into a great laugh. "Wa'll, now, of all the innercent greenhorns thet ev'r broke out th' corrall you air surely the greenest. Why, Doc, ef thet big trout war t' git holt of thet outfit, he'd think you were tryin' t' tickle him with a feather."

Some optimistic mining men had once erected a huge quartz mill on the banks of the stream and just above it had constructed an eighteen-foot dam over which the water poured into a deep, wide pool. If I were a trout I should choose just such another pool for my abiding place. In this deep water lived an old trout, famous for miles around. Divers anglers had hooked him, but his capture was among the things yet to happen. He always managed to smash their tackle, and for years held undisputed sway over the pool.

We passed on and left Uncle John to chuckle over our defeat.

The Reverend was not especially interested in big trout. After his tussle with the big charr he was content to accept the smaller fry. A likely looking place further on attracted his eye and he did not tarry. I planted myself on a jutting ledge of rock and sent my battery of flies whirling out over the water. They fell softly as a leaf in autumn.

There was a swirl, I caught the flash of a dark body as it curved upward, and that was all. The great trout came, saw, and returned to his lair. No amount of inducement would coax him



GREEN, TREE-CLOTHED MOUNTAINS THAT REAR THEIR LOFTY HEADS INTO THE SKY



WE CAMPED AT IDLEWILD FOR SEVERAL DAYS AND SPENT MOST OF THE TIME TROLLING FOR CHARR

to come again. I tied on every fly in my assortment, but it was all in vain. At last I gave it up in disgust and followed the Reverend.

I laid divers plans that day for the undoing of the big trout. On our return toward camp that night we met Uncle John driving in the cows. He saw my rod intact and by that sign guessed that I had not met the Sage of the Pool Below the Falls. I admitted my defeat.

Shortly after daylight next morning my feet were on the trail, headed for the falls. I had had an inspiration; when purchasing tackle before starting the enterprising dealer had "worked" off on me a bright little brass spoon, no larger than a dime. The thing had reposed peacefully in my fly book up to the present moment. The old trout scorned all commoner lures; perhaps he would "fall" for this. Uncle John was on hand and followed me to the stream, prepared to chortle over my discomfiture.

The water lay dark, for the sunshine had not yet spread itself over the pool. Countless midges were dancing in fairy circles over the place and the smaller trout were busy gathering breakfast. Not so the old chap. Down deep in his retreat he lay with watchful eye for something more appetizing than the tiny midges. I knew where he lay. One cast got the distance, the next sent the little spoon "flittering" right out over where he was; it lighted just where the water bubbled at the foot of the fall and I began to reel in.

Ten feet of line were regained when he struck. A dark, slaty body shot up out of the deep, flashed into the air in a curve, and carried the spoon down with it. I hooked him with a sharp snap and the trouble began. When it began I was standing five feet above the water on a rock, two minutes later I was waist deep in the water, fighting, not only for the capture, but to save my greenheart. Uncle John danced like a dervish on the rocks and yelled directions which were unheeded. Up and down the pool the old fellow raced, leaping time after time, only to be met with a slack rod as he fell back.

The fight ended. The scarred old veteran gave up and came in. I had no

landing net, but gently insinuated my fingers into his gills and hauled him ashore. The Reverend was ready with the scales-that-would-not-lie and they told us five pounds even. To our surprise the old fellow proved a *salmo fontinalis*, an unheard of weight for a trout of that kind.

We had some fine sport at the mouth of South Gold Creek where it enters the lake. One evening on our return to the camp we surprised a small boy seated on a half-submerged log, with a cane pole and a minnow for bait, catching charr by the dozens. The youngster was having the time of his life. The Reverend, who prides himself on his influence with youth, soon had begged, borrowed, or—well, at any rate, secured possession—of several of the minnows and was seated by his youthful friend fishing for charr with what his most ardent admirer would admit was but indifferent success. The little native was snailing them out one after another and smiling covertly at the Reverend's lack of luck.

A Doubter Convinced

I sneaked over to the camp and got out my casting rod, tied on a phantom minnow, and returned. With a little twitch I sent the minnow whizzing out a hundred feet beyond where the two sat and began to reel in.

"Huh, you'll never ketch a charr that-away," the urchin remarked.

Before the words were well out of his mouth there came a strike and the water boiled around that minnow. The little fellow watched with open mouth while I landed a three-pounder and threw him in the heap on the shore. Another was added to the list.

A voice at my elbow said: "Say, mister, how do you do that?"

I had been so intent on my casting that I had forgotten my audience. The boy was standing at my elbow his eyes round with curiosity.

"Would you like to try it, laddie?" I asked.

"You bet. Jes' wouldn't I?"

I handed him the rod, instructed him how to thumb the reel to prevent back-lashing, then stepped aside to witness the

fun. That boy is a born fisherman. The first cast or two he managed to wind the line several times about his neck and jab the gang of hooks into various parts of his anatomy, but after a few times he got the hang of it and threw quite respectable lengths of line. He even managed to hook a small charr well into shore. His face was a study in joy as he saw his efforts crowned with success.

We did not exhaust the possibilities of Lakeview, but there were other worlds to conquer. One afternoon we slipped down the lake, camped at Granite Creek, slipped on down the next day, and turned up at the Clark's Fork of the Columbia which enters the lake from the east.

The river winds through a wide valley and is bordered with a deep fringe of cottonwoods; reedy lakes lie along the shores where innumerable waterfowl find nesting places. The rushes were alive with young ducks and geese, as we plowed our way up the stiff current that summer afternoon. The little village of Clarkfork lies at the foot of the Cabinet Range, some ten miles from the mouth of the river, just above where Lightning Creek enters the river.

Lightning Creek is in reality a small river and one of the loveliest trout streams imaginable.

It is born in the heart of the Cabinets among the glaciers at an elevation of nearly ten thousand feet. It is not to exceed thirty-five miles long, and where it joins the river has an elevation of less than three thousand feet. The reason for the name is obvious. In the spring millions of trout leave the lake and ascend this stream to spawn.

Its extreme isolation has protected it thus far from the Sunday tourist and the one-day angler from the city. Only the hardy devotee dares penetrate the forbidding crags and peaks of the Cabinets. Once there, however, his cup of angling

joy overflows. In all my "moochin" around the great West I have seen nothing like it.

We left the *Papoose* tied to the pier, shouldered our pack sacks, and "hiked" up the stream twelve miles to Katy's Cabin. Years ago some unknown Katy built a rude log cabin at the forks of the creek, for what purpose no one seems to know. That cabin furnishes a camping place for the few people who enter the country, and there we threw down our loads one evening as the sun set.

It would become tiresome should I recount each trout taken during the three days of our stay on Lightning Creek. They were legion. The stream is ideal, more can hardly be said of it. For several miles of its course it dashes down through a deep, rocky canyon, with glaciers filling the gulches and terminating at the water's edge. Beneath these glaciers and in the deep pools formed by the overhanging rocks, great trout lie, always hungry, always vicious. We fished, loafed, ate, slept, fed our souls on the sight of the majestic mountains, reveled in a thunder storm that awoke the echoes of the hills, watched the vivid display of lightning as it played brilliantly among the crags.

Then we made our way back to the river and the patient little *Papoose*, left the village, dropped down the river into the lake, skirted along the shore, passed Hope perched on its mountain side like Bregenz above Lake Constance, on past the mouth of Pack River with its millions of feet of boomed saw logs, past Fisherman's Island, past Odin Bay where the waterfowl love to congregate in the fall, into Sandpoint, where we landed, brown from exposure to wind and sun as two Indians, uncouth in raiment as two trappers from the North, but happy and contented withal, boasting a renewed store of vitality and health with which to meet and win the battles of life.



THE BLUNDERER

BY NEVIL G. HENSHAW

Illustrated by Thornton D. Skidmore

NICHOLAS WILSON, overseer of Belrive plantation, cut off a generous slice from his plug and thrust it into his left cheek before replying to my question.

"Yes," said he, after a thoughtful chew or so, "these Louisiana Frenchmen sure are some hard to handle. I say handle, as I've never even tried to understand 'em. Perhaps it's because I'm from the West, or because they ain't from any place in particular, not bein' what you'd rightly call Americans. I can't say. Anyhow, I'd rather work a hundred fieldhands than a single one of 'em, although I've run across exceptions. Take the Blunderer for instance. But that's another story.

"The Blunderer come to us about four springs ago, just at the time the rice was beginnin' to sprout. He was one of them big, slow, good-natured Frenchmen that are so scarce among the natives round here, and he was ridin' a little Creole pony, about the size of a rabbit, with a rope for a bridle and no saddle to speak of, except a couple of folds of sackin'. When he come up to where I was watchin' the work on the field levees, he let down his feet a couple of inches and just naturally stepped over the pony's head.

"'Good day, M'sieu,' says he in Gumbo French. 'I am looking for work.'

"'Then you're in the right church, but the wrong pew,' says I. 'Most of the folks round here are tryin' to hide from it.'

"I seen him begin to smile kind of slow and puzzled, like he was limberin' up his thinkin' machinery, so I come back at him with some of my own Gumbo which, although I've worked on it faithful for



THE OVERSEER CUT OFF A GENEROUS
SLICE FROM HIS PLUG

the past six years, ain't exactly what you'd call a standard article.

"'What sort of work you huntin' for?' I asks him.

"At this he looked up at me in a shy, sheepish sort of way for a second or two, and then tucked down his head and begun to stroke his pony's nose. He done it unconscious, too—like you'd pet a child. It was a little thing, but it's generally the little things that count on a plantation. Anyhow, I seen from the start he was fond of animals.

"'I would like to go with the water tenders M'sieu,' says he. 'They tell me that one can do well there when one has learned to become skilful.'

"'And have you had any experience?' I asks him.

"'No, M'sieu,' says he. 'All my life I have been a wanderer. I have hunted. I have fished. I have worked in the swamps. But I am willing to learn.'

"'All right,' says I, and I engaged him; first on account of his size and strength, and second because he looked so good-natured.

"That's another one of them little things that count in engaging hands. Take a man who can keep cheerful, and in time of trouble he's worth more than all the free grog and extra pay in the world.

"Of course, this particular party didn't go down in the time book as the Blunderer. He signed on as Dolphe, which was Adolphe, with the A cut off and was the worst misfit of a name I've ever heard. Just shut your eyes and say Adolphe a couple of times, and you'll see what I mean—one of them little four-foot, dried-up Frenchmen, with moustaches like knittin' needles and a perfume about him like last year's onion bed this summer and perhaps a pair of black nose glasses, if he's old enough. And here was a big, three-hundred-pound hunter and swamper, with a face as smooth as my hand and a smile like one of them levee washouts that they call a crevasse. Honest, if I'd been him, I'd had it changed.

"Well, I signed him on as Dolphe and give him a place with the water tenders, like he'd asked. It was all I could do anyhow as, barrin' a little light work round the pumpin' plant, there wasn't any other job I could a' put him on. Outside of the Boss and myself, we only had two white men on the plantation that year, Henry, the engineer who ran the pump, and old Joe, the head water tender.

"Of course you've seen places round here where they work the white and the colored labor together in the field, but I've never cared for it. It always makes trouble and then, too, I've never seen the white man yet who knew any too much about a mule.

"But all this ain't tellin' you about Dolphe. After I'd give him his job, the next thing was to find a place for him to stay. Henry lived a few miles up the road with his wife and, as he'd only been married a month or so, he wasn't lookin' for a boarder. That only left old Joe and myself, and as I was out of the question and Joe lived in a two-room

cabin with a family of twelve, it looked like we'd have to try some place else.

"So we hunted round for a likely place and finally decided on a bunk in the pumphouse where Dolphe could be pretty comfortable when they wasn't runnin' at night. Even then if he couldn't be comfortable, he could be handy, which was a whole lot better for the plantation.

"Dolphe's meals was easy. I just took him round to old Joe's cabin and, in less than five minutes, Madame Joe had agreed to feed him for two bits a day and send his dinner to the field, as was usual. She'd done it for ten cents, but I didn't have the time to argue with her and, anyhow, Dolphe didn't seem to care.

"The fact is, he was so busy lookin' at Joe's daughter, Celeste, that I don't reckon he'd a' kicked if they'd charged him a dollar. He just stood and grinned and stared, with his mouth wide open, like a boy watchin' a circus parade.

"If you'd been there, perhaps you'd a' felt like doin' the same thing, because Celeste was as pretty a French girl as I've ever seen, and you know how pretty them French girls can be. She was one of the little, red-cheeked, black-haired kind, with a nose that tilted up just enough to make it look like it was smilin' at you, and hands and feet about the size of a doll's. She was Joe's oldest unmarried daughter, and, outside of his five-year-old grandson, Little Joe, he thought more of her than of anyone else in the world.

"After we got away from the cabin, Dolphe give a sigh and a shake, like a man comin' out of a dream. 'She is an angel,' says he.

"'Maybe so,' says I, 'but if the angels are goin' to soak me two bits a day for meals, I'm goin' to try and take my grub along.'

"'I was not speaking of Madame—' he begins, and then he seen my smile and broke off sudden.

"'Pardon, M'sieu,' says he. 'I have always been stupid about such things. It is my way.'

"That afternoon, when I went to the field, I took Dolphe round to Joe and told the old man I'd brought him another assistant, now that the work was comin' on strong. I told him kind of

polite, too, because, although he already had two of his sons helpin' him, he'd been after me ever since the season started to let him have a third. Although none of his sons was any good and I'd only hired the two I had to keep the peace, Joe was the best water tender I've ever seen. He was a little, wrinkled old man, as deaf as a post, all knotted up with rheumatism, and usually about as nervous as a cat in a thunder storm.

"'So,' says he, lookin' at Dolphe like he was gettin' ready to eat him. 'And can it be possible that, in the short time since I have left home, I have lost all of my sons save these two?'

"I didn't wait to argue the matter. I just give Dolphe a shovel and pulled out for another part of the field, cussin' myself for not havin' thought of all this before I signed Dolphe on. Then I thought of the way Dolphe had looked at Celeste and of the way Joe had looked at Dolphe, and I seen that I'd probably started trouble enough to furnish every plantation in the parish.

"That night I told the Boss, Mr. Gordon, about the mistake I'd made and asked him what he reckoned I'd better do.

"'Kill your own snakes,' says he. 'I've got plenty of my own.'

"Then he smiles and says, 'Perhaps the new man'll work it out for himself. Anyhow, if I was after as pretty a girl as Celeste, I know I wouldn't want any help from outside.'

"Well, the trouble started the very next day. It was bound to come, so I reckon it didn't see the use in losin' any time. And even if Joe hadn't had any sons, it'd been the same. Take a big, slow, ignorant man and put him under a quick, nervous one who has his business at his finger tips, and you'll find that somethin's pretty liable to drop. I never have understood why I didn't see it at the beginnin'.

"It was just before the bell rung, at noon, that Joe come over to me, yellin' and wavin' his arms like a crazy man, and when I got to where he'd been workin', there sure was somethin' to pay. I'd ordered 'em to raise a levee at that particular spot and they'd raised it all right, but right in the middle of it was

a four-foot gap, with the water rushin' through and floodin' four or five cuts that hadn't ought to had a drop for a week to come.

"'There is the one who did it,' says Joe, dancin' round and pointin' at



"'THEN I GAVE ONE THRUST VERY HARD AND DEEP'"

Dolphé. 'I will work with him no more. He is a blunderer—that is what he is—a blunderer.'

"'Sure, sure,' says Joe's two sons. 'He is a blunderer, I tell you—a regular blunderer.'

"Right there Dolphe got christened and the name stuck. The Blunderer—as I'm goin' to call him from now on—didn't say a word. He just stood there smilin' kind of slow and uncertain, but I could see his big fingers beginnin' to



“THEY SAY OLD JOE NEVER SPOKE TO HIM EXCEPT TO CALL HIM A BLUNDERER.”

work and I knew it was time for me to take a hand.

“How’d this happen?” I asks him, knowin’ that, of the four of ’em, he’d be the one most likely to give me the straight story.

“I do not know,” says he. ‘All mornin’ M’sieu Joe has stormed at me, calling me a blunderer and a fool. I am slow—I know that,—but I have done my work well, for I have followed his every direction. A while ago he shouted to me that I was working as a child, and to put my strength into it like a man.

Then I gave one thrust, very hard and deep, and the earth fell out. That is all.’

“I leaned over and looked at the edges of the break and, down toward the bottom, I seen that the levee was all honey-combed with craw-fish holes. I likewise seen all that had happened that mornin’ as plain as though I’d been there—how Joe had cussed and nagged the Blunderer till he’d finally tired of it, and had then made him dig out the levee in a rotten place he knew of, thinkin’ I wouldn’t notice and would let him go. Maybe you think I wasn’t mad. If Joe hadn’t been the water tender he was, I’d a’ fired him on the spot.

“‘Joe,’ says I, lookin’ him square in the eye, ‘I’m on to you, and you know it. This man’s goin’ to stay and if you try any more tricks like this, you’ll get your time if I have to tend water myself. You start in right now and perhaps you’ll be able to repair the damage by the end of knockin’ off time.’

“Then I turned to the Blunderer. ‘You’ll help,’ says I, ‘and you’ll likewise hold your job as long as you do your work. If the old man and the boys get too strong, come to me.’

“The Blunderer held up a hand about the size and shape of one of them English saddles and looked at it for a second. ‘Yes,’ says he, kind of slow and thoughtful, ‘that will be the best way.’

“That night the Blunderer went, per as usual, for his supper at old Joe’s cabin. Celeste told me about it afterward and she said she felt so sorry for him, she reckoned that was how her interest come to be aroused. Accordin’ to her, the Blunderer come in all spick and span and bowed and smiled to everyone and then sat down and ate his supper like it was some sort of party and he was the special guest. And all the time old Joe and the boys sat and glared at him and cussed him under their breath, and the one who’d lost his job even asked for some rags so he could clean his gun.

“I suppose you’re wonderin’ why Joe let him come at all, but then you don’t know Madame Joe. Even if he’d killed the old man and all the boys, she’d a’ fed him as long as he paid the two bits a day.

"After supper Celeste went out on the cabin porch and the Blunderer rolled a cigarette and followed her. Then Joe called the girl like a man drivin' a cow out of a lot, and the Blunderer went home. He had the best nerve I've ever seen, but I reckon even *he* thought he'd had enough courtin' for one day.

"The next mornin' Joe sent the Blunderer's breakfast over to the pumphouse, but that didn't do any good. The Blunderer just went down to the cabin with the bucket and said he didn't like cold meals and that, if they couldn't let things run as they'd been goin', he'd see if he couldn't make some arrangement with Henry. After that he was as much a fixture as the cabin chimney.

"They tell me Joe put up an awful kick, but even if the Blunderer hadn't stayed, I'd a' known he'd lost by the mark over his eye. And, then too, there was six bits' worth of glassware charged up to him that day at the plantation store.

"Things went on like this for a while, with the Blunderer goin' to the cabin twice a day and followin' Celeste round with his eyes and tryin' to get a word with her. They say old Joe never spoke to him except to call him a blunderer or cuss him in the field and that when he wasn't keepin' tab on the girl, one of the boys was. I've often wondered how the Blunderer managed to smile and keep on. I reckon, if it hadn't been for the smile, he couldn't a' done it.

"So the Blunderer stuck to it till harvest and then, one noon at knockin' off time, he got his chance. It was only for a minute or so while Celeste filled her bucket down by the pumpin' plant, but in that time he managed to ask her to marry him. Whether she felt sorry for him, or whether she'd just naturally fallen in love with him already, I don't know, but, anyhow, she accepted him.

"That afternoon, as I was goin' back to the field, the Blunderer stopped me in the big road and told me all about it. He was mighty proud and happy, and he had a scared, holy sort of look in his eyes, like you see in a mother's sometimes when she's lookin' at her first child.

"Somehow we'd got to be pretty good friends in the time he'd been at Belrive,

and I'd found him to be a whole lot better man than I'd expected. Not quick and bright, but slow and sure, takin' some time to do his work, but always doin' it well. And good-natured—why, feelin' cheerful was as catchin' round him as a disease.

"'Well,' says I, after he'd got through tellin' me his good news, 'what you goin' to do now? Run away?'

"The Blunderer shook his head.

"'Ah, no, M'sieu,' says he. 'To run away—that is not nice. To-night I will speak to M'sieu Joe, as is customary.'

"'And after he's refused you and probably taken a shot at you, what then?' I asks him.

"'I shall keep on trying until finally he gives his consent,' says he. 'I am willing to wait.'

"'Very well,' says I, 'but if in the next world you happen to strike the same place as Job, you're sure goin' to have someone jealous of you.'

"'That evenin', after we'd knocked off, I went down to Joe's cabin and asked for the three guns we'd loaned his boys to keep off the rice birds with. They was the only weapons in the house, and I give the excuse that I was goin' to take stock of the plantation next day. Of course things mightn't have got to the shootin' stage, but you never can trust them Frenchmen.

"I found old Joe all tied up with an attack of rheumatism, and Celeste rubbin' him with liniment and mullein leaves so he could get to the field next day. He was crosser and crankier than I'd ever seen him, and I don't believe I'd changed places with the Blunderer that night for all of Belrive and a full plantin' of seed thrown in for lagniappe.

"The next mornin', when the Blunderer come into the field, he looked mighty quiet and dejected. It's true he managed to pull off a smile when he passed me, but he put so much earnestness into it that it wasn't much of a success. When I finally got over to where he was workin', I called him aside, although I didn't feel there was really much use in doin' so.

"'Well?' says I. 'What'd the old man say?'

"The Blunderer shrugged his shoul-

ders like them Frenchmen do instead of sayin' 'What's the use?'

"'Nothing,' says he, and I knew that, if old Joe had talked all night, he couldn't have shown him better what he was up against.

"Joe wasn't at work that mornin' and I thought of course it was the rheumatism and his feelin's, till the bell rung at noon. Then he showed up in his workin' clothes and asked me to put him down for half a day.

"'I have been forced to go to town,' says he. 'Otherwise I would have made my full time.'

"'What's the matter?' I asks. 'Rheumatism?'

"'Ah, no, M'sieu,' says he. 'It was my daughter, Celeste. This morning she went upon a little journey.'

"So that was the way the old man had fixed it. Of course the Blunderer heard about it at supper time, and of course there wasn't anything he could do. He looked me up that afternoon, though, and told me he meant to stay on.

"'One cannot keep from home always,' says he. 'Some day she will return and, when she does, I will be here to greet her.'

"Well, after this, things runs along pretty peaceable till after harvest. The Blunderer still got his meals at the cabin, although Joe and the boys never spoke to him and treated him just about as badly as they'd done before.

"Madame Joe was pretty kind to him, though, whether because she felt sorry for him, or on account of the two bits per, I can't say. Then there was Joe's grandson, Little Joe. The Blunderer was mighty fond of children, and he made friends with the little fellow and used to build him boats and houses on the sly.

"Then old Joe caught him at it one day and snatched away the kid as though he'd been playin' round a moccasin. What he told the child I don't know, but after that, whenever the Blunderer'd come near him, he'd fight and scratch like a cornered coon. I think it hurt the Blunderer worse than anything else because, as I've said, he was mighty fond of children.

"But all this time you needn't think

the Blunderer was idle about the girl. Every Saturday at noon he'd saddle his pony, and he'd hardly get back before workin' time Monday. I figured he was scourin' every inch of the parish lookin' for Celeste; although he'd never talk with me about it.

"'One must have a change,' says he when I asked him about it. 'Also, my horse is in need of exercise.'

"After that I took the hint and let the subject alone.

"The finish of the affair come along about the tail end of harvest. Of course there wasn't any water or any rice to speak of either, at that time, so I'd laid off Joe's two sons and had put the old man and the Blunderer on whatever work I could find to keep 'em goin'. You see, water tendin' don't last very long, and a man's got to live through the rest of the year.

"On the day I'm speakin' of I'd set the two of 'em to storin' seed rice in the loft of the barn. It was some special Honduras that the Boss'd paid two prices for, and he was as anxious about it as though every grain had been made of gold. It was in regulation sacks of one hundred and sixty-two pounds, and I started 'em storin' it two sacks at a time, with a pair of mules and a block and tackle.

"Joe tended the mules and loaded the sacks, fastenin' 'em with a couple of turns of rope and holdin' the turns with one of them long-pointed iron hooks. As his back was turned on the pull and he was too deaf to hear any call, I tied a cord round his arm for a stop signal and fastened the other end in the door of the loft.

"The Blunderer was up in the loft doin' the storin'. The two sacks made a pretty good load, but by reachin' out and grabbin' 'em by the ears as they come up, he managed to balance 'em on the edge of the door. Then he'd kick loose the hook and place 'em while Joe was fixin' another pair.

"After I'd instructed 'em to be particular careful, I went to the field, and they loaded away till the bell rung at noon. By then they had only half a dozen or so sacks left, and the Blunderer told Joe they might as well store them

and get through before knockin' off for dinner.

"Joe started to kick, and then got an idea, and kept on. I don't think he meant to hurt the Blunderer, but he thought that, if he could get him to drop a couple of sacks and foul the rice, the Boss'd fire him. At least that's what he said afterward.

"Anyhow, when he come to the last two sacks, he fastened the hook so's it'd hold till the Blunderer caught the sacks by the ears. Then it'd pull loose and, the Blunderer not bein' prepared for the sudden strain, the sacks would drop and break open on the ground. It was a pretty smooth scheme, but there was one or two things Joe didn't count on.

"In the first place, when the hook come loose it was on the inside, and as it flashed up from the pull of the mules, the point caught in the muscles of the Blunderer's thigh. In the second, the Blunderer didn't drop the sacks. He fell, of course, when the strain come on him, but he still held on as he lay in the doorway, the sacks swingin' in midair by their ears.

"Just at that moment, a child come runnin' round the corner of the barn, tripped over a piece of loose rope, and come smashin' down, head-first, on the ground. It was Little Joe, and he had a dinner bucket in each hand.

"The Blunderer yelled at him, but it was no use. The child just lay there stunned and helpless, not hearin' a sound.

"Now, although it may not seem like much the way I tell it, there was a good deal in that situation. There was the Blunderer, lyin' flat on his stomach in the doorway, with them sacks swingin' from his hands, and that hook tearin'



"IT WAS ONLY A MINUTE OR SO, DOWN BY THE PUMPING PLANT"

slowly through the muscles of his thigh. And there was Little Joe lyin' directly beneath the sacks, waitin' to be smashed as flat as a pancake the moment the Blunderer let go.

"Lyin' as he was, the Blunderer couldn't swing the sacks aside an inch. Likewise there wasn't any use in yellin' to old Joe. He couldn't a' heard a cannon and, besides, his back was turned to the whole business.

"That was the proposition the Blunderer was up against. If he held on it was his leg, and, most probably, his life. If he let go it was the child's.

"All he had to do was to drop the

sacks and reach up for the signal cord. Then Joe'd stop the mules and he'd be saved. No one could blame him as no one'd believe he'd held the sacks without seein' it and, after all, he didn't owe either one of the Joes so very much anyhow.

"He had just a second to make his decision, and all the time the hook was tearin' through, slow and gratin.' Perhaps you've had a cut sometime. It's like Heaven beside a tear.

"The Blunderer held on. Most men would 'a' let go, either through faintness or inclination, but he lay tight till the hook pulled through, and Joe turned and grabbed the child out o' the way. Then he dropped the sacks and come down behind 'em, all white and crumpled, like a piece of cloth.

"One minute later old Joe give the alarm and the hands come runnin,' droppin' their dinner pails till it looked like the fag end of a barbecue.

"When I got there the Blunderer was conscious again and old Joe was kneelin' beside him, prayin' for forgiveness and tellin' him he could marry Celeste, or Madame Joe, or the whole family, if he wanted to. The Blunderer just waved him aside and motioned for me to come near.

"Take me to my wife,' he whispers when I was close enough.

"Your—your—wife?' I stammers. 'Then you've been married all along? How about Celeste?'

"It is Celeste,' says he. 'We were married the first Saturday after she went away. Ever since, she has been living with Madame Henry.'

"You ought to seen old Joe. He stomped and raved just like he hadn't given his permission a minute before, and then he turned on the Blunderer, and stuck a finger in his face.

"Traitor,' he yells. 'Did you not

swear to me that you would never run away with my daughter?'

"I did not run away with her,' says the Blunderer. 'You did so yourself. I only followed behind.'

Wilson paused, and began to cut a fresh slice from his plug.

"Well?" said I.

"Oh, that's about all," he replied. "The Blunderer pulled through all right, although he always will be lame in that leg and not particular good about runnin.' He worked right along for me till last year, when he bought a little place he'd been savin' for, and started in for himself.

"Up to the very day he left he never got tired of tellin' me about how he schemed to get Celeste. It seems he and Mrs. Henry had everything arranged beforehand so, when he found the girl at a friend's in the parish and married her, all he had to do was to hide her at Henry's place. He used to go to see her every night, doublin' back across the fields so's to avoid suspicion.

"Somehow he seemed to think it was the only bright thing he'd ever done."

"And old Joe?" I asked, as Wilson paused again.

The overseer smiled.

"Oh, he's livin' with the Blunderer," said he. "Likewise, he ain't done a lick of work since he found out about the marriage. That's what I meant at first about not understandin' them Frenchmen.

"The very day the doctor said the Blunderer'd pull through, Joe come to me and asked for his time. 'And who's goin' to be my head water tender next year?' says I.

"The old man looked at me, as surprised as if I'd told him I'd forgot my name. 'Why, my son-in-law, M'sieu Adolphe,' says he. 'As you have perhaps noticed, he is a very smart man.'"



SHOOTING THE WILY SNIPE

BY FREDERICK ARTHUR DOMINY

IF you have never crouched in a blind and with upturned eyes (and incidentally an aching neck) watched a great flock of yellow-legs circling around, far above you in the air, as they listened to your persuasive whistling, "pheu, pheu, pheu," and wondered if they would ever make up their minds to decoy, you have missed a whole lot of fun. Snipe shooting may sound like tame sport and perhaps, to a certain extent, it is, but then you have your choice of waiting until next fall, which always seems ages away to the enthusiast, or of turning your hand and gun to some immediate pursuit, and certainly one can get a lot of enjoyment from a dozen wooden decoys, a good pond hole on the meadows, and the proper kind of a day for the business.

No one, however, should be misled by the idea that snipe shooting is all play and smooth sailing. If you go shooting, and go with the intention of making every effort to secure a good bag, you will find that there is considerable work mixed in with the pleasure and that the more pleasure you eventually enjoy, the more work you have done to secure it. Of course, there are some who slight all the disagreeable tasks and loaf about the beaches and meadows, satisfied with occasionally pouring a murderous volley into the midst of a flock of little sandpipers or ox-eyes, rather than endure a driving rain that sends the big birds scurrying up and down the beaches, or of getting up in the middle of the night for a long sail to some out-of-the-way place which snipe usually frequent during the weather prevailing at that time. But if a man does not object to some labor, is not afraid of the rain, or of leaving a comfortable bed at an unseemly hour in the morning, he can pass many an enjoyable day in the blind, and in the course of that day bring to bag a

number of toothsome birds, the size of the bag naturally depending upon his ability as a marksman, together with his knowledge of just when and where to seek a certain shooting ground, for different winds and weathers, and the rise and fall of the tides, mean that snipe will be here to-day and there to-morrow.

In August and the early part of September snipe shooting is at its best. [This statement applies to Long Island, where the season opens July 16.] Then the larger birds, the curlew, plover, willet, and yellow-leg, are starting on their Southern journey, lingering, perhaps, for several days at a time upon some especially choice feeding ground until a storm hastens them onward, and then, if you are in their line of flight, with a setting of decoys scattered about your blind, you will get shooting that will more than repay you for what time and energy you have expended. Perhaps a flock of twenty or more black-breasted plover will come sweeping down toward you and swing over the decoys with wings set and legs outstretched, ready to check their flight and alight among their sham compatriots, or maybe it will be a pair of those big fellows, willet, who will fly inquisitively near and then, just as you think they are going by, will turn slowly and fly directly toward the blind in which you are crouching, half nervously handling your gun, but ready to arise at the proper moment.

Next to being a good shot, or possibly fully as important, for no matter how expert you are with the double-barrel you certainly cannot kill birds where there are none, is the knowledge of where to go under certain weather conditions or tides. Any wild bird will naturally feed where he can obtain his food in the easiest manner, provided the surroundings are equally quiet and remote. Bearing that one fact in mind,

you can readily understand that it would be useless to set out your decoys on a sand-bar at high water, or upon the meadow when the tide has fallen.

There is, of course, the chance of killing a few stragglers wherever you are rigged, but it is a certainty that better shooting will be obtained by changing with the rise and fall of the tides. Then comes the knowledge of how different weather affects the flight of the birds. This, to a great extent, is controlled by the locality. For instance, on the Long Island coast, a day when it is blowing a southwest gale is considered the best for the sport, while upon the shores of New Jersey a southeaster starts the flight. Hence it is impossible to lay down hard-and-fast rules covering any great length of coast, and the sportsman must make his own observations and study the effects of different winds and storms in his own locality until he can judge for himself as to the most favorable weather conditions; it is needless to say that the more observant he is, the larger will be his bag.

Save Money on Equipment

The equipment of the snipe shooter is inexpensive, or should be, for salt water and the knocks they will get aboard the boat or in the blind are no great aids in keeping your belongings in first-class condition, so, to be sensible, go rigged for business and cut out the fancy trimmings.

In the matter of clothes there is considerable latitude. An old pair of trousers and a thin sweater, with a wide-brimmed felt hat to shield you from the rays of the summer sun, make about as comfortable an outfit as you can choose. As for boots—well, boots are all right in the early fall when the mornings and late afternoons are chilly and there is a tinge of frost in the air, but in the summer try an old pair of shoes and don't be afraid of getting your feet wet. They protect you from sharp-edged shells and wreckage abounding with rusted nails and are more comfortable by far.

The snipe blind is a poor place for a fine gun with beautiful engraving, selected stock of choicest walnut, and su-

perelegant finish. The damp, salt air of the meadows or the beaches, the mud and sand and water, with which it is certain to get splashed, are all injurious and marring, and it is much wiser to use a cheaper gun for this shooting. You won't have the guilty feeling of being careless with a valuable weapon if you do, and besides you can kill just as many birds with one that cost thirty-five or forty dollars as you can with one the price of which ran well up into the hundreds. If you don't believe this final statement I could have proved it last year, provided you were willing to spend a day on the beaches and watch some of the market gunners I knew cut down yellow-leg and plover at thirty, forty, and sometimes fifty and sixty yards with a rusty-looking contraption that did not cost a cent over twenty dollars, and they wasted but few shells either. This ought to go far toward verifying the statement that it is the skill of the man behind the gun, and not so much his weapon, which accounts for the size of the bag.

