RIVER ROVERS

E. J. Brady

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The attention of Reviewers is directed to letterpress pages 129 to 146, dealing with "The Murray Waters Question"

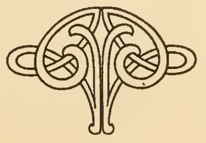
River Rovers.

The Author. *Monteath Photo.*

River Rovers

By E. J. BRADY

Author of "The Ways of Many Waters,'
"The King's Caravan,"
"Tom Pagdin, Pirate," "Bushland Ballads,"
"Bells and Hobbles," Etc.



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PROPY. LTD.
Melbourne, Sydney, Adelaide, and Brisbane.

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Dedication.

I dedicate this volume to my life-long friend,

BROTHER WILBRED,

A candid critic and a keen sportsman,
who imbued my youthful mind
with a love of literature,
and inspired my spirit with true
Australian sentiment.

Melbourne, Vic., 9th July, 1911.

The Travelling Biograph.

River Rovers

The day was like a sapphire set in an emerald. The harbor waves broke, softly as the opening of lotus buds in Aidenn, on the beach before us. We heard the deep seas tolling on the Gap and soughing round South Head, as Jim Jones and I dabbled our toes in the sand and smoked in sensuous laze. The Marine Parade was beautiful, but conventional and unadventurous. The glory of life in our blood set our pulses leaping towards wider fields. We spoke of the Bush and the Outer places.

The day warmed and grew, and the wander-lust grew with it.

Directly within view, tossing up and down on the Waters of Watson's Bay, rode Jim's 16-foot motor skiff.

An idea came to me. I rolled over on the warm sand and faced Jones with a tentative proposition.

"I'd like to take a motor boat down the Murray, from Albury to Adelaide," I said, "and see the Riverine."

Jim shut one eye and regarded the smoke-curls critically with the other.

"How far?" he asked.

"Fifteen hundred measured miles."

"Anyone done it in a motor boat yet?"

"No," I said. "It seems to me that nobody has thought of it. It ought to be done, though; there are so few things left on earth to do except discover the Poles. Besides, it would be a world's record for river distance as far as marine motoring is concerned."

Jim drew in more smoke. I could see that the great idea had taken mental root, and was sprouting pleasant tendrils of fancy.

"Can you fix it?" he asked, presently.

I mentioned "The Lone Hand" magazine as making it possible.

"All right," said Jim. "Get it fixed and I'll go with you."

So I went up-town and saw the Editor.

. . . .

Four days later, two enthusiasts were heaving joyously on a hawser, bringing the boat up on the skids at Watson's Bay for a thorough overhaul.

We repainted her, and rechristened her "The Lone Hand." She was fitted with a 1½ h.p. "Little Giant" engine, using motor spirit or benzine. This engine is built by the Strelinger Marine Engine Coy., of Detroit, Mich., U.S.A. Her speed was nominally 6½ knots in still water. With a 2-knot current in the Murray, we reckoned we could make good going. But we did not take the difficulties into consideration just then. They presented themselves afterwards. Difficulties generally do.

Then came the organisation of the outfit. That 16-foot skiff was to be our travelling-home for probably two or three months. We were to accomplish 1500 miles of unknown river waters in her. No motor boat had attempted to go down the Murray from

Albury to Adelaide since the great Australian river began its winding course from the feet of ancient Kosciusko to the Indian Ocean. The river gods might not receive the audacious adventure kindly; they might regard it as an invasion of sacred rights and immemorial privilege. There would be rain, perhaps floods, obstructions, shoals, sand-bars, rocks, rapids, dangers, delays. So we prepared, not without pleasurable anticipation, for all visible contingencies. Sport offered. Visions of wild-duck battues flashed through the busy hours. Dreams of 40lb. Murray cod lightened tedious moments of boat-painting.

We bought fishing-lines, spoon-baits, and reels and rods. I unscrewed the locks of my shot-gun, oiled the Winchester, and polished up the lens of the camera.

I dissuaded Jim from bringing many unnecessary and awkward things, including a folding-bed and a crosscut saw; but I permitted him a hammer, a monkey-wrench, a hand-saw, an axe, and other necessary tools.

We took a double pair of sculls, a mainsail, sprit and mast, in case of a breakdown; also a spare propeller and shaft and fittings; a six-by-eight silk tent, with a fly; a kerosene-tin bucket, with removable handle. Four billycans, a gridiron, frypan, enamelled plates and mugs, sheath knives, bags with running strings—to keep tea, sugar, and domestic necessities apart from invading ants—formed part of our cluinary outfit. The bucket we used for boiling beef—and the beef was good.

Oilcloths and macintoshes and spare old clothes we laid by as a precaution against damp ground and wet weather. A rug and a blanket constituted our bedding. The man who goes motor boating on the Murray River will find a rug to lie on and a blanket over him a good enough bed after his day's work is done. He will scorn the spring mattress and the feather pillow and go to sleep under the stars without

feeling the loss of such effete luxuries. He will rise from his couch of sand or grass in the mornings, and take his pre-breakfast swim, and shout in the sunrise for sheer healthy joy of living.

When we had selected and packed in convenient bundles all we deemed needful, we went and quarrelled with the N.S.W. Government Railway Department about the freight of our boat to Albury. Unimaginative officials pined to charge us 6d. a mile for conveyance. But we discovered that by building a crate around our bark we might save much coin of the realm. So we complied with idiotic regulations, and reduced the public revenue by more than 50 per cent. on the transaction.

My mate accompanied his beloved boat to Albury, and I arrived at the border town from Melbourne.

It was night when the express approached the Murray, with white stars winking overhead. I craned my neck out of the window to view the river, which was to be home to me for I knew not how many weeks. But the train dashed over the bridge, and I merely caught a fleeting glint of winding water, in which the stars were mirrored or lost in reflected trees shadows.

Then the highway of adventure lay behind in a still, mysterious night, and Jim was shaking hands on the long, gaslit platform, and obstructing the traffic while he imparted information he had acquired from various unreliable sources.

. . . .

At the very beginning we discovered that the population of the Murray banks knew nothing of the river beyond their immediate habitat, but they were all cheerfully ready to afford statements.

The Australian has a most elementary idea of land distance. No two bushmen are ever agreed as to the length of road from point to point; but when it comes to river miles, the Australian is plainly and simply a gorgeous liar. It is not that he wishes to mislead the

Getting Ready for the Long Trail.

Photo.—Henry King, Sydney

Launching "The Lone Hand" at Albury.

Photo.—Star Studios, Albury.

stranger. On the contrary, he desires to cheer and encourage him. So he says four miles when he believes eight, and the actual distance is sixteen. Occasionally he errs in the other direction, and doubles the mileage; but on inquiry it will be found that this is the imported Australian, not the native product. A Cockney always over-estimates, and a Scotchman takes so long to decide that you are generally out of earshot when he shouts his perjury at you.

The river was very low. There had been some rain in the mountains, but the two-foot fresh sent down from Mount Kosciusko was ahead of us, and we had no chance of catching up to it before it reached the Australian Bight.

Albury is a pleasant old town, with a post office and a place where one can purchase petrol at a 40 per cent. advance on metropolitan prices; but its shady sycamore-lined streets seem to breed pessimists as naturally as bad wine breeds headaches.

They came round to the hotel, although the hour was late, and told us that we would never get down the river. They said there was not enough water in places to float a boat drawing eight inches, and that the water was too deep in other places. The Murray was full of snags and sandbanks and gravel-beds. The last steamer that came up to Albury, 30 years ago, had to stay there, and be broken up and sold for old iron and firewood. No motor boat had ever gone down to Adelaide, and no motor boat ever would or could go. We would certainly lose the outfit, and probably both our lives as well. Hundreds of people had been drowned in the Murray—mostly strong swimmers. Old Jabez Cornfield was drowned only a week previously. He had been a respected citizen in days gone by, but he took to drink, and his body was recovered on a snag, after being in the water for six days and seven hours. He was of an incredible color when retrieved. He had about a hundredweight of iron tied

to him, and a good many people thought he might have committed suicide. We had better remain in their fertile and coming district, they said, and take up land. It was less strenuous and not so risky, and the profits in good seasons were tremendous. In any case, we ought to remain for the inquest; an inquest would offer fine literary material, they suggested.

We declined the hospitality of Albury, accompanied as it was by generous invitations to partake of local and imported beverages; and on the afternoon of February 28, 1908, a bright, promising, sunny afternoon—the boat being duly launched and loaded—we pushed off from the bank, lined with critical spectators, and took the long trail.

The river was deplorably shallow at the start, with hard gravel beds, over which the water raced and bubbled ominously. We would work cautiously over these, shoot suddenly into a deep, boiling whirlpool, and turn about with a merry-go-round motion, bow and stern in the current. The first stages of the journey we found would have to be accomplished largely by rowing and hauling the boat over shallows.

We acquired this interesting and useful information by shooting suddenly on to a gravel-bank, and ripping off our propeller. The codfish just below Albury know where that propeller is. Doubtless they bring their families and friends for miles to inspect it. It is a new river wonder, and useless as food, unless some daring old sixty-pounder takes it on when grasshoppers and black frogs are scarce.

Jim's remarks when the propeller went cannot be set down here. They were carefully and deliberately worded, but rather florid for publication even in a "Police Gazette." My companion divested himself of his garments, punctuating each item on the disrobing programme with expressions, some of which were new to me (and I have been in Northern Queensland and in the holds of sea-going ships).

A Lignum Swamp.

At the first dive he shot down-stream a good 10 miles an hour, and brought up on a snag 60 yards nearer Adelaide, gashing his foot badly. He clung nakedly to his perch, and lifted his voice so that I feared the police in Albury might hear and resent him.

I worked the boat off somehow and effected a rescue, and we resolved not to attempt any more diving in the Murray. We got many reasons afterwards for adhering strictly to this pious resolution—many good and significant reasons.

The Murray is a very wonderful, and sometimes beautiful, river. Taken with the Darling it is the longest in the world, and its watershed embraces a large section of the Australian continent. These facts and others are to be found in the geography books. But even the foreign geography books, one of which, English of course, mentions it as a "mountain torrent," do not state that it is a treacherous and erratic watercourse from Albury to Echuca, laying in wait for motor boats that it may devour them. There were times, along that stretch of winding waterway, when we almost hated and feared the river we had set ourselves to conquer.

The photographs which accompany this letterpress give very inadequate impressions of the difficulties of our navigation. One can see, and the lens will record, the snags on the banks, and the snags which project from midstream and shallow; but it was the treacherous, sly, sneaking, cowardly, submerged snag that we learned to dread. Some were roots and stumps of trees bedded firmly in the sand and mud, looking like black teeth waiting a prey. Thousands of these black teeth bristled everywhere, and we knew not where. Any one of them was vicious and sharp enough to rip the bottom out of our little craft, and leave us struggling mayhap in 20ft of whirling, eddying water, with the sinking of the outfit and a hard swim for life as the certain evils.

Even when we could get up power on the upper reaches, and enliven the anxious hours with a little fast going, we never knew the moment we would crash into some hidden saw- or spear-edged water devil, and become bait for perch and bream.

According to tradition, steamers occasionally traded the Upper Murray safely 30 years ago, and the river was then kept clean and navigable. But since the coming of the railway-builders there is practically no water traffic above Echuca. The stream is choked with silt and driftwood and submerged timber. If a flat-bottomed steamer attempts the current in the direction of Tocumwal or Corowa in flood-time, making a dash for a cargo of logs or produce, she takes the risk of remaining tied up to the bank somewhere until the next flood refloats her, or she rusts and rots.

Australian hardwood lives for 40, 50, maybe 100 years under water, and the red-gum snags we dodged on the way down were firm and solid enough to please any enthusiastic timber merchant who was uninterested in motor boats and record river trips.

We made our first camp about nine water-miles below Albury, taking the accepted average of three miles of water to one by road; for the river looped and returned upon its course interminably for the first 300 miles of the journey. We were dog-tired, but we climbed up a steep bank and surveyed the prospects. The sun had faded from the hilltops to the westward, and the land was brown and sere after dry summer days.