The satisfactory gun would be a moderate priced twelve gauge, with the right barrel open and the left a modified choke. Some prefer a full choke, but, unless the birds are very wild and do not decoy well, I think the open gun will get the best results. Often you will have an opportunity to shoot into a flock, and then is the time that the open bored gun will do more execution than one that simply drives a ball of shot through the center of the huddled-together birds.

You will find that shells loaded with shot ranging in size from eight to ten are about right; the ten's you may think are too small, but you will discover that if the birds are decoying well they will kill quicker and cleaner than the larger shot. It is also well to have a few shells loaded with sixes in your bag. Sometimes in the fall a stray teal, or if early in the morning, a black duck, may swing across the decoys, and the smaller shot would not kill.

The decoy question is a simple one to settle. If you have some mechanical skill you can easily make a couple of dozen at a very moderate cost, or, if doubtful of your ability, engage a carpenter to do the designing and shaping, and after that

smooth off the rough corners with sandpaper and paint them to suit your taste.

If you wish to make the decoys the first thing to do is to secure a white pine board, from one to one and a quarter inches thick, the other dimensions depending upon the number of decoys you wish to manufacture. After cutting out a pattern from stiff cardboard (for yellow-legs it should be about eight inches from head to tail and three inches across) trace a number of these upon the board and then cut them out with a compass saw. Round off the sharp edges with a knife and then sandpaper them smooth.

A hole should be bored into each one for the stick that is used in setting them up and a ten-penny finishing nail makes an excellent bill. Paint them first with a couple of coats of good white lead and oil and after that is thoroughly dry use brown or black paint to color the backs and heads. If your work is done neatly and carefully, you will have a set of decoys that will look as well and last as long, if not longer, as those you might buy, and at a fraction of the cost.

While a gun and decoys are about all the really necessary adjuncts for snipe shooting, there is another article that is easily made and more than repays one for the slight labor and expense of manufacturing it, and that is a light gunning box. Often the beach or meadow has to be hunted over for some time in search of materials wherewith to construct a blind, and when it is built, it is, at its best a most uncomfortable hiding place, with a water-soaked log or a rickety box as a seat and scraggly bushes sticking into your anatomy from so many points that to escape them is impossible.

To build this gunning box one board fourteen feet long, twelve inches wide, and half an inch thick, will do for the sides, and about twenty feet of the same material is used for the bottom. Cut the sides about six feet long and shape one end of each (the head or bow) scow fashion. Place these two boards from eighteen to twenty inches apart and nail the bottom and ends on with four-penny galvanized nails; then bore a hole in the bow for your towing rope, paint inside and out a dead grass color, and you will

have the best contrivance for snipe shooting that you could ask for. When you have selected your gunning grounds nothing is easier than to put your shells, gun, and decoys into the box and drag it over the meadow or through the shoal water to the chosen place.

There are numberless little tricks which the experienced snipe-shooter is acquainted with and which all help in enlarging the size of the bag. Watch an old-timer setting out his decoys and you will see that every one of them is stuck up in the water if it is possible, and that instead of being bunched closely together they are from four to five feet apart. Twenty decoys put out in this manner will make more of a showing than three times that number on a dry shoal, and it is also a fact that snipe will decoy more readily over water.

Then, supposing it is a quiet day with hardly a breath of wind stirring, and the birds are swinging by, dipping down toward your stool but showing no intention of decoying, you would see him take half a dozen decoys and set them up a hundred or a hundred and fifty feet to leeward of the blind. Perhaps you would wonder at this, but watch the next flock of snipe that flies over the pond. The first decoys they see are those five or six to leeward and down they sweep upon them. Then, just as they are about to shoot into the air again, a soft whistle is heard, and they immediately sight the larger setting about the blind, toward which they fly, now only ten or fifteen feet above the water and certain to decoy nicely.

It is unnecessary to state that in putting out the decoys they should always be placed to leeward of the blind with their heads pointing into the wind; also see that the majority of them are well to the left of the blind so that you will not be compelled to swing around to the right, or wrong handed, as it is termed. Being able to whistle the call of the different varieties of bay birds is also important, and oftentimes, provided you are skilful in that respect, you can call the birds from a considerable distance where otherwise they would have flown by without seeing your decoys.

FOR ALL KINDS OF FISHING

BY SAMUEL G. CAMP

CERTAINLY it pays to specialize, but, as regards angling, the specialist is often at a disadvantage. It pays, for instance, to know all you can—you cannot know it all—about fly-fishing; indeed, if you do not specialize on fly-fishing and begin early, there will always remain a great deal to be learned, although possibly you may not be aware of it. As a general rule, subject to a few exceptions due to chronic personal self-satisfaction, the more one learns about fly-fishing—understanding that to mean the whole gamut of tackle, casting methods, and the habits of game fish in their relation to the sport of taking them with the artificial fly—the more one realizes there is to learn. Eventually, as one progresses in the art, he is apt to acquire a deeply seated conviction that he knows just about nothing whatever of fly-fishing.

But, however that may be, the specialist on fly-fishing or bait-casting often finds his accustomed methods for the time being of little or no use upon the waters he may be fishing. This may be due to the natural character of the lake or stream or to temporary conditions of wind, weather, or water. Then, if any sport at all is to be obtained, there must be a radical change in the method of going after the fish; then, too, the more you know about certain less advertised but sufficiently successful methods of angling, such as bait-fishing, deep-trolling with copper lines, even the time-honored rustic custom of "skittering," and other angling ways and means, the better off you are.

Of course, it may be said that fly-fishing or bait-casting are the only sportsmanlike ways of taking game fish, and that the angler worthy of the name would seldom or never lower himself by killing a fish in any other way. All that

sort of thing is highly commendable; within reason the idea is surely worthy of practical observation, but its application would hardly seem to extend to the sportsman who finds his little vacation in extreme danger, from the angler's view-point, of being entirely spoiled by the fact that it is simply impossible to connect with the bass, the trout, or others, by casting with fly or bait. The angler with time unlimited, or whose fishing lies the year round at his very door, can afford to wait; the sportsman who has one week out of fifty-two to devote to his favorite sport cannot—and he is, in this, it would seem, entirely without blame.

In any event, every fly-caster should learn bait-casting also; as a sporting method of angling casting from the free reel has everything to recommend it and, indeed, runs a very close second to fly-casting. This method, of course, is not employed for trout fishing, and the sportsman who sees game qualities and sporting possibilities in no fish save the brook trout will naturally have none of it. Unfortunately for the black bass, many anglers have discovered that the pursuit of that game fish yields sport somewhat difficult to equal and still more difficult to surpass.

It might be suggested that if your angling experience has heretofore been confined to trout fishing—and that is the case with very many anglers who take it for granted that virtually all of bass fishing is sitting out in the sun on the very hard seat of a very porous and balky boat—it might be suggested that you do somewhat as follows:

In the first place acquire—honestly, if possible, if not, otherwise,—at any rate acquire a seventeen-foot, canvas-covered canoe of the open Canadian model. Item, one spruce—not maple—paddle. That will most assuredly be a decided improvement upon the sort of craft above men-

tioned, and which, possibly correctly, you have usually associated with the-to-you-doubtful sport of fishing for black bass. One reason why you like to fish for trout is because you like to wade the brooks; one of the reasons why you will find bass fishing interesting—and more than that—is that you will like to swing the paddle of that particular seventeen-footer. Also it's just as "good medicine"—there is no better exercise—as wading the trout streams.

Next, still honorably if practicable, but, anyway, become the possessor of a bait-casting rod. Its length should be from five and a half to six feet, inclusive; its material, split-bamboo, bethabara, or greenheart. Hand and tip guides of agate are extremely advisable, obviating line-wear and materially facilitating casting, and the intervening guides should be of German silver with fairly generous apertures. Of course, the reel-seat—of German silver—must be above the hand grasp.

The typical bait-casting reel is a quadruple multiplier, long in the barrel to facilitate casting and thumbing, preferably of solid metal, and necessarily of good quality. Upon this you will use at least fifty yards of size G—no larger—unwaterproofed braided silk line. A few spinners, some quarter-ounce dipsey sinkers to use with them, one or two floating baits, wooden or phantom minnows, and a small tackle box for reel, baits, and "etceteras" complete the outfit. How to cast with the short rod and free reel cannot be discussed here; however, doubtless you have a friend who will be glad to start you right; if not, you will find the method quite fully explained in the present writer's book, "The Fine Art of Fishing," mention of which may perhaps be pardoned as it would seem that the way to cast is not completely detailed in any other volume.

On the other hand, neither is bait-casting all of fishing for black bass or the other game fish to be taken by that method. The versatile angler will do well to remember that at the proper times and in favorable locations the black bass will rise to the flies with all-sufficient emphasis, and that, too, when possibly the bait-caster is finding little

sport. You will make no mistake when you "put in" your above mentioned seventeen-footer for a little fishing cruise, possibly this fall, if you include in the tackle equipment a ten-foot fly-rod,—also a one-hundred-yard single-action reel with twenty-five yards of either level or tapered enameled fly-casting line, size E.

It has been the writer's experience that usually anglers use too small flies for lake fishing for black bass and flies too large when stream fly-fishing. River fly-fishing for black bass may well be done with the larger sizes of trout flies, numbers six and four. In lakes, however, particularly when the water is not extremely clear and in all lakes where the water averages pretty deep, flies as large as number one and often larger should be used. Fish the flies—the fly, rather, as it is best to use one fly only—considerably submerged.

Lots to Learn

If you have never done much fly-fishing from a boat or canoe you will find it different. Your chief difficulty will be in hooking your fish; to obviate this keep a taut line by stripping in with the left hand. Select ringed or gut-looped flies not whipped to snells.

It may be said that the fly-caster for trout, black bass, ouananiche, or salmon needs must be versatile if success is consistently to crown his efforts. Tackle and methods must be suited to the occasion, and the occasion often offers problems difficult of solution; indeed, the times when wind, weather, and water are jointly in favor of the angler are comparatively rare—and then you must first find the fish. Finding the fish is largely a matter of ichthyology, a practical conversance with the habits of game fish as related to sport with rod and reel, and also stream experience, particularly familiarity with the water you are fishing.

The comparatively inexperienced angler with crude tackle, who, nevertheless, knows his trout stream, can usually show results, not infrequently equal to those of the expert who may be fishing the water for the first time. But if the experienced angler, good at casting and

having approved tackle, keeps his eyes open and fishes with intelligence as well as with the fly, then the tyro local talent, dependent for success upon intimate friendship with a majority of the residents of the trout stream, had best look out on the second fishing trip,—for often that is exactly where friendship ceases. Learn your trout stream like a book, forward and backward; then never lose sight of the fact that the stream changes every year.

Possibly intimate familiarity with the waters fished is a greater factor for success in fishing for black bass than in any other sort of angling. Tackle and methods usually successful in one lake are quite apt to be of no use whatever in another, even when the waters are adjacent. The reason for this is found in the variation in depth and general character of the contrasted waters,—whether shallow or deep; sandy, rocky, or weedy bottom; clear water or cloudy; and also in the character of the principal food supply and its abundance or scarcity as the case may be.

Looking the Ground Over

All these are matters of which the versatile angler will take official and immediate cognizance at the first opportunity when trying out new waters. It might be suggested that, before you do any amount of fishing in a lake strange to you, you slip a little quarter or half-ounce dipsey sinker over the barb of your fly and paddle around the lake, sounding for depth here and there. It may make a very great difference in the history of your fishing trip.

In fishing for black bass, either large or small mouthed, versatility of expedient is at a premium. The black bass may be taken by fly-fishing, bait-casting with live or artificial bait, trolling with either natural or artificial bait or with flies, still-fishing with any one of a long list of natural baits,—the live minnow (best), frogs, crawfish, the familiar "garden hackle" of the trout fisherman, helgramites, grasshoppers, and still others,—by "skittering" as for pickerel, "bobbing" as in the South, and, without

doubt, in yet other ways. Surely here is a catalogue of angling methods, some one of which will be found to suit the needs of the bass fisherman under almost any coincidence of adverse conditions.

And yet, such is the instability of the black bass temperament that no one of the well-known bass angling methods will for long continue successful upon identical waters, and, rather too frequently, it would seem that an additional method—better, two or three—is really needed. In any event you should become familiar with several of the above ways of fishing for black bass, without decided prejudice toward any one of them, except as founded upon its immediate success, if you would lessen the chance of absolute failure or a merely nominal success when bass fishing.

"Fishing with the fly" means one thing to a certain angler; to another fly-caster it describes something quite different; no two fly-fishermen cast or fish the flies in exactly the same way. As a result success is apt to follow the efforts of two anglers, fishing the stream in company and with identical tackle, in different degree. Obviously, other things being equal, this can only mean that the methods of casting and fishing the flies used by one angler are better suited to the stream and the temporary or possibly permanent desires of its residents than those of the other. It being true that this unconscious and natural variation in the way any two anglers fish with the fly produces results—frequently widely divergent, it logically follows that the wise fly-fisherman will assiduously cultivate versatility of methods in casting and fishing the flies.

Concisely, you will do well not to become a slave to the theories of any one "school" of fly-fishing; you will fish with both the wet and dry fly; you will fish either up or down stream as the occasion warrants; your fly-book will contain a generous amount of flies of varying form, coloration, and size; your rod rack will hold fly-rods in both the lighter and heavier weights; and, always, when fishing a stream new to you you will listen to the advice and adopt the methods of the local fly-casters of experience.

“PUTTING ON THE BRAKES” ON THE AUTOMOBILE

BY HAROLD WHITING SLAUSON

THE most common question asked by the ordinary purchaser of a motor car is, “How fast can she go?” and the fact that the machine may need to be stopped suddenly does not seem to be considered—until an emergency arises, and then the owner may wish that he had paid more attention to the brakes of his automobile. As a matter of fact, the designers have kept the importance of good brakes well in mind, and even though it is a point overlooked by many a purchaser, every modern car is equipped with well-made apparatus that can bring the machine to a stop so suddenly that the occupants would need to be expert bronco busters in order to retain their seats.

But the brakes and their mechanism require attention, and while the ordinary owner may consider his car “well kept up” if the valves are ground, the cylinders cleaned, and the clutch inspected regularly, lack of the proper adjustment of the brakes may send the automobile to the junk heap—and the occupants, too, for that matter—quicker than though the motor had never received an overhauling. Another argument emphasizing the necessity of the proper attention to the brakes—and one which may appeal to some owners more than the danger to life and limb mentioned above—is the matter of tire expense. By the use of properly adjusted brakes, the wear on tires may be reduced to a minimum and a set of shoes will give double the life that would be obtained were the wheels made to slide each time the car is brought to a stop.

Electric cars and steam engines may invoke the aid of the reverse to bring them to a stop if the brakes fail or are

insufficient, but the gasoline automobile has no such alternative, for the machine must be brought to a dead stop before the reverse can be applied. For this reason, nearly all automobiles are supplied with two sets of brakes, one known as the service brake and the other as the emergency.

As its name implies, the first is to be used under ordinary conditions of driving, but the emergency may be employed whenever it is necessary to supplement the other set. Either set of brakes in itself should be sufficient to stop the car quickly, but in many cases the application of both at once will avert what otherwise might be a serious accident.

A few years ago when the motor car was in its early stage of development, manufacturers and owners held “braking contests,” the object of which was to determine the shortest distance in which an automobile could be brought to rest from a given speed. These were valuable as showing the efficiency of the brakes, but one seldom hears of such contests in these days.

This is not due to the fact that the importance of good brakes is now overlooked by manufacturers, but rather does it indicate that the design of these parts has reached such a stage that all cars are now equipped with braking apparatus sufficient to meet all conditions. This does not mean that all accidents may be averted by the prompt application of the brakes, for there is a “limit of suddenness” beyond which no car may be safely stopped, no matter how powerful may be the brakes with which it is supplied. But it is seldom that an accident will happen to a new car “through the failure of the brakes to hold,” and whatever trouble of this nature may be encountered with older machines will probably be due

solely to the lack of proper attention on the part of the owner or the person in whose charge the overhauling of the car is placed.

It stands to reason that a light car does not require as powerful brakes as does a heavy machine, but this does not mean that the former should not be inspected as regularly as should the latter. Some of the small and medium-sized cars are provided with a shaft brake that is operated by the same pedal as is used to disengage the clutch. Such a service brake is operated by pushing the clutch pedal to its extreme point, the intermediate position serving merely to release the clutch without applying the brake.

Thus one pedal is made to take the place of the customary two, but such a construction will seldom be found except in the "unit power plant" design. This clutch-pedal brake may be of the constricting band type operating on the driving shaft, or it may be of the cone design, similar to the clutch. Whatever the type or mode of operation of the brake, however, its care and adjustment will be similar to the conventional designs found on the average car.

The Two Types

On the majority of cars, the service brake is operated by the right pedal in front of the driver, and should, of course, never be applied without first disengaging the clutch. The emergency brake is controlled by the side lever near the gear shifting lever and is provided with a ratchet and "dog" by means of which the brake is automatically locked in any position to which the lever is moved. This is different from the service brake, which is only applied as long as the foot is pressed against the pedal, and thus the emergency brake is useful for holding the car on a grade when it is left standing. The emergency brake is also useful if the motor should be stalled while ascending a hill, for by its use the driver may dismount and crank the engine without having to coast ignominiously backward to the bottom of the grade for a fresh start.

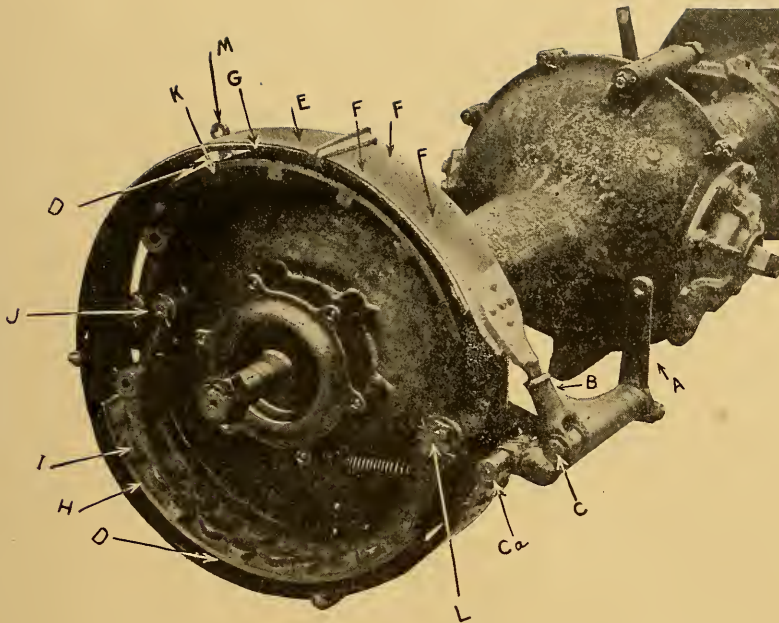
Owing to the great leverage obtained by the emergency brake handle, the brake

may be applied suddenly and with great force which, when used to supplement the foot, or service brake, will serve practically to lock the wheels of the car. The brake is applied either by a forward push on the lever, or by a pull toward the driver, depending upon the make of the car in question, but the latter type is the one that seems to be preferred by the majority of designers.

Although many emergency brake levers are provided with a connection which automatically disengages the clutch as soon as the brake is applied, this feature should not be relied upon absolutely, for the quickest stop may be obtained by a push on both pedals and a pull on the emergency lever. Thus not only is the clutch sure to be disengaged and the service brake applied when the emergency lever is pulled, but a brace is at the same time afforded for the feet and much greater power can consequently be applied at the lever. Such wholesale use of one's limbs, however, is only necessary in an emergency when it is desired to stop the car as suddenly as possible, but it is well for the driver to become accustomed to the simultaneous action of both feet and his right hand so that it will become second nature for him to apply the brakes in this manner when he has no time to think or reason.

As has already been mentioned, the service brake of many cars acts on the driving shaft near the transmission case. Such a brake will probably be of the constricting band type, although there are some designs in which a cone, similar to the clutch, is used. Inasmuch as there is a gear reduction between the driving shaft and rear axle at the differential of between two and three to one, a large brake is not needed and the car may be stopped comparatively easily by only a slight pressure of the band on the driving shaft drum.

But as any resistance at the driving shaft will be multiplied two or three times at the rear wheels, the teeth of the bevel gears in the differential where this reduction is made will be subjected to a great strain and are liable to be "stripped" if the brake is applied too suddenly. Consequently it is generally the service brake, and seldom the emergency



INSIDE HISTORY OF AN AUTOMOBILE BRAKE

The meaning of the letters and the operation of the brake are fully described on the following pages

brake, that is located on this driving shaft, for the latter is provided with so great a leverage that it could be applied too suddenly for the good of the parts that carry the strain.

From this the driver will understand that, under certain conditions, it is inadvisable to apply the service brake that is located on the driving shaft too suddenly and that the emergency brake should be used to supplement the first when it is desired to make a quick stop. Of course, if the service brake is properly adjusted so that it is not too "fierce," no harm will necessarily result if it is applied suddenly, but it is not well to rely on these conditions when the emergency brake can be used as well as not.

The tendency of modern motor car design, especially in the case of high-powered machines, seems to be to place both the service and the emergency brakes at the rear wheels. Instead of acting directly on the tire or rim of the wheel, however, the brakes are placed in contact with an iron cylinder, or drum, that is securely bolted to the spokes of the wheel. This provides a friction surface that turns

with the wheel and yet does not interfere with the tires or rims.

The service brake, operated by the right pedal, is usually in the form of a constricting band that surrounds this drum and grips it tightly when the brake is applied. The emergency brake is generally in the form of a jointed shoe that can be expanded and will press tightly against the interior surface of the drum. This brake is known as the internal expanding type, while the service brake is called the external contracting design. It will thus be seen that there are in reality four brakes, two external contracting and two internal expanding, one of each on each rear wheel.

Both of the external brakes are operated by the single pedal, while the two internal shoes are expanded by the one emergency lever. Consequently it is no wonder that a car will be brought to a sudden stop when both sets of brakes are applied at once, for it will be seen that the drum attached to each wheel is practically locked in a tight grip between the contracting bands and the expanding shoes, and as all of the rubbing surfaces

have high "coefficients of friction," the wheels are held as securely as though clamped in a vise. Of course variations of this design will be found, such as constructing both brakes on the internal expanding principle and placing one of each in the same drum, but the care and adjustment are similar in both cases.

Even the grossest tyro can obtain an idea of the operation of modern motor car brakes by an examination of the accompanying illustration. This photograph shows the service and emergency brakes for one wheel, and while the design may be varied in many details on several different makes of cars, it represents a type on which to base a graphical description of the construction, operation and adjustment of all brakes.

The view shown is the right-hand end of a rear axle, the wheel having been removed. The axle on which the wheel ordinarily turns is shown projecting from the center of the plate at the end of the differential housing. The outer band, or strap, (E), forms the external contracting, or service, brake, while the bronze castings, or shoes, (H & K), constitute the internal expanding, or emergency brake.

Now it must be remembered that when the wheel is in place, the brake drum fits in between the inner and outer brakes so that its surface is surrounded on both sides by them, the space in which the brake drum revolves being shown by points (D). In their normal positions, strap (E) has a tendency to spring out, while the inner shoes (H & K), are held together by a spring, and thus the drum is allowed to revolve freely without coming in contact with either of the brakes.

When the lever (A) that is connected with the brake pedal is pulled, the two cranks, (C & Ca), on the other end of its shaft, are turned—the one down and the other up—and strap (E) is tightened until it constricts the drum on the wheel.

The two shoes (H & K) are jointed at the pin (L) and held by it to the end of the differential casing. When lever (M) is pulled by the emergency brake lever, the toggle joint (J) is turned, one arm being pushed up and the other down, and the ends of the two shoes are spread

until the entire outer surface of each comes into contact with the inside of the brake drum. As the movement of the handle of the emergency lever is about two feet and that of the toggle joint and ends of the shoes but the fraction of an inch, the tremendous force applied at this brake may be realized, for the increase in power is proportionate to the reduction in movement.

As the service brake is the one that will be used the most, it will naturally require the greatest amount of attention, and it is for this reason that most of the manufacturers choose the outer and more accessible brake for the "every-day" work of stopping the car. As the basis of the action of a brake is friction, and as friction will eventually wear even the toughest materials, a certain amount of "play" will develop in the brake.

This may make it necessary to push the pedal to its limit of motion without applying the brake with sufficient force to check the speed of the car an appreciable amount, and in this case the contracting band must be "taken up." This is done by removing pin (C) and giving yoke (B) a few turns to the right. This yoke should not be turned so much, however, that the band will rest in contact with the drum when the brake is released, as this would set up undue wear and resistance and would be uneconomical and inefficient from every aspect.

Lining the Brake Strap

The brake drum is generally of cast iron, and as friction varies according to the nature of the substances in contact, the brake strap must be composed of or lined with some material that will wear well and yet will offer the proper resistance when brought into contact with the drum. Some of these straps are composed of another metal softer than the cast iron, while others are of steel lined with some flexible substance. Inasmuch as the strap or lining is much more easily replaced than is the drum, the latter should be the softer of the two so that it, rather than the drum, will receive the greater part of the wear.

A method in popular use on many of the best automobiles, and one which is

illustrated in the accompanying photograph, consists in lining the steel strap with a specially-treated flexible strip. As friction generates heat, this material must be "fireproof," as well as possess the proper friction qualities, and consequently tough canvas treated with an asbestos preparation is often used as a brake lining. Other fibrous preparations that have been rendered heat proof are equally efficient, and even a camel's hair lining has been used with great success.

A lining of this type is shown at (G) in the photograph, and whatever its composition, it is generally held in place by means of a number of small copper rivets (F) that pass through the steel strap. When the lining has become worn to such an extent that the wear cannot be taken up by turning the yoke (B) the heads of the rivets must be cut or filed off, and they may then be driven through the holes. It is not a difficult matter to install a new lining, but care must be taken to make sure that it sets perfectly smooth, as otherwise any projections or folds would be the first points to come in contact with the drum when the brake is applied, and uneven wear that would make early replacement necessary would result. If the yoke (B) has been turned to take up previous wear, it must be reset, otherwise the increased thickness of the new lining will cause the latter to bind on the brake drum surface when the brake is not in operation.

The internal expanding brake,—which as has already been mentioned, is the one generally connected with the emergency lever,—may be composed of a variety of materials, but it is usually a metal or alloy casting of some sort, forming what is known as a "metal-to-metal" brake. Of course it is possible to line these internal shoes with the same material as that forming the friction surface of the external brake, but as the expanding brake is located in a less accessible position than is the other, the parts of the former should have as high wear-resisting qualities as is practicable.

In the particular design illustrated in the photograph, the shoes of the internal expanding brake are provided with cork inserts. While the corks themselves are not shown, one of them is placed in each

of the extensions (I) which has been recessed from the face of the shoe. Each cork is forced in under great pressure and is then shaved off until only about 1-64 of an inch projects above the surface. This is similar to the design of cork insert clutches, and the effect is practically the same in both.

When the brake is applied, the cork surfaces first come into contact with the drum and offer a substantial resistance to the turning of the wheel—for the "coefficient of friction" of cork against iron is very high, and yet the former is not easily worn by the heat of friction. As the pressure increases, the corks are forced farther into their recesses until the actual surface of the shoe comes into contact with the drum and a maximum of friction will be obtained.

The shoes of the internal brakes will seldom need to be renewed, but continued wear may make it necessary to take the brake up slightly. For this purpose a nut or turnbuckle is generally provided, by means of which the effective length of one of the operating rods connected to the lever (M) may be changed to suit the various conditions. There will probably be a similar nut or turnbuckle in connection with the external brake, but this can only be used to regulate the relative position of the pedal and will not change the "slack" in the strap itself.

Adjustments to Watch

Even though the wearing parts of both brakes are in perfect condition, attention will need to be paid to the adjustment of the operating rods. It is bad enough so to set the brake rods or levers that rubbing takes place between the shoes or strap and drum before the brake is applied, but it is far worse to be unable to apply the brakes when the pedal or emergency lever is moved to its limit. In other words, the entire range of action of the brake should be allowed to take place well within the limits of motion of the controlling pedal or lever, and in order to bring about this condition, all nuts and turnbuckles should be properly adjusted.

When the pedal and lever are released, both brakes should be set so that neither

is quite in contact with the drum, but the brake should begin to be applied the moment the pedal or lever is moved. This will enable the full resistance of the brakes to be obtained before the controlling levers have reached the limit of their motion, and furthermore will allow plenty of "leeway" for any slight stretch or wear that may take place in the parts.

It is well to adjust the individual brakes of each set to about the same position so that both will be applied with equal force. It is evident that the brake that is set the tightest will be applied first and with greater force than will the other, and this will result in uneven wear. It is almost impossible to obtain exactly the same amount of tension in each of a set of brakes, however, and consequently many cars are provided with equalizers which serve to distribute the force equally to each brake, regardless of the difference in tension between them.

An equalizer generally consists of an iron bar to the middle point of which the rod connected with the lever or pedal is attached. To one end of this bar is attached the rod that operates one brake, while the other brake is connected in the same manner to the opposite end, and thus an action similar to that of the whiffletree on a horse-drawn vehicle is obtained. If both brakes are set alike, the equalizer will remain straight and will pull on each brake rod the same amount. If one brake is set tighter than the other, however, this rod will not be pulled until the equalizer has exerted the same force on the looser rod by moving out of its former straight line. In other words, the equalizer causes the force to be applied to the looser brake first.

When the brake is applied, the comparative adjustment may be noted by observing the position that the equalizer assumes. If this position is not at an angle of about ninety degrees to the line of the central rod, the brakes should be adjusted until the pull is practically equal on each.

As a rule, brakes do not require a great amount of lubrication, but a "fierce" brake, or one that grips suddenly is hard on the tires and should be remedied. Such trouble will generally be

found only in the metal-to-metal type, for those provided with a flexible lining are usually intended to be run "dry." If a brake is "fierce" or squeaks badly when applied, a small amount of heavy oil or grease may not come amiss, but if such treatment is to be required frequently, it is probable that a grease cup or other lubricator will be provided.

Graphite will often cure a harsh or noisy brake, and a small amount of this applied to the rubbing surfaces of the metal-to-metal types will last for a considerable length of time. Care should be taken not to apply any lubricant to the lining of the external brakes, however, unless such a course is recommended by the manufacturers of the car, for a special canvas that has become soaked in grease or oil may refuse absolutely to perform its function as a generator of friction.

While a brake that grips the wheels suddenly and causes them to slide as soon as applied may seem to be exceedingly effective in stopping the car, it is both theoretically and practically inefficient. Not only will the use of such a brake result in a greatly increased tire bill, but the car cannot be stopped as quickly as would be the case were the brake applied without causing the wheels to slide.

Of course almost any good automobile brakes *can* be applied with sufficient force to cause the wheels to slide, but it has been found that sliding friction is not so effective in bringing the car to a stop as is "impending slipping," or the friction which, while it does not lock the wheels, is as great as can be applied without causing actual sliding to take place.

Of course, in order to bring about these ideal conditions in which the car may be stopped quickly with no attendant wear on the tires, a driver should "know his brakes." In fact, he should be as familiar with the operation and "feel" of them as he is with the management of the clutch and transmission. As the action will vary slightly, even in different cars of the same make and model, it is doubly apparent that each automobile has a "personality" of its own which should be studied thoroughly before the driver will be able to obtain the highest efficiency from its operation.

MEASURING YOUR GUN STOCK

BY EDWARD C. CROSSMAN

IF your rifle stock does not fit you, discomfort is about the only evil result. You'll have to crane up your shoulder and screw down your neck to get the sights aligned. Maybe you'll be kicked in the nose into the bargain, while steady holding is made difficult by your strained muscles. But as long as you get that ivory front in its proper position, both in the aperture of the rear and on the hide of the quarry, you'll land the meat.

If your shotgun stock does not fit you, birds will escape that you'd swear by the beard of your grandfather were in the center of the pattern. The butt will catch in your clothes as you bring it to your shoulder, or maybe the comb will try to tear off your cheek-bone or possibly upper-cut you in the jaw. Also a hard, unyielding thumb may endeavor to level off your face, starting in with your nose as the most prominent obstruction.

A rifleman is pretty certain of a hit when a front sight is there or thereabouts in its proper relation to target and rear sight. Also when he gets misses he usually knows the why and the wherefore.

The shotgun shooter has no front or rear sight. Likewise when he misses, the reason thereof and the striking point of the charge usually remain a dark mystery. Of all shooting experiences, the most discouraging is the inability of the shotgun user to find out why he isn't hitting those ever-condemned flying objects rising before him.

We are told that the average man can shoot well enough with the average gun. Maybe it is true, but the average man never existed, while even the standard guns of various makers are enough different to throw a shooter off his form should he change from one to another.

There is no reason why you should not

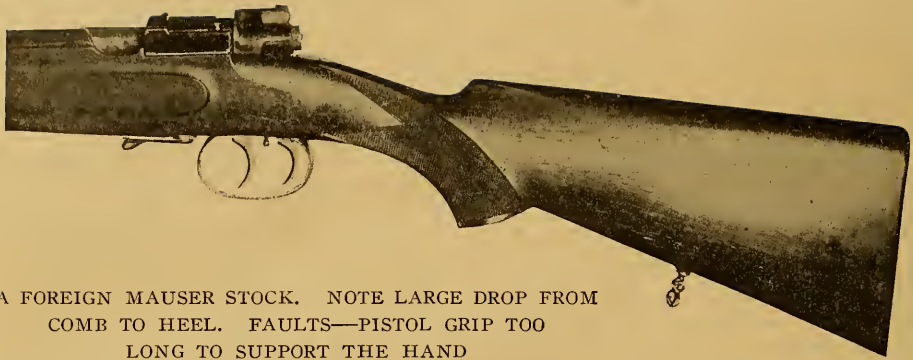
shoot better with a stock made for you than with one made for a party six inches taller and of Flatiron instead of Capitol building architecture. The difficulty that blocks the way between the purchaser and a proper fit is that while a tailor, with his little tape and his politic "B. L." for bowlegs, can call off the proper figures for a well fitting suit for you, the gun-maker has no such easy time of it. Even at his factory he cannot take one glance at you and scribble down the figure for the gun that can't miss 'em. English gun-makers use try guns, affairs with adjustable stocks for all dimensions; running artificial rabbits, clay pigeons thrown across steel plates, and other devices for getting a line on your capers.

You can take it as a truth that if your style with the shotgun is fixed, the gun should be made to suit that style. Remaking the man himself is a rather difficult task. Therefore, watch yourself, learn your individual quirks and get that gun made accordingly.

When a gun-maker describes a stock he calls the rear end the butt. The upper end of this butt, as the gun is held at the shoulder, is the heel, or the bump as our English friends sometimes have it. The other end of the butt is the toe. The thin raised part of the wood, just to the rear of the portion gripped by the right hand, is the comb. The grip or hand is that part running from the comb to the frame of the gun.

In the distance these parts lie from one another and from the frame of the gun lies the difference between comfort and misery when using the weapon; between hitting 'em with pleasing regularity and regarding the gun with morose suspicion that stops just short of smoothing down a stump with it.

In ordering, or selecting from stock, a gun for field shooting, a common error is in getting too long a stock, basing the



A FOREIGN MAUSER STOCK. NOTE LARGE DROP FROM COMB TO HEEL. FAULTS—PISTOL GRIP TOO LONG TO SUPPORT THE HAND

selection on the fact that the gun throws up pretty well at the store, when you are feeling fresh and not flustered by the sudden appearance of a winged bomb-shell from below your feet.

If you are a beginner and your style is not fixed, don't try to select a stock until you make up your mind where you are going to hold your *left* hand. Yes, that's right, your left hand. As long as you keep shifting the hold of this left hand, out on the barrels; you cannot hope to get a stock length that is right. To prove this, pick up a gun, run your left hand well out the barrels, almost to the full extent of the arm, then pitch the gun to the shoulder several times. Regrip the gun, this time with the left hand gripping the fore-end to the hinge. Again try pitching the gun to the shoulder and note the difference in the apparent stock-length.

The average man, that non-existent individual who must be called upon in an article addressed to more than one shooter, can shoot comfortably with the hand grasping the barrels so that the forward end of the fore-end just gets into the palm. Variations from this distance depend upon the build of the shooter. But whatever point you select, stick to it unless you have to shoot a strange gun. It is convenient to remember, if you are compelled to use a strange gun or lose some good shooting, that running the hand farther out the barrels partly neutralizes the evils of too short a stock, while too long a stock can apparently be shortened by moving the hand the other way.

Laying down fixed rules for stock

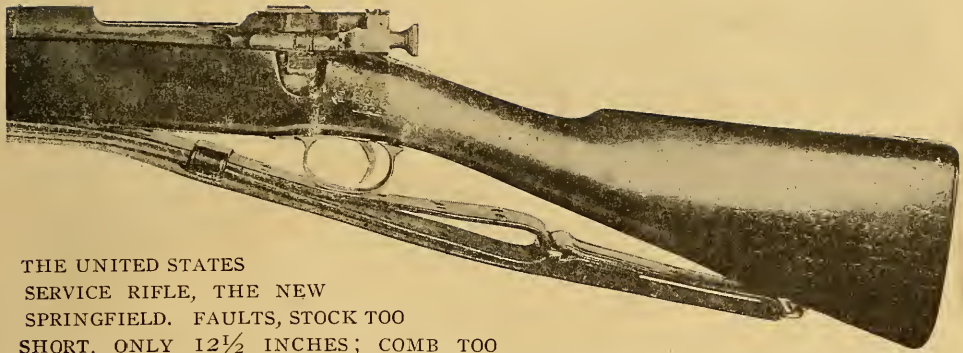
measurements is impossible. Only hints as to the approximate stock for your build can be given.

A heavy gun feels longer in the stock than does a light one. You can shoot a quarter of an inch longer than your standard, without feeling the difference. Conversely an ultra heavy twelve seems to add large fractions of an inch to the stock along with its increased weight. A heavy gun in the hands of a tired man will come up clumsily and feel yards too long in the stock, when in the morning it leaped to the shoulder like a twenty gauge featherweight.

It is well to keep this in mind. It is as deceiving as putting up a lunch for the trip, with your stomach satisfied with a hearty breakfast. You rarely put in enough under these circumstances; you cannot see ahead and realize how you'll feel five hours later. Nor do you when selecting a gun.

The man about five feet nine inches high, of normal build and arm length can usually shoot a fourteen-inch stock. Any change should usually be on the short side if the gun is for field shooting. Keep in mind the fact that the gun must leap to the shoulder without catching on the clothes and must strike its proper position the first instant it gets to the shoulder. A stock too long has a pleasant habit of sliding out on the arm in such circumstances. The resulting arm is not pretty the next day, nor does the shooter have to wait that long to discover his error.

Trap-shooters use longer stocks than the ordinary field hunters. Some of them



THE UNITED STATES
SERVICE RIFLE, THE NEW
SPRINGFIELD. FAULTS, STOCK TOO
SHORT, ONLY 12½ INCHES; COMB TOO
LOW, NEARLY TWO INCHES DROP BELOW LINE OF SIGHTS; GRIP TOO BIG AROUND

tell you that guns for trap-shooting and for field shooting should not be the same in stock measurement. Others aver that changing guns is equivalent to throwing away all the advantage of the practice at the flying clays. It is safe to say that unless you contemplate going in unusually hard for the clay bird business, you had better get a stock to suit you for the field and stick to it, regardless of the targets on which it may later be trained.

Until our birds are gone; until we find something more pleasurable than pulverizing asphalt discs with leaden pellets, the question of proper stock drop will remain unsettled. There are two distinct schools of stock drop advocates. Both sets get their birds, and both sets marvel that the other fellows get enough meat on the wing to make a pan smell, attributing any luck on the part of the other school to the fact that the pattern of the shotgun makes up for many errors at its butt.

One set of cranks swear by the shade of Hip Li, who invented gunpowder, that the shotgun stock should be crooked enough to bring the rib before the eye without any movement on the part of the head. Then they go out and blow Bob-Whites into pan-fries to prove their point.

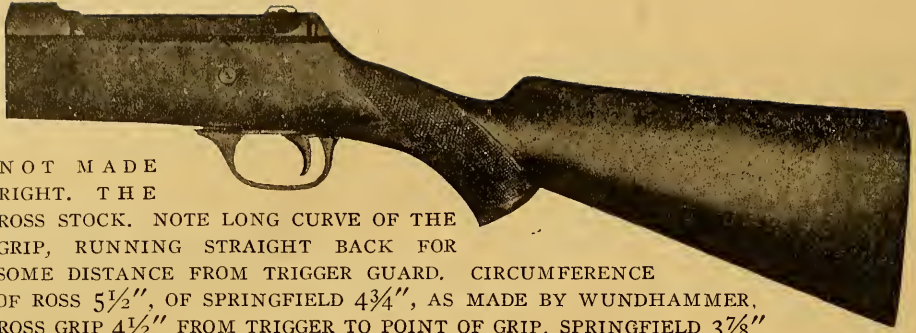
The gentlemen on the other side of the controversy aver firmly that the shotgun of the sane man should have the bend the wrong way—with the heel higher than the top rib. That the head should be about one inch below the collar button when the gun is held properly. You can find examples of the latter class

at any trap shoot. Of the two schools the straight stock advocates have the best of it, although the truth lies between the battling forces, not on either side.

Three out of four birds, missed through vertical errors, are undershot. They are usually rising, while shot drops a little, even over forty or fifty yards. A common error on the part of the beginner is to think that the eye should be so held that the line of sight passes up the rib, close to and parallel with it, as in sighting a rifle. To get the eye down so this can be done would require considerable stock drop or considerable bending of the neck.

If the head is held so the line of sight starts from some distance above the rib and it and the barrels gradually converge, the effect is that of taking more elevation on the rear sight of a rifle. The bead may be put on an object, but the muzzles really point above it. Properly held, the muzzles rise to a point just under the target, while the shot line passes slightly above it. The breech end of the barrels should not intrude themselves into the field of vision, the thing to see is the bird.

A shotgun is not aimed, it is pointed with the two hands, as Mr. Askins truthfully says. You point the gun much as you "point" your fist in delivering a left jab or as you "point" the brick with which you knock that thrice-blessed cat off the alley fence. If you do this, and the stock fits you as regards drop, the gun points right without further effort and your misses come from lateral errors, not those of elevation.



NOT MADE RIGHT. THE ROSS STOCK. NOTE LONG CURVE OF THE GRIP, RUNNING STRAIGHT BACK FOR SOME DISTANCE FROM TRIGGER GUARD. CIRCUMFERENCE OF ROSS $5\frac{1}{2}$ "', OF SPRINGFIELD $4\frac{3}{4}$ "', AS MADE BY WUNDHAMMER, ROSS GRIP $4\frac{1}{2}$ "' FROM TRIGGER TO POINT OF GRIP, SPRINGFIELD $3\frac{7}{8}$ "'

Drop is measured at the comb and at the heel. The drop at the comb determines the place the stock will touch your face, whether high up on the cheek or low down on the jaw or between. Too much drop at the comb drops the wood too far down on the face and you sometimes "jaw" instead of cheek the gun. The effect is as though you stopped a series of snappy uppercuts with that portion of your face. Not enough drop here puts the comb high up on your face and at times pounds the cheekbone in extreme cases. An inch and a half is an ordinary drop at this point.

When it comes to the drop at the heel—the butt—of the gun, English and American sportsmen do not agree. The standard English stock has but two inches drop at the heel. A drop of half an inch more than this is still considered straight in the United States, while two and three-quarter inches is common enough.

Probably the stock to suit the great number of men would measure one and one-half inches at the comb and two and five-eighths inches at the heel. If an error is to creep in, better have it on the straight side. Before deciding, try all

the guns you can get hold of, try them by actually firing them, not merely throwing them to the shoulder. If there is any error in the comb drop, it will show in a few shots.

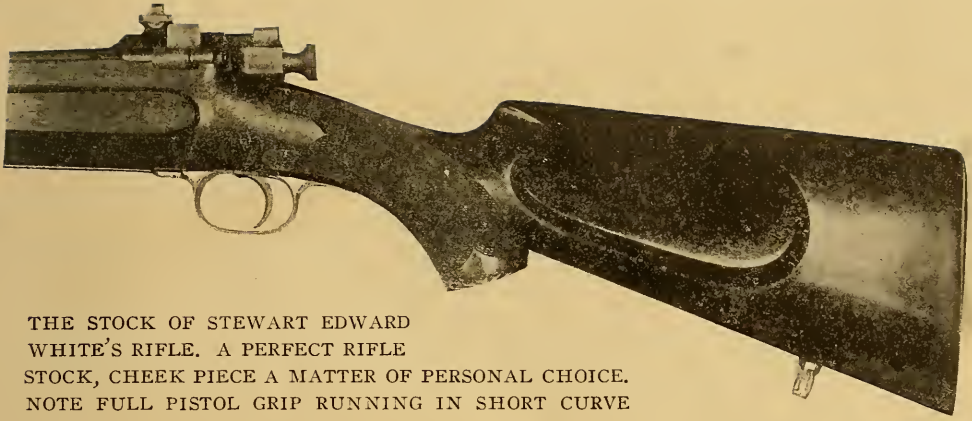
It not infrequently happens that the man with a stock that fits properly as regards length, drop at comb, and drop at heel keeps making inexplicable misses, even on easy straightaways. Sooner or later the trouble will be explained when he sees his shot charge rip through a tree or bush to one side of the quarry.

If you throw your gun to your shoulder and barely touch the stock with your cheek, you will find that you are aiming from the *left* edge of the rib, down to the bead and then to the target. In actual shooting you don't see the rib, but this is where your line of sight passes nevertheless.

Now if you press the face tightly against the wood you can easily aim from the *right* side of the rib, over to the center and then to the target. In the first case you would miss the bird to the left, in the second the shot would go to the right of him. The effect is precisely as though you moved a rifle sight to one side or the other. The shotgun rear sight is



A GENUINE PISTOL GRIP STOCK OF AN ENGLISH TARGET AIR RIFLE



THE STOCK OF STEWART EDWARD WHITE'S RIFLE. A PERFECT RIFLE STOCK, CHEEK PIECE A MATTER OF PERSONAL CHOICE. NOTE FULL PISTOL GRIP RUNNING IN SHORT CURVE

the pressure of the cheek against the wood. If, in your favorite shooting position, the line of sight does not pass down the center of the rib, the gun must be changed until the line of sight does go right.

In England, the gun-makers have three distinct and important stock measurements. They are the length, the drop, and the cast-off. The third one of the measurements is rarely used in America, but is important nevertheless.

A broad-shouldered and full-faced man almost invariably shoots to one side of his birds, even though he scores a fair proportion of hits. His heavy cheeks and broad shoulders keep his eye from the center of the barrels and he kills his birds with the right edge of his pattern, if he hits them at all. Regardless of their build, most men need a cast-off—a bending of the stock away from the face, so that when the face is brought against the wood, the eye is opposite the center of the barrels.

The standard English measurement for castoff is one-quarter inch at the toe

and one-eighth inch at the heel—always away from the shooter except in special cases. Supposing you put your cheek against the wood of the stock and find the line of sight passing to the left of the rib center; now, if you held it there and somebody bent the whole stock outward—away from your face—when you again cheeked the wood, the eye would have been moved slightly to the right—and in line with the center of the rib.

Rarely it happens that a very thin-faced man who presses his face hard against the stock, gets his eye to the *right* of the rib. The remedy here is a cast-on—the stock bent over to the left—or a fuller comb to keep the face from getting so far over.

To try your own style of shooting, paint a picture of your favorite bird, life-size, stick it up at forty yards and fire a dozen shots at it with white paper to show the pellet strike. If you shoot persistently to one side or the other, using your quick, snappy field style, and not a pose, a change is indicated. It may result in a little thinner stock, in a thicker



STOCK OF A HIGH-PRICED FOREIGN HAMMERLESS EXPRESS RIFLE

one, in a cast-off or, improbably, in a cast-on.

The details of the stock make much difference in the pleasure with which it is used. In the grip particularly many makers are prone to err. It should be proportioned to your own hand as a glove is fitted. If you have a ham for a hand, you don't want a four and one-eighth inch grip. If your hand is the envy of the ladies of your family, you'll be wise to pass up the five-inch variety. It should be oval in shape and checked with sharp diamond checking, not the flat-topped variety that does not assist in holding. The pistol grip, when all is said and done, is the most satisfactory for the field, aiding as it does the grip and control of the gun.

The butt plate may be of vulcanite composition, of horn, or a handsome skeleton steel affair, found on some high-grade guns. A heavy set, full-chested man can use a butt plate more hollowed out between the heel and the toe than the flat-shouldered brother shoots. A long toe keeps the gun from sliding up too high on your shoulder when the gun is hurriedly pitched to place.

In general keep in mind the fact that a straight stock is more racy looking than the crooked variety and is safer in case you are not sure; that more guns are padded up to rectify errors in too great a drop than are bent more crooked; and that if you have changes made in your stock, make them very slight. Sawing off one-quarter inch from your stock makes more difference than you would believe a full inch would do.

For a lady the gun should have at least one-quarter inch cast off at the toe, should be shorter stocked, lighter in weight, and should have a grip rarely larger than four and one-eighth inches in circumference.

The rifle stock is not governed by the rules of the proper scattergun affair. The eye must be down to the line of sights, which are in turn in line with and close to the barrel. You cannot put any muscles on a strain and hold well, you must be comfortable and poised easily. Therefore more drop is called for, while

usually a shorter stock is indicated. Don't forget, also, that you may use that rifle where it is cold and you are wearing several shirts and a sweater, which make a long stock almost unusable.

There should be a *full* pistol grip—a real one, not that wart of wood that sometimes masquerades under the name. It is to support the hand, to help the grip while the trigger finger is left free. Therefore, see that it is not more than four inches from grip point to center of trigger. The grip should be a trifle larger around as you have but one trigger to pull, and besides the rifle must take more grief at times.

The grip and fore-stock should be checked. A slip in the presence of game might cost you a shot for which you had come a thousand miles.

The butt should be of the shotgun shape, of steel and checked to prevent its slipping. Never take a rifle butt plate; it is an abortion and a relic of the days of the Kentucky rifle with its slight recoil. Avoid the rubber or vulcanite plates that go to pieces if you have to use the rifle as an alpenstock to head off an incipient slide.

Don't, if you can help it, take a gun with stock smeared over with varnish. It is a cheap and eminently unsatisfactory way to finish a stock. If you have to take this finish, get some varnish remover from a paint store and remove the factory finish. Get them to make up a little filler for you of putty, burnt sienna, and oil, fill the wood, and then apply linseed oil with constant rubbing after the filler dries. The oil finish does not show every scratch like varnish and improves with age in its dull lustre and richness of grain.

Get the gun to suit you if you can possibly afford it. Better one of them every ten years than a poor one every year or so. But when you write the maker of the gun of your choice, don't merely enclose the price and the information that you are thirty years old, a brunette, of good habits; a Methodist, a Democrat of thirty years standing, and a total abstainer. That isn't what he wants to know.

PONIES AND PROFITS

BY DAVID BUFFUM

THE formation of breeds of ponies in different parts of the world is one of the most interesting things in connection with horses, for, unlike the diminutive breeds in other kinds of domestic creatures—as bantams, among fowls, or the smaller varieties among dogs—which have been bred down below the normal size by the skill of man, the diminution which has resulted in any of the breeds of really small ponies has been wholly the work of nature. The horse only attains the size that we are accustomed to consider as normal in the temperate zone and if taken to a very cold or very hot country he will inevitably deteriorate in size. He does not deteriorate, however, in other respects; indeed, the pony of whatever type is much more thoroughly a *horse*, as regards the highest equine qualities and characteristics, than horses like those of the draft breeds, which greatly exceed in size the normal and original type.

The tendency to diminution in arctic or tropic regions is so strong that the greatest skill of man seems unable to keep it wholly in check. In the far north, though it is a matter of history in many places that the stock was of normal size when first introduced, the horses have long since become true breeds of ponies, reproducing themselves unaltered in size and type when carried to other parts of the world. And the horses in tropical countries, even though, as in most British colonies, great care is exercised in their breeding, are always smaller than those of the same stock that are raised in the temperate zone. This tendency to diminution, which the breeder's greatest care in mating, and nurture cannot overcome, is, of course, much more potent where no such care is used; the stock that is bred

indiscriminately or allowed to run wild will result in a breed of ponies in much less time than is commonly supposed—though considerable time is needed to so fix the type that it will reproduce itself unaltered if again taken to the temperate zone.

It is to be noted that the diminution caused by arctic and tropic conditions differs considerably in kind. In the tropics the ponies retain the conformation and general appearance of the stock from which they originally sprang. They are simply little horses. I have seen, in the West Indies, diminutive descendants of the once-famous Narragansett pacers that, in all but size, were entirely true to the parent type. But in the north, as diminution progresses, the conformation becomes much modified: The ponies become round and chunky, like little cart horses; their coats become thicker and longer, and they have a greater tendency to take on fat. But, like their tropical cousins, they show no degeneration in spirit and endurance. It is quite probable, in fact, that they even excel the original stock in these respects for they are purely the result of the survival of the fittest and the conditions under which they have been developed have never been easy ones.

The tendency to diminution in arctic and tropic regions also affects all of the domestic animals that thrive best in the temperate zone. In Jamaica, where English ideals in live stock, as in other matters, are much treasured, I have seen herds of beautiful Devon and Ayrshire cattle that had been bred with as much skill and care as any in England, but all of them were noticeably smaller in size. The little West Highland cattle of the far north occupy much the same place among horned stock that Shetlands do among horses.

It is true that the difference in size is not as great, but this, in my opinion,

is owing to two very significant facts. One is that in many of our most valued breeds of cattle—as, for instance, the Devon and the Jersey—very little attention has ever been paid, as in horses, to increasing the size and so, of course, the cattle of the far north can not be, relatively, so much smaller. Another and, perhaps, more potent reason is that horses will live and multiply where cattle will not, and therefore they have been subjected to those more extreme conditions which have wrought more extreme results.

Ponies the Most Nearly Perfect Horses

At the risk of repeating what I have said in previous articles, I wish to impress upon my reader a law in horse breeding that is worth remembering because it makes clear a great many things in connection with the large, medium-sized, and small breeds that otherwise are not so easily understood. In increasing the size, the *natural tendency* (obviated, to more or less extent, by skilful breeding but never wholly overcome) is to a greater coarseness of structure and a loss of some of the most valued equine characteristics. Within reasonable limits this loss is rarely noticeable, but it always is when extremes are reached.

In decreasing the size, this tendency is reversed. If any one wants a practical illustration of this, let him place a pony alongside a draft horse, making especially a comparison of the feet. The beautiful, fine-grained, and elastic hoof of the pony is hardly in the same scale of comparison with the coarser make of the draft horse's hoof.

As a natural result of this law, ponies average sounder, tougher, and much less liable to sickness or accident than horses of larger breeds. And in just so far as they have attained the fixity of type of true breeds, so much more does this truth apply. The Shetland, one of the purest if not the purest of breeds of ponies, very rarely shows any of those structural unsoundnesses, such as ring-bones, spavins, and curbs, that so often vex the breeders of larger stock; he is, according to his size, fast and of remarkable endurance; he is hardly ever sick

or ailing, and while not such a fool as to despise good food, will get along upon rations that would be wholly insufficient for a horse of ordinary size.

I have already mentioned the Narragansett pacers, and these horses furnish so striking an illustration of what environment will do in diminishing size that, before referring to the breeding of ponies in this country, I think I may profitably say a few words concerning this old-time breed. The foundation stock of these famous horses was brought to southern Rhode Island from Andalusia and were a distinct breed and of pure pacing gait. Here they were bred in large numbers and exported to the West Indies with which, at that time, Rhode Island was in very close touch. From their beauty and their superiority as saddle animals they were in great demand and brought high prices. They were the peculiar pride of the Rhode Islander and justly so, and they became known and celebrated all over the civilized world.

Just why so splendid a breed of horses ceased to be produced and finally even became extinct in this country would be hard to say, but certain contributory causes can be easily found. The opening of carriage roads in the colony and the greatly increased use of wheeled vehicles made a different kind of horse necessary for home use and the pacers were crossed with larger stock, imported from England which, while perhaps improving them as carriage stock, greatly lessened their value as saddle horses. The abolition of slavery in the colony, too, and the cutting up of the great estates into smaller farms had a tendency to restrict stock raising. Thus, in a comparatively short period of years, Rhode Island, which had been the greatest horse-breeding and horse-exporting section in the colonies, was exporting none and the Narragansett pacers became a thing of the past.

In my early boyhood, I remember seeing a very few remnants of the breed that were of pure gait and were believed to be of very nearly, if not quite, pure blood—though I doubt if any one could have vouched for their breeding. One of them, a beautiful mare owned in

Newport and called "Indian Queen," I especially recall, and later I saw several on Block Island that showed the gait and other characteristics so strikingly as to give evidence of at least a strong preponderance of the blood. But I should doubt whether, for at least the past thirty years, any trace of it sufficiently distinct to be recognized could be found in Rhode Island.

My pleasure as a horseman can therefore be surmised when, some fifteen years ago, I saw unmistakable traces of the blood in the West Indies. Even in Jamaica, where improvement of the native stock has long been sought by crossing with English horses, the tendency to pace remained strong in many horses and some still showed a slight resemblance in conformation to their pacing ancestors.

But it was in Hayti, where, least of all, I expected to find anything of interest in horse flesh, that I found the most interesting specimens of the breed. These were a few ponies of pure pacing gait that were raised in the mountainous country back of Jérémie. In conformation and characteristics they tallied exactly with what I knew of the Narragansett pacers and I think must have been of **very** nearly pure blood. But their environment, since the time when their ancestors were brought from Rhode Island, had done its work and they were so small that the bare feet of their negro riders nearly touched the ground.

I was at first surprised to find in such a country such striking representatives of a bygone breed, but a little reflection showed me that the conditions there were really the most favorable for its preservation. For where so little is known or thought of in regard to either agriculture or stock breeding, where there is no progress and no change except the change from one revolution to another, there would doubtless be more in-breeding and less disposition to try to improve the stock from outside sources than anywhere else.

Unfortunately I saw only a few of these ponies and these at rare intervals. In their suggestion of bygone times and of an industry so long dead, they were like ghosts of the past—and lively little

ghosts they were, too. But their chief interest was in showing the effect of environment in diminishing size—for they were no longer horses, like their ancestors, but ponies.

But, brilliant as was the career of the Narragansett pacers while it lasted, the pony that has played the most conspicuous and, in many respects the most important, role in the United States is the mustang or "bronco" as he is often called. These horses are undoubtedly the descendants of horses brought over by the Spanish conquerors. They are easy under the saddle and remarkably sure footed and enduring; indeed in the latter respect there is probably no breed of horses that will do so much work without being fed grain. These characteristics have made the mustang serve an excellent purpose in the cattle business, but they are so fully offset by others, of a less desirable kind, that he is not, under any ordinary circumstances, an animal of much value.

Wildness of the Bronco

His temper is often rather uncertain, but the chief drawback in his nature is a peculiar, underlying vein of wildness, not easily described but very promptly discovered by those whose experience enables them to compare him with horses of other breeds. An example, in cattle, of this curious wildness of nature is furnished by the phenomenon, rather rare but sufficiently common to be familiar to every farmer, of a calf "running wild." His ancestors, from a very remote period, have been domesticated and accustomed to the presence of man and he himself may have been handled by man from the day of his birth, and yet it occasionally happens that if he escapes from his stable he will suddenly revert, as it were, to the wild nature of his most remote ancestors and will run, panic-stricken, over fences and ditches, till he falls exhausted or reaches a place of concealment.

A very gentle little heifer belonging to me once took fright and ran in this way. She made her way over stone walls that had always before turned her and that no one would suppose she could

possibly leap and finally reached the woods. Here she was found a few days later and having gotten wholly over her insane fear, willingly suffered herself to be led back to her home.

I have sometimes heard old farmers refer to such cases as "sun-blindness" or "sun-craziness," but the sun has nothing to do with it. It is simply a harking back to wild ancestors, centuries ago, who feared man and had never known his restraining hand.

Sprung From an Untamed Stock

This underlying wild nature seems to be ever present in the mustang nor is it ever very far beneath the surface. In no other breed is there any more than a mere suggestion of it. Just why it should exist in so much greater degree in the mustang—whether it is owing to characteristics that were in the breed in the first place or to the very considerable period, after its advent into this country, that it ran wild on the plains—is not clear. The latter hypothesis would seem to be the most reasonable, and yet, to my mind, it does not offer a wholly satisfactory explanation, for, long as the time was when the breeds ran wild, it was extremely short when compared with the time that the horse has been a domestic animal. It seems more probable to me that these horses, either from the way in which they had been bred and raised or from some other cause, were not as domestic as other breeds in the first place, and that, therefore, their return to a wild condition made them more thoroughly wild than it otherwise would have done.

But, whatever its cause, this wildness is a factor that can never be left out of the reckoning when dealing with the mustang. And yet his proven superiority in quickness, sure-footedness, and endurance has led many to try to turn him to account in breeding. Having myself little faith in such efforts, I have never experimented much with mustangs but, having at one time two mustang mares that were unusually handsome in build and color (one of them, a buckskin, with silver mane and tail, was remarkably pretty), I tried the experiment of

breeding them, one to a trotting bred horse and one to a thoroughbred.

Neither cross proved satisfactory, though the half-thoroughbred colt was the better of the two. I had hoped that he might make a good polo pony. But, while he had many of the qualifications, his disposition was too much like that of his dam—and the fact that the disposition is almost always inherited in greater degree from the dam than the sire is a constant source of trouble in trying to raise good colts from mustang mares. I have known of nothing that could really be called success in such breeding, but have since seen some ponies that were the result of a second thoroughbred cross—the thoroughbred horse upon the half-thoroughbred half-mustang mare—that were very pretty and appeared to be excellent polo ponies.

With regard to raising ponies for the market, the profit is good. The price, it is true, is rarely as high as can be realized for a correspondingly good horse of normal size, but the cost of raising is usually enough less to make the percentage of profit average fully as high. The breeder must raise the right kind, however, if he is to succeed and the kind he chooses should depend upon the kind of market with which he is most in touch. High prices are often paid for really superior polo ponies, and others of the larger kinds, if only they are choice of their kind, will sell well. In all of the larger kinds too much stress cannot be laid upon fitting for market; being strictly fancy stock, they *must* show well in the role they are to fill, whether it be harness or saddle or both.

But while each kind of pony has its admirers and really good ones of any of the various types will sell well, it is a very general truth that the smaller the pony the better he will sell, and my own experience, as well as preference, has led me to the breeding of the smaller varieties. Of these, the Shetland is undoubtedly the best. There is none, in my opinion, that is so well adapted to children's use. A pony for children should not only be small but, as he is often called upon to draw a considerable load, he should also be strong and compact in build. In these requirements the

Shetland is without a rival for no other breed combines so much strength with so small a size. Moreover, he is almost always of a cheerful, active temperament, very intelligent, and of good disposition.

The raising of small ponies for market is quite different, in many respects, from raising full-sized horses and is comparatively simple. My own practice has been to keep them during the colder months of the year loose, in small flocks, in barns arranged exactly like a sheepshed, with racks around the sides for hay and large doors on the south which were kept open day and night—with the occasional exception of some unusually severe snowstorm, when the barn was in danger of becoming filled with drifts. No grain was needed and on all but very stormy or wet days the gate of the barnyard was left open so that they could run out to pasture at pleasure.

In summer they require no shelter except such as is afforded by shade trees and can run, with very little care during the grass season, in a pasture where there is water. But it should be remembered that all horses, ponies or otherwise should have shelter from the sun in summer and, if there are no trees in the pasture, a shed of some sort,—preferably entirely open at the sides—should be provided. The youngsters I have generally broken to harness at one year old, though sometimes not till two. The advantage of breaking at one year old is that the youngster is then all ready for a customer, but, at this tender age, he is not, of course, fit for much work.

The simplicity of the way in which ponies can be raised, however, should not delude the reader into the belief that the matter is too easy and that he has nothing to do but sit still and let the profits fall into his lap. In raising ponies, as in every other industry, attention and proper care are necessary to success. Attention must be paid to the mating; mares that are near foaling, unless they are running in pasture, should

be separated from the others and put in box-stalls by themselves; the youngsters should be broken to harness at the proper time and, if customers are to be satisfied, must be broken well and be perfectly gentle.

Their hay should be fed them regularly; they should never be allowed to go without water to drink and the floor of their barn should be kept dry and well supplied with litter. It will pay the breeder, too, and pay him big dividends, always to keep well acquainted with his ponies and to pet them and notice them, so as to keep them very gentle and domestic—for no one wants a wild, unruly pony. In fact, though raising ponies is easier than raising full-sized horses, it provides no royal road to success any more than any other business, and the pony breeder who is interested in his business and pays the most attention to it is the one who succeeds the best.

I should add that I have never found it necessary to shoe a pony. Their feet, naturally sound, hard, and elastic, become quickly accustomed to hard roads, and ponies that have been used by my children for years have never become in the least degree footsore. Customers, however, have generally had those they bought shod—possibly from a desire to see the little animal equipped in every way like a full-sized horse and possibly from a belief that he needed it. But it is a mistake to shoe any horse, pony or otherwise that has shown that he does not need it.

I have been asked a great many times if ponies are really more intelligent than full-sized horses. They certainly appear to be. But the intelligence of any horse will develop under petting and human companionship, and there is no doubt that other horses, if given the same privileges that ponies enjoy and if their size admitted of their being handled and managed in the same way, would prove equally intelligent.





THIS IS ONE WAY OF TRIMMING PHOTOGRAPHS DOWN TO THE LIMIT AND COMBINING THEM FOR EFFECTIVE DISPLAY AND CONTRAST. THE TOP PANEL IS OF AN OLD WINDMILL SOUTH OF NANTUCKET — ONLY THE FLAG SHOWS ITS NATIONALITY. AT THE LEFT IS THE PILGRIMS' MONUMENT AT PROVINCETOWN, AN EXCELLENT SUBJECT FOR PANEL PHOTOGRAPHY. THE VIEW ON THE RIGHT IS DOWN AN ALLEY IN PROVIDENCE WHICH HAPPENED TO GIVE AN EXCELLENT GLIMPSE OF AN OLD CHURCH AT THE FARTHER END

USING THE SHEARS TO HELP THE CAMERA

BY CHARLES PHELPS CUSHING

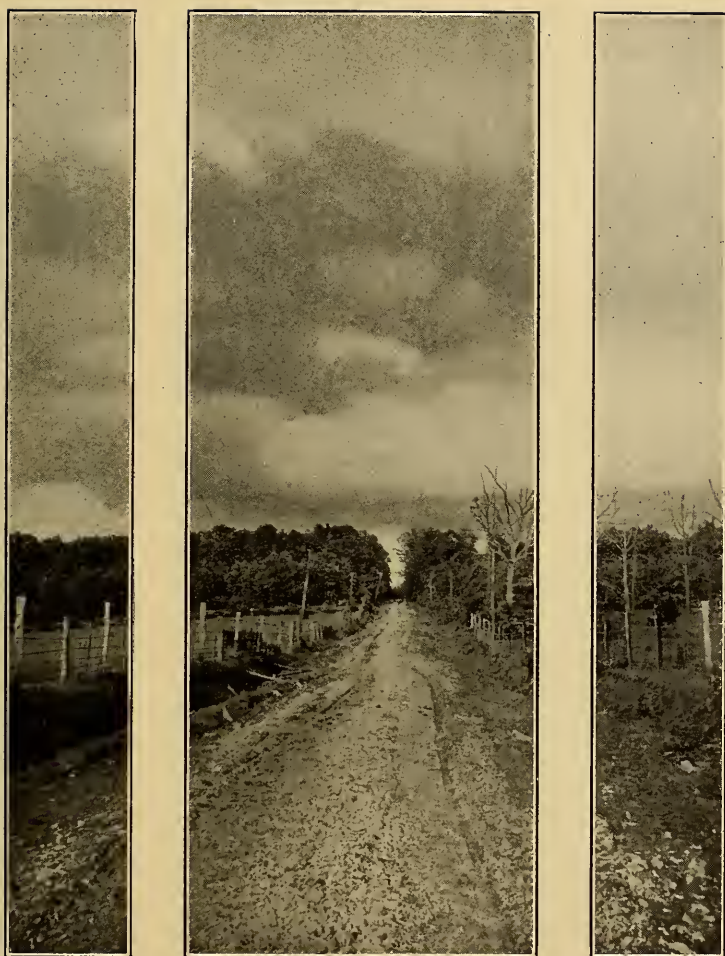
Photographs by the Author

IN an age when photography had no amateurs and the way to learn its art and methods was to bind oneself apprentice to a near-chemist, the camera man was regarded with undisguised awe. A visit to his studio was about as agreeable an experience to a sensitive "subject" as an afternoon with the dentist. In his lair, the photographer spent half the hours with his head under a black cloth (except when posing the victim) and for the remainder of the time kept himself locked in a windowless closet, rocking pans of malodorous dark fluids under the light of a ruby lamp.