An unpicturesque and odorous woolwash confronted us. Outside a galvanised shed two men sat on woolpacks smoking. One was a red-faced, pleasant-looking person, and the other was Tim Smith. I have met Tim Smith all over Australia. He wears moleskins or dungarees, a soft shirt, and a long beard generally shot with grey. He is a simple, kindly,

obliging, cheerful soul, and you need not follow his yarns any further along the highways of mendacity than you care to go.

Tim Smith fondled his beard, regarding us with a benevolent eye the while.

"Any place to camp here?" I asked in my best bush-company voice.

"Camp in the shed," said Tim, "if you like. Thirteen bunks there, and me an' my mate only uses two."

So we thankfully culled our bedding from the boat and found the billy, safely stowed away under everything else. Tim made a pack-horse of himself; remarking at frequent intervals that he liked to oblige people, because some day he might want friends to do him a good turn. It was evident that the most of Tim's worldly philosophy lay in this principle—as announced.

"Where did you put the bread?" asked Jim Jones, rummaging among the cartridges and photographic material.

A cold shudder ran down my spine. I had bought onions and potatoes, and canned peaches and flour, and tinned fish and everything I could think necessary, in Albury. Surely I hadn't forgotten bread!

"In the boat," I said, lying loudly.

Jim turned over everything several times. I stood on the bank in the after-glow, offering counsel and suggestions. Some of the packages were heavy, but none of them was bread.

"There's none here!" he snorted.

"It must have gone overboard when we got out to drag her at the Island," I asserted.

"Well, you'd better go and get some more," said Jim. "I suppose you forgot it."

"I bought five loaves," I claimed—"five double loaves. Maybe they're in the tin box."

"Considering the tin box hasn't been unroped since

it left Sydney. I don't think they are," he replie sourly. "You'd better get some if you want any tea

So I walked a mile inland to a German farmer place.

An Indian hawker. wearing a huge yellow turban stood at the cow-bail waiting for a bowl of milk; the kine were in the yards. the pigs grunted within their smellful enclosure. and the farmer's comfortable vine-clad cottage. with outlying sheds and barns. made an effective picture; but I only had a soul for bread.

The farmer's wife was kind. and sold me two great home-made loaves and a can of milk. I trudged back to the river-bank. feeling like a patriarch after prayer.

Tim Smith had the billy boiled. and was fussing round looking like the father of the Prodigal Son. He opened a tin of our salmon with his jack-knife. because the whereabouts of the can-opener was shrouded in utter mystery.

Jim Jones swore he was going to go all over that boat in the morning and fix things so they could be found when wanted. But it took a fortnight to get the typography of our belongings. and even then the gridiron was usually under the petrol when it was wanted. or else the frypan had maliciously stowed itself away in the blankets with the last instalment of fat clinging lovingly to it.

We mealed at the woolwashers' table. and filled our pipes with good. honest plug. and then we lounged outside on woolpacks spread under the stars. Tim Smith drew on his wondrous imagination, just as an archer might gently and lovingly pull the bow-string up and up. until it touched his ear.

Tim had been everywhere. seen everything, and killed snakes. Not just ordinary snakes. but reptiles that a man might start at the tail-end at noon. and ride till sunset and not reach the business end of. Once, in Queensland. one of these fabulous snakes embedded its fangs in Tim's cheek. The victim extracted a

A Billabong on the Murray.

fang and sent it to the Museum in Sydney. We could go and see it when we went back. Anyone could see it. They kept it on view in a glass case. Tim gave the exact measurement of the case, and the name of the man who made it. He was great on details, and never contradicted himself.

The Southern Cross in a shamefaced way burned on his right hand, the Milky Way covered itself with an apologetic mist, and still that mild, bearded old man lied on.

"Onct," said Tim Smith, regarding the evening star with apparent reverence, "I was overseer on a cattle-station in Monaro. It was owned by an English syndicate, and they went in for stud bulls. It kem a very cold winter, the coldest winter they ever had on Monaro, an' the manager—he was a young feller from t'other side o' Gippsland—he wrote in his report to head orfis, an' he told head orfis 'ow at the last muster we 'ad 500 head of bulls, and how, owin' to the extreme cold, them bulls were all gone back into the mountains, an' he didn't think we'd save 'arf 'em by the time winter was over. Well, the English syndicate got a chill, because them bulls was worth something, each one on 'em worth more'n a 'undred anyhow, an' they wires back:

"Rug bulls at once."

When the manager got that telegram he *was* wild.

"''Ow in 'ell,' sez he, 'am I goin' to rug 500 mad Monaro bulls!' So he wires back—to put 'em off like:

"Cannot follow instructions; no rugs."

But the syndicate 'ad made up their mind them valuable animals 'ad to be saved at any cost, so they wires again:

"Sending rugs, insist on you following instructions."

"Well, the young cove had a stiddy job, an' he didn't want to lose it. In about a week two twenty-'orse team loads o' bull rugs kem to hand, an' the

manager called the hands together, an' sez: 'Boys, get all them bulls in an' we'll rug 'em, if it leads to a war between England an' Australia, an' takes till the day o' Giniril Jedgment to do it. I'll foller instructions,' he sez, 'if it lands the directors in gaol.'

"So we out after them bulls, an' we brought 'em in, every cow's son of 'em—but it took a week. One half-caste cove broke his neck over the job, an' my mate, 'Arry Moffat, got gored in the thigh, an' was crippled for nigh on 12 months. We took 'em one by one, an' got the rugs on 'em somehow, an' when they was all finished, the manager sings out:

"'Take down the scarlet sliprails, an' let the blankers go!'

"Go!" said Tim Smith, standing up, and waving his patriarchal beard in the beautiful starlight. "Go! There was never anything on this earth went like 'em. Some o' the rugs was red and some was blue, an' the whole bush for miles an' miles was just flying streaks o' red bull an' blue bull. An' beller! The bellerin' o' them bulls was enough to turn a man's 'air white. Nobody ever 'eard anything like it. You could 'ear 'em for miles an' miles, tearin', an' rippin', an' roarin', an' going' like mad back for the mountains.