Even the posing, once he had locked your head in a vise, had a suggestion of the uncanny about it. With a singing

master's gestures he urged you to look as you couldn't possibly feel; or, if you were young, he danced before you like a medicine man and brandished a toy bird, or, perhaps, a rag doll. The old-time photographer used to complain about how difficult children were to "take," but the wonder to the Rest of Us was how the frail little things ever survived the operation.

And he was almost as formidable out-of-doors as in. When he walked abroad to "take views" his paraphernalia required a pack-horse, and timid youngsters believed he was the bogie man. A few of the bolder small boys regarded him with the veneration usually reserved for thief-catchers, cowboys, or firemen. It is remarkable that a gaping public in



IF YOU WANT TO KNOW HOW MUCH TRIMMING INCREASES THE POWER OF A PICTURE COVER THE WASTE PANELS AT THE SIDE. THEN YOU WILL SEE THAT PART OF THE ROAD TO ORGAN FLAT, ARKANSAS, THAT REALLY IMPRESSES ITSELF UPON THE EYE OF THE BEHOLDER

those days did not distinguish the photographer with the rank of "doctor"—or, at least, "professor."

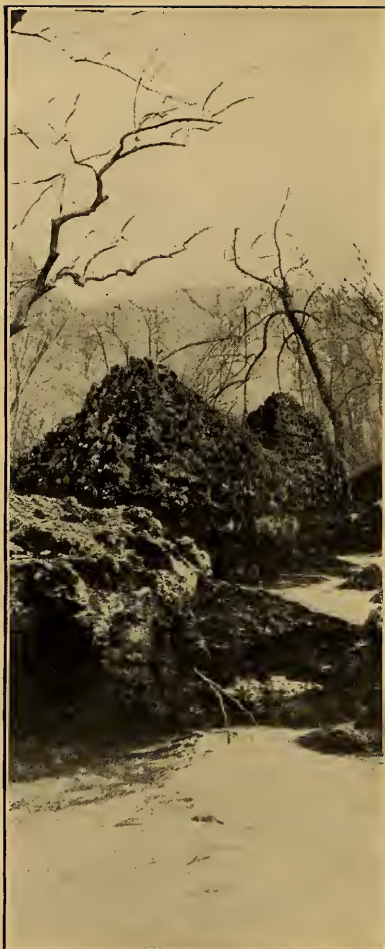
Reversed are the tables nowadays. Amateur photographers are almost too numerous to count; and the pictures we prize the most are not "studio portraits," but photographs of our own taking, snapped from the window seat of the living room, or in the nursery, or under a blossoming apple tree on the lawn. No country home is completely furnished without a camera; and to forget the films on an outing is almost as bad as to

leave the sandwiches at home. From the old view that only a semi-professional can make real photographs, the public has come to believe that nearly any one can take good enough pictures if he can manage to get a camera, a roll of films, and a brief instruction book.

Reduced to simplest terms, modern photography requires only a knowledge of how to *take* the picture—then of how to use the scissors on the print. After the beginner has learned how much light different sorts of subjects require, he may leave most of the rest—excepting



Chinese geese



Trout canyon



November sky

THERE IS NO ABSOLUTE RULE FOR TRIMMING PHOTOGRAPHS. THE EYE MUST BE THE JUDGE. IN THE CASES ABOVE THE PANEL METHOD SERVED SIMPLY TO CENTER THE ATTENTION ON THE PARTS OF THE PHOTOGRAPH THAT WERE REALLY WORTH WHILE

one last process—to some trustworthy professional finisher.

The exception I mean is the trimming of waste space at the print's edges. Very little additional expense of time and thought spent with the shears greatly increases a photograph's efficiency. Set it down for a rule that no print is finished until it is trimmed and that few pictures are so well "composed on the film that they would not be better for some pruning." This is not a paradox: that strength, suggestive qualities, balance, and a touch of the art interest may be

added by making subtractions from what may appear a complete picture.

Examples tell the story better than any amount of description. In the picture of the Road to Organ Flat, see how the combination of storm cloud and vista of road was made more dramatic by lopping off the edges of the photograph. The scene itself was rather ordinary, but the trimming gave it a tremendous gain in interest. Look at the picture first as a whole. Then cover those waste panels at the sides with pieces of paper and see the gain in impressiveness.



The Painter



Collegian Arborcal



Two Hudson Palisade panels



IN OTHER CASES THE PANEL IS NECESSARY AS HELPING TO ACCENTUATE THE DOMINANT LINES OF THE PICTURE. IN THE INSTANCES ABOVE, FOR EXAMPLE, THE PERPENDICULAR PREDOMINATES. HENCE THE PANEL

The accompanying photographs were cut into narrow panels for the purpose of showing how far, in some instances, the trimming may be carried. The tops and bottoms, however, may be trimmed to as good advantage as the sides, and sometimes even better.

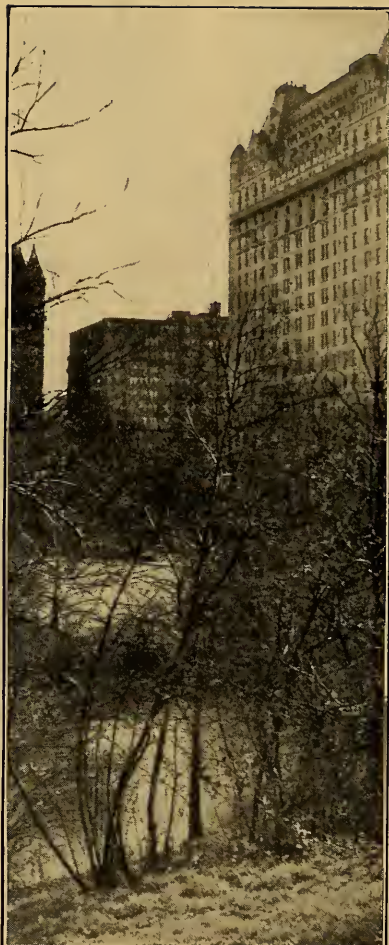
The path through the pine woods illustrates the point. Cover a little of the bottom with a piece of paper. Slowly move the paper toward the top of the picture. Somewhere between the lower edge of the print and the base of the nearest pine trees is a point where the picture can be trimmed to best advan-

tage. The way to find the location of that point is by experiment, keeping in mind at the time, of course, that a composition usually is more pleasing and effective if the horizon line or other sharp division mark doesn't cut the picture into exact and equal proportions such as halves or thirds.

It isn't always easy to trim effectively. There appears to be plenty of proof that some amateurs, lacking the "feeling" for composition or arrangement, never can be sure of getting effective and natural groupings; and these same photographers will have no easy task in trimming.



Arkansas photograph taken at dawn. One second exposure, with shutter wide open



The Plaza Hotel, New York, as seen through the trees of Central Park

IF YOU WANT TO TAKE A LITTLE TROUBLE YOU CAN SECURE SOME VERY EFFECTIVE CONTRASTS, AS ABOVE, WHERE ARKANSAS AND NEW YORK STAND CHEEK BY JOWL

Artists have written whole volumes on composition, but this information isn't part of the average amateur photographers' field equipment. For him, the eye is the only test. And if his eye isn't reliable, he can only press the trigger and pray for luck.

Concerning the art of composition—of putting the elements of a picture together—painters and draftsmen have written whole, fat volumes as technical as a textbook for civil engineers. This does not mean, however, that the Rest of Us can't use an ordinary sort of intuition to work

out good enough results. The first question to ask is, "What are the really *effective* parts of the picture?" Perhaps the center of interest then will be found above and to the right of the untrimmed print's mathematical center, and you will not need to take even a hair's width from the top or the right-hand side, but will slice wide ribbons from the left side and the bottom.

What does the eye remember? What does it see most vividly? The remainder must be eliminated—it detracts from the strength of the true picture. For ex-



Shore of a small inland lake



Shore of Lake Michigan

LOOK AT THESE SCENES IN ACTUAL LIFE WITH YOUR OWN EYES AND YOU WILL SEE AND REMEMBER LITTLE MORE THAN WHAT IS SHOWN HERE. IN OTHER WORDS, TRIMMING A PHOTOGRAPH IS MERELY A DISCARDING OF THE NON-ESSENTIALS

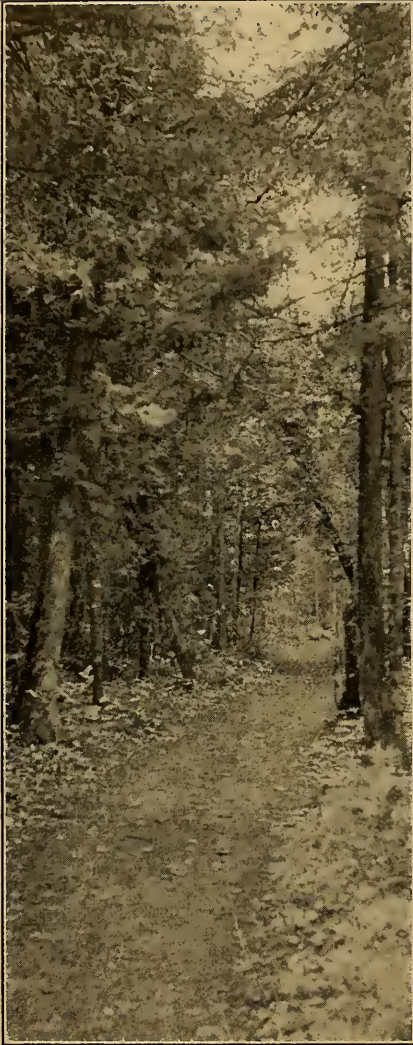
ample, in the photograph of the Arkansas road, the two ribbons of space sheared from the sides were areas that were worse than waste; and in the instance of the path through the woods, the lower half of the foreground spends the eye's energy without just cause.

The most useful advice is to look for useless space first in the foreground—the bottom of the print. This is where the greatest area of waste usually is found. Furthermore, to shear the bottom of the photograph draws the point of interest closer to the eye. (As in that instance of

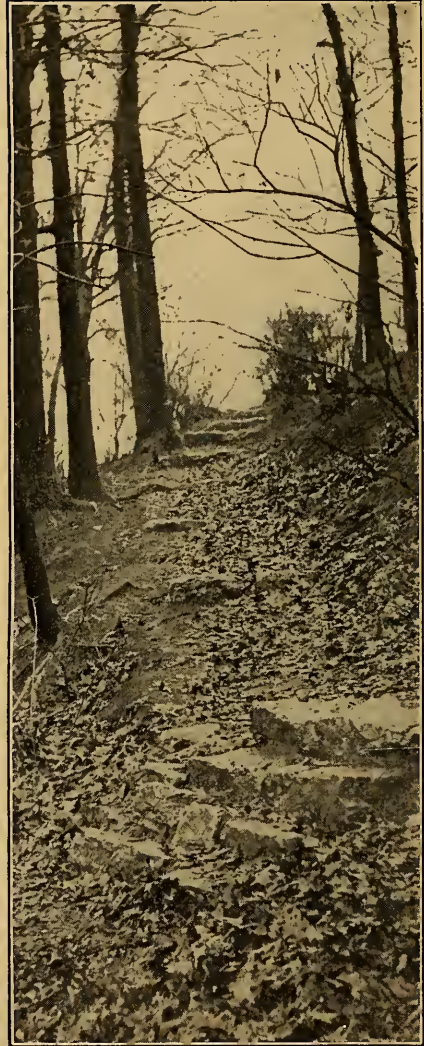
the path through the woods, you walked down the path as you pushed the paper upward.)

Look next to the sides. Most of all, be careful not to unbalance the picture by trimming. And don't be in too much of a hurry. Don't shear until you are certain about what effect on the whole arrangement the subtraction will produce. To cut off the waste space at the top after this will be easy.

Often enough, to cut away the sides of a picture is to make it less literal—showing less but suggesting more. That



The path through the woods



A rainy day in the park

THE MOST USEFUL ADVICE IS TO LOOK FOR USELESS SPACE FIRST IN THE FOREGROUND—THE BOTTOM OF THE PRINT. THIS IS WHERE THE GREATEST AREA OF WASTE USUALLY IS FOUND

was the case in nearly every instance in this set of panels. For steeples, steps, hillsides, tree tops, crags, and the like the narrower picture greatly emphasizes height. For portraits the panel may be many times more interesting than a wide photograph in which a mass of details detracts from the importance of the real subject.

For decorative pictures in general the panel has long been a favorite shape. In

the woods, where there are tree trunks to work with, or in the city, with steeples and skyscraping buildings, its uses are equally effective.

Cover the edges with paper, or cautiously trim a little and then a little more. You can't hope to guess right every time. Often the trimming is vexatious and disappointing labor, but in a majority of experiments the results justify the pains.



Photograph by Clara B. Joyce.

Now, the day is at hand, prepare, prepare—
Make ready the boots and creel,
And the rod so new and the fly-book, too,
The line and the singing reel.

“THE TENT-DWELLERS”

'GOING LIGHT' IN HORSEBACK TRAVEL

BY DILLON WALLACE

Photographs by the Author

SEVERAL readers of THE OUTING MAGAZINE who have in anticipation a saddle trip in the Rocky Mountain have requested me to outline for them a simple but efficient equipment and outfit similar to that which I used in my journey last year, described in "Saddle and Camp in the Rockies."

They desire to know, not how much they can take, but rather how little is necessary for comfortable traveling.

Any department store or outfitting establishment is prepared to load a half dozen horses down with innumerable clap-traps, which eloquent salesmen induce the would-be traveler to believe are necessary for his very existence in the mountains. Any one of the hundred books upon camping equipment will set him wholly at sea as to what he really needs or does not need. I shall endeavor, therefore, to get down to the ground, and as briefly as possible describe a simple outfit, such as I used, which, on the whole, I found quite sufficient and efficient.

Let me warn the camper, however, that going light "with comfort" is a relative term. While one man might find the outfit which I shall enumerate entirely sufficient for his comfort and enjoyment, another would not. Let it be understood, therefore, that I shall confine myself to what men accustomed to the wilderness consider sufficient for comfortable traveling. No Pullman car luxuries will be included, for wilderness travel and parlor car travel are quite dissimilar. The idea, then, is to be as comfortable as circumstances will allow, and in this case it is to be as comfort-

able as possible with but one pack animal to transport equipment for two men.

The first thing one considers in outfitting is what he should wear, and this depends to some extent upon the section he is to visit and the season in which he is to travel. In July and August I found athletic summer underwear entirely satisfactory in Arizona and Utah. As a general rule, however, medium-weight woolen underwear is the best for all-round use. Should one perspire freely and then be exposed to a cooling wind, woolen underwear will ensure against cold and pneumonia. Cotton socks do very well until frosty weather sets in; then good woolen socks are indispensable. Three suits of underwear (that is, two extra suits) and a half-dozen pairs of socks are quite enough to carry.

In very warm weather a khaki cotton outer shirt is as good as any, but in autumn a flannel shirt is the only thing. Its color does not matter—blue, gray, or brown—but let it have pockets on the breast; there is nothing so handy as a pocket in a shirt. My outfit usually contains one khaki and one flannel outer shirt.

The trousers should be of heavy khaki, moleskin, or any close-woven material that will not catch too easily upon brush. I use regular long trousers, with reinforced seat, as preferable to the usual riding trousers; regulation U. S. Cavalry puttee leggings, and good strong shoes. The shoes should be large enough to leave the foot ample room with woolen socks; nothing tends so much to make one cold as a tight shoe.



MR. WALLACE'S GUIDE AND HORSES ON THE DESERT OF ARIZONA

Some riders prefer top boots, such as Arizona cowboys wear; I confess I would like them myself, but for their high heels, which make walking uncomfortable. Or one may do away with leggings, and wear high-laced mountaineering shoes. I have also found ordinary shoes and German socks exceedingly comfortable in cold weather. But whatever is decided upon, extra trousers, extra leggings, and extra shoes are superfluous. One pair of each—the pair worn—is sufficient. Consider the toiling pack horse.

The best sweater that one can take is not a sweater at all, but a Pontiac shirt—the heavy, felt-like shirt worn by lumbermen—made loose enough to slip over the outer shirt. This has been my standby for years—whether canoeing or dog traveling in Labrador, or horseback riding in the West. Its cost, too, is only a third that of a sweater. Perhaps even better than this, because lighter, is a buckskin shirt, made plain without frills or fringe. It is wind-proof and pliable. In saddle journeys on cold days a wind-proof canvas coat is a comfort. On canoe trips I eschew a coat as an unnecessary encumbrance, but it is quite otherwise in cold weather on horseback. For horseback traveling in summer, however, a coat is superfluous.

A high-grade, good-weight felt hat

with a broad brim is by all odds the best hat for winter and summer wear. It should be of high grade, for the brims of cheaper ones are sure to sag after a little wear. A pair of heavy gauntlet buckskin gloves should be taken as a protection against brush in summer and cold in autumn.

A saddle slicker, or a good quality rubber poncho is a worthwhile comfort—yes, a necessity. Personally I like the poncho, as it can be put to many uses.

Last of all, some fast-color, large bandanna handkerchiefs should be provided. A handkerchief tied around the neck will often protect from sunburn, and plenty of these handkerchiefs are handy to have.

Personal equipment other than clothing should next receive attention. Knives are important, and first of all a good two-bladed jack-knife is indispensable. My hunting and cooking knife, which I use as a general utility implement, is a small butcher's knife, with a broad-pointed, five-inch blade. Such knives can be had in sheaths for seventy-five cents and answer all purposes.

A compass should not be forgotten. A simple one with a metal dial, its needle pivoted upon a jewel, which costs from one to two dollars, is quite as good for the purpose as a more expensive one.

A waterproof match box is also ad-



HORSES AND MAN CAN BE COMFORTABLE WITH A MINIMUM OF OUTFIT

visible, though the general supply of matches may be carried in a tin box in the pack, where they will always remain dry.

Firearms depend upon the character of hunting to be done. A saddle rifle, however, should be short and light—not over twenty-four-inch barrel, and not above seven pounds in weight.

The average tenderfoot loads himself down with ammunition, and generally much experience is necessary before he is willing to limit himself to a reasonable quantity. If I were going into a wilderness where I could by no means renew my supply for six months I should perhaps take as many as sixty rounds for my rifle. On an ordinary trip of, say, a month or two, I would carry but one box of twenty cartridges.

It is understood, of course, that this is an equipment for a riding and camping, and not for a target practice trip.

Gun grease and cleaning apparatus should not be overlooked.

A revolver is unnecessary, but for target practice in camp offers a means of amusement.

Whether or not a shotgun is carried will depend upon whether bird shooting is intended.

Medicines should include a cathartic, something to relieve dysentery, bichlo-

ride of mercury as an antiseptic (all in tablet form), a roll of one and one-half-inch adhesive plaster and some antiseptic bandages. These will relieve any trouble that may arise until a physician can be reached.

Then there are towels, soap, pocket comb, razor, shaving stick and collapsible shaving brush, tooth brush and paste, and the smoker should take an extra pipe and plenty of tobacco. A good supply of matches should be provided.

In my journey of two thousand miles in 1910 I carried a 6 x 7 Hudson's Bay model balloon silk tent that weighed six pounds, but pitched it only half a dozen times. One needs some sort of a tent, however, and a small A tent of balloon silk or tanalite, that weighs ten pounds or so, is perhaps the most practicable and will furnish ample cover for three or four men, should occasion arise. Tent poles can be cut anywhere, if trees between which to stretch it are not available. The rope with which it is guyed will take the place of a ridge pole, and a good supply of rope should be provided.

A tarpaulin of waterproofed, medium-weight canvas is an essential. It will answer as a tent floor at night, and by day covers the pony's pack, protecting it from dust and rain.



THIS IS ALL YOUR PONY NEEDS TO CARRY—BESIDES YOURSELF

In summer I carry a pair of light-weight woolen blankets, and no other bedding. When frosty weather comes, however, this is not enough, though I managed with it in twenty-five degrees of frost, in conjunction with my saddle blanket. Personally, I like a sleeping bag of waterproofed canvas. This should be lined with two pairs of light blankets, that four thicknesses of blanket may be available for covering. The blankets should be so arranged that they can be taken out and the bag turned for airing. This makes a light and exceedingly comfortable bed under nearly any circumstances, even in a zero temperature. Saddle bags make a good pillow.

One of the great essentials which no one should ever go into the woods without is an ax. I have found a three-quarter ax, with twenty-eight-inch handle, sufficient under all circumstances, and much lighter to pack than a full-sized ax. In this connection, a file for sharpening and a small whetstone should not be forgotten.

The cooking utensils need not be numerous, and for general camp use I have found aluminum ware the best. Enamel ware is heavier, but otherwise is a good second and is cheaper. On my horseback trip I carried an aluminum plate, pint cup, one small pan in which to mix bread or flapjacks and to use as

a dishpan, a dessert spoon, a large iron stirring spoon, a two-quart coffee pot, and an ordinary frying pan.

I did my frying, bread baking, and stewing in the frying pan. It is well, however, to take along a three-quart pail in which to boil potatoes and other food, and if one feels that it is necessary an aluminum reflecting baker or a Dutch oven. I have never cared enough about either to pack them, as I find I can bake just as good biscuit after the northern Indian fashion in the frying pan. Westerners, however, are wedded to their Dutch oven—a heavy iron kettle with iron cover—and they invariably pack it. But remember the fewer things one has, the less he has to take care of and the lighter is the pack pony's load.

I have camped for weeks at a time with no other cooking outfit than my pint aluminum cup.

A table knife and fork are not heavy and are useful. Long ago I learned to use a forked stick for a fork and to depend upon my hunting knife or jack-knife for cutting, and I never carry the extra knife and fork. Whatever you may do as to this, for goodness' sake do not pack broiling irons or fire irons. Do not weigh your pony down with that kind of superfluous truck. One can broil a piece of meat nicely upon the end of a dry stick.

In traveling in an arid region canteens should be provided. There should be one large one for each traveler, to be carried by the pack horse, and a small one slung upon the saddle horn will be found convenient for ready use.

Stocking the Larder

The food supply depends upon the taste of the individual. We are considering here the *necessities* of a horse-back journey in the mountains, where one keeps moving from day to day. On such a trip one is certain to come upon settlements occasionally where the provision supply may be renewed and fresh meat, vegetables, and fruit can be had. My own regular stock with which I start out from supply point to supply point consists of bacon, a small piece of salt fat pork, flour, baking powder, salt, potatoes, onions, coffee, tea, sugar, and a few packages of desiccated vegetables. When I am able to get desiccated potatoes in the riced form, I cut down my stock of fresh potatoes, as the desiccated vegetables are exceedingly light and every whit as palatable and nutritious as fresh vegetables.

I usually also carry for emergency three or four cans of baked beans and a couple of cans of canned beef, though I am very sparing in the use of canned goods. I have seen several cases of ptomaine poisoning directly traceable to them and have suffered myself. In warm weather, in an arid region, in fact anywhere, lemons are a great comfort and at times almost a necessity. Whenever I can get them I have a dozen or two in my pack.

Unless going into permanent camp two men will hardly find it necessary to start out with more than thirty pounds of flour and ten pounds of bacon, with other supplies in proportion. Before these are gone they can renew their supply. An excellent method is to have some small bags of strong muslin or light canvas made, in which to pack the various articles of food—one for flour, one for sugar, and so on. Paper bags cannot be relied upon, and eschew glass-ware.

If life is unendurable without butter

and canned milk, they can be taken without much inconvenience, but I never carry them. Butter gets oily and rancid, and a can of milk once opened is prone to leak and daub the outfit up. Neither do I carry pepper, for I rarely use it, but it is a pretty good thing to have in the outfit if one likes it.

Coming now to the pack horse equipment, the first thing to consider is a good thick, soft, woolen packsaddle blanket. One cannot afford to have the horses galled, and this, with care in adjusting the pack, is the preventative. The ordinary saw-buck pack saddle is the best pack saddle for all-around use, and the double cinch, when it can be had, is preferable to the single cinch, though in my work I have always used the single cinch because I happened to have it.

Kyacks or panniers are better than alforjas for packing. They may be had of light, tough, indestructible fiber, or made to order of heavy canvas, with sole-leather ends. If made of canvas and leather they should be riveted, not sewn. The hitch-rope should be of ample length—say thirty-five feet—with a good broad canvas cinch attached. I prefer that my hitch rope be of good, hard-twisted cotton, as it is more pliable and more easily handled in wet weather.

The riding saddle should be a double-cinch, horn saddle, lined with wool, to prevent slipping, and of ample weight to hold its position without inclination to slide. My own is a regular stock saddle weighing thirty-five pounds, though a twenty-eight- or thirty-pound saddle might do just as well. I prescribe the horn because of its convenience. One may sling a camera upon it, binoculars, or other necessities that are in constant use. The saddle blanket should be of good quality and heavy enough to insure against galls, as in the case of the pack horse. A leather boot for the rifle should not be forgotten, a pair of spurs, and saddle bags, for notebooks, toilet articles, and odds and ends, will be very convenient.

A pair of hobbles should be provided for each horse. They may be purchased throughout the West at nearly any village store. It is advisable also to carry a bell and always to strap it around the

neck of one of the horses when the animals are hobbled and turned loose to graze.

It will sometimes be wise to picket one of the animals, and for this purpose fifty or sixty feet of rope will be required. Also sufficient rope should be provided with which to lead the pack horse when necessary, and a halter rope for each animal.

It will seldom occur that the tender-

for if a hired horse is injured while in a traveler's possession the owner holds him responsible for the damage.

A horse weighing from nine hundred to one thousand pounds at the outside makes the best saddle horse for mountain work, and a small horse, as a general rule, is better able to forage a living. Too large a horse is liable to be clumsy, while too light a horse will of course tire under a heavy rider. A pack pony



THE WAY A PRACTICAL WESTERNER TAKES THE FIELD

foot traveler will undertake to do his own horseshoeing, but should he know how to do it he will not forget to supply his pack with three or four extra shoes, a horseshoer's nippers, rasp, hammer and some nails.

A word about horses: If one is planning a journey to extend beyond a month it is cheaper to buy horses than to hire them, in most localities. In horse raising localities very good animals can be had at anywhere from forty to seventy-five dollars, and the usual rate is one dollar to one dollar and a half a day for horse rental. Therefore half the value, or more, of a good horse would be eaten up in rental, and at the end of the journey one would be able to sell the horses for nearly, if not quite, what he had paid for them. The risk is no greater,

weighing, say, eight hundred to eight hundred and fifty pounds will carry a one hundred and fifty pound load very nicely.

In choosing horses there are three things to look out for. First, be sure that the horse is perfectly sound and not too old; a horse of eight or nine years, however, has greater powers of endurance than one four or five years of age.

Second, be assured that the horse is perfectly gentle and not inclined to buck or kick. It is very annoying to ride an unruly horse on a rough mountain trail, or a horse that is liable to shy and throw one at a time when it would be, to say the least, inconvenient. A well-broken cow horse can be left standing nearly anywhere with his reins down. He is usually gun wise, and will not be fright-

ened at sudden noises or quickly moving objects.

Third, a horse should be a good camp horse; that is, one that will remain in the vicinity of the camp when hobbled and turned loose, and not attempt to run away to his old home. One of the most annoying things a traveler can have is a horse that wanders far from camp.

There is, of course, a great difference in the gait of horses; some are easy under the saddle and others very hard indeed. Single footers are the fastest travelers, but it is hard to get a single footer, and one has very often to take what he can get in this respect.

With proper judgment in selection, the entire equipment outlined above, for two men, including provisions, will be found to make a load of not above one

hundred and fifty pounds for the pack horse. This is, of course, exclusive of the saddle horse equipment, which the pack animal will not be called upon to carry. In many instances it will be found quite possible to cut even this down very considerably, but as it stands it is sufficient for easy and comfortable traveling and light enough to admit of rapid progress. Should the reader find difficulty in purchasing any of the articles specified, such as tent, packs, or, in fact, anything desired, I shall be very glad to answer personal inquiries and direct him to several outfitters who can offer him a selection. It will also give me pleasure to recommend to the would-be traveler reliable guides, so far as I may know them, in the vicinity in which the traveler wishes to journey.

THE BROWN THRASHER

WHEN the first wake robins come, and a mist of green lies on the elms, and the maples take on a touch of red, the brown thrasher is heard at his best. How often he is mistaken for the mockingbird! Let the woods be very still, let the clouds be softening into showers, let a pool of the deeper blue be in the sky, and presently from the underbrush he will come silently, a slender fellow, to the top of a maple and with a short prelude begin his song, his tail drooping, his head thrown back, his breast expanded.

Then what a time for dreams! The spring beauties peep out here and there. The May apples are pushing up the mold. Sap is pulsing in the underworld and running up to the very tips of the twigs, urging them into fuller expression of beauty. How like a stream of silver melody that song runs through the dreams of the listener! Who shall write it? Who shall describe it as it flows on and on? It is not as varied as the mocking bird's. At times it is louder, but it has a nameless charm of its own for all the singer has been accused of being an egotist with no thought of love save of love for himself and his own music.

Not being suspected of having game blood in his veins, as is the meadowlark, nor of being a useless fellow as is the woodpecker, and not having so brilliant a coat as the cardinal, the brown thrasher fares better than these, his brothers, in song.

I have never seen him in a cage, and boys and so-called sportsmen generally pass him by. He comes close to men, nests near them, and is confident in his demeanor toward them. This is as it should be, to the advantage of both.

Last Summer a pair of brown thrashers built in a honeysuckle within a few feet of my doorstep. Both worked assiduously at the nest, and after it was finished and the female was setting, I could just see her head and bright eyes through the overlapping twigs and foliage, though I stood but a few feet away. In my care to make this couple feel at home and to relieve them as much as possible in their quest for food, I sprinkled crumbs plentifully on top of the fence just above the nest. Alas! how my good intentions miscarried! Some mischievous jays found the crumbs and the nest, drove the thrashers away, and devoured the eggs.



OUR FRIENDSHIP WITH THE OLD CACIQUE DEVELOPED VERY RAPIDLY

THE TRIP THAT FAILED

BY J. RUDOLF IVES

Illustrated by George C. Harper

ABOUT thirty miles east of the Canal Zone, in an irregular line, running from the Atlantic almost to the Pacific, begins the habitation of the most peculiar tribe of people, I believe, living in the Western Hemisphere to-day. Their country comprises the numerous, beautiful, and fertile islands along the Atlantic coast between Puerto Bello and the Gulf of Uraba and extends inland, approximately dividing the eastern end of the Republic of Panama. Within this territory, civilization has cast no lights nor shadows, nor introduced new customs, nor gathered tithes for the propagation of foreign superstitions, nor taxes for governments of questionable integrity. These people still hunt with the bow and arrow and have the poisoned dart in reserve for their enemies.

The attention of the writer was first attracted to this part of the Isthmus by rumors of unlimited game in the country and lurid pictures of gold, which is said virtually to "pave the beds of the streams." So, though it is known in all parts of the Republic of Panama that the San Blas Indians permit no strangers, white men particularly, within their territory, we decided to try to explore it anyway by traveling at night in mid-stream in cayucas resembling their own and concealing ourselves in the jungle during the day.

My decision to tell of this visit involves a promise not to reveal the names of the others concerned. They are all still in the employ of Uncle Sam on the Isthmus and they do not wish him to know that he has so many ninnies on his payroll, holding somewhat responsible positions.

The party consisted of a district phy-

sician, a district quartermaster, a division chief clerk, and the writer. Last but not least, there was Emiline, our cook. No, he is not a lady. His mother, a Jamaican woman, had been married, he said, but not "parsoned." Not having been very well acquainted with his father, he "tuhk his muzzer's name."

The Bayona River, which flows into the Pacific, extends farther inland than any other within reasonable distance of the Zone, and we knew that the mixed breeds of people occupying this part of the Isthmus, for at least twenty miles inland, were not hostile, if not friendly. Our idea was, under the guise of hunting, to make several preliminary trips up the river, making friends along the way and ascending farther each time, until we reached the San Blas country, when we should begin our nocturnal tactics.

The fourth visit brought us to a settlement within three miles of the first San Blas outpost, which the Indians have regularly established on all streams and trails to warn the stranger not to continue inland. This settlement, which, so far as I know, possessed no distinct name, is situated on the Mamoni River within a few miles of a junction of two rivers. One branch comes from the north from the San Blas country, the other runs easterly from the direction of Panama City itself.

We visited this settlement twice, and each time had the good fortune to meet the cacique of the community. The cacique is simply the head of the settlement, a position attained, not by political pull or bribery, but by begetting many children, and they in turn begetting many more. This organization or form of government, if it may be so called, comes from their Indian ancestry. A similar politico-social form of government exists among the San Blas Indians also.

Our friendship with the old cacique developed very rapidly so that when we anchored near his settlement on the evening of December 31, 1910, he greeted us warmly and pressed us to spend the night with him. We wanted the invitation so that we could politely refuse it, and at the same time announce the

fact—the falsehood, I should say—that we did not intend to spend the night on the Mamoni, but would explore its left branch this afternoon and return to the Bayona for a couple of days. This trip up the left branch was a fake trip intended to disarm the neighborhood of suspicion as to our real intentions. The Indians did not object to parties ascending this arm of the river.

With two cayucas in tow, which we borrowed at the settlement, we went up the river, making considerable noise intentionally. When the Indian outpost at the fork of the rivers came in view, we hugged the left bank closely to advertise our route, should the Indians be on guard. There were no signs of life about the hut until we were, perhaps, within a hundred yards of passing it.

To our intense amazement, two stalwart Indians suddenly emerged, and stood on the bank facing us. They began to beckon to us as though they had been drilled in concert for this performance. The two Indians were unarmed. We ourselves were so bedecked with offensive weapons that we looked vicious even to each other. There was no apparent reason why we should not respond to their signs, so we directed the course of the launch to the right.