"Well, would *you* believe *me*," concluded Tim, "that when we kem to muster that stock in the Spring, we could only find 150 out of the mob, an' only one o' them 'ad kept the rug on 'im, an' 'e was as quiet as a sheep, an' let us ride up to 'im, an' 'e put down 'is 'ead, an' sorter asked in a kinder shamefaced way to 'ave it took off, an' that's the gospel truth."

The narrator sucked at his pipe.

Presently the red-faced man asked in a quiet voice:

"What kem o' the rest o' them bulls, Tim?"

"'Ow do *I* know?" said Tim Smith. "I reckon it's time to get to bunk."

. . . .

There are joys in camp life that no city will ever know.

You awaken in the morning refreshed and hungry. You slip down to the river in your pyjamas, and peel off, and plunge into water that has not come from a reservoir through miles of heated piping and hydraulic pumps. You do your breast-strokes and over-arm strokes as if you were after the Royal Humane Society's medal, and you climb out on to the bank dripping like a retriever, and half dry yourself, and get into your clothes with the appetite of a savage urging breakfast.

Your black billy tea and fried steak will not give you indigestion, nor will your pipe of post-prandial tobacco affect your nerves. The blood courses through your veins—good, red, life-blood, wherein the white corpuscles do not dominate.

To Halifax with the towns! Avaunt effete civilisation! Pity the poor merchant going tiredly towards his office! Sorrow for the bank clerk at his stool!

All living Nature pulses, throbs, respirates freely around you. Every breath you inhale is a joy, a pleasure, a draught of wine with no headache in the heel of the goblet.

Slip cartridges into the breech of your shotgun! Adjust the reel of your fishing rod! Australia is a good country, and you are free to roam without fear of gamekeepers.

> Oh, Liberty, can man resign thee,
> Once having felt thy generous flame?

Let Lalage laugh and Ida pose. Let the World to its money-getting, its silly social ambitions, its effort and its strife! For you to-day there is nothing but peace, and to-morrow can care for itself. To-morrow we will all be dead.

From the brown grasses flocks of gaily-coloured parrots flew towards the timber, and a light wind lifted the thistle-down and carried it here and there.

The river flowed slowly between its deep banks, keeping constant current towards that distant ocean bourne whither we also were bound.

We re-freighted our blankets and cooking utensils, waved farewell to our over-night friends, who came down the bank to watch us start—the first motor boat they had seen. Jim gave the flywheel a professional twist, and "The Lone Hand" began to pitter-patter down the Murray. Our adventures had begun in earnest.

Our little engine only weighed 56lb., but we found that we could get up a speed of ten miles an hour going down stream; and we also learned very early on the voyage that until we reached navigable water it was not good enough to attempt fast running.

We acquired this fact and admitted it; but whenever we came to a reach of apparently deep water, the temptation to speed up was too strong, and the flywheel was generally called upon to execute its maximum 800 revolutions a minute.

Then Jim stood up in the stern, tiller in hand, keeping a hawk's eye on the channel ahead, watching for the ripples on the surface of the water that told of hidden snags; and I sat forward in the bow with a broken scull in hand sounding the depth.

I learned to execute some graceful evolutions with that paddle. It had snapped off about 6ft. from the blade in a rapid on our first day out, and after a time I could swing it forward, feel the bottom, report the depth, and change it from port to starboard hand perhaps six times in a minute.

I shouted the soundings as we went, thus: "Deep water!"—anything over paddle depth; "Good water!" —where I could just touch the bottom. "Four feet!" "Three!" "Two!" "Shallow water!" "Stop her!"

Then Jim would grab the lever, and we would probably plunge into a mudbank or a gravel-bed. Lower down the river these gravel-beds, on which the keel

Good River, S.A.

grated with a horrible tearing sound, gave place to sand-bars. The bars often spread right across the channel, and we would be compelled to get out—we never wore boots in the boat—and shove and drag her through to deeper water somehow. Ofttimes we spent an hour or more on a bar, with a hot March sun beating down on us, living the entirely strenuous life and acquiring blistered legs. But it was good fun, and better than physical culture exercises in a gymnasium for the development of muscle and strength.

Sometimes, by keeping the engine going at full speed, we could plough and churn a way over the sand. When the boat found the edge she would dip into deeper water like a duck, and we would yell applause and endearments at her.

I blushingly confess that we learned to love that little engine. I have seen Jim Jones pat her like a mother might pat her son, or a schoolmistress her pet pupil; and when she was thirsty and wanted lubricating oil, he would give it her as a woman gives a feeding bottle to an infant. If she got tired, or anything went wrong, Jim never swore at her like some men will do with machines. He just brooded over her with a spanner, touched her tenderly here and there, eased down any stiffness, or tightened up some loose section, and coaxed her into a good humour again.

Our electric battery was composed of dry cells, and we took a lot out of them. Before we reached Echuca, one afternoon, just when we were getting into good water, something went wrong. Jim didn't blame the engine. He said she was a thoroughly conscientious, strictly honest and industrious and sober engine, and the battery was at fault; it wouldn't spark properly. Batteries never had any principles to speak of. So I took the paddles and kept steering-way on the ship while he reasoned with the battery.

Presently Jim jumped nearly out of the boat, and burst into loud remarks. He had lifted the wrong

wire, and received four volts of electricity. That battery had been waiting for him, and it got him in the end. You cannot afford to treat a battery with disrespect. This treacherous action did not tend to increase our regard for the battery. We petted the engine more afterwards and made the battery so jealous that it struck altogether, and we had to instal a new one.

As we gained experience we organised for contingencies. In the event of our running full force on to a snag and ripping a hole in the boat, we were to both keep cool and try to get her into shallow water before she sank. If she foundered in deep water—there are holes in the Murray holding 80ft. of dampness—and there was no chance of saving anything, we were to swim with the current, and by no means attempt to battle against it, until we managed to get ashore. In every case, as soon as she hit anything we were to throw ourselves forward, and so lift the stern and save the propeller, if possible.

This last feat we performed fully 40 times before we got to Echuca, and on several occasions when we were running full speed. The propeller shaft was bent so much by two collisions that we had to take "The Lone Hand" ashore to straighten it on a stump.

The boat had a curved bow, so that when we struck a sunken log she would glide up on it; then, by throwing ourselves quickly forward, we brought the stern up; the propeller executed its revolutions in air, and, somehow—more perhaps by the will of Providence than our own efforts—we always got through without serious mishap.

When the days were calm and sunny we could see the channel fairly well, pick out the places where most of the snags were, and avoid them; but when the wind blew, and the surface of the water was ruffled, we simply took the risk—not knowing what trouble each succeeding second might bring us. Looking back, I

believe those were the pleasantest moments of all. It was a gamble, and we enjoyed the excitement of it.

Mile by mile we followed the windings of Australia's greatest river.

A few miles beyond Albury, the hills died away into blue distances, and we entered the flat prairies of the Riverine.

From sunrise to sunset, day by day, our way lay in and out of the plain. The banks of the river were richly garbed in green, drooping red-gums, and their reflections made shadow-trees in the water, with spectral clouds and faded blue skies repeating the overhead beauties of the glad hours through which we speeded, the musical ripple of parted waters for accompaniment and song.

I had my first shot at wood-duck the morning we left the woolwash. They were preening their mottled breasts on the edge of a gravel bank, and the approach of the motor seemed to puzzle them. We came into fair range before they rose. I got in right and left barrels of No. 2 shot, and bagged a brace, which we grilled over the coals for breakfast next morning, and carefully picked the bones. They were the forerunners of many a savory grill and stew.

It may be appropriate here to go into the question of cuisine. We organised this also.

I did most of the hunting; the fishing department fell more to my mate, who was particularly expert with hook and line. It was, therefore, my appointed duty to pluck and prepare the birds, and an occasional rabbit or hare, while he cleaned and cooked the fish. I wish to put on record a healthy man's appreciation of Murray cod fried in the open, in a pan of clean fat, by a mate who knew exactly the requisite crispness and brownness of the fillets under treatment. I hold, without fear of contradiction, that a two or three pound cod done in that fashion, and taken with a half loaf of bread, and, say, a quarter pound of butter and

two pints of coffee, is a breakfast fit for and enough for a prince. Although the prince might eat from a tin-platter and drink out of an enamelled mug, and use his sheath-knife without regard to etiquette, he would appreciate the dish. The hooking and landing of his fish beforehand would not detract from the pleasure.

I have no fault to find either with black duck appropriately stewed in a billycan. Of course, you first shoot your duck. This is not unpleasing to you if you possess sporting instincts. Then you sit forward in the boat and pluck it. If the wind is blowing, the feathers will collect aft in your mate's hair; but you can silence his protests by pointing out the absolute necessity for plucking a bird before cooking it. When you come to camp at night you singe the bird, having previously removed the superfluous sections, cut it up with a sharp bowie-knife, and put it in a billy with salt and pepper and sliced onions, some pieces of bacon, and sufficient water, and let it stew. Next morning you can heat it up for breakfast, and add a thickening of flour. Then dip bread in the rich, thick gravy, and thank Heaven for its beneficence. This recipe is given freely for the enlightenment of lady readers.

All along the River Murray, from Howlong, in New South Wales, to the broad South Australian reaches, one finds clean, white, sand-spits running out into the stream. We mostly chose a sand-spit for our night's abiding. It was softer than the tussocky bank, convenient and level, and the tent pegs could be driven in easily. When the day's run was completed, as the evening shadows began to close in, "The Lone Hand" would turn out of the channel and make for one of these spits—especially if it lay handy to habitation or human company.

First, the electric batteries were disconnected and a waterproof covering placed over the miniature machinery astern. Then the paddles were tied in pairs for

Photo—F. Gorman. Backwater from a Flooded Murray.

tent-poles, pegs driven fore and aft, and the vagabond tent pitched—using a rope as ridge-pole.

This became my mate's department. While he was fixing up our abode I built a fire and got the evening meal ready. Cold corned beef does not require much attention, but such ceremonies as the frying of bacon, the boiling of potatoes, and the brewing of coffee are almost sacerdotal, and must be approached with reverence.

It is a joyous thing to see the smoke pillar from crackling eucalypti twigs and leaves arising to Heaven, and to inhale the incense of burning wood. It is good to lounge by the red coals after a satisfactory meal and smoke the pipe of peace. It is sweet to lie under the tent with the hurricane lamp swinging softly overhead; hear the river talking to the stars, hear the fish leaping occasionally; hear the quack of wild ducks, the call of plover, and the uncouth utterances of night-birds in the distance.

The boat's sail—never hoisted but once on the trip—was our tablecloth. When the weather grew cooler it became a supplementary bed covering as well.

We would waken at dawn, tumble out into the freshness of the morning, build fire, cook breakfast, strike tent, roll up and bag the bedding, repack the boat, refill the petrol tank, oil and adjust the machinery, and resume the day's travel like giants refreshed.

Heroic labors often awaited us; but we studied the angular aspects of patience and cultivated brawn. We grew so hard that we jocosely struck matches on one another's muscles; so steady of sight and hand that we could shoot ducks with the Winchester as the boat sped. In sooth, the Red Indian mode came so pleasant and natural that I have on more than one occasion clipped a duck with the rifle, finished it with the shot-gun at nearer approach and retrieved the bird without stopping the engine.

Luckily for the expedition, unfortunate for the

Riverine, the journey was begun and completed in dry weather. Only twice did we get heavy rain, and the first of those occasions was after leaving our woolwash. We came to camp that afternoon between grey, misty showers, and slept on wet ground without ill-effect. It was a little settlement called Redbank, on the Victorian side. Poor soil and poor people, but open-handed and of warm and generous hearts. They gave us fresh milk and invited us to share their humble fare. And when we would not accept their kindness they were almost offended. But we said we would come up after tea and "yarn."

The children of gentle condition, whose evenings are made sweet with books and music, with theatres and the social intercourse of cities, cannot appreciate the bush significance of the word "yarn." A yarn in the remote Outback is the equivalent for a hundred enjoyments of the town. Where there are no pianos, no violins, not, mayhap, even an accordion, a banjo, or a concertina, under the bark roofs, under the hot iron roofs, under the roofs of thatch and canvas, under the open stars, when the day's labor or the day's march is done, they will sit and "yarn."