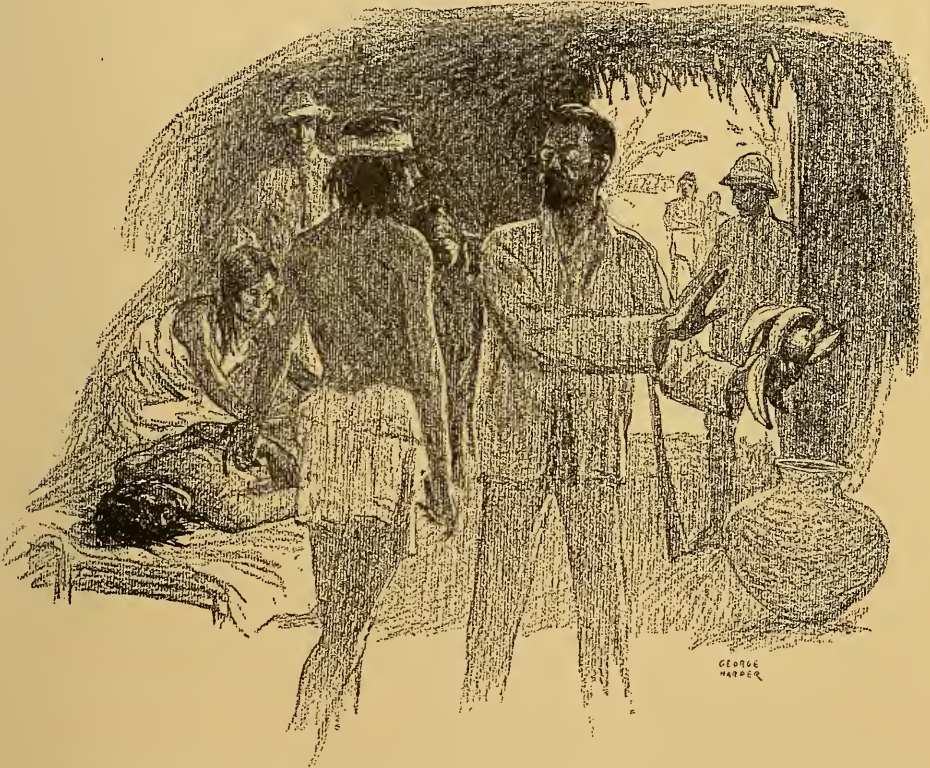
The Indians stood motionless while three of us ascended the bank. The facial expressions of our hosts, or would-be captors, we did not know which, were rather doléful, even for Indians, and I began to suspect that they were in trouble of some sort. This proved to be the case when we entered the hut in response to further signs on their part.

The hut was the ordinary type customary in the tropics. The sides were made of bamboo, the roof of palm fronds. The floor was the bare earth. There was nothing suggestive of conveniences for living about the place, except a large, earthen water-jar suspended in the rear door and eight or ten bamboo bench-like structures, evidently used for beds. There were various kinds of fruit, mostly coconuts, in one corner of the hut. Hung along the sides were bows, bundles of arrows, and various crude, but formidable-looking, weapons made of broken pieces of old iron. Stretched

limply on one of the benches, in an absolutely nude condition, a third Indian lay, evidently very sick.

There was not one word spoken between the Indians and ourselves from the time we landed until we left. Some remarkable pantomime occurred when Doc returned from the launch with his medi-

When Doc got through with the feverish Indian, he looked much improved. Final directions were given to the nurse at the back door where the eastern and western horizons were visible. Doc pointed to the sun, then to the east, and counted out three pills, indicating that three should be taken at



TAKING IN HAND THE DIFFERENT ARTICLES OF FOOD THAT WERE IN SIGHT AND SHAKING HIS HEAD IN DISAPPROVAL AFTER LOOKING MEANINGLY AT THE PATIENT

cine-case. He had taken in the situation at a glance and now proceeded to give the sick Indian a thorough examination, and incidentally break in the future nurse to his new duties. The Indian was apparently suffering from simple malarial fever.

It was interesting to watch Doc train this barbaric nurse. His professional instincts so far asserted themselves that I am certain he forgot where he was, or that he had started anywhere in particular. His attentions to the sick Indian concluded with a bath.

sunrise, two when the sun was directly overhead, and one at sunset again.

He even went so far as to put the Indian on a diet. This he accomplished by taking in his hand the different articles of food that were in sight, and shaking his head in disapproval after looking meaningly at the patient. Condensed milk, appropriated from our commissary supplies, and orange juice were to constitute his diet.

When everything was satisfactory at the outpost, we continued up the river until out of sight and sound of the In-

dians. We then transferred our commissary supplies and such other articles as our inland trip necessitated to the cayucas. Doc and the quartermaster were assigned to one cayuca, and myself and Emiline to the other. The Chief Clerk was to run the launch and remain with it and wait for us in the Bayona River.

Under cover of night we returned downstream as fast as the darkness permitted. All lights were out except the bull's-eye lamp on the bow of the launch, which accentuated the darkness in the rear. We were seated in the cayucas as we expected to travel, with two lines merely held in our hands.

When we reached the north branch of the Mamoni, we turned loose from the launch and paddled as fast and as noiselessly as possible toward its right bank away from the outpost that we had visited a few hours before. The launch did not deviate from midstream, or slacken its speed on its way to the Bayona. We hoped by this ruse to make the Indians think we were all returning homewards.

After we had been paddling about three hours against the disagreeably swift current, we could hear the roar of Mindi Falls like distant thunder. We could scarcely make headway at all, and foam floated past in patches. Further progress against the current was impracticable, and the magnitude of the work before us became more apparent. The cayucas could not be poled against the stream on account of the depth. Nor could we tow them from the banks, as there were none practically. The trees grew on the banks and into the water within twenty feet of each other, making a natural barrier to the current on the sides. The branches overhead lapped in a riotous embrace a hundred feet above, making a mile-long saxophone for Mindi Falls to rumble on.

There was nothing to do but to leave the stream and take to the jungle. It was now midnight. We must get our cayucas and provisions above the falls by daybreak. A diligent search revealed no trace of a trail. A new one must be cut. We drew the cayucas through an opening between the tree trunks, into

the jungle as far as possible, and began work.

Without machetes our trip would have ended here. With the aid of this useful instrument even our task was herculean. We had not time to try to discover the lay of the land in the impenetrable darkness, but just worked in the line of least resistance, trusting to luck.

The three white men of the party did practically all of the work. About two o'clock in the morning we jumped a tapir which, though an inoffensive beast, "got Emiline's goat." The squalls and howls of wild cats, jaguars and lions added nothing to the pleasantness of the situation. The fact is, this entire hillside seemed to be a natural den for native animals; the atmosphere, oppressively warm and miasmatic, had the peculiar scent of a "zoo." The heavy dews made an irregular patter on the wide-leaved foliage, constantly attracting one's attention to nothing in particular, but rendering one apprehensive.

Five o'clock in the morning found us with an opening to our temporary goal—the head of the falls. Our last task before breakfast was to drag the cayucas up and bring up our commissary supplies.

There is no particular art or science in getting a cayuca up a hill. It is just a question of brute strength. The reader should not confuse the cayuca of the tropics with the birch-bark canoe of the North American Indian. A cayuca is a one-piece boat, a dug-out, a single tree hollowed and sharpened at both ends. In the water it has two objects in existence; one is to drift down stream, the other is to turn over when checked. On land it is a monument to inertia.

An hour's hard labor landed them at the top, where we meant to camp until afternoon. We had turned the boats bottom up and were seated on them having a breathing spell, when we remembered that it would not be safe to leave our food supplies at the mercy of prowling animals and hurried down again to bring them up also.

Our food had been packed in three cases. One contained canned beef and salmon; a second, canned tongue, ham



DOC SAID HE FELT ALL THE SENSATIONS OF BEING EATEN

and condensed milk; a third contained our meager cooking outfit, coffee, sugar, bread, some fruit and a few eggs. It was a perplexed quartet that reached the lower end of that trail. There was but one case there—the one containing the least food with the cooking utensils.

I accused the Quartermaster and Doc of neglecting to take them from the launch. They protested vehemently that they did bring the other two cases and remembered distinctly placing them with the other during the night. Emiline was satisfied that "hants tuhk 'um." No reply being forthcoming, he felt that he had made a favorable impression and suggested further that it wasn't half as hard to pull cayucas down hill as it was to take them up.

Hunger composed the major portion of my sensations by now, and I knew the others were in the same condition. With lowered spirits we returned to camp and set Emiline to get breakfast from the meager supply of food that was left. It was suggested that the Quartermaster keep a lookout down the trail to detect if possible if we were followed. Doc was to reconnoiter the front along the river bank, both to report in thirty or forty minutes. I decided to remain with the rations, as any further depletion meant an immediate return.

I was seated on the end of one of the cayucas meditating on the lost canned goods and admiring the sunrise, a panorama of pink and gold and fleeting shadows. Emiline had the morning air pervaded with the aroma of boiling coffee. About twenty-five minutes, I judge, had passed since our sentinels had gone on duty.

Of a sudden I heard something coming through the jungle on the run and gripped my rifle and wheeled to shoot if necessary. No one can imagine my feelings when I perceived the cause of the disturbance was Doc himself. He was without his hat and rifle. His clothes were torn, his hands scratched and his face, from the florid hue of health, was changed to the color of stale beef liver. When he was free of the jungle his knees wobbled and he staggered as though drunk.

He managed to reach one of the cayu-

cas and tried to sit on it, but fell backward to the ground and leaned against it. I did not question him, but walked up and looked him squarely in the eyes, hoping to reassure him to some extent. I felt certain he had gone suddenly crazy. What followed was not calculated to relieve my apprehensions. He began to move his lips and tongue as though speaking, but not the faintest sound emanated from his lips. His arms jerked spasmodically with just enough method in their movements to suggest that he meant them for gestures.

My first thought was that he had lost his mind and imagined he was still nursing the Indian. It soon became evident to me, however, that Doc was simply scared speechless. This was equally surprising as I knew personally, beyond a doubt, that he was in no sense a coward. His nerve had been tested on too many previous occasions for me to entertain that thought very long. As quickly as possible I got a drink of whisky into him, followed by a cup of hot coffee. The Quartermaster had come in now and likewise heard Doc's story, when at length he was able to speak.

He said he had followed the bank of the river up-stream until the jungle came down to the water's edge and stopped him. There was a huge ceiba log lying between a partially open space and the dense vegetation, offering a good resting place and afforded a fine view of the river, which bent to the left at this point. He was seated about ten minutes, his back to the rising sun, when he became vaguely, strangely conscious of a living presence besides himself. Anyone who has been much in the wilds of nature has experienced this.

Glancing about furtively, to the right, overhead, in front, he saw nothing unusual. His shadow, trailing out in front of him, caught his attention a moment. It seemed out of proportion in the region of his left shoulder. Turning abruptly, he found himself squarely facing a gigantic anaconda, their faces within five inches of each other.

The anaconda's expression was a satisfied smirk. He was pleased that he had found his breakfast so easily, but

was a little puzzled at the nature of the diet. Doc said he felt all the sensations of being eaten, and then he felt nothing—he became panic-stricken.

Breakfast was eaten with little zest. When we had finished Doc, the Quartermaster and myself went up the river to kill the anaconda, but in spite of a diligent search no anaconda was to be found. What was stranger still, Doc's rifle and hat were gone also. We followed Doc's trail through the jungle to camp, but could see nothing of them.

We originally intended to spend the day at this camp and rest and continue our trip up-stream at night. By a unanimous vote we decided that this was no place to loiter, however, so we put our remaining possessions in shape, floated the cayucas and continued inland.

There are many places on earth for which scientists or nature lovers, for one reason or another, claim the distinction of being the site of the Garden of Eden. This question could be settled for a generation or so, I believe, if I could get these claimants together and take them through the valley of the Mamoni. I feel sure each would surrender his pet location in favor of a place naturally so beautiful. There are

trees with wonderful foliage, varied and novel; flowers of every hue and shape and size; myriad vines in festoons so graceful as to suggest the touch of hu-



I FORGOT ABOUT LUNCH AND STARTED BACK DOWNSTREAM



WE WILL OMIT ANY REFERENCE TO OUR
CONVERSATION

mankind. On either hand the undulating hills of perennial green vie with a sky of indigo. Beneath the rays of tropic suns nature paints with her deepest dyes.

The water is as clear as crystal and I experienced the sensation of the aeronaut gliding over an element that could not be seen. Fish, eels and denizens that I am unable to class, darted to right and left to hide beneath the vari-colored lilies along the banks.

We had been traveling three hours perhaps when lunch began to assert itself. I left the paddling to Emiline a moment so that Doc and the Quartermaster could catch up and was standing in the bow of the cayuca, looking for a suitable place to camp. Of a sudden a peculiar twang broke the stillness of the tropic noon. The twang was followed

by an ominous whiz or swish which could not possibly have lasted more than a few seconds, but it seemed to me a quarter of an hour or more.

I felt the blood mount to my face. A warm glow stole over my body, followed by sensations of prickly heat. My eyelids involuntarily batted incessantly, giving the landscape a kaleidoscopic appearance. I wondered if the Indian was a good marksman and whether he would aim at my legs, body or head. I found myself trying to imagine what it felt like to have an arrow stuck in one's body.

Then a new thought, fraught with still greater horror, obtruded itself: would he use a poisoned arrow or one with which he ordinarily killed his game? Thud!—the suspense was ended. The arrow stuck in the bow of the cayuca about three feet in front of me.

A poor marksman, I thought, still I won't tempt him to further efforts. Emiline had already stopped paddling. Before we could overcome the momentum of the cayuca another diabolical twang broke the stillness on the opposite bank of the river. Whiz-z-z—thud! a second arrow buried itself vis-à-vis to the first in the bow of the boat.

I forgot about lunch and started back downstream. When we met Doc and the Quartermaster they were at first somewhat inquisitive. On being shown the arrows still projecting from what had been the front of my cayuca, they ceased inquiries and followed.

Our trip back to the falls was uneventful. We had already decided not to have lunch until we reached Padre Cacique's settlement, which we hoped to do by five o'clock.

At the falls our ill luck still attended us. Doc, the Quartermaster and I undertook to get their cayuca to the foot of the falls first. When we were about halfway down, Emiline set up a series of unearthly yells. We hastened up to see whether the Indians or the anaconda had him. Neither was the case. He had been afraid to stay with the boat alone and had tried to keep us in sight down the trail. In the meantime the boat drifted into the current and he had just detected it.

We arrived in time to see my boat, containing my rifle, camera outfit and the remainder of our scanty provisions, disappear over the brink.

We will omit any reference to our conversation here, except to remark that it bore no resemblance to a love-feast. The four of us went on down the trail to look after the remaining cayuca. When we reached the pool below I doubted my own senses. There was the case of salmon and the case of meat unharmed, where it was originally placed. Resting on the cases was Doc's rifle and hat.

The inference was only too plain. Those Indians had been dogging our trail all the time. They did not mean to harm us if they could avoid it, but they did not mean for us to get far enough inland for our trip to be known as a success.

The cayuca that had gone over the falls by some miracle was absolutely unharmed; in fact, it was improved—the arrows were gone. We fished it out and continued homeward in silence. When we passed the Indian outpost it was as quiet as a tomb, not a sign of life in evidence. We reached Padre Cacique's settlement about six in the afternoon. The Chief Clerk was there with the launch waiting for us. He said he had a hunch we wouldn't be gone

two days, so had come up that afternoon to wait for us.

After much needed food was served all round, we tried to acquaint the Chief Clerk with the details of the trip. This was accomplished amid general confusion and recriminations. It seemed to be a general opinion that I was a poor leader for an exploring party. I admitted this, but pleaded extenuating circumstances. With a Quartermaster that could not take care of three cases of provisions, what could be expected?

The Quartermaster turned on Doc and accused him of having been taken in by a healthy Indian at the outpost, and then drinking all the snake medicine himself until he saw snakes and ran off and lost his rifle and hat. Doc allowed that this might be so, but he did not feel that he was any bigger fool than the rest of us. Emiline alone seemed to retain his self-respect and dignity; he had protested against the trip from the first.

The Chief Clerk interrupted the medley long enough to inquire what of the general object of the expedition? Was there any gold in the country? I looked at Doc; Doc looked at the Quartermaster; the Quartermaster looked away over the hills. Those Indians had kept us so busy one way and another that we hadn't once tried to find out.



THE AIREDALE—"BIGGEST AND BEST OF THE TERRIERS"

BY WILLIAMS HAYNES

IT was in the Merchants' Hotel, Manchester—a famous gathering-place for the dog fanciers of the English Midlands, the most thickly dog populated district in the whole world—that one autumn evening I heard the best definition of an Airedale that I ever knew. A party of us, fresh from some bench show, were seated round a table waiting for dinner, and naturally we were talking dog, telling dog stories, anecdotes, and jokes. I gave the American definition of a dachshund—"half a dog high and a dog and a half long"—and Theodore Marples, editor of *Our Dogs*, turning to a quiet little man, noted as a wild fanatic on the subject of Airedales, asked him his definition of his favorite breed. Quick as a spark he answered, "The biggest and best terrier!"

There are thousands of people, all sorts of people, from bankers to beggars, scattered all over this earth from Dawson City to Cape Town, from Moscow to Manila, who will echo the statement that the Airedale is indeed the biggest and best of all the terriers. Moreover, their votes would not be bribed by mere sentiment, but based upon good, sound reason, for it is certain that he is the biggest, and he is "best" at doing more things than any other dog in the stud book.

An Airedale will drive sheep or cattle; he will help drag a sled; he will tend the baby; he will hunt anything from a bear to a field mouse. He can run like a wolf and will take water like an otter. He does not "butt in" looking for trouble with each dog that he passes on the street, but once he is "in" he will stick, for he is game as a pebble. He is kind, obedient, thoroughly trustworthy as a companion for children, or a watch-

man for your property. He has the disposition of a lamb combined with the courage of a lion. He is certainly the most all-round dog that there is, and, unlike many Jacks-of-all-trades, he is apparently quite able to master all tasks a dog is called upon to perform.

Over and above his talents and his character, the Airedale has a constitution made of steel and stone. He is equally at home in the snow wastes of the Arctic Circle and on the alkali deserts of Arizona. The dry, bracing air of Colorado and the fever-soaked atmosphere of Florida's Everglades both seem to agree with him perfectly.

"The biggest and best terrier" indeed fits him to a T, but it does not convey any very definite idea as to what he should look like. Even his most enthusiastic admirers never claim beauty for the Airedale. He is not pretty, unless we acknowledge that "handsome is that handsome does," and can see the beauty of perfect symmetry under wiry coat and odd coloring.

A good Airedale is about as big as a pointer: somewhere in the neighborhood of forty-five pounds, a little more for a dog and a little less for a bitch. His head should be long; the skull flat and broad; the cheeks smooth; the muzzle strong with tight lips over big, white, even teeth. His eyes should be small, dark, and full of fire, and his ears little, carried high, and shaped like a V, for nothing can so detract from the correct terrier expression as large, light eyes and houndy ears. His front legs ought to be a pair of gun-barrels, straight and strong, and about the same thickness all the way down.

His shoulders are like those of a race-horse, long and sloping, while his pads should be firm and hard, not those loose,

sprawly feet sometimes seen. The only kind of a back for him to have is short, and his ribs must be well sprung. A long-backed dog lacks staying qualities, and a slab-sided one has not the room for lungs. His chest should be deep but narrow, and he should be slightly cut up in the loin—not the wasp-like waist of a greyhound, but no better is a body like a stovepipe. His hindquarters should be strong, with the hocks quite near the ground. The Airedale who does not carry a gay tail is a delight to no eye.

Last, but not least, comes the coat. In color this should be a deep, rich tan on the head, face, chest, legs, and under parts, while over the back is a saddle of black or iron-gray. Personally, I like the black more than the grizzle, for it makes a prettier contrast with the tan, but "a good horse cannot be a bad color." The Airedale's coat is (or rather should be) double. The overcoat is of hair like wire, stiff and hard, about an inch long all over the dog, except on the skull where it is shorter. Under this jacket of wire, there ought to be a vest of soft, woolly hair.

If you can collect in your mind's eye all the above details of description you should see a big, strong, compact, businesslike dog, full of the proverbial up-and-ever-coming spirit that inspires all terriers. His every movement shows strength, yet he always moves in that effort-economizing way which is the very personification of grace. When running he sweeps along with the free-open stride of a galloping thoroughbred, with his head often carried low, but his tail always high.

Very often the man wanting a dog for hunting, for a guard, for a pal, turns up his nose at all the finely enumerated details in which the standard describes the fancier's ideal of Airedale perfection. He is wrong, for, as the advertisements say, "There's a reason." Take the double coat for example. The Airedale was originally bred to be a water dog. The wiry coat sheds water like a duck's back, the under-coat keeps him warm in all weather. With the kind of a jacket for which the standard calls an Airedale can swim the river, scramble out, shake

himself, roll over, and be dry. Moreover, such a coat is a perfect armor against all kinds of thorns, claws, and teeth. The long, clean head with its strong muzzle means a jaw with plenty of room for big, strong teeth and muscles to shut those teeth as quickly and as surely as a spring trap.

Of course, not one Airedale in a thousand comes within seventy-five per cent. of being all that the standard describes. The average, however, is high in America, much higher here than anywhere else in the world, except England, and our best can even hold their own with the champions from the land of the breed's creation. Americans, who have been interested in the dog, have been blessed with enough of this world's goods to buy what they want, and almost without exception they have been inspired with the best fancier ideal, that of breeding their own winners.

Second Only to England

This has given us a breeding stock second only in numbers to that of Great Britain in the hands of men who could and would use the material to the best advantage. Accordingly, the American-bred Airedale is noted the world over as a show dog, and in no other country has the breed's sporting possibilities been so fully tested under all conditions as here in the United States.

By birth and breeding the Airedale is a sporting terrier. A dog bred originally to do the work of a vermin destroyer, he has taken naturally to all kinds of game. In the Rockies, he is used on bear, and he has won a name as a dog of exceptional brains, unfailing courage, and remarkable stamina at work from which no fool, coward, or weakling comes home to supper. On the farms of New England he is cherished as an exterminator of woodchucks, moles, rats, and vermin of this class. He hunts all the way down the scale from the giant "silver tip" to the mouse in the pantry—mountain lions, wolves, panthers, lynx, wild cats, foxes, coons, skunks, rabbits, mink, what not, each and all he hunts with equal gusto and success. Is it any wonder that though the Airedale is only

a little over half a century old his fame has spread from pole to pole?

The Airedale is a dog that no one can know well without becoming his friend, but all his friends do not know him well. For this reason, and because so much depends upon one's first dog, it seems particularly necessary to give some advice to intending Airedale purchasers, whom we may divide into dog owners and kennel owners. By a dog owner I mean one who wants an Airedale or two as a companion, guard, and all-around dog. Kennel owners are those who intend keeping, breeding, and showing or hunting several dogs.

The dog owner does not as a rule think it worth while to post himself on the history and points of the breed. He has heard the praises sung of "the biggest and best terrier" and has decided that he is the dog he wants. If that is all he wants let him get some friend to give him an Airedale puppy or let him buy one as cheaply as he can, but he is going to lose half the pleasure of owning a good dog of a good breed.

Merrinac, the best-known *maitre d'armes* in France, once said to a party of American fencers that it was the romance of the sword that made fencing so fascinating to its devotees, and there is romance in the history of the Airedale that weaves its charm around an Airedale owner. Whatever we know well is interesting and wonderful, and a knowledge of the Airedale's past and his points, which is an absolute necessity to the kennel owner, adds one hundred per cent. to the dog owner's pleasure.

The wise dog owner then will learn all he can about his breed; "book l'arnin'" is good, but better still are talks with all sorts and conditions of Airedale owners and a visit to an Airedale kennel or the ringside at a dog show when the breed is being judged. No men ride their hobbies harder than dog fanciers, and all will talk and from all can something be learned.

When one has learned something about Airedales let him then buy his dog. It is best to buy a dog about six months old—old enough to be over puppy ills and not too old to teach new tricks. A puppy of that age, over dis-

temper and house broken, is as satisfactory as it is possible for a pup to be. Bringing up a terrier puppy is hard on one's shoes, the ladies' hats, and everyone's disposition, but it is much more satisfactory to train him yourself in the ways you would have him go.

In picking out a puppy select the bright little chap to whom you are naturally attracted—I am advising the "dog owner" who knows the breed well enough not to be interested in any litter not of orthodox breeding. Only in case of doubt need you pay attention to show points. If it comes to a question of that, pick the dark eye, small ear, long head, short back, straight legs. Do not worry about size or color or coat nor must a novice expect to be able to "pick the winner" of a litter. Go to a reputable breeder and pay as much as you can afford. You can take his advice, for all dog breeders are not crooks and grafters, but like any other kind of a business transaction, knowledge is very valuable to the purchaser.

May I plead the case of the bitch as a companion? Nine out of ten want a dog, but a bitch has many advantages. She is usually more clever, a great deal more affectionate and faithful, much less given to roaming from home, and should one ever want to raise more puppies she may prove a valuable investment.

Studying the Breed

The kennel owner, turning now to him, will, I take it for granted, read all he can lay his hands on that treats of the Airedale, go to shows, visit kennels, and talk, think, and dream Airedale. If he is to have a small kennel I advise his buying one or two young bitches. Puppies are a chance and old bitches, however famous, are poor breeding stock. Buy young winning bitches, proved mothers and of desirable blood lines, and you will have the best possible start along the road of kennel success. It is as rocky a thoroughfare as the proverbial one to Dublin, full of all sorts of disappointments and maybe even losses, but its pleasures and its gains are sure to come to the man who follows it in the right spirit.

The large kennel owner is either going into it for pleasure, when he will have a check-book to help him, or for a business. In the former case he will probably leave much on the shoulders of his kennel manager, and I am writing on Airedales, not the servant problem. If he is going to make a business of raising Airedales, that is his business not the author's.

To all Airedale buyers let me again say that it pays to know all you can about the breed and to buy the best you can afford. The "biggest and best terrier" has been tried by so many different people in all parts of the world and has won such unanimous praise that his admirers can recommend him to anyone, anywhere, for anything.

The Airedale is a product of the middle of the nineteenth century, and was manufactured in Yorkshire. The streams that tumbled down the deep vales of that Midland county are the homes of hundreds of crafty, hard-bitten otters: there are thieving foxes and very game, but very rascally, badgers in snug dens in the hills: many a swift English hare lives in the broad game preserves. The hardy Yorkshireman of 1850—his sons and grandsons to-day are real "chips of the old block"—the Yorkshireman loved nothing so much as a hunt after the vermin, with possibly a rat-killing contest with "a couple o' bob" at stake of a Saturday night, and, sometimes, on moonless nights, when game-keepers are asleep, a little trip after the filling for a rabbit pie. Now, you cannot do these things without a dog that is brainy, game, and obedient, and as much at home in water as on dry land; so they just naturally set to work to make themselves such a dog.

All this we know positively, but when it comes to saying anything definite about how they made that dog, which we now call the Airedale, you begin to deal in traditions as conflicting as theories on the Martian canals and speculations as vague as old wives' tales. Taking all the yarns and guesses and boiling them down to an average, we find that the Airedale, so most people think, was originally a cross between a tan-grizzle terrier, now extinct or absorbed in other

breeds, but once common in the Midlands, and the otterhound, a big wire-coated water dog of the bloodhound type, that comes in all colors of Joseph's famous coat, but mainly white with black and tannish markings. To this cross were added dashes of bull terrier, which breed was, at that time, just coming to the fore with its deserved reputation for grit, and Bedlington terrier, a light-weight, top-knotted dog from the North of England.

A Little of Everything

Probably there were sprinkles of the blood of the collie and of all terriers found at that time between the Midlands and the Scottish Borderland. All these (fox, Manchester, Welsh, Old English, and Dandy Dinmont) were then more or less indefinite as to type and uncertain as to breeding, which helps materially in making confusion worse confounded. Just how and why this strange indefinite mixture should have resulted in the Airedale no one can say. The otterhound donated the size and the love of the water, and all the terrier blood made him a terrier in spite of his size. From the very beginning the breed had the advantage of having an object. The Yorkshireman wanted a big, strong, dead game, water-loving terrier. That furnished a standard to breed to, and they got what they wanted.

When the fame of this dog first spread from the valleys of his birthplace, he was pretty well established as to type, and once taken up by the dog-showing fancy and a standard drawn up, the type was firmly fixed. Since his first introduction to the world he has changed, becoming somewhat larger. The seers and wise men of English dogdom raised a great hullabaloo when this giant among terriers appeared, saying that no dog over twenty pounds could be a terrier, because a terrier must go to earth.

The dog, however, was mainly terrier in blood and so very certainly terrier in characteristics that he was classed with the family. Maybe it is out of respect to the authorities of the early days of the dog fancy that we have gradually dropped the terrier in his name, and,

though it is a part of his official title, still the dog is universally spoken of as the Airedale.

This, however, was not his original name, for in early days he was called the "waterside terrier" and his official debut at the English dog shows was in classes for "broken haired working terriers." Both titles were felt to be too indefinite, and the sporting authority, "Stonehenge," suggested "Bingley terrier" from the town in the heart of the district where the breed originated. Local jealousies prevented any one town giving its name to the breed, and there was quite a war waged till some unrecorded genius suggested that as the birthplace of the breed had been in the valleys of the Aire River and its little tributaries, Airedale was the best name. So Airedale he became, having an official christening at the Otley show in the late seventies.

Changes In Type

Besides adding some ten pounds to his weight and getting a distinctive and pleasing name, the Airedale has changed in other ways since he took his light from under the bushel-basket. His head has lengthened, following the tendency of all terrier breeds. His shoulders, legs, and feet are all worlds better now than they were years ago, but coats have suffered. The wire jacket has improved, but the woolly under-vest has been sacrificed, though now more and more attention is being paid to this by breeders and judges.

The honor of having brought the first Airedale to America is generally ascribed to Mr. C. H. Mason, who is better known to this generation of fanciers as a cocker spaniel owner and editor of *Man's Best Friend*. He was originally a Yorkshireman, who had known and loved the breed since his youth. He imported Bruce, a fairish dog, blind in one eye but useful in stud where he sired Ch. Brush. Bruce is merely a sentiment with Americans, for all he has left is a reputation for bad temper and a yarn about having been sold for a few dollars at a horse auction in New York in 1885.

The breed first "took on" in New York, but Philadelphia has long been its stronghold. The Quaker City, boasting such fanciers as Clement Newbold, William Barclay, Russel H. Johnson, W. H. Whittam, Daniel Buckley, and Dr. Henry Jarrett, has away and beyond passed other cities in the number and quality of Airedales. In early days the New York fancy was represented by Mr. J. O. Lorillard, the purchaser of Clonmel Marvel, whose importation boomed the breed's stock in this country; Messrs. de Witt Cochrane, Foxhall Keene, and C. O'Donnel, all of whom have not been so active lately. Later Theodore Offerman, James H. Brookfield, James Watson, and John Grough entered the game, and they figure to-day as owners of winners.

This is a short sketch of how the breed originated and how they came to America, but real "history is men, not events," or rather dogs not events. It is interesting, but more important is knowledge of the dogs of the past. In limited space one can only say a word or two about the most famous of the breed's celebrities, so I must be pardoned if some reader is disappointed in not finding mention of some dog in which he is particularly interested. Almost each year has seen its good dogs, but we can only touch those which time has declared to be truly great.

The sigh for "the good old days" is common in all things and we often hear it from dog fanciers. It is good food for talk, but that is all, for the old timers of any breed could not win in the ring against the cracks of to-day. Among the very early Airedale winners were: Tanner, Young Tanner, Rustic Twig, Rustic Kitty, Rustic Lad, Newbold, Fritz, Vixen and Venom, none of whom would be one, two, three in a good show today. Clip and Ch. Cholmondeley Briar were the two first really good dogs. Clip was a sound, honest dog who showed real modern type and gave black, real terrier eyes to his pups, while Briar was the first real show hero, having gone undefeated until he met Clonmel Marvel.

Clonmel Marvel, one of the really great dogs of the world, was bred by a

novice, a Mr. T. C. Brown, who mated his Cholmondeley Mona to Clipper, a good dog, but no wonder. There were nine in the litter, and Mr. Brown showed Marvel, whom he called Warfield Victor, in a £3 selling class where he was placed second, being sadly out of condition. "Jack" Holgate saw the rough diamond, bought it, and resold it to Messrs. Mills and Buckley, the famous Clonmel firm. Marvel beat all of his time—dogs and bitches—and won eighteen championships. Eventually he came to America, along with Ch. Clonmel Sensation and Clonmel Veracity. He was by far the best Airedale seen up to his time, a dog hard to fault even in "the light of modern criticism." He proved as wonderful a sire as he was a show crack, and much of real terrier style to be found in the breed today is due to him.

A contemporary of Marvel's was Ch. Dumbarton Lass, who also came to this side of the Atlantic to the kennels of Mr. Joseph Laurin, in Montreal. She was bred by Capt. Baird Smith, who benched her at Woolwich in poor condition. Mr. A. L. Jennings, whose kennels were then paramount, bought her and showed her for three years when bought by the Canadian fancier. She proved a gold mine as a brood bitch and was personally hard to fault—barring her coat.

But the most wonderful brood bitch of the breed, one whose name should be written in gold in the Airedale Hall of Fame, was not a great show winner. She was Bath Lady. Her first big winning puppy was Briarwood, who came out in London in 1896. Briarwood was by Hyman Briar, by Willow Nut, and, like all Bath Lady stock, proved his value in the breeding kennels. His most famous get was the beautiful bitch, Ch. Broadland's Bashful. We can only mention two others of Bath Lady's offspring, but those fanciers who have dogs in whose pedigree she appears can congratulate themselves. To Ch. Clonmel Marvel she produced Clonmel Kitty, a really good one all over, and to Master Briar she had Walton Victory, even better—except in skull—than Kitty.

During the nineties the Tone kennels,

with Ch. Tone Jerry, whose forte was his wonderful coat and color, and Ch. Tone Crack, excelling in bone, coat, and body, but broad across the skull, had a big say in prize lists. In 1896 Studholme Sherry came out and was hailed as a flyer, but he did not last, though in his day he was a beautiful terrier.

Almost An Ideal

Ch. Clonmel Monarch, who has done so much for Philadelphia's Airedale supremacy as a sire and as a show dog, came as near the ideal Airedale as we find, made his debut about this time at Leicester and ran second to Ch. Rock Salt. Monarch was undeveloped, but six months later at Alexandra Palace he came to his own and after that his show record in England was an unbroken string of firsts. He was a grand terrier—almost faultless—his coat waved a bit and his critics used to say he was "so fine he was bitchy." Just to mention some of his pups shows what he was at stud: Ch. Broadlands Royal Descendant, Ch. Tone Regent, Ch. Clonmel Bed Rock, Claverhouse Enchantress, Clonmel Coronation, and Strathallan Solace. Ch. Rock Salt, mentioned as the conqueror of Monarch, was a good one whom Americans know best through Ch. The New King, his son, who has done so well for the New England fancier, Mr. Arthur Merritt.

Ch. Tone Masterpiece—known here as Ch. York Masterpiece, for Mr. Offerman gave him his own kennel's prefix—was a dog of ups and downs; but he was an honest champion, who just missed being great. His son (bred in England), Floriform, was another good dog who did things in New York in the early years of the new century, where he was owned by Mr. Offerman and later by Mr. Brookfield. Floriform was the sire of Ch. Engaflora, the first great American bred.

In 1902 two good but unfortunate sons of Clonmel Monarch came out, Ch. Lagrams Prince—a real flyer—and Bandaloro, who never got his deserts at the shows. Rheumatism spoiled Prince's shoulders for the show ring and his ill-starred half-brother died of wasp stings.

A contemporary of these dogs was Ch. Wombwell Rattler, a rattling good one with a softish coat who sired Mr. Offerman's well-known crack Ch. York the Conqueror.

In the same year (1902) Ch. Delph Girl, wonderful color and coat, good head and expression, but too fine, and Ch. Dumbarton Sceptre, the best bitch of the time, both made their debut and eventually came to the United States. The dam of Sceptre, Claverhouse Enchantress (by Clonmel Monarch ex Clonmel Winifreda), needs special mention. She won a number of prizes, but soon passed into the hands of a novice, Mr. Cuthell, and as a mother and grandmother of champions made a place for herself second only to Bath Lady. Dumbarton Sceptre and Claverhouse Sorcerer—the former a real flyer, the other a dog above the average—were in her first litter. Her second, by Ch. Master Briar, resulted in the great Ch. Mistress Royal, probably the best show bitch produced. Enchantress was next bred to her own son Solace, mentioned above, but unfortunately died of poison before whelping.

Ch. Clonmel Bed Rock, whom Mr. Foxhall Keene later imported, came out about this time. He was a good, sound terrier, full of fire, with wonderful legs and feet, and won lots of honor here and in England. Ch. Broadland's Royal Descendant was a rival of Bed Rock's and a very classy dog with exceptional

coat, real terrier fire, a good head, but not very beautiful ears.

After these dogs came Ch. Master Royal, which brings us down to the dogs of to-day—if not the present generation—and it is out of place to say aught of dogs which one can see and judge in flesh and blood.

The show cracks have so very often proved so valuable in the breeding kennels that the two terms great sire and show crack may seem synonyms. They are not. Nevertheless there is a close chain that binds the whole of a breed of dogs to the show ring, for the show ring winners are the dogs most often sought for breeding purposes and so the styles of the bench authorities are forcibly, if unwittingly, thrust on the race.

The Airedale, however, has always been known and appreciated as a sporting terrier. His owners have fortunately never lost sight of the reason he was manufactured, and they remember that today he is intended to be a rough-and-ready dog, willing and able to do all terrier work just a little better than the other members of the family, and because of his greater weight enabled to do things his smaller cousins could not even attempt. His great usefulness has kept him from being wholly at the mercy of the faddists of the dog shows, who have given him all the great advantage of their skill in scientific breeding and all the advertising of public exhibition without turning him into a freak.



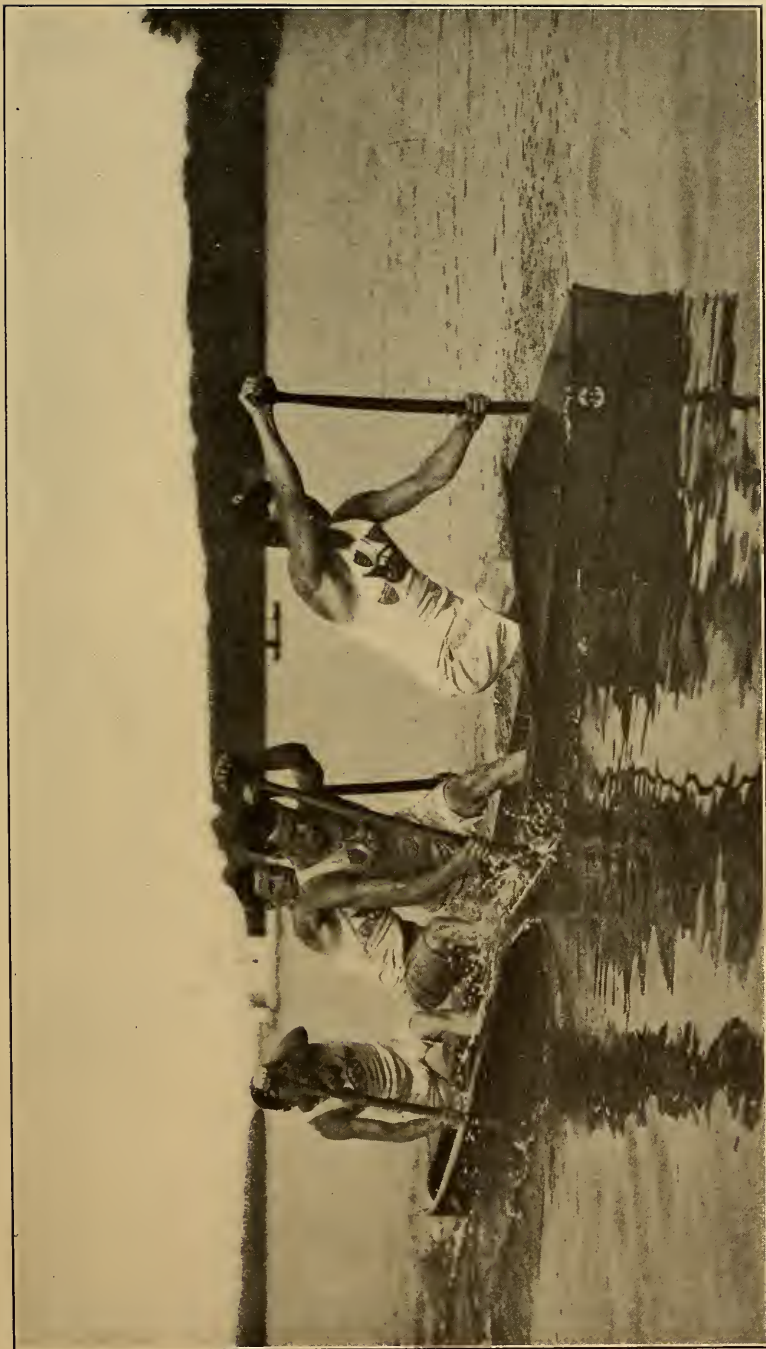


Photo by Jessie Tarbox Beals

We've raced the rapid; we're far ahead!
The river slips through its silent bed.
Sway, sway,
As the bubbles spray
And fall in tinkling tunes away.

E. Pauline Johnson

MORE POWER FOR THE MOTOR BOAT

BY LAWRENCE LARUE

Illustrated with Photographs

LET the motor boatman not be deceived for a moment into thinking that we are about to divulge some secret formula whereby he may increase the power developed by his engine and thereby surprise his friends with two or three miles an hour added to the speed of his craft. Such formulas do not exist, and while some speed maniacs may recommend "dope" in the fuel tank, the addition of any stimulant is almost certain eventually to result in a weakened motor. The power developed by a motor that is in perfect condition cannot be increased, and it is wasted time to labor with an engine that is doing its best. The gasoline motor is not like the steam engine, the power of which can be increased by added steam pressure, and its limitations are sharply defined by its bore, stroke, compression and efficiency of its joints, packing, air passages and bearings.

This would seem to indicate that a new motor offers no opportunity for improvement except during the first few weeks of running required to "wear it in" and increase the efficiency of the moving parts and that no attention will be required by it until the time for the first spring overhauling. This should be true, and every man who has spent time, thought and money on the selection and purchase of a new motor has the right to expect that all adjustments have been made and all faults remedied at the factory and that his acquisition will develop its maximum power and run at its highest efficiency from the outset.

No factory is absolutely infallible,

however, and even though the motor may have been in perfect condition when it was shipped, the knocks and jars of transportation, loading and unloading may loosen some of the parts or shake them out of adjustment. Added to this, the amateur may make some mistakes at the outset when trying to start his new motor, and even though the results of these mistakes may not be apparent for some time, they may contribute to a decided decrease in the power of the machine. Then, too, a poor quality of cylinder oil may have been used which has become gummed during the long interval between the final factory test of the motor and its trial by its new owner; and dozens of other troubles and accidents may contribute to the poor performance of a power plant from which great feats have been expected—and can be obtained when the seat of the disturbance is reached and matters remedied.

Secure in the belief that his motor is up to specifications because "it runs," many an owner may be perfectly satisfied with the performance of his new boat, when in reality he may not be getting two-thirds of the power and efficiency to which he is entitled. If his craft is guaranteed to maintain a certain speed and he finally discovers that she falls below this mark, the disgusted owner may be tempted to return the entire outfit to the factory—for the contrast with his feelings when he was under the impression that he was "getting his money's worth" will give him the sensation that he has been duped. But to ship a boat or a motor back to the factory entails correspondence, waiting and "red tape" galore and may result in

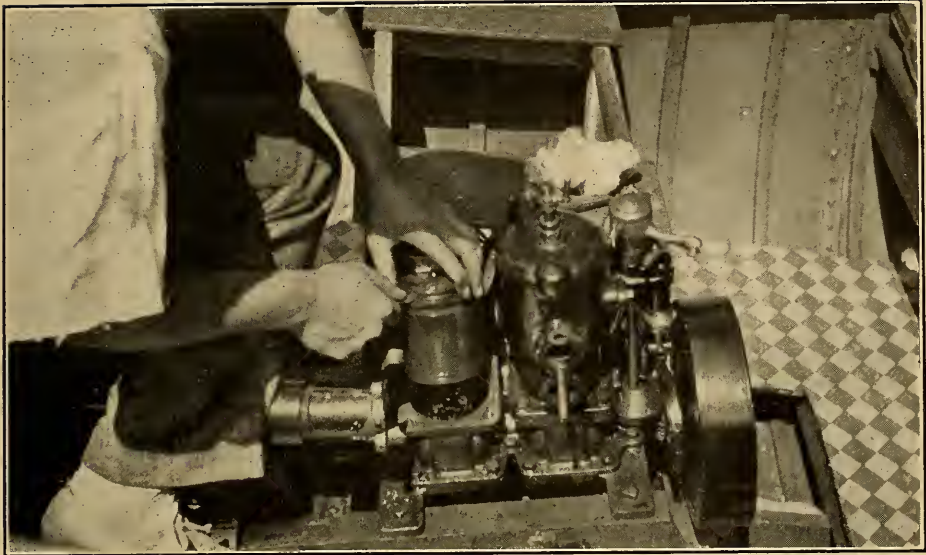


FIG. 1. A MOTOR OF THE SOLID HEAD CYLINDER TYPE, WITH CYLINDER REMOVED IN ORDER TO REACH THE RINGS

a boatless owner during the remainder of the season. The trouble may be due to his own carelessness as much as to any neglect on the part of the manufacturer, and it is to the owner's interest at least to determine if he cannot remedy matters for himself.

Assuming that the motor runs, let us suppose that it does not develop the power for which it was designed. With good gasoline and a "fat" spark, this loss of power nine times out of ten will be due to faulty compression. Power cannot be obtained without sufficient compression in the cylinder, for it is upon this that the force of the explosion depends and a leak allows this useful energy to escape and be wasted absolutely. The compression, of course, can be felt by the resistance offered to turning the flywheel when all valves and cocks in the cylinder are closed. If there is more than a single cylinder, the one offering the least resistance is certain to be that in which the trouble will be found, for under normal conditions the compression should be the same in all on the up-stroke of the piston.

If the motor has but one cylinder, its compression-retaining ability may be determined by turning the flywheel until

the point of greatest resistance is reached and then holding it there until it can be moved past the "dead center" easily. If the motor possesses good compression an appreciable time will elapse before the resistance is reduced sufficiently to enable the flywheel to be turned over, but it must be remembered that even in the best of engines the compression will escape eventually. But if the flywheel may be turned over slowly without meeting any vigorous resistance, it may safely be assumed that good compression is a negligible quantity in this case.

The average compression in an ordinary gasoline engine is about sixty pounds per square inch, which would amount, in a four-inch cylinder, to a total resistance of about 750 pounds. But if the flywheel by which the piston is moved is two feet in diameter and if the crank is two inches long (assuming a four-inch stroke), the actual force necessary to be applied at the rim of the flywheel would be but 125 pounds; and if momentum has been attained by giving the flywheel a swing, this resistance can be overcome comparatively easily and the force of compression will not be found to be as formidable as the figures would have it appear. But by keeping

the comparative values of these figures in mind and remembering that even the strongest compression will gradually escape past the piston rings if the piston is held near the top of its stroke, even the rankest amateur can learn to distinguish between good and poor compression.

It is to the piston rings that most of the loss of compression can be laid. These rings are supposed to form a tight joint between the cylinder walls and piston, for the latter, having to move freely and being subject to variable expansion due to the heat, cannot be machined to a perfect fit. The rings, on the other hand, being springy, can adapt themselves to any temperature that will be found within the cylinder walls—provided they receive sufficient lubrication.

The majority of motors are tested after manufacture and are shipped to the purchaser with the piston and rings thoroughly oiled and a certain amount of lubricant in the base. In the case of a new machine, however, the moving parts of which are liable to be "stiff" at first, it is better to be on the safe side and introduce plenty of fresh oil into the crank case and to the piston and rings before the motor is started.

But in spite of these precautions, one of the rings may have become "stuck" in its groove so that it no longer automatically fits the curvature of the cylinder walls and consequently the compression and the exhaust gases of the explosion are allowed to escape past it. There will probably be three or four rings on each piston and the motor may run with the remainder of these in working condition, but the best results cannot be obtained unless all are loose in their grooves. Consequently it is for a stuck ring that the owner is to search first when he finds that one cylinder fails to hold its compression as well as its companions.

The only certain way of locating and remedying the trouble is to "get at" the rings. In the case of a motor having a solid cylinder head, this may be done by removing the entire cylinder casting from the base of the machine, thus leaving the piston and rings exposed. If

the motor has a removable head the connecting rod may be loosened from the crankshaft by reaching through the hand-holes generally provided in the crank case and unscrewing the nuts that hold the two halves of the bearing in place. After this has been done the piston may be pulled out through the top of the cylinder and the rings will be ready for inspection.

A Place for Careful Work.

Each ring should be loose and should not bind in any portion of its groove, whether it be pushed in or out or be turned either way as far as the pin forming the stop at the notches in the end will allow. If it is found that a ring is stuck in its groove it is probably due to a deposit of carbon and gummed oil rather than to any mechanical defect. Great care should be taken in loosening the ring and the gummy substance should be dissolved by the application of kerosene or gasoline at every accessible portion.

Then a small screwdriver may be placed under one of the free portions between the ring and its groove and gradually worked around until the remainder is loosened (Fig 1); but the ring should never be bent out from its end, as this would be almost certain to snap it in two. A broken ring is not only useless, but will do actual harm if the motor is allowed to run under these conditions, and as it is not a particularly easy matter to fit a new one in place, rings should be removed only with the greatest care.

Even though the sticking is caused only by a small amount of gummed oil that can easily be dissolved, the ring should be removed in order that it and its groove may be scraped out and cleaned thoroughly. The ring should be thoroughly loosened before any attempt is made to remove it and then it should be worked out gradually in sections, wedging each part out with a stiff wire to prevent its return to the groove. When the ring gets entirely out of its groove it may be slid along the outside of the piston and off at the end, but if more than one ring is removed at a

time care should be taken to distinguish them, as each should be returned to its own groove. If the motor is small and the ring is not too stiff, the latter may sometimes be removed by pulling a piece of stovepipe wire between the ring and piston and following this action with the fingers of one hand to push the ring up on the piston as it leaves its groove.

It may be that the ring has been hur-

need grinding may be determined. If it is found that the ring is a comparatively tight fit in its groove so that absolute freedom of motion cannot take place, it may easily be ground down with a piece of fine emery paper. This emery paper, or cloth, should be laid on a flat surface and the ring placed upon it (Fig. 3). Then, by pressing firmly upon the ring with the fingers and giving it a rotary

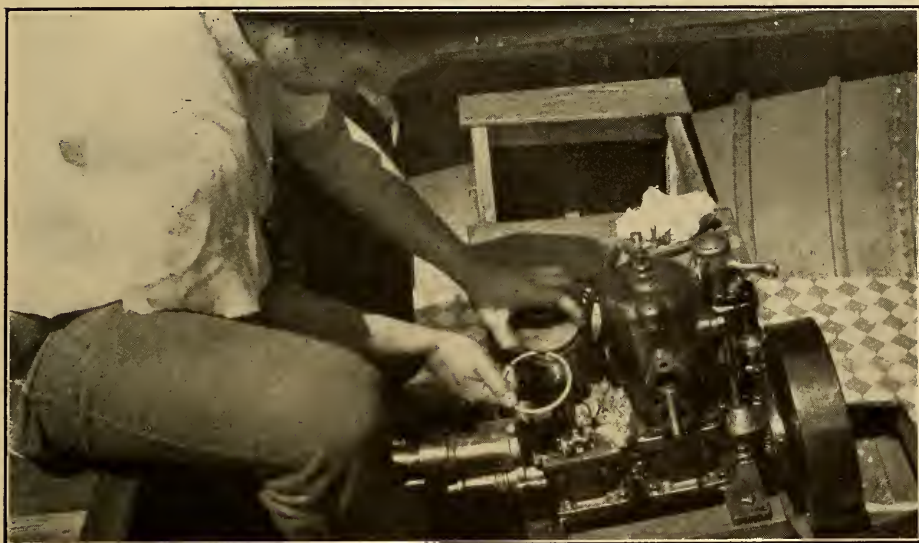


FIG. 2. TRYING THE RING IN ITS GROOVE TO INSURE A PERFECT FIT

riedly fitted at the factory and put in place without having been properly finished. This will cause it to stick in its groove, even though the oil has not gummed, and consequently it should be tested for a good fit before being returned to its place. After the carbon and gummed oil have been removed the ring may be tested for size without returning it to its groove by rolling it around in the groove so that each part will come in contact with the portion of the groove in which it ordinarily rests. In order to have these portions "register" the ring should be held upside down and started with one end placed against the pin forming the stop in the groove (Fig. 2).

Whenever there is the slightest binding between the sides of the ring and the groove such portions should be marked in order that the parts that

sweep with the hand over the rough surface of the emery cloth, the side that is lying down will be ground off slightly.

If the ring seems to be too thick throughout its entire length the pressure of all of the fingers should be evenly distributed, but otherwise only those portions at which the binding takes place should receive the greatest weight. By alternately testing the ring in the groove in the manner already mentioned and grinding the thick portions as described above, a perfect fitting ring and one that should do its share in holding compression for a long time to come may be obtained.

If the entire cylinder has been removed to reach the piston a little care will need to be exercised when assembling the parts. After the rings are in place the piston should be moved to the bottom of its stroke and held in a ver-

tical position with the engine bed while the cylinder is slid over it. The lower edge of the cylinder walls will probably be beveled to allow it to slide easily over the rings as they project from their grooves, but the cylinder must be set on very slowly and not forced, for any undue pressure will mar the edges of the rings and result in scored walls and eventual leakage of compression from the cylinder.

Care should also be taken to keep the rings in their proper position with their notched ends, or joints, surrounding the small pin provided in each groove. If the ends of any ring move around beyond this pin forming a stop the joints of all rings may eventually fall in one straight line, in which case an easy escape for the compression would be furnished. The joints of adjoining rings should always be placed on opposite sides of the piston.

Getting the Piston Back in Place.

If the cylinder has a removable head and the piston has been withdrawn in order to repair the rings, its return to its place may be greatly facilitated by a device, the use of which is illustrated in Fig. 4. The piston will set easily into the cylinder until the first ring is reached, after which it will be evident that each ring must be compressed tightly in order to fit within the cylinder walls. The device in question consists merely of a piece of annealed stovepipe wire—which is flexible and yet strong—about a foot longer than the diameter of the piston. Each end of this should be twisted around the middle of a wooden handle, which may be cut from a broomstick.

By crossing the wire near the handles a loop will be formed which should be placed around the ring that it is desired to compress after the piston has been set in position. When this is done a steady pull on the handles will furnish a leverage that will easily serve to compress the ring so that the piston will drop into place until stopped by the next ring. By dealing with all rings in the same manner the piston of even a large motor may be set in place in its cylinder in

a surprisingly short time and with but very little trouble.

If all of the rings have been examined and it is found that the cause of the loss of compression does not lie with them, it is probable that some of the packing has been loosened or blown out, thus furnishing a vent for the escape of some of the gases. Of course, it is possible that the spark plug is not a good fit or that the relief or priming cock valve has loosened, but the escape of compression and exhaust gases from such an outlet would be so apparent when the motor is running that even the tyro would not look farther for the leak and would tighten these parts before examining the rings.

Escape of compression through the packing of the cylinder can only occur in those motors having detachable cylinder heads. But such trouble is easily remedied and should not be considered as an offset to the many advantages possessed by this type of motor. When it is found that there is a leak in the cylinder packing the head should be unbolted and both surfaces thoroughly cleaned. The old packing that cannot be picked or torn off should be first soaked with kerosene or gasoline and then scraped with a putty knife or other flat, broad-bladed instrument, until the top of the cylinder and the bottom of the cylinder head are perfectly smooth.

Although the packing of the cylinder head is not directly exposed to the heat of the exhaust gases, the walls and surfaces between which it rests will become rather hot through conduction. But this "gasket" also serves as a packing for the water jacket between the cylinder and its head and consequently the joint must be waterproof as well as able to withstand an appreciable amount of heat. Asbestos and rubber packings are made especially for this purpose and either will give satisfactory service when cut to the proper size and shape and held securely in place by the bolts that pass through the cylinder head.

One of the most efficient packings, however, and one that is the easiest for the amateur to apply, can be made from heavy, tough brown paper or drawing paper. Such a gasket will prove to be



FIG 3. USING EMERY CLOTH TO SMOOTH DOWN A RING THAT BINDS IN ITS GROOVE

gas and watertight and will not be affected by the heat of the iron surfaces of the cylinder and its head between which it is placed.

The best manner in which to apply such a gasket is as a sort of shellac-and-paper sandwich of the "double-deck" variety, composed of several layers of each ingredient. In order to cut each piece to exactly the proper shape and size the paper should be laid over the top of the cylinder on the surface on which the gasket is to be placed. By holding the piece firmly in place and tapping the edges and outlines of the iron surface through the paper with the round or "peening" end of a machinist's hammer, the paper will be cut to the proper shape. The edges of all bolt holes and water jacket openings in the surface should also be tapped in this manner, as shown in Fig. 5, but care should be taken not to strike so heavily that the threads of the bolt holes will be injured. The tapping should be sufficient to break the paper and care should be taken to prevent the gasket from moving before the entire outline is finished.

Three or four gaskets should be made in this manner and then a coat of shellac should be applied to the surface of

the top of the cylinder. On this should be laid a gasket in exactly the same position as that in which it was cut so that all outlines, holes and openings will "register" and then the gasket itself should be shellacked. This should be continued until all gaskets are in place, each being separated from the others and from the iron surfaces of the cylinder and head by a layer of shellac.

The gaskets should be laid in place quickly before the shellac will have an opportunity to dry. After this "sandwich" has been "built up" and the last gasket has been treated to its coat of shellac, the cylinder head should be bolted in place as tightly as possible. The motor should not be run for a few minutes until after the shellac has had an opportunity to "set."

The above treatment is almost certain to cure any case of leakage of compression from the cylinder proper and the renewal of this packing may cause an increase of from ten to twenty-five per cent in the power developed by the motor. But there is another source of trouble which is oftentimes overlooked in the search for the missing horsepower. This is the crank case compression, or the compression formed in the base by

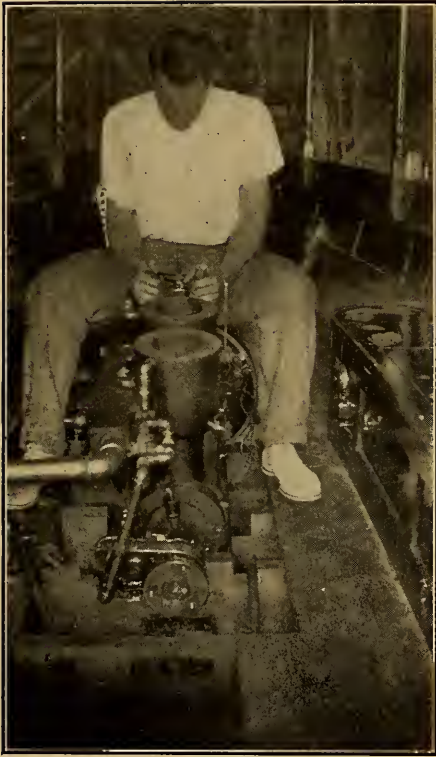


FIG. 4. A GOOD WAY TO COMPRESS THE RINGS SO THAT THE PISTON MAY BE SET DOWN IN THE CYLINDER

the *down*-stroke of the piston and used to force the charge upward into the cylinder. This is the principle used on what is known as the "three-port" type of two-cycle motor, and while this compression does not amount to more than from ten to fifteen pounds per square inch, the escape of even a small part of it is vital, for it is the actual explosive mixture in its most concentrated form that is lost.

Practically everyone who has had experience with this type of motor is familiar with the "crank case explosion" that occurs whenever too weak a mixture is admitted to the engine. As a rule, such crank case explosions are more startling than harmful, but occasionally the force of the pre-ignited gases will blow out a part of the packing between the crank case and removable base plate with which nearly all motors are provided in order to render the connecting

rod bearing accessible. If it is found that this gasket has been so damaged a new one may be cut out in the same manner as that described for the cylinder head packing, but it is better to use only one layer of heavy paper rather than several gaskets of a lighter weight.

As it is frequently necessary to reach the interior of the crank case by removing the base plate, the gaskets for this portion should not be shellacked. This gasket, however, is not subjected to high pressures and does not need to be absolutely watertight and consequently the application of oil or grease on both sides of the packing will serve the purpose almost as well as will shellac and at the same time will prevent the gasket from sticking to the base plate or crank case when the former is removed.

As a further precaution against the escape of crank case compression, none of the plugs, oilers and pipes leading to the base of the motor should be allowed to jar loose. It may sometimes happen that the valve on an oil cup will become stuck and allow the compression to force its way back against the lubricant, but such a condition will generally be indicated by a very apparent spluttering and bubbling.

It is not only the fact that a leak in the crank case allows a part of the incoming charge to escape that reduces the power of the motor, but the dilution of the remaining mixture, as well, will cause irregular running of the engine. On the up or compression stroke of the motor, a partial vacuum is formed in the crank case. This vacuum should be filled only by the incoming gas, which has already been properly mixed at the carburetor, but any leak in the crank case will furnish an entrance through which air will find its way and thus dilute the explosive charge.

With the rings, gaskets, oil cups, and oil-hole plugs in good condition, there is only one route by which air can be taken into the crank case, other than by way of the carburetor. This is through the crank shaft bearings, for if these have become loosened or worn, an easy passage is formed for the escape of the gas and the admission of the outside air. The crank shaft bearings, of

course, cannot be set too tight, or they will bind and soon become worn, but on the other hand, there should be no perceptible "play" between the crank shaft and its bearing surfaces.

Under proper conditions, the film of oil that should be kept on the bearings from the lubricator or from the crank case will serve to make an air-tight joint between the shaft and the surfaces on which it turns. But let even one bearing run for only a short time without oil, and the softer bronze or babbitt metal will become worn, "chewed," or "burned out" in an astonishingly short space of time; and even though the normal supply of oil be resumed, a new bearing will almost certainly be required. This furnishes, to the amateur, one of the most puzzling causes of loss of power in a motor, and while the installation of a new bearing will render the engine as sturdy and vigorous as ever, the inaccessibility of this part of the motor makes the bearing the last place to which the motor boatman will look for power leakage. It is only when he has exhausted every other resource and has proved to his own satisfaction that the rings, packing, and other joints are tight that the novice will realize the important part that properly set crank shaft bearings play in the behavior and general good condition of his two-cycle, three-port motor.

Many an owner has claimed that he has obtained greatly increased power from his motor by a change in carburetors, but, as a rule, this is probably due as much to imagination as to any material advantage gained. When a good motor leaves the factory, it is supposed to be provided with a carburetor of the proper size and type, and, as a rule, the less "monkeying" with this part of the engine, the better. But the carburetor equipment is designed for a certain normal speed of the motor, and it may be that, owing to a slight change in the pitch or size of the propeller, the motor will "turn up" faster than was the case in the factory trials. In this event, the carburetor with which the motor was originally provided may not have a sufficiently large air opening to supply all of the cylinders with

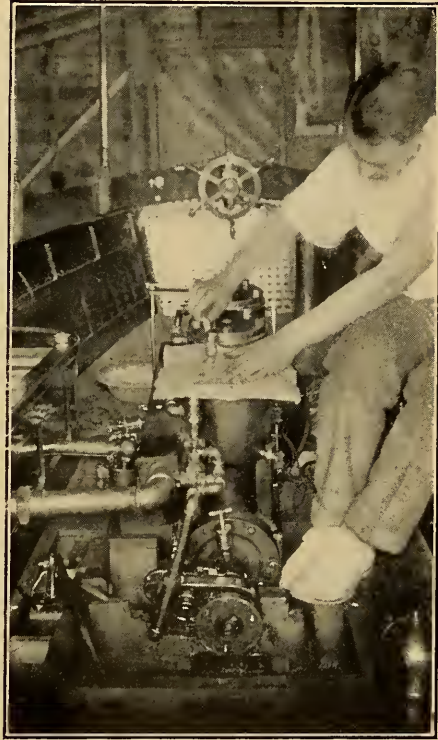


FIG. 5. CUTTING OUT GASKETS TO PROPER SIZE AND SHAPE BY TAPPING WITH MACHINIST'S HAMMER

enough mixture at this increased speed, and in consequence the engine may "starve."

The remedy, of course, lies in the change to a larger carburetor, but this should not be installed until it is made comparatively certain that the motor really is "starving." A motor suffering from this ailment will run well when throttled, but on the high speeds will miss and backfire and seem to suffer from lack of fuel in somewhat the same manner as has doubtless been noticed when the gasoline supply is about to become exhausted.

These few hints on the common causes of the loss of power in a new motor should not make owners dissatisfied with their purchases and wonder if they are "getting their money's worth," for "leave well enough alone" is a motto that could be applied to good advantage to many a power boatman who sets out to discover the source of a

supposed loss of power, only to find that his craft was doing its best in the first place and that his hoped-for improvements turn out to be serious handicaps. There are cases, however, in which it is very evident that the best results are

not being obtained, and, in such instances, a common-sense investigation of the possible reasons for the trouble may not only save the owner time and expense, but will give him the pleasure of "knowing his motor" better, as well.



PAUL RAINEY, SPORTSMAN

BY GEORGE FORTISS

WHILE the story of how Paul J. Rainey, big game hunter, naturalist, millionaire, and sportsman—extraordinary, lassoed polar bears in the Arctic has often been told, it is doubtful if the account of how he and his party were themselves lassoed is as widely known. The fact that it was a few feet of the net of a Labrador fisherman that turned the trick and, as Capt. Bob Bartlett put it, "ketches the ketcher," but lends spice to the tale.

Rainey's ship, the *Beothic*, was anchored off the ragged Labrador coast, near Nigger Bay. The young millionaire, who spends most of his time collecting specimens of big game, dead and alive, for zoological parks and his own collection, had gone out after deer along-shore in a twenty-five foot motorboat. With him were Captain Bartlett, Harry Whitney, Dr. Johnson, who is now with him in Africa, and Jack Hemment, the official photographer.

A cold gale was blowing in from sea, and it was getting dark when Rainey and

his party started back for the ship from a point several miles distant along the coast. The *Beothic* was too far distant for her lights to be seen, and Bartlett steered by the outline of the ragged shore a few hundred yards distant and against which the freezing gale was driving.

Suddenly the boat, an open one, save for a tiny cabin forward, gave a tremendous lurch that threw every one from his feet, and the motor stopped short. It was at first thought that she had hit some obstruction in the water, presumably a submerged ice pan; it was found that she was not damaged forward, which would have been the case had floating ice been encountered. The engine was turned over, but refused to go. Captain Bartlett, who held the crank, noticed that the shaft seemed jammed in some manner, and instantly surmised that the propeller had become entangled in something.

A boathook thrust over the stern verified the trouble, and when hauled on board brought with it a part of the long net which had been wound about the propeller and which, had it not been an-



Photograph by Hemment

MR. RAINEY IS TYPICAL OF THE HIGHEST ENTHUSIASM OF SPORTSMANSHIP

chored, would probably have resulted in a calamity involving the death of some, if not of all, of the party.

Scarcely three hundred yards to leeward a terrific sea was breaking in smothered foam on the pinnacles of the jagged rocks that lined the precipitous bluffs of the shore line. At the instant this thought flashed through the minds of Rainey and his men, they did not know that a fifty-pound anchor held the fisherman's net to bottom. They did know that their boat was helpless, her engine clogged, and they believed she was drifting upon the lee shore. It was a time for action, and Mr. Rainey characteristically prepared to go overboard into the freezing sea to clear the propeller, a feat which might have resulted in his freezing to death before the ship could be reached.

The Only Cheerful Man Aboard

At this moment Bartlett and the others, hauling a portion of the net over the side of the boat, found that it was fast to the bottom. This dispelled the fear that the boat would sag off onto the lee shore, and made it unnecessary to take the extreme measure of plunging into the water. The net was lashed fast to the boat, and all hands set about trying to clear the propeller from deck.

Lying on his stomach, his legs held by those on board, Mr. Rainey plunged his arm shoulder deep in the water and tried to cut away the entangled net with a knife, but failed. It was so cold that the water rapidly froze on his skin, sheathing his arm with a layer of thin ice. At length, when it was patent that the net could not be disentangled, it was found that to add to the difficulty the only lantern on board had fallen into the water. With the thick darkness close about them, the sea buffeting them on one side, and the lee shore threatening them on the other, the party faced a terrible night in the open boat. Shoutings and the blowing of the automobile horn on the boat were carried away by the gale, and failed to reach the ears of those on the *Beothic*, who were waiting the home coming of the party.

"Mr. Rainey was about the only one of us who felt cheerful," said Hemment,

in speaking of the occasion, "I heard him humming a tune in the dark, and when, a little while afterward, we saw a small iceberg coming toward us before the gale, I could still hear him humming, though if that berg had hit us we wouldn't have had a chance.