This makes the stranger doubly welcome. He has come from other places; he has new tales to tell. He in turn can be told old local lies and incidents that have staled in the ears of local audiences. He can be made the victim of ancient jests.

The rain upon the iron roof rose and fell through many octaves in the scale of sound as we yarned.

The mother of the household, her hair whitened by rough years of Australian pioneering life, sat by the fireplace, her two eldest sons on the cretonne-covered sofa, her husband with his feet up on a chair and his back to the wall. The indispensable sewing machine, under the window, was noiseless for once. The paper-covered scrim linings of the room bulged to and fro as the wind found inward passage through the cracks in

the slabs. A kerosene lamp shed uncertain light over this homely interior.

The old woman recounted experiences of forty years. As a girl she had trekked overland from South Australia with her people. She had married, toiled, borne children, known the vicissitudes of seasons and the vagaries of Nature; but in all those years she had only twice beheld the wonders of a city, and each simple impression of city life and city ways was fresh in her mind.

When we came to talk of the river—the dark, inscrutable, serpentine river, flowing by in the night beyond—she shook her head, sadly. The river had claimed her first-born child. It was just a common little bush incident, tragic, mournfully frequent. Ten years before, a young man in the prime of life and strength had gone out in the grey light to rescue stock from a rising flood and had returned no more. Months afterwards the river gave up his bones. They were earthed in the high ground beyond—and life and the river still rolled on.

The old woman by the fireplace put her apron to her eyes, the man with his back to the wall coughed unsteadily, and the brothers on the sofa shifted their feet. We led the conversation gently into other channels, and the curtain dropped again upon that passing vista of human loss and human grief.

. . . .

We set out for Howlong on a sunlit Sunday morning. The river purled innocently around clear gravel beds, and slipped softly over the naked feet of overhanging trees. It was all coo and kiss in the rising sun; but before night fell we had learned once more that our Murray was cat-like in character, with hidden claws. Having negotiated a tedious seven-mile bend, which brought us back a few hundred yards away from where we started, "The Lone Hand" ran into a series of serrated difficulties.

In places the current poured rapidly; those places we usually found full of snags and submerged or half-submerged logs. We entered an ugly-looking channel, where disturbed waters boiled and hissed. Jim Jones, a 12-stone athlete, stood aft at the tiller, eyeing the prospect anxiously. Every now and then he would pull back the lever, and regulate the "mixture" down to half speed. Very often he stopped the engine altogether, and carefully piloted the little craft through dangerous intricacies, sculling with his face to the bow. We were down to half speed, with a current of about four miles an hour under us, when we went crash on to a submerged log. The impetus was just sufficient to bring her half way over, and there she hung with the water swirling round her.

"Sit still!" roared James. "Sit hyphenated still!"

I sat.

"What's to be done?" I asked, humbly. "Shall I peel off?"

"What for?" he asked.

"I can get out and swim, and push her off," I ventured.

Jim looked at me with pity and contempt.

"How long do you think you'd swim in that current?" he asked. "Look at it!"

I looked.

It was frothing round the roots of projecting stumps, yapping at the heels of the logs, and snarling and snapping at everything as it shot by.

On reflection, I concluded that it was better to remain where I was until actually compelled to enter that maelstrom.

After about an hour and a half's anxiety and hard, careful work, we dodged and coaxed "The Lone Hand" into clearer water without losing our propeller.

They had never seen a motor boat along that part of the river before, and the sparse population ran down to the waterside when they heard us coming. Several

The Call comes down for Water—Upper Murray Settlement.

Hell's Gate. A Bad Place for Navigation.

horsemen followed for quite a distance along the bank, and shouted encouragement to us. A charming young lady and her brother were angling on the bank. They invited us ashore, and fed us on grapes. I had some difficulty in getting Jones to leave this place.

About midday, as we rounded a wooded bend, a be-whiskered gentleman, in a state of apparent excitement, appeared on the bank, and waved us to stop.

"Where are you goin' with that boat?" he shouted.

"Adelaide," replied Jones, laconically, as "The Lone Hand's" bow nosed the soft mud of the river margin, and the noise of the motor ceased.

"Y' can't! Y' can't!" yelled the stranger. "You'll never get over the next corner."

"What's the next corner?" we asked.

"Hell's Gates," said the man of hair, "they calls it. Last cove tried to get through was drowned, an' his body ain't recovered yet!"

I looked at Jim, and he looked at me.

"What is it like?" we queried.

"Awful!" said the man. "Awful! All snags, an' the current's like a mill-race. You'll never do it."

"We've got to do it," I said. "We can't go back now. All the people who dislike us would aim the finger of scorn and fire rude, sarcastic remarks. We must get through—or drown. Our friends will bury us decently. Go ahead!"

"Orright, orright," said the pessimist on the bank. "But I've warned ye! I've warned ye!"

"That's right," I replied, "but can you give us any directions?"

"Well," he said, "if you *will* tackle it, keep on the New South side till you get half way, where there's a big log across the stream. If you get over that, shoot straight across for the Victorian bank, and then turn into the channel; but you'll never do it—never."

We thanked the melancholy person—he was a rab-

biter—and approached Hell's Gates, not without some apprehension.

It was a weird-looking proposition. The river appeared, at first glance, to end there as far as navigation was concerned. Fallen trees and snags had seemingly blocked up a narrow waterway, which swirled down between high banks. How to overcome this next 500 yards of our journey became an immediate problem.

We hauled into the bank, surveyed the prospect, took counsel, and laid down a plan of attack. A shoot of about 100 yards on the New South Wales side brought us to the fallen tree. Luckily there was just room under the log, close against the bank, to allow the skiff through, and by flattening ourselves in the boat we achieved this. We ran into the bank and got breath. I made Jim go down the log and hold the boat while I snapped her, but the picture was a disappointment. It conveys no idea of the actualities. Instead of a Satanic strip of difficulties, the photograph expresses a rather pleasant-looking picnic place resting in midday calm. Yet Murray voyageurs and old river captains who negotiated it 30 years ago still speak of "Hell's Gates" with serious blasphemy.