"It was the longest night I ever spent, and the most unpleasant. Gracious! but it was cold, and the sea broke clean over the boat as the wind picked up with the hours. We were wet and shivering, and we lay on the bottom boards in the small shelter of the cabin, half dead. We hadn't anything to eat, and we didn't know if the people from the ship would find us in the morning or not. Mr. Rainey wouldn't let us sleep, and he and Bartlett and Whitney took turns blowing the auto horn, hoping the ship might hear us.

"Under those circumstances, Mr. Rainey was the coolest man I ever saw. I don't believe he has any nerves, anyway. When a man has the face to crack jokes in a time like that—well, just imagine it!"

At daybreak, Sunday, all the party were so stiff from cold that they could hardly rise. Soon after daybreak, however, a boat was seen coming down shore. Mr. Rainey climbed up on the cabin top.

"Well, boys, here come some Eskimos," he laughed. "I'll bet they're going to church, and if they don't mind, I think I'll join them. It's the first time in ten years, but, well, I'll take a chance."

When the party had not returned at midnight, those on the *Beothic* had gone ashore, and, climbing a hill, waited for daylight, only to see the crippled boat far down the coast. When Rainey and his party of fagged-out companions reached the ship, every one was crying anxious to tumble into bunks for sleep—every one but Rainey. The tireless young sportsman, without a vestige of nerves, ordered a hasty breakfast and an early start upshore for more deer.

"Get outside of the coffee, quick, boys," he shouted. "We've got a long day's hunting ahead of us."

This is typical of Rainey. Limitless energy, boundless enthusiasm, a physique capable of absorbing the hardest work and coming back for more, and an iron

determination to get what he wants at any price.

Later on in the trip into the far north, from which the young sportsman brought home trophies alive and dead for museums and the New York Zoological Gardens, the hardy Newfoundland sailors who manned his ship got other glimpses of the fearless determination of the man.

It was up among the ice pans, and the expedition was out after walrus. The big, strange-looking brutes sleep along the edge of the pans in large numbers. On the approach of a boat, they slip off into the water, dive, and not infrequently come up under the boat, overturning it if it be a small one. The Eskimos have a wholesome respect for them and approach cautiously, content to pick off straggling beasts. But Mr. Rainey didn't like that "old woman" way of hunting.

On the first trip out he ordered the boat driven full tilt into the midst of the drove of walruses. The crew hung back.

"Drive that boat in there, I tell you," he shouted, "and I'll take care of the rest." And as for his ability to take care of it, none who were with him questioned that after his return. It took but a week for Hemment, as long as Rainey was at his side with a rifle, to stand his ground unmoved with only a camera in his hands while a wounded polar bear charged him.

"When I made the pictures of the charging bears," Hemment said afterward, "I never felt any concern, for I knew the bears would be dead before they reached me. I knew that in a real emergency Mr. Rainey would shoot them through the heads, though, as a rule, when they charged he fired at their bodies, so as not to injure the skulls for purposes of collection."

Mr. Rainey is typical of the highest enthusiasm of sportsmanship. When there are two ways of obtaining an end, one of them entailing the taking of a chance, he will choose this one, just so long as it does not cause undue risk to others. He has hunted, as one friend put it, ever since he was in short dresses, and is never happy unless he is playing squat tag with polar bears, or blind man's buff

in the association of Bengal tigers and man-eating lions.

When "Silver King," the big polar bear, lassoed by Mr. Rainey, and now in a cage at Bronx Park, New York, pulled the launch to which he was fastened by the lariat halfway out of water on the ice, off Ellesmere Land, Mr. Rainey for a moment forgot himself and started to leap out of the boat with the intention of dragging the bear back into the water. Ten minutes later, when the brute had finally been worked off the ice pan and had shaken off the noose, Rainey leaned over the boat's side and did not throw, but *placed*, the rope once more about the neck of the infuriated animal. Those who were with him on these occasions say that he does not know the meaning of fear.

Had it not been for the early training of this tall, blonde young man with the quiet manner, it is probable that the Bronx Zoological Gardens would have been minus their specimens of polar bear which for a year have attracted so much attention. It was Rainey himself who caught the first bear by a perfect throw of the lariat. When asked how he learned the use of the Western "rope," he laughed modestly and said he'd roped a few steers on the range.

Down in Mississippi he has a big ranch on which he hunts, raises cotton, and engages in yearly tussles with black bears and bob cats. It was there as a boy that he got the training that made a throw with his lasso almost as certain as a ball from his rifle.

It was on the trip back from the Arctic that "Silver King" tore off the top of his cage in the hold and started up through the hatchway for the deck.

While one nervy sailor drove him back with a deck mop, another started on a run for the cabin where Mr. Rainey and others of his party were at lunch.

"The bear is out, sir," cried this sailor, a moment later.

"Please close the door," said Rainey quietly.

At the present time, having successfully hunted all the game provided by this country, Mr. Rainey is in Africa chasing lions with a pack of American hounds.



Photograph by Bertha M. Colby

“WHERE KING MOOSE LIFTS HIS HEAD, WITH ANTLERS CROWNED”

RAIDING WITH THE FRENCHMEN

BY JOHN R. SPEARS

FROM the point of view of those buccaneers who wanted it distinctly understood that they were not in the business for their health the French outclassed the British as raiders. That is to say, the Frenchmen, during the buccaneer period, made the raids wherein more money was captured than was at any time secured by the British. For instance, in 1683, under the lead of Grammont, Laurent de Graff, and Van Horn, a band wherein the French predominated captured Vera Cruz, Mexico, by a night attack. They then collected plunder, coin and plate to the value of 1,500,000 pieces of eight and 1,500 slaves with which they went afloat. A fleet of seventeen Spanish warships appeared off the port while they were gathering their plunder, but they escaped without the loss of a man or a rope yarn. Moreover, when well clear of the Spaniards they drove away their English consorts and so secured all the loot for themselves.

On May 3, 1697, Cartagena surrendered to a French expedition. The fleet was under the command of a French admiral, but the buccaneers did all the fighting while the naval contingent looked on. Plunder worth more than 100,000,000 livres—say 35,000,000 pieces of eight—was secured and placed upon the naval ships, when the admiral sailed away for France, leaving the buccaneers upon the beach. French as well as British buccaneers were thus "bilked." But being buccaneers they were not without resource; they wrung the town once more and secured 5,000,000 livres. Then, through the Governor of Tortuga, they sued the admiral in the courts of France on a contract he had made to give them one-thirtieth of all

plunder secured after the first million, and the court gave them 1,400,000 livres.

Still more remarkable was the expedition of which the Sieur Ravenau de Lussan was historian, for while it did not accumulate as much coin as either of those mentioned above, it went to the Pacific and brought back overland gold and jewels worth a million pieces of eight. Moreover, this gang helped a band of Englishmen with whom they worked temporarily to secure so much as to warrant a return to the Caribbean by way of Cape Horn.

Ravenau de Lussan was a Parisian, who says he went to Tortuga as a traveler. When there he ran in debt and "thought it the part of an honest man to repay it." He therefore made himself "one of the freebooters' gang" in order to "borrow" the needed money from the Spaniards. Accordingly he was found in the band that crossed the Isthmus under Captains Rose, Picard, and others in March, 1685, and had part in the battle off Panama on May 28.

Having separated from the British, after the battle, the Frenchmen, of whom Lussan was one, cruised along the Central American coast for a long time with very ill fortune. They landed at frequent intervals to loot the villages and even the ranches alongshore, but the Spaniards generally managed to carry off not only all the valuables but the provisions as well. As the sails of their ships wore out they patched the holes with their clothing until they were well-nigh naked. They were harassed by sickness and bitten to death by serpents.

Though they fought with the desperation of hungry men, as Lussan says, the Spaniards managed to kill one now and then. Eventually they lost their

ships and had to cruise in periaguas and even smaller dugouts. Thus they were unable to cruise far out at sea and the Spanish patrol alongshore was able to keep them in view most of the time and so forestall them in their landings by removing all treasures and food supplies. The gauntest, raggedest pack of human wolves described in the records were these Frenchmen.

Finally, in March, 1686, Captain Townley and his band, who had been on the Mexican coast with Dampier, arrived down on the Central American coast and fell in with the Frenchmen. They, too, were hungry and desperate, so the two bands united to raid the city of Granada, Nicaragua. A most interesting conflict followed.

The "Feast" at Granada

Landing somewhere near the end of the proposed Nicaragua interoceanic canal route on April 7, they marched to Granada, only to find that the Spaniards had seen them in ample time to prepare for battle. The grand plaza had been fortified and fourteen large cannon, with six small ones, had been mounted to sweep the streets leading to it. The armed Spaniards numbered 2,500. To meet this force, which was for the most part behind entrenchments, the buccaneers had just 345 men. But what they lacked in numbers they made up in stubborn-twist pluck.

Forming in column at the end of a street that led to the plaza, they charged forward, "singing and dancing as if they had been going to a feast." Two large and four small cannon were aimed up this street and the Spaniards made haste to fire them. But the buccaneers "saluted them down to the ground"—fell flat at the flash of the priming—and the projectiles flew harmless through the air above. At the next round the Spaniards fired false primings, but the buccaneers had foreseen that trick and ranged themselves along the house-walls against which the Spaniards dared not fire lest they injure some of their own within the houses. So the buccaneers reached the building next to the plaza, climbed up like second-story burglars, fired at will

into the Spaniards, who were now in plain view, and finally leaped down and climbed the fortification with cutlasses waving.

"We were very well prepared to receive them," wrote the Spanish governor, afterward, "but the way of fighting practised by these men did so much astonish us that we could not make that resistance we had promised ourselves we should do."

In fact, the Spaniards fled in a panic. And yet among those Spaniards were grandchildren of the courageous *conquistadores* who had, under Cortez, carved their way through Mexico's millions. Two generations devoted to commercialism had developed a race of curs.

As soon as sentinels had been placed, the French buccaneers entered the great church facing the plaza and solemnly sang the Te Deum. If rightly seen, this act of devotion affords a most interesting and instructive study of the human mind. It was possible then, as it is possible now, for persistent and merciless plunderers to give thanks to God for their success. There is no reason to doubt that these buccaneers were sincere as the modern buccaneer, who, by might of wealth, robs his neighbor, is sincere. The buccaneer is blind—unmoral—not insincere.

After attending to their religious duties the buccaneers began searching for plunder but soon learned that the Spaniards had once more prepared for defeat—this time by sending afloat on Lake Nicaragua all their treasures except a sum amounting to 1,500,000 pieces of eight which they had buried in a wall intending to use it for a ransom for the town when they could save the place in no other way. And this sum the buccaneers might have obtained had a Morgan been there to torture a few prisoners to death. As it was, the buccaneers fired the town as soon as they learned that the treasures had been sent away on the ships and that no boats could be had with which to go after the ships. The facts about the treasure in the wall were not learned until the buccaneers were fighting their way back to the Pacific.

On reaching their boats the buccaneers returned to their former way of life—

they wandered, desperately hungry, along the coast until the morning of May 23, 1686, when they landed 160 men near "La Villia" (Villa de los Santos, on the Rio Cubita), and an hour after sunrise drove the Spanish away. They had hoped to obtain some food and a little plunder, but as they began to ravage the town they found that the merchandise from the treasure fleet of the year before—the merchandise for which the whole fleet of buccaneers had fought all day in vain on May 28 of the year before, had been landed here and that the Spaniards with their *poco tiempo* notions had allowed it to remain.

Most unexpectedly these buccaneers (they were led by Captain Townley) had captured goods worth 1,500,000 pieces of eight besides 15,000 in coin. Loaded down with plunder, they started for their canoes, but the Spaniards attacked them in force and nearly everything but the coin had to be abandoned.

Then, while the buccaneers fought their way down the river, the Spaniards captured one of them and, cutting off his head, they stuck it on a pole where the others saw it. It was a most foolish act, for the buccaneers had a considerable number of prisoners whom they were carrying away for ransom, and they at once cut the heads from four of these and put them on poles beside that of the buccaneer.

Seeing this, the Spaniards offered 10,000 pieces of eight for the ransom of the other prisoners, but when the buccaneers accepted the offer the Spaniards tried to evade payment, thinking the buccaneers were frightened into accepting so small a sum. Thereupon the buccaneers cut off the heads of two more prisoners and sent them with a demand for the coin, and that brought it speedily.

Lured by a story told by a prisoner to the effect that a shipment of eight hundred pounds' weight of gold dust was lying in Santa Maria in the Gulf of San Miguel, waiting for the buccaneers to abandon those seas, the raid was made thither. They got only a few pounds of gold dust, but they captured merchantmen that served them much better than the dugouts that most of them had been cruising in. Then, on August 21, just

at daybreak, three Spanish warships attacked them.

There was no lack of courage among the Spaniards on this occasion, but the fight was like a wholesale attempt to commit suicide, so far as they were concerned. For while they had cannon and were well prepared, the flagship lost eighty men out of one hundred and twenty, another lost fifty-two out of seventy, and the third fled without telling her loss. The buccaneers had one man killed outright and twenty wounded, but because the Spaniards had poisoned their bullets nearly all the wounded died. Among those was Captain Townley.

Bringing the Governor to Terms

In the meantime the Governor of Panama was holding five buccaneers, whom he had captured on the Darien trail, in prison. On learning this fact the buccaneers demanded an exchange, but the governor declined. At that the buccaneers detained the governor's messenger while they brought twenty of their prisoners on deck and cut off their heads. The heads were then put in the messenger's boat and sent ashore with the promise that unless the buccaneers in prison were sent off unharmed, together with 20,000 pieces of eight, the heads of the other prisoners would be sent ashore in like fashion. The governor sent off the imprisoned buccaneers and 10,000 pieces of eight, with a promise of the remainder, but the buccaneers went cruising without waiting for the fulfillment of the promise.

Once more ill luck attended their cruising until April 12, 1687, when they arrived, after a passage from the Central American coast during which they lived on a small ration of stale tallow served once in forty-eight hours, off the bay on which the city of Guayaquil stands. Here they fell in with a prize that had been captured by the *Bachelor's Delight* and was manned by eight men who were on the way to Isla de la Plata, the common rendezvous of the South American coast. These British buccaneers gave the Frenchmen a supply of food and were invited to join in looting Guayaquil.

It is interesting to note here that the *Bachelor's Delight* had been so successful in capturing Spanish treasure ships that her crew had accumulated 5,000 pieces of eight per man and had then headed away for home by the way of the Horn. But by the time Juan Fernandez was reached a number of them, including Captain Davis, had lost all through gambling and were anxious to return to the coast for more. As it happened, a Captain Wilnet and a small crew arrived at Juan Fernandez at this time in exactly the same condition. So the two crews agreed that the penniless should have the *Bachelor's Delight* and return to the coast, while the lucky gamblers went on home in Captain Wilnet's ship.

By going to the Isla de la Plata the Frenchmen might have secured the help of all of the crew of British buccaneers, but they would not do that. Landing 260 men under Captain Groignet (he who had flinched off Panama), and with the veteran Picard to lead the forlorn hope, the buccaneers marched against the city. They found seven hundred Spaniards behind a wall at the city limits, and at the first dash were repulsed. But the Spaniards made the mistake of trying to follow up the buccaneers. As soon as the former appeared on open ground the buccaneers turned. The Spaniards fled immediately, but the buccaneers hewed a way into the shrieking mob and then swept through the streets with such merciless fury that nine hundred Spaniards were killed.

The buccaneers lost nine killed and twelve wounded. Captain Groignet was one of the wounded and with several of the others he died a few days later. He had fully atoned by desperate fighting for the disgrace he had incurred the year before.

The plunder found in Guayaquil astonished the buccaneers. The houses were lavishly supplied with gold and silver dishes. Indeed many of the kitchen utensils that in other places were made of iron or copper were here found wrought from silver. Pearls and precious stones, especially emeralds, were found in prodigious numbers. An eagle made of gold that weighed sixty-eight pounds and had

emeralds for eyes was among the articles secured. Silver plate, and in fact coined silver, was so abundant that much was allowed to lie where it was found, for the buccaneers knew that they were to make their way back overland to the Atlantic and that silver weighed too much to the dollar for such a journey. However, a few hundred thousand pieces of eight were taken along which "served us to play for on board our ship for our diversion," as Lussan says.

Converting the Women

A ransom of a million in gold was agreed upon, but the governor told them they must wait while he brought this money from Quito. Lussan, in telling why the buccaneers agreed to wait, says:

"The women of this town are very pretty; but . . . the priests hated us to that degree that they persuaded the women, who had never seen any freebooters, that we were not even of human form, and that we would eat them and their children; which made them conceive such horror and aversion for us that they could not be dispossessed thereof till they came to know us better. But then I can boldly say they entertained quite different sentiments."

Lussan, in relating his personal experiences, says that while leading a young woman to the church, which was used as a prison, on the day the city was captured, she turned to him with streaming eyes and said, "For the love of God, do not eat me." A few days later, however, another young woman was so much in love with him that she urged him to remain in Guayaquil, to become a Spanish citizen, and she even procured letters from leading citizens who promised that he should be treated as a native if he would do so. But fearing a snare, he declined.

Meantime, by fine promises, the Spaniards gained time enough to bring a war squadron to the bay. But with the help of the *Bachelor's Delight* that had reinforced the Frenchmen, the Spaniards were beaten off long enough to enable all the buccaneers to escape.

How much of the plunder the *Bachelor's Delight* carried off is not told, but

she had enough to satisfy her crew, for they at once headed for Cape Horn and returned to the West Indies. The Frenchmen, after some further cruising on the northern coasts, during which they captured Tehuantepec, Mexico, landed on the shores of Amapala Bay, Honduras, and prepared to march by way of the Wanks or Segovia River to the Atlantic. The total plunder with which they started inland was, according to Bancroft's History of Central America, just \$1,000,000. Lussan does not give the total sum, but says he had \$30,000, the greater part of which, however, he had won in gambling. Fearing that he would be murdered and robbed by the unlucky ones of the gang, he engaged a number of them to help him carry his wealth on shares—an expensive kind of insurance, but one that proved effective.

The total number of buccaneers who started on this journey was two hundred and eighty. If there was any heroic figure among them Lussan does not mention him, but it is likely that Picard was the man who commanded the host. The Spaniards gathered around them in force immediately. A regiment said to number three hundred marched parallel with them from day to day, but no attack worth mention was made, and only at one place were they in real danger from the Spaniards.

As they drew near the Wanks they found the trail leading into a narrow gorge with a vertical wall on one side, a steep ascent on the other and a brook at the bottom. On the steep ascent the Spaniards had built three lines of earthworks and posted 1,500 men. The trail was also blocked by trees that had been felled into it with branches interlacing. The buccaneers never had faced as complete a barrier as this was, and after some scouting they decided that they would not be able to open the trail. But they did not despair. Leaving a force to guard their baggage, which consisted chiefly of silver, they sent a forlorn hope

to climb to the rear of the intrenchments above the Spaniards.

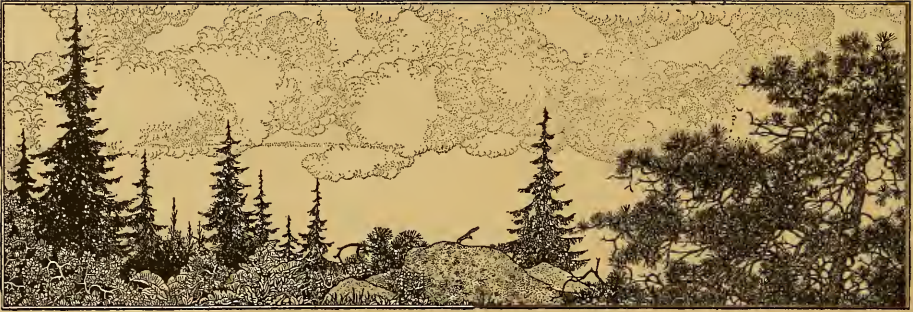
"We spent the whole night to advance half a quarter of a league," says Lussan, "through a country so full of rocks, woods, and frightful precipices that our posteriors and knees were of more use to us than our legs, it being impossible for us to travel thither otherwise."

At break of day the buccaneers were on the mountain side well above the breastworks, and they charged down just as they heard the Spanish begin to chant the prayers of morning. The Spanish officers tried to rally their men below the lowest breastwork, but when the buccaneers came down, "singing and dancing as if for a feast," they all fled into the brush entanglement they had built to stop the advance of the invaders. While they struggled through this the buccaneers slaughtered them until, "being affected with compassion upon sight of the great quantity of blood we saw running down into the rivulet, we spared the rest."

This battle, fought on January 14, 1688, was the last that need be mentioned. The buccaneers had left the shores of Amapala Bay on the 2nd; they reached the Wanks on the 17th. There they built rafts on which they floated down the turbulent current. All lost their food; some lost their treasure; some were drowned; five Englishmen who had won much in gambling were murdered and robbed. But the remainder reached still water, and there they made dugouts and went away.

Lussan and fifty of his friends found a British trader on the coast whom they hired to carry them to Petit Guaves. And "When we were got all ashore to a People that spoke French," he says, in an old English translation, "we could not forbear shedding tears of joy, that after we had run so many hazards, dangers and perils, it had pleased the Almighty Maker of the Earth and Seas to grant a deliverance and bring us back to those of our own Nation."





THE PRAIRIE CHICKEN OF YESTERDAY

BY CHARLES ASKINS

SOME friends of ours had an afternoon with the chickens in Nebraska, and a morning in Minnesota—after fifteen years. What is a space of fifteen years? If we happen to be a woman and unmarried, at worst it adds but four flowering seasons to our age, or we grizzled old fellows can still blow the breath of youth upon it, and “pouf!” it is gone like an April snow. But in the life of a prairie chicken or his breed, fifteen years is a long, long time.

Honestly chickens and Indians are an obstinate lot. We feed them on corn and wheat in place of choke berries and grasshoppers; protect them by stern edict of the law where they used to be a law unto themselves; not one of us ever allows the other fellow to shoot more than he can help; and yet the places that knew a full bevy last year have only a passing acquaintance with a skulking old cock grouse this season—and even he will presently be carried to his last pot-roast in solitary grandeur.

But fifteen years ago there were still sod houses, squatting low in the winding valleys of the Nebraska sandhills.

The Keen Youngster, the Old Timer, and the driver pulled up at one of these places about three in the afternoon of an autumn day in the year '96. Each man had his gun, for, bless you, the driver meant to shoot too, if only to show the city sports what a real chicken-man could do with a scatter gun.

The ranchman was waiting for them with his reliable pump gun and a hard-looking, big-headed, cockle burr-coated setter, who proved to have such chicken wisdom that he was presently given control of the shoot by common consent. Poor old chap! Well for him that he lived in his own good time, for it would take a hundred years of modern chicken hunting to learn as much as he knew then.

Setting in just below the old straw-covered barn was a valley, a mile long and half a quarter wide. It had been sown in wheat, as evidence the rank stubble with here and there patches of wild grass struggling to regain their own. At the far end of the field was a patch of the dwarfed Nebraska corn, now a combination of yellow and green from the effects of the first October frost.

By four o'clock they were ready to start with an hour and a half of good daylight yet remaining. A pretty slip of a fourteen-year-old girl stood in the door to watch them kill the first chicken which might happen within fifty yards of the house. All the dogs had been tied by advice of the ranchman, except old Mark, the chicken dog. Hunting was not what was required of the dogs so much as clever handling of the birds, for the farmer confidently declared that five hundred chickens would be raised between the house and the cornfield, but they would have none of the tameness of August birds.

Four abreast the gunners could sweep the entire field. The Old Timer liked the actions of the bushy-coated, red and white dog from the beginning. He didn't bolt into that field like a race-horse, but swung off on a slow gallop, the big head carried the very highest of any dog they had ever seen, moist nose feeling the wind; his burr-matted tail was so heavy that it couldn't beat to and fro, but went round and round like an Indian club; one hind leg limped a trifle from the effect of half-spent shot; the whole dog was undoubtedly underfed and overworked, stale and slow, but, Lord! the chicken sense in that bony head.

Once he quartered the narrow field and half way back; then he stopped and looked around, rolling the whites of his eyes, curling his upper lip so that the Old Timer swore he grinned. The guns collected behind him, guarding his flanks, and then he moved slowly off down through the stubble that came half way up his sides.

A hundred yards on he stopped and sat down, drooping his head low with infinite caution. A prairie gopher sat up before his nose and looked at him impudently. A bittern hidden by the rank cover thrust his lancelike bill toward the sky. The Keen Youngster noted the girl still watching from the door. The Old Timer silently motioned the guns to spread out. The ranchman clucked to his dog, and the latter rolled the white of his eye reproachfully.

A great cock chicken burst out, throwing flashes of light into the driver's eyes,

roaring an electric charge into his nerves, and he missed incontinently. The Keen Youngster killed the bird and looked back to see if the girl had noticed—she had. Now the pump guns bing-banged, and the double barrel rattled in right and left to be reloaded and fired again. Oddly enough, in the heat of it, the hard shots were always taken, while the bird that cackled up from under their very feet escaped unshot at. But at the end of the fusillade seven birds were brought in by old Mark and dropped at the ranchman's feet, while twenty-five more had gone just over the first range of sandhills to the left.

The Keen Youngster and the driver were for following the scattered covey at once, but the ranchman declared they had only made a beginning, and pointed down the long stretch of stubble. "There are ten birds left for every minute of daylight," he said. "How many more do you want?"

In the Thick of It

Old Mark went on as sure as fate—the fate of the prairie chicken—and the guns followed abreast like English beaters in the turnips. From one side of the narrow field to the other the chickens got up, in pairs, singly, in broken bevs, and one pack of fifty. Kills no longer counted, misses were ignored, the birds were so thick that a man remembered neither the one nor the other. Coats became so heavy that a gunner secretly rejoiced when he saw his neighbor pick up a grouse he had killed himself.

Sundown found them working through the last bit of corn, loaded down with game, but gazing regretfully at the darkening sky.

The tireless chicken dog started to ascend the hill, head up, nose feeling the dampening breeze, hind leg limping, burr-matted tail going round and round. He knew where four hundred chickens lay just over the ridge—all of him knew—but his master called him back.

"The teal are coming into the pasture pond," said the ranchman; "you will need the rest of your shells."

The Old Timer sat down, partly to

relieve his tired shoulders, and pulling the red and white old dog across his knees began tenderly removing the burrs from under the chafed legs. The chicken dog patiently thumped the stubble with his extended tail as he submitted to the pain of the unaccustomed process.

"From now on," the Old Timer told him confidentially, "you are my dog. Money will never again buy you, you homely old brute. You will eat what I eat and never sleep out in the snow again except I sleep beside you. The prairie chicken has seen his day, the chicken dog has run his course, the chicken hunter has told his tale; it was a great game while it lasted, and you, old doggie, shall be in it to the end."

Then they surrounded the pond and with heated guns, shot the whistling teal until the fire flew in long streams from overworked muzzles. If the dog lost a single duck of all they killed nobody ever knew it, and they counted up thirty teal that night and fifty-three chickens.

The girl came galloping down from the house, and they tied the chickens and ducks in a great mass to her pony. Then the Keen Youngster walked home beside the little miss. And now we will leave them for fifteen years.

* * * * *

In the season of 1910, the Old Timer sat on a gravelly beach of a Minnesota lake idly watching a jack loon chasing

the fish. His great old chicken dog was dead long since, his unloaded gun leaned against a cottonwood tree; one cock grouse had flown within reach of him without drawing a shot—he had marked it but hoped none of his friends would find that chicken.

Far away to the west he could see his party industriously steering an automobile about the fields in search of grouse, but their guns were silent. Deep under the surface of the clear water he saw a loon catch a pickerel. A flock of bluewings swung round and round, skimming the surface of the lake, and alighted near him. He threw a stone at them, but, after flying away, they came straight back and dropped in again.

The chicken-hunting car returned and scared the ducks. No chickens had been killed but the crew cooked and ate dinner on the beach, then went swimming—noisy and happy. Blessed be youth and ignorance, the Old Timer thought.

The persistent teal returned and they shot into them. That night they drove back to the city with seven teal and four jack rabbits. Noticing the veteran's silence the Keen Youngster and his wife (the girl) broke the silence tunefully with the old Southern melody:

"Sing me a song of the old, old time,
One with a sweet refrain;
Tell me a tale of bygone days
That I may be happy again."





THE WORLD OF SPORT

THE OPEN SEASON

AS in previous years, we present below a brief summary of the laws of the various states as regards open and closed seasons. In some instances changes may have been made later than the period covered by our information, but such instances are few and of small importance.

Alabama.—Deer, Nov. 1-Jan. 1. Does protected; Jack-lighting prohibited. Quail, Nov. 1-March 1. Wild turkey, Dec. 1-April 1. Water fowl, Sept. 1-March 15. Snipe, plover, Nov. 1-May 1. Grouse, protected.

Arizona.—Deer, Sept. 15-Dec. 1. Antelope, protected till March 1, 1915. Elk, mountain goat, and sheep, protected. Turkey, Sept. 15-Dec. 1. Quail and grouse, Oct. 15-Feb. 1. Water fowl, no closed season.

Arkansas.—Deer, Sept. 1-Jan. 31. Quail and partridge, Nov. 1-Feb. 28. Turkey, Sept. 1-April 30. Pheasant protected.

California.—Deer, July 15-Nov. 1. Does protected. Elk, protected. Water fowl, Oct. 1-Feb. 15. Valley Quail, Oct. 1-Feb. 1. Snipe, Oct. 1-April 1. Mountain Quail, protected to 1911.

Colorado.—Deer, Oct. 1-Oct. 10. Elk, mountain sheep, antelope, wild turkey, quail protected. Water fowl, Sept. 10-April 15. Prairie chickens, Oct. 1-Oct. 20. Shore birds, March 1-March 15, and August 1-Nov. 30.

Connecticut.—Deer, open season. Water fowl, Sept. 1-Dec. 31. Quail, woodcock, ruffed grouse, Oct. 1-Nov. 30. Shore birds, snipe and rail, Sept. 1-Dec. 31. Sunday hunting prohibited.

Delaware.—Quail, Nov. 15-Dec. 31. Reed birds and rail, Sept. 1-Feb. 1. Water fowl, Oct. 1-April 15.

Florida.—Deer, Nov. 1-Jan. 31. Turkey, quail, partridge, Nov. 1-Feb. 28. Ducks, Oct. 1-March 31. Sunday hunting prohibited.

Georgia.—Deer, Sept. 1-Jan. 1. Turkey, pheasant, partridge, and quail, Nov. 1-March 15. Woodcock, Sept. 1-Feb. 1.

Idaho.—Sage hen, partridge, or grouse, Aug. 15-Dec. 1. Quail, Nov. 1-Dec. 1. Water fowl, Sept. 1-March 1. Deer, elk, mountain sheep and mountain goat, Sept. 1-Dec. 1.

Illinois.—Deer, protected until July 1, 1913. Turkey and imported pheasant and partridge, protected to July 1, 1913. Quail, Nov. 10-Dec. 10. Grouse and prairie chickens, unprotected. Shore birds, Sept. 1-May 1. Water fowl, Sept. 1-April 15.

Indiana.—Deer, protected. Quail and grouse, Nov. 10-Jan. 1. Water fowl, Sept. 1-April 15. Woodcock, July 1-Oct. 1, and Nov. 10-Jan. 1. Turkey and all pheasants, protected.

Iowa.—Deer, protected. Grouse and prairie chicken, Sept. 1-Dec. 1. Woodcock, July 10-Jan. 1. Grouse, turkey and quail, Nov. 1-Dec. 15. Water fowl, Sept. 1-April 15. Jack-lighting birds prohibited.

Kansas.—Antelope and deer, protected until March 13, 1918. Grouse and prairie chicken, Sept. 15-Oct. 15. Water fowl, Sept. 1-April 15. Quail, Nov. 15-Dec. 15.

Kentucky.—Deer, Sept. 1-March 1. Water fowl, August 15-April 1. Turkey, Sept. 1-Feb. 1. Woodcock, June 20-Feb. 1. Quail, partridge, pheasant, Nov. 15-Jan. 1.

Louisiana.—Deer, county regulation. Snipe and sandpipers, Sept. 1-May 15. Water fowl, Oct. 1-March 15. Blue wing teal, Sept. 15-April 1. Turkey, Nov. 1-April 15. Quail, Nov. 15-March 15. Woodcock and prairie chicken, protected.

Maine.—Caribou, protected to Oct. 15, 1911. Moose, Oct. 15-Dec. 1. Deer, Oct. 1-Dec. 15. Grouse and woodcock, Sept. 15-Dec. 1. Ducks, Sept. 1-Jan. 1, county exceptions. Quail, protected. No Sunday hunting.

Maryland.—County regulations.

Massachusetts.—Deer, protected conditionally. Grouse, woodcock, and quail, Oct. 15-Nov. 14. Water fowl, Sept. 15-Dec. 31. Sunday hunting prohibited.

Michigan.—Moose, elk, caribou, protected to 1913. Deer, Nov. 10-Nov. 30. Quail, protected to Oct. 15, 1914. Water fowl, Sept. 1-Jan. 1.

Minnesota.—Moose and deer, Nov. 10-Nov. 30. Elk and caribou, protected. Snipe, prairie chicken, woodcock and plover, Sept. 7-Nov. 7. Quail and grouse, Oct. 1-Nov. 30. Water fowl, Sept. 7-Nov. 30.

Mississippi.—Deer and bear, Nov. 15-March 1. Turkey, Jan. 1-May 1. Quail, Nov. 1-March 1. Water fowl, Nov. 1-March 1.

Missouri.—Deer, Nov. 1-Dec. 31. Quail and partridge, Nov. 1-Dec. 31. Water fowl, Sept. 15-April 30. Woodcock, prairie chicken, and ruffed grouse, protected.

Montana.—Elk, mountain goat, mountain sheep, deer, Oct. 1-Dec. 1. Grouse, prairie chicken, and sage hen, Oct. 1-Nov. 1. Water fowl, Sept. 1-Jan. 1.

Nebraska.—Deer, antelope, and quail, protected. Water fowl, Sept. 15-April 5. Prairie chicken, grouse, and sage hen, Oct. 1-Nov. 30. Snipe, Sept. 15-April 30.

Nevada.—Deer, Sept. 15-Oct. 15. Sage hen, July 15-Oct. 1. Grouse, mountain quail, Oct. 1-Jan. 1. Water fowl, Sept. 15-March 15.

New Hampshire.—Grouse, caribou, and elk, no open season. Ducks, Oct. 1-Jan. 31. Woodcock, quail, and snipe, Oct. 1-Dec. 1.

New Jersey.—Deer, Wednesdays in November. Quail, partridge, grouse, turkey, woodcock, northern section, Oct. 15-Dec. 31. Snipe, rail, reed birds, both sections, Sept. 1-Dec. 31. Water fowl, except brant and geese, northern section, Oct. 15-Jan. 1; southern section, Nov. 1-March 15. Brant and geese, northern section, Oct. 15-Jan. 1; southern, Nov. 1-March 25. Shore birds, both sections, May 1-Dec. 31.

New Mexico.—Deer, Oct. 15-Nov. 15. Turkey, Nov. 1-Dec. 31. Grouse and native quail, Oct. 1-Dec. 31. Snipe, Sept. 15-March 1. Ducks, no closed season.

New York.—Deer (some counties closed), Sept. 16-Oct. 31. Quail (some counties closed), Nov. 1-Nov. 30. Woodcock, Oct. 1-Nov. 30. Water fowl, Sept. 16-Dec. 31.

North Carolina.—County regulations.

North Dakota.—Deer, Nov. 10-Nov. 30. Antelope, grouse, elk, sheep, protected. Prairie chicken, snipe, Sept. 7-Nov. 1. Water fowl, Sept. 7-Dec. 15.

Ohio.—Quail, Nov. 15-Dec. 4. Woodcock, Sept. 1-Dec. 4. Water fowl, Sept. 1-Dec. 31; also March 1-April 2. Ruffed grouse, pheasant, protected to Nov. 15, 1913.

Oklahoma.—Deer, Nov. 1-Dec. 1. Antelope, protected to 1914. Quail, Nov. 15-Feb. 1. Turkey, March 15-Apr. 15, and Nov. 15-Jan. 1. Prairie chicken, Sept. 1-Nov. 1. Water fowl, Aug. 15-May 1. Sunday hunting prohibited.

Oregon.—Deer, Aug. 1-Nov. 1. Certain counties, Sept. 15-Nov. 1. Elk, mountain sheep, antelope, protected. Ducks, Oct. 1-Feb. 15, certain county exceptions. Grouse, Oct. 15-Nov. 15, county exceptions. Prairie chicken, Sept. 1-Oct. 15, county exceptions. Quail, Oct. 15-Nov. 15, county exceptions. Shore birds, Oct. 1-March 1.

Pennsylvania.—Bear, Oct. 1-Jan. 1. Deer, Nov. 15-Dec. 1. Grouse, Oct. 15-Dec. 1. Quail, Oct. 15-Nov. 15. Water fowl, Sept. 1-April 10. Turkey, Oct. 15-Nov. 15. Woodcock, Oct. 15-Dec. 1. Shore birds, Sept. 1-Jan. 1.

Rhode Island.—Deer, protected. Pheasant, quail, woodcock, Nov. 1-Dec. 15. Shore birds, Aug. 1-Dec. 31. Water fowl, except black and wood duck, no closed season.

South Carolina.—Deer, Nov. 1-Feb. 1. Pheasant, turkey, Nov. 15-March 1. Woodcock, Sept. 1-Jan. 15, certain county exceptions. Quail, Nov. 1-March 15.

South Dakota.—Deer, elk, mountain sheep, Nov. 1-Nov. 30. Snipe, partridge, plover, Sept. 10-Oct. 10. Water fowl, Sept. 10-April 10. Prairie chicken, grouse, quail, protected.

Tennessee.—Deer, protected to Oct. 1, 1911. Quail, Nov. 15-March 1. Turkey, Nov. 1-March 1, certain county exceptions. Water fowl, Oct. 1-April 15. Sunday hunting prohibited.

Texas.—Quail, Nov. 1-Feb. 1. Deer, Nov. 1-Jan. 1. Turkey, Dec. 1-April 1. Antelope,

sheep, protected. Water fowl, no closed season.

Utah.—Deer, Oct. 15-Nov. 15. Quail, sage hen, county regulation. Water fowl, Oct. 1-Jan. 31.

Vermont.—Deer, Nov. 15-25. Snipe, Sept. 15-Dec. 1. Grouse, woodcock, Sept. 15-Nov. 15. Water fowl, Sept. 1-Jan. 1. Grouse, caribou, quail, protected. No Sunday shooting.

Virginia.—Deer, Sept. 1-Dec. 1. Turkey, grouse, quail, woodcock, Nov. 1-Feb. 1. West of the Blue Ridge Mountains, season ends Dec. 31. Water fowl, Oct. 15-May 1. Shore birds, July 20-Jan. 1.

Washington.—Deer, caribou, sheep, goat, Oct. 1-Dec. 1. Elk, protected to Oct. 1, 1915. Moose, antelope, Sept. 1-Nov. 1. Quail, grouse, prairie chicken, sage hen, Oct. 1-Jan. 1, certain county exceptions. Water fowl, Oct. 1-Feb. 1, certain county exceptions.

West Virginia.—Deer, Oct. 5-Dec. 1. Turkey, grouse, Oct. 16-Nov. 30. Quail, Nov. 1-Nov. 30.

Wisconsin.—Moose, protected. Deer, Nov. 11-Nov. 30, certain county exceptions. Woodcock, partridge, plover, snipe, Sept. 10-Dec. 1. Duck, rail, Sept. 1-Jan. 1. Goose, brant, Sept. 10-May 1.

Wyoming.—Moose, protected to 1915. Elk, deer, sheep, Sept. 1-Nov. 30. Water fowl, Sept. 1-April 30. Ruffed grouse, Aug. 1-Sept. 30, certain county exceptions. Other grouse, Sept. 25-Nov. 30. Quail, protected to Sept. 25, 1912. Shore birds, Sept. 1-April 30.

PROGRESS OF GAME PROTECTION

A GREAT deal of information in rather unattractive bulletin fashion is afforded by a circular from the Bureau of Biological Survey of the Department of Agriculture on the Progress of Game Protection in 1910. The Bureau finds the situation on the whole favorable, although it is a bit hard to draw much comfort from the facts. To be sure, the number of bison on the American Continent has increased from 1,917 in 1903 to 2,108 in 1910. Of this number only 475 are wild, as against 325 in 1908.

The paragraph on antelope is significant as repeating a warning sounded recently by Mr. Dillon Wallace in this magazine. The report says:

"The condition of antelope still remains unsatisfactory, notwithstanding the fact that the animals enjoy complete protection throughout the United States. The laws providing a close season will expire in 1911 in Arizona and South Dakota, and in 1912 in Colorado and Texas, and unless provision is made at the next sessions of the legislatures for continuing the close season, the antelope in those States will be left without protection. The chief danger arises, however, from encroachment on their range through settlement in the Plains region and by sheep and cattle grazing in the Rocky Mountain States."

The report does not add, as it might well have done, that much of this encroachment is unnecessary and of little or no permanent benefit to those responsible for it.

Little success seems to have attended the attempted introduction of foreign game birds in American covers, although the time is too short in many instances for a complete conclusion to have been reached. Kansas, however, turned down 1,600 pheasants three or four years ago, and has nothing at all to show for it today. Out of 10,000 partridges liberated in Connecticut in 1908 and 1909 about 170 broods remained in the fall of 1909,—"which have since diminished and were probably finally destroyed by the severe weather in December, 1910," the report pessimistically remarks.

On the whole the scales seem to be inclining somewhat against the much-discussed partridge and in favor of the pheasant as less expensive and easier to acclimatize.

Among our native game birds the best case seems to be that of cheerful, friendly, courageous little Bob White. He stands the winters better, increases at a more rapid rate, is less liable to epidemics, can forage better, and is a better sport all round. It is encouraging to note that the woodcock seems to be returning in certain sections and to have reappeared in one or two places where it was unknown before, notably eastern Oklahoma. The ruffed grouse and the prairie chicken seem to be doing little better than hold their own, if as well as that, although in certain sections an in-

crease of the chickens was reported due to a more careful protection.

On the whole we must believe that conditions are improving, although there is cold comfort in some of the figures. The best consolation comes not from statistics after all, but from indications of a new and more vigilant spirit in the enforcement of the law. State game wardens and their deputies are more and more alert and there is an appreciably smaller tendency to regard the appointments to these offices as an opportunity solely for the payment of political debts. The world is really moving, although it is necessary to look very closely at times to be at all sure of it.

AIR LAWS

TWO or three States have enacted legislation supposed to govern the operation of aeroplanes. Most of this is concerned with the registration of the fliers and the issuance of numbers. This is interesting and doubtless provides work for needy souls, but its effectiveness is to be doubted. New York State has proposed a law which, if enacted as proposed, will really accomplish something.

In the meanwhile there are one or two points on which there is considerable discussion. One is the proposed restriction of flights to certain designated "highways" through the air. This would seem somewhat of a difficult task and of doubtful usefulness if it is ever accomplished. Within certain very broad limitations—so broad as to be of little use—it is hard to see how anything of this sort can be accomplished.

What is of more importance is that the aviators should be warned away from particular areas. In other words, the important need is to indicate, not where they may fly, but where they may not. Not long ago a birdman soared daringly over what the reporters in these flying days delight to call "the cañons and gulches of Manhattan." It was daring enough in all conscience—and risky, too. And the risk was not all for the man in the machine. How about the people in the streets below?

At one of the international polo games

the spectators were duly electrified by the spectacle of another birdman sailing over the field—and incidentally over the people on one of the stands—at a height of a little more than a hundred and fifty feet. It was only a short time before that an aeroplane had run amuck on a French aviation field and, dashing into the crowd, killed one and seriously injured another member of the French cabinet.

Let those who will fly, fly by all means and forbear to hedge their flying about with fine-drawn restrictions and limitations. But guarantee the safety of those of us who still walk in city streets. In other words, make it a misdemeanor for any man to fly over a town or incorporated community of any sort. Such legislation is at least easy to understand and should not be hard to obey.

WHAT A SMALL WORLD, ETC.

THREE men were dining in one of the quiet but good New York hotels—there are a few still left. One of them was an Englishman, a man of wide travel and many and curious experiences—in South and Central Africa, South America, the Straits Settlements. The other two men don't matter; they merely happened to be there.

A deferential headwaiter stood by to take the order for dinner. Square-shouldered, clean-cut as to face, quiet as to voice, courteous but not obsequious as to manner, he was close to the ideal of what a headwaiter should be—and be it understood right here that this little anecdote draws no social distinctions and sets up no standard of snobbery.

Green corn was suggested as a part of the order. The Englishman protested. "I've bought and sold too many hundred tons of the stuff," he said. The headwaiter evidently marked the English accent, smiled, and voiced his deductions. "You called it mealies, didn't you, sir?" he asked.

The Englishman glanced up. "What do you know about mealies?" he demanded.

The waiter countered with another question. "Haven't you been in South Africa, sir?"

"Yes. Have you?"

"Yes, sir. 1895. With the mounted police on the first expedition to Mashonaland."

That was all. The Englishman said nothing more and the headwaiter, still quiet as to voice and courteous but not obsequious as to manner, finished taking the order. The two outsiders, apparently, were the only ones to feel the drama of the situation and even they did their best to appear blasé and travel-worn.

AN AMERICAN-ENGLISHMAN

THERE has been some tendency to dwell rather unpleasantly on the fact that it was an American—Putnam the husky Kansas hammer-thrower—who helped Oxford and Cambridge win their track and field games with Harvard and Yale last July. The Americans lost, but an American won; so runs the criticism of some American newspapers in brief.

This is to display a woeful lack of knowledge of the true inwardness of such contests. In the first place, a track and field meet is not of such transcendent importance that we need lose any sleep over the result, if only the contestants have conducted themselves as gentlemen and sportsmen. That, according to all reports, the young gentlemen in the present instance did. Further than that, the meet was nothing more than a friendly contest between young men who happen to be attending four different institutions of learning in two different countries.

It was not intended that this display of strength, speed, agility, and the other manly qualities should settle for all time to come the respective merits and virtues of the two countries. The Americans lost, but the flag still seems to wave with all its old gayety. If the case had been reversed, it is scarcely likely that the British Empire would have crumbled to decay with more than the usual speed of empires—which seem to be always crumbling anyway.

Putnam was a good hammer-thrower, a bona-fide Oxford man—thanks to Cecil Rhodes—and a good sportsman.

Therefore did he throw the hammer farther than any other contestant, and that's all there was to it.

MAL DE AIR

EVERY time an aviator tumbles unluckily—all too frequently disastrously—to earth there is grave mention in the newspapers of probable "airsickness." Most of us who reside in the outer darkness so far as scientific—and particularly medical—terminology is concerned use the term without much idea of its meaning. The *New York Medical Journal* comes to our rescue with a learned description of the disease and a suggestion as to its remedy. Here is what the *Journal* has to say "for them as wants to hear it":

"The cause of aviator's sickness, apart from the nervous factor referred to, is probably the difficulty of effective arterialization of the blood. In normal arterial blood there are about thirty per mille of oxygen and forty of carbonic acid; when the aviator ascends over three thousands yards the formation of oxyhaemoglobin is hindered, the oxygen is easily separated, and respiratory activity is lessened owing to the diminution of carbonic acid. The consequent dyspnoea is urgent and painful, breathing being rapid and shallow, there is a humming and whistling in the ears, and vertigo and syncope finally supervene. If the ascension is very rapid there may be epistaxis and hæmoptysis.

"The treatment, which will probably be soon applicable during flight, if, indeed, it is not already available, consists mainly in the administration of a mixture of oxygen, thirty per cent, carbonic acid, fifteen per cent, and nitrogen, fifty per cent, by means of a mask or by a tube introduced under oiled silk. Cartridges of sodium dioxide, placed on a wet cloth near the mouth, have been used. Other measures, requiring more space than the present model of aeroplane permits, are artificial respiration, traction of the tongue, and mouth to mouth insufflation. For the cardiac failure hypodermic injections of camphorated oil or ether are indicated."

There now, you know what air sick-

ness is and what to do when you catch it.

ONE of the English illustrated papers offers a photograph of Governor *Dixy* presenting the international polo trophy to the American players. Probably there are times when he wishes he was down there.

THE Pribiloff Islands have been favored with a naval wireless station. When the operator announced that he had opened communication with Honolulu and was prepared to furnish news on all available subjects the only thing the exiles on St. Paul Island asked for was—the baseball scores. The operator ventured to suggest a little information about the coronation of King George V.

"Ditch that," was the chorus. "Ask him for Cobb's batting average, and all about Eddie Collins, Hans Wagner, and Red Dooin. The coronation can wait."

It is probably still waiting.

DOWN in Philadelphia a baseball player assaulted an umpire and was promptly fined \$200 and suspended indefinitely. The next day word came from Philadelphia that the player was suffering from a nervous breakdown. Remorse or baffled rage?

THE Geographical Society has canceled the diploma granting a gold medal to Dr. Frederick A. Cook for his alleged discovery of the North Pole.—*News Dispatch*.

Be sure you're wrong, then go back and start again.

NEWS OF THE OUTDOOR WORLD

Aviation

ON July 11th Harry N. Atwood won the New York *Times* trophy by flying 568 miles, his trip taking from June 30th to July 11th to complete, and including Boston, New London, New York, Atlantic City, Baltimore, and Washington. On arrival at Washington President Taft presented the aviator with a gold medal.

At Vincennes, July 7th, Lieut. Conneau won the 1,000-mile international circuit race through France, Belgium, Holland, and England in 58 hrs. 36 mins. 45 secs. Garros was second in 62 hrs. 18 mins. 34 secs. and Vidart third in 73 hours, 32 mins. Lieut. Conneau, it will be remembered, was also the winner of the Paris-Rome race.

James C. Mars met with a serious accident on July 14th, falling with his biplane a hundred feet at Erie, Pa.

On July 10th the national circuit race finished at Johannisthal, Germany, Buechner being the first to arrive. The second arrival, Koenig, was declared the winner on account of his greater mileage. The distance covered was 1,200 miles.

The Belgian aviator, Olieslagers, made a flight of 626 kilometers (388 miles) at Brus-

sels July 17th, without a stop, in a monoplane. This beats the world's record for distance in a continuous flight.

The balloon *St. Louis IV* landed near Lapaz Junction, Ind., July 12th, winning the balloon race with a distance of 525 miles and an altitude of 22,000 feet.

The aviator, Joly, was killed at Juvisy, France, July 23rd, by falling with his biplane. The extreme heat is blamed for the accident.

Tom Sopwith, with a passenger, established a world's record at Nassau Boulevard, July 22nd, landing in the remarkably short distance of 1 ft. 5½ ins. He was second in the quick-starting contest, the winner being A. L. Welsh with 81 ft. 10 ins., but Sopwith won the bomb-throwing contest and the cross-country speed race.

The English *Daily Mail's* air race for a \$50,000 prize, covering over 1,000 miles, was won on the 26th of July by André Beaumont, whose real name is Lieut. Conneau. His time for the circuit, which embraced London, Edinburgh, Glasgow, Stirling, Manchester, Carlisle, and Bristol, was 22 hours and 28 minutes. Pierre Vedrines finished second in 22 hours 58 minutes 55 seconds.

St. Croix Johnstone, flying an American Moissant monoplane, broke the American record for duration and distance, remaining in the air 4 hours 1 minute $53\frac{3}{4}$ seconds, covering over 176 miles, at Garden City, July 27th.

Automobiling

A NEW world's auto record was made at Saltburn-by-the-Sea, England, by P. Bordino, the Italian driver, who drove 116.13 miles in one hour, July 1st.

Racing at Buffalo, N. Y., July 14th, on the Fort Erie Track, J. V. Constant, of Brooklyn, won the ten-mile national motor cycle championship in 9.29 mins. The fifteen-mile professional race went to Ed. Hasha, of Dallas, Texas, in $13.49\frac{3}{5}$ mins. The ten-mile trade riders' race was won by Hart, of New York, in 9:59.

The Grand Prix de France auto race was competed for at Le Mans, July 23rd, by fourteen starters. Hemery won the event in 7 hrs. and 6 mins., for 395 miles, his speed averaging 56 miles an hour. Maurice Fournier was killed as a result of his machine's axle breaking.

Golf

AT Bretton Woods, N. H., July 14th, Thomas M. Sherman won the annual tournament of the American Golf Association of Advertising Interests, defeating A. H. Johnson, of Scarsdale, 7 and 6 in the 36-hole finals.

At Garden City, July 16th, Donald MacKellar made a new amateur record for the course in 72.

Gil Nicholls, of Wilmington, won his title in the Metropolitan Golf Association match July 13th from a big field with a total of 299.

Golfing at Versailles, France, July 8th, Chas. Evans, Jr., of Chicago, defeated J. G. Anderson, of West Newton, Mass., in the final round of the French open amateur golf championship.

At Englewood, July 11th, Oswald Kirkby and Jack Hobens led the open invitation four-ball competition with a best ball of 67.

Playing at the Essex County Country Club, Manchester, Mass., July 22nd, Charles Evans,

Jr., was defeated by Parker W. Whittemore in the Manchester Cup final by a score of 1 up.

Tennis and Cricket

AT Haverford, Pa., July 14th, the Bermuda Cricketers scored 164 runs in the first innings of their two-days' match with an all-Philadelphia eleven, against the home team's score of 125. Again on the 15th the Bermudians made a total of 294 runs in their two innings, beating the Philadelphians by six runs for the two.

Defeating the Bensonhurst eleven in the New York and New Jersey championship games on July 8th, the Staten Island team maintained their list of wins intact. The final score read Bensonhurst 73, Staten Island 101.

The Toronto Cricketers lost to the Staten Island eleven at Livingston, July 22nd, by 15 runs. Toronto's score was 94, while the home team ran up 109.

Anthony F. Wilding, the New Zealander, playing against H. R. Barrett, the English tennis player, at Wimbledon, July 8th, defeated him in the fourth set for the challenge round of the men's singles in the English championship.

Dr. James Dwight, President of the U. S. National Lawn Tennis Association, stated on July 21st that an agreement has been made with the English Association to play the preliminary matches for the Dwight F. Davis Cup in this country.

Gustave F. Touchard won the challenge round of the Long Island singles on the Kings County Tennis Club's courts on July 1st from William B. Cragin, the cup holder. The young Californian registered 6-3, 4-6, 6-0, 4-6, 6-0. The doubles championship was won by Charles M. Bull, Jr., and H. C. Martin, the Crescent Athletic Club pair, from the Gates brothers of Yale.

Playing at Lake Forest, Ill., July 29th, C. M. Bull, Jr., and Harry Martin, of New York, won the Western doubles tennis championship, defeating G. M. Church and Dean Mathey, of Princeton.

L. R. D. Little and G. F. Touchard won the Eastern doubles tennis championship at Longwood, July 25th, defeating Beals C. Wright and N. W. Niles.

Sailing

LARCHMONT'S "race week" opened June 15th with 116 entries for the various events. Among the winning yachts were the *Miladi*, in the schooner class; *Avenger*, in the sloops L and M., and the *Joyant*, in the sloops P. Of the thirty-footers *Caprice* won the 20-mile race. Other winners were *Princess*, *Interim*, *Scud*, *Mana*, *Chinook*, *Grace II*, *Wild Thyme*, *Crescent*, *Nateka*, *Hamburg*, *Chickioker*, and *Sapphire*.

On the second day, July 17th, of Larchmont week, the yacht *Avenger* won in the sloop class L. and M., the *Dorello* in the M. and N., and the *Joyant* in the P. class. The "thirties" race went to Ralph N. Ellis's *Caprice*. Other winners in their classes were the *More Joy*, *Alert*, *Red Wing*, *Essex*, *Jolly Roger*, *Yukana*, *Ogeemah*, *Mahaskah*, *Edith*, *Turquoise*, *Cyric*, *Twinkle*, *Scaup*, *Skylark*, *Adois*, *Gogo*, *La Rochelle*, *Inez*, *Tautog*, *Gitty*, *Cliphora*.

Ladies' Day at Larchmont, July 18th, was a great success. The handicap speed boat race was won by the *Vita*, which finished the 20 miles with elapsed time of 1:26:30. The 1,000 yards' swimming match went to R. Rider in 16.10.

At Larchmont, on the 19th, 136 yachts crossed the starting line. The *Avenger* sailed against all comers and won. Other winners in their classes were *Miladi*, *Cara Mia*, *Dorello*, *Alera*, *Suelow*, *Cliphora*, *Alert*, *Quest*, *La Cubana*, *Amanita III*, *Grace II*, *Fastina*, *Keewaydin*, *Ogeemah*, *Arizona*, *Turquoise*, *Scylla*, *Little Dipper*, *Scaup*, *Slow Poke*, *Rowdy*, *Gogo*, *Let'er Be*, *Inez*, *La Rochelle*, *Faraway*, and *Gitty*.

The fourth series of the Larchmont races brought 131 starters to the line July 20th. Mr. G. M. Pynchon's *Istalena* crossed the line ten minutes ahead of her opponent, *Avenger*, but on corrected time the win was given to *Avenger*. The *Corinthian* won in the "P" class, Mr. J. P. Morgan, Jr.'s *Phryne* winning the "thirty" race. In the handicap classes the *Alert*, *Scud*, *Busy Bee* and *Robin Hood* won in this order in their four divisions. *More Joy* won the "Q" race, other winners being *Salas*, *Keewaydin*, *Ogeemah*, *Edith*, *Drena*, *Mahaskah*, *Cat's Eye*, *Scaup*, *Twinkle*, *Skylark*, *Alpha*, *Adios*, *Cow Baby*, *Nereid*, *Inez*, *Gitty*, *Tautog*, and *Cliphora*.

The big sloop *Istalena* won from the *Avenger* at Larchmont on Friday, the 21st July, in the fifth series, from 110 starters. J. P. Morgan, Jr.'s *Phryne* led the ten "thirties," winning from the *Alera* in 1 min. 7 secs. Other winners were *Crescent*, *Maryola*, *Busy Bee*, *Robin Hood*, *Yukan*, *Ogeemah*, *Keewaydin*, *Hamburg*, *Chickioker*, *Scylla*, *Cyric*, *Cat's Eye*, *Scaup*, *Little Dipper*, *Slow Poke*, *Kiddo*, *Viva*, *La Rochelle*, *Inez*, *Gitty*, and *Tautog*.

Larchmont's "last day" was marked by a full field, 135 yachts starting in the final series on the 22nd. Of these, only two failed to finish, one being disabled. Mr. G. M. Pynchon's big sloop *Istalena* again defeated the *Avenger*. In the "P" class the *Windward*, sailed by her owner, won, and the "thirties" went to the *Yolande*. The "handicap" winners were *Sally IX*, *Fearless*, *Chinook*, and *Kenosha*. In the inter-club race the *Festina* won, and in the Star class the *Little Dipper*. Other winners in their classes were *Clare*, *Cliphora*, *Pixy*, *Hoyden*, *Nateka*, *Ardeme*, *Moonstone*, *Curlew*, *Goo Goo*, *Pike*, *Skeeter*, *La Rochelle*, *Gitty*, *Tautog*, and *Cyric*.

The new defender made 46 miles an hour on her trial, without being driven to her limit, July 22nd. This is four miles an hour better than the previous best record made by the *Pioneer*.

At Sheepshead Bay, in the intercollegiate swimming races, July 8th, Princeton swimmers totalled 20 points over Pennsylvania's 10, Brown's 8, and N. Y. City College 7. T. H. Robinson won the 440-yard swim in 6:53, making a new record.

The yacht *Elena*, racing at Portland, Me., in the Eastern Y. C. race, won her fifth consecutive victory by about 21 minutes.

The Ottawa Rowing Club's eight was beaten in the semi-final Challenge Cup heat at Henley, England, July 7th, by the Magdalen College (Oxford) crew, the present holders, after a grand race. The Ottawans also lost the semi-final for the Steward's Challenge Cup to Trinity Hall, Cambridge crew.

The Bensonhurst Yacht Club Independence Day regatta was marked by late finishes. The sloop *Suelow* won in Q class, the handicap going to *Joy*. *Cyric*, *Skylark*, and *North Star*, sloops, each won a race.

The National Yacht Club started seven power boats around Staten Island July 4th. In Class A the *Caroline* won, and in Class B *Empire* had similar luck.

Racing at Marblehead, July 4th, the *Elena*, owned by Morton Plant, won the Eastern Yacht Club special prize for big schooners, as well as the famous Puritan Cup, over a 38-mile course.

Winners at the National Yacht Club July 8th were: Power boats, 17 miles, *Sim Too*; sloops 11 miles, *Soya*; handicap, 11 miles, *Careless*, other winning sloops being *Wink*, *Suffragette*, and *Aries*.

On Long Island Sound, July 8th, the Glen Cove cups were raced for at the New York Yacht Club's annual. Over a course of 19¼ miles, George Scott's schooner, *Miladi*, won the Class F race and the "thirty" race went to J. P. Morgan, Jr.'s *Phryne*.

Thirty-six yachts started on Long Island Sound for the annual race of the Riverside Yacht Club. Among the winners in the various classes were the *Fearless*, *Chinook*, *Robin Hood*, *Yukan*, *Virginia*, *Minnow*, *Prena*, and *Scylla*.

At the Eastern Yacht Club's race, July 8th, at Portland, Me., Morton F. Plant's schooner, *Elena*, won her sixth race this season in the first division.

At Marblehead, Mass., July 16th, the power boat *Classic*, representing the Motor Boat Club of America, won the race from Huntington, L. I., to Marblehead, on her time allowance. The *Kitsix* and *Thistle*, of Yonkers Yacht Club, were second and third, respectively.

The Ottawa Rowing Club's crew won at Henley-on-Thames, England, July 6th, beating the Belgian crew of Ghent, the 1909 winners of the Grand Challenge Cup.

At Marblehead, July 7th, the Eastern Yacht Club made its annual cruise, Capt. C. C. Rumrill's *Adventuress* leading. Capt. Dennis's schooner, *Elena*, won, with *Enchantress* second.

The Bensonhurst Yacht Club held its annual race to the Scotland Light Vessel, July 9th, for all classes. The yacht *Joy*, owned by Commodore Le Sauvage and G. Geer, was the first to finish, but on corrected time Richard Rummell's *Careless* was awarded first prize.

At Sheepshead Bay Bud Goodwin won the quarter-mile swim in 6:02½ mins., July 9th.

The Argonaut Rowing Club of Toronto made an excellent showing at Saratoga Lake July 28th and 29th, winning six races, viz., the eight-oared shells, quarter-mile dash for single sculls, senior eights, senior single sculls, senior fours, and champion senior single sculls, at the National Association of Amateur Oarsmen. Boston won two events, Philadelphia two, Detroit one, and Baltimore one. The best work for the Canadians was done by their champion sculler, E. B. Butler.

Mr. G. M. Pynchon's yacht *Istalena* won from the *Avengeur* by a margin of 23 seconds over the 20-mile course at the Indian Harbor Yacht Club regatta, July 29th. Other winners were: *Joyant*, *Alert*, *Essex*, *Scud*, *Robin Hood*, *Salas*, and *Hoyden*.

At the Colonial Yacht Club July 30th the annual race to Rockland light and return was won by the power boat *Anna V*, whose time for the fifty miles was 5 hours 1 minute 51 seconds.

Baseball

ON July 1st, the Waseda University of Japan easily defeated a picked team at Lenox Oval, New York, by 10 to 4, their opponents being composed of collegians and semi-professionals.

Pitcher Marty O'Toole, of St. Paul, has been purchased by the Pittsburg National Club for \$22,500. This is a record for such transactions.

Miscellaneous

THREE senior records were broken and one equalled July 1st at Pittsburgh, Pa., on the occasion of the A. A. U.'s championship games. W. M. Sheppard made the fast time of 1:54½ mins. in the 880-yard run, cutting the previous record by one second; C. F. Snediger threw the javelin 165.21 ft., breaking the American record of 163 ft. 1 inch, and A. R. Kiviat took the mile race in 4:19¾ mins., the previous A. A. U. record being 4:22¾. The 220-yard hurdles was won by Eller in 0.24¾—his own record.

Frank Kramer was defeated at the Newark, N. J., Velodrome, July 16th, in the five-mile national cycle championship, by Jackie Clarke of Australia, in 10:17 mins.

Four new club records were made at Brooklyn, July 16th, at the Sheridan Athletic Club meet. D. Politzer won the 60-yard dash in 6 $\frac{3}{8}$ secs., also winning the "220" in 24 $\frac{1}{2}$ secs. H. Browser made the one-mile run in 4.39, and the hop, step and jump was won by L. Bernstein (scratch) with 42 feet.

At the National Rifle Association shoot held at Bisley, England, on July 15th the Canadian team won the Mackinnon Challenge Cup with an aggregate of 1,581 out of a possible 1,800. The English team was second with 1,569.

Oxford and Cambridge defeated Harvard and Yale in a dramatic clash at the Queens Club, London, July 11th, by five points to four. The hammer throw of 151 ft. 5 ins. went to G. E. Putnam, of Oxford, the running high jump to Wooster Canfield, of Yale, 5 ft. 11 $\frac{3}{8}$ ins.; the half-mile run was won by B. M. Preble, of Harvard; the 100-yard dash by Duncan MacMillan, of Cambridge, and the running broad jump by R. T. Holden, of Yale. The 120-yard high hurdles went to G. A. Chisholm, of Yale, the Englishmen taking the two-mile run (E. Gowan Taylor, of Oxford), the quarter-mile run (F. G. Black, Cambridge), and the one-mile run, which was won by P. J. Baker, of Cambridge, in 4:27 $\frac{3}{5}$.

John J. Eller registered a new hurdle figure on July 9th, at the Guttenberg race-track, when he covered the 250-yard distance in 28 $\frac{3}{5}$ seconds.

On July 9th Alfred Goulett, the fast Australian, defeated Frank Kramer in the one-mile bicycle race at the Newark Velodrome in 2:06 $\frac{1}{5}$ min.

The Duke of Westminster's offer to the Hurlingham Club Committee to finance an English polo team for the international matches next year has been accepted. He will take control of the Cup Recovery Fund and the reorganization of the string of ponies, but will not play.

Shooting at Bisley, England, on July 19th, Private Clifford, a Canadian, won first prize in the Prince of Wales competition with a score of 81 out of a possible 85.

The Eastern Shooting Handicap was won at Wilmington, Del., on July 13th by Harry L. David, of the Island Gun Club, Philadelphia. David and H. E. Buckwalter, of Royersford, Pa., tied at 96 in the 100 targets, the former winning the shoot-off at 20 targets, 19 to 17.

Sir William Bass's famous mare Sceptre was purchased by Tattersalls July 14th for \$35,000. Eleven years ago Mr. R. S. Siever bought her for \$50,000. She afterwards changed hands to Capt. William Bass at \$100,000. Sceptre's wins include a St. Leger, Oaks, Two Thousand Guineas, and One Thousand Guineas—the four English classics—in one year. A daughter of Ornament, by Persimmon, who won the Derby for King Edward, she was bred by the late Duke of Westminster, and three of her daughters were sold for \$55,000 together. A fourth daughter, Maid of the Mist, fetched \$23,000 recently. Sceptre has won for her various owners over \$200,000.

John Paul Jones, Cornell's mile man, ran at Washington Park, Brooklyn, July 29th, defeating Abel Kiviat by 40 yards in 4:28 $\frac{3}{5}$ for the grass track mile.

Thomas Barden, of the Yonkers Y.M.C.A., won the Caledonian's six mile race in 27 minutes 30 seconds, July 29th.

R. M. Ritter, of the City Athletic Club, won the Metropolitan 440-yard championship, July 29th, at Travers Island, swimming the distance in 6:02 $\frac{3}{5}$, against Bud Goodwin's time of 6:55 $\frac{3}{5}$.

J. Steur won the fourth annual river Marathon at Chicago, July 29th, swimming one mile and a half in 43:21 $\frac{3}{5}$.

The world's three-mile record for trotting stallions was broken at Aurora, Ill., July 29th, when Joe Bowers, driven by F. E. Wickersham, of Arkansas City, trotted three miles in 2:10 $\frac{3}{4}$, 2:10 $\frac{1}{4}$, and 2:10 $\frac{1}{4}$.

Louis Scott, of South Paterson A. C., ran two miles at Celtic Park, July 29th, in 9:29 $\frac{3}{5}$, winning the event from scratch.

The American sprinter, Ramsdell, was defeated by H. Rau, the German champion, in the 100 and 200 meters in 0:10 $\frac{3}{5}$ and 0:22, respectively, at the Berlin Sports Club, Germany, July 9th. Harry Gissing, another American runner, won the quarter-mile in 0:51 $\frac{1}{2}$ and the half-mile in 2:04.



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