The next performance we were called upon to execute was to "shoot" "The Lone Hand" over to the opposite bank, across current, avoiding, if we could, the obstructions of the passage; turn in the swirl a few yards from the Victorian side, and dart through a network of snags into the clearer water down-stream.

Jim put the engine half speed, and I sat forrard, using the broken paddle to port or starboard, as the steersman ordered, and so we made one of our most exciting dashes.

The river yelled and boiled; snags snapped at us with malignant teeth. We hit once, but the force of the current hurled us round. The boat completed a flying circle, leaped a submerged log, and shot out into

the broad water like a switch-back car. It was exhilarating work.

We arrived at Howlong that blue autumn afternoon, feeling that we had earned our night's rest. The arrival of "The Lone Hand" made quite an excitement. We camped near the bridge, and knots of curious country people squatted on the banks and discussed the novelty. One man argued loudly that the skiff was run by clockwork, and another contended that she went on kerosene. On the outskirts of the group stood a little, stout, sad-eyed man.

I learned presently that he was a travelling photographer. He had only a few weeks previously launched a flat-bottomed boat at Albury. This boat he had fitted up on a small scale as a living and developing room, and he had a fair-sized tent for a studio. All his ready money, he said, had gone into the venture. Taking his cameras and stock of negatives aboard, he had set out, thinking to work his way down the Murray to the sea. From the very first hour of the voyage he had been in difficulties, which culminated in a capsize at "Hell's Gate." Camera, outfit, negatives, and stock-in-trade had gone to the bottom of the Murray, and the voyageur himself was swept down-stream—about a mile he reckoned—and nearly drowned. Someone on the bank saw him disappear, and sent word into Howlong. The police came out and started dragging operations. Meanwhile, the "corpse" had found its way to a farm house, had been revived with the wine of the country, and was sleeping off its effects when discovered. The police were quite hurt when they heard of it. In fact, our friend said the sergeant seemed so cut up that he was almost sorry he had not been drowned.

He was an interesting little man, that photographer—a wandering Welshman, who had been floating round the world all his life. He had travelled with a house on wheels through the Midland Counties, caravaned

through the United States, spent some years in South America, and drifted over Australia. He was going grape-picking next day, in order to earn enough money to get a fresh start in life. This at 53! There is a lot of stolid stoicism to be found in the Bush—an heroic acceptance of the "bludgeonings of Fate," which asks no limelight and seeks no applause. Men and women of the West face the footlights of tragedy daily in a hundred star parts, where there are no approving audieuces to shout encouragement and offer wreaths or bouquets. They see the results of a season's labor swept away in an hour by floods, and do not moan. They face cruel droughts without flinching, watch their starving stock dying round them, see the tanks and dams and watercourses go dry, see the red sand whirled across sun-scorched plains by the winds of Hell, eat hard fare amid the hardest conditions, and remain still cheerful, resolute, and strong. Cheers for the nation-builders of the backblocks—hard and lean and brown!

. . . .

A Customs officer came down to the tent with a can of fresh milk after tea, and we filled pipes and yarned by the camp fire. Since Federation the border Customs officials have had a reasonably quiet time. Their duties consist chiefly in keeping tally of the dutiable goods passing across the river, in order that each State may receive its rightful proportion of credit from the Federal Government. But in days gone by, when Victoria faced Freetrade New South Wales with a high Protective tariff across the Murray, the Customs stood high in the plane of economic importance. Much smuggling was done, and the foundations of several respectable fortunes laid in the border towns in those days.

After New South Wales passed its first Chinese Exclusion Act, the sneaking of Chinamen across the river was a lucrative business. Down at Tocumwal I heard weird stories from a cut-throat who had once

Settlers on the Upper Murray

The " Lone Hand " at Howlong.

followed the profession of unlawful ferryman to Asia. Ostensibly he was engaged in fishing, but he had occupied many a dark night in sneaking pig-tailed undesirables over the water. Altogether he thought he had drowned seven Chinamen, but it might have been nine. He had received from three to five pounds a head from his fares, and the trade was thoroughly organised. But another gentleman started in secret opposition to him. He was no good, that other man. He would arrange to smuggle a cargo of Mongolian at cut rates—a pound a head—and when he got his yellow passengers in midstream he would demand another pound a head all round. He would demand it quietly, but insistently, with a spanner or a tomahawk in his hand, and the passengers dared not lift their voices in protest. After a time this rascal got to colloguing with the police, and fell to delivering his misguided victims at some place on the bank where they would be promptly seized by the authorities in waiting. Such perfidy, my cutthroat explained, could not go long unpunished by the justice of Heaven. The offender was found one morning in a bloated condition on a snag seven or eight miles below Albury. There were several knife wounds in the body, and it was apparent that the opposition had not died an altogether peaceable death.

The smuggling of prohibited stock has also been a lucrative business on the Murray, but of late the cold, unimaginative hand of law and order has lain heavily upon the land. A certain amount of sheep-stealing is still incidental to local conditions, and illicit distillation is carried on in some places, but the years of picturesque criminality are buried in a more adventurous pioneering past.

They were bridge-building at Howlong. One span of the bridge had been eaten through by white ants, and a benevolent public exchequer had been called upon to provide funds for a new structure. It was pleasant to see the bridge-builders turning up to work

in the early autumn morning—rolling out of their tents and camps, and drawing bucketsful of water from the Murray for bath or billy; to see the blue wreaths ascending from the fires; inhale the odors of frizzling steak and chops, of tobacco smoke and wood smoke; hear the clinking of hammers on iron. the screwing of bolts, the grating of drills, the squeal of the circular saw. I went over and stood beside a worker in dungarees, who was feeding firewood into the furnace of a horizontal engine, and smoked and said nothing—I felt so good.

We got as far as the N.S.W. Government Viticulture Station that morning. I found in Mr. White, the director, an old personal friend, whom I had not met for over ten years. The Agricultural Department has 70 acres under cultivation here. It was my first lesson in irrigation, and it opened my eyes to possibilities. Outside the fence spread a dry and apparently arid plain. Not a blade of green grass brightened that endless waste; not a flowering plant, not a strip of herbage to "mark the desert from the sown." Within the fence, where science had been yoked to the car of progressive agriculture, there was no desert, but a fertile oasis burning like an emerald on the dry breasts of Nature.

This experimental farm has been instituted for the cultivation of phylloxera-resisting vine-stocks. I thought instinctively of that lost Norse colony in Greenland, which, centuries before Columbus, sent its beaked ships down the New England Coast and left material for Longfellow's "Skeleton in Armour." They saw the woods of Maine, and, going ashore, fed gratefully on the wild grapes and called the land Vinland. Now this original grape stock was being cultivated at Howlong, and on its disease-defying stems Mr. White and his assistants were grafting varieties of grapes from all over the earth, that Australian vignerons might overcome phylloxera.

On the Roads.

Cool grape-arbors surrounded the director's homestead. He plucked nectarines of fabulous size from the trees in the orchard, culled tomatoes, cut luscious grapes enough to fill a sugar-bag, detached a huge watermelon, and set me back to the boat an enthusiastic advocate of irrigation.

"Where have you been?" asked Jones, as I appeared over the edge of the bank, laden like a camel.

"To the Promised Land," I replied. "Get a knife 'till I cut the throat of this aggressive watermelon." We buried ourselves in that melon. It was a hot, thirsty day and—we buried ourselves in that melon.

The grapes—they were of the choicest kinds, muscatel, black ambro and black prince—lasted as far as Corowa, and below Corowa I went ashore to a vineyard, and bought another bucketful of the best for a shilling, and these lasted until we were tired of eating grapes. Australia is a good country to live in, if literary people and politicians would only recognise it.

That afternoon we met our first stretch of good water, and innocently imagined the difficulties of navigation were over. We made fully two hours' run without stopping the motor or striking anything, and we told one another gleefully that the worst had been conquered.

. . . .

It was Paddy Duffy who leaned over a high bank in the gloaming and asked us if we meant to camp there that night. When we said we would, Paddy appeared to take it as a personal favor to himself.

This six-foot Celt held charge of the pumping-station that supplied the Victorian town of Rutherglen with water—miles away.

"You'll pitch no tent here to-night!" said Paddy, viewing our camping preparations with disfavor. "There's a bed at the house for ye."

We argued the point until he grew dangerous, and compromised by accepting the best family mattress.

Nothing short of attempted homicide would have defeated Duffy's hospitable desires.

Shallows and snags, with occasional reaches of fair water, enlivened the approach to Corowa. Here direct railway communication with Sydney ends. From Corowa to the South Australian border the New South Wales side of the Murray is cut off from the capital. But Victoria, with the enterprise of the poorer brother, has already stretched out seven fingers of railway to clutch the fatness of the Riverine, and intends ultimately to place both hands upon her prize. Corowa lies in a bend of the Murray, like a fair girl's head in the curve of her lover's arm. We made an impromptu toilet under the shade of a red-gum, and advanced upon the town. With characteristic Australian friendliness the town received us warmly. News of the expedition had preceded us, and the inhabitants, being of a sporting character, held out the glad hand. The Corowa "Chronicle" seized us and conveyed us to the principal hotel for lunch. Prosperous townsmen placed vehicles at our disposal; fair ladies smiled upon us, people pointed us out in the street—we were in danger of being famous. They said we would have good river now for the rest of the journey; we had got over the worst, and we should stay in Corowa a few days and look around their golden land of grape and grain. We should view the vineyards and the wheatfields; there was a lagoon out about 15 miles fairly black with ducks and teal, to say nothing of the fishing, which was admittedly the best on the Murray from Albury to the sea. Jones showed signs of wavering, so I took him aside and spoke severely. I pointed out that there were 1400 miles of river yet before us, and that if we began lotus-eating at Corowa we would probably be eating the bread of repentance at Koondrook. I thought of old Jason's ruse, and suggested that we ought to go to the chemist and get some cotton-wool to put in our ears, so that we might not hear the siren

songs of Corowa. I spoke of St. Anthony and other notorious people. I pointed out how Alexander had marched over Asia, just because he kept his objective in view. But Jim had me there. He retorted that after Alick completed his great trek, he stalked round the streets of Athens attired in the family tablecloth and wailed because the wine of Fame would no longer go to his head.

This made me desperate—I was beginning to weaken myself. I spoke excitedly of Hannibal and Cæsar, and Napoleon, and the Book of Common Prayer. I said the eyes of all Australia were upon us, apart from the hard commercial gaze of our proprietary, and we must go on.

Jim shook his head, sadly.

"It's no use," he cried, "you can't get away from them. They'll use force."

"Then let us sneak out," I suggested.

So we put up a ruse on those good people. We pretended the boat was leaking, and brought her round to the rowing-shed for an overhaul—and after fixing the propeller and buying our groceries and meat and things by stealth, we slipped discourteously away from the town in the late afternoon without saying good-bye. I trust Corowa will forgive us now.

I am firmly convinced that if we had stayed over-night in that delightful, hospitable place, we would be there yet.

We petrolled secretly down seven miles of good river, with green vineyards and red wheatfields on either side, and came to anchor for the night. There was a great round of corned beef in the boat, and the boiling of this in the kerosene tin gave us an evening's occupation. An enlightened aboriginal paid us a visit, and imparted useful information on the question of bait. Cod-fishing in the Murray is not a mere matter of sport. From Albury to Lake Alexandrina the river offers treasure to hundreds of professional

fishermen. All the way down one sees along the banks thousands of stakes, to which lines have been attached. Every day we passed anglers of all characters. Men, women, and children engage in the always pleasant, and ofttime profitable, occupation of catching the fatted cod and perch and bream. Aborigines and half-castes from the mission stations, town residents, country people, visitors, tourists, travellers, and whalers squatted or lounged on the riverside watching floats and tending lines. Between Tocumwal and Echuca we found aboriginal fishing camps every few miles. These people lead a gentle, nomadic life, moving slowly from place to place with their canoes and traps and general outfit.

Sometimes the camp was a gunyah of boughs, sometimes a few sheets of bark or a blanket, sometimes a tent and lean-to. The native seems to favor the hand and set line rather than the drum-net, which forms part of most Murray whalers' travelling furniture. Usually the fisherman attaches a bell to the stake on which his line is tied. Often at night we would hear these bells tinkling, and know that a big fish was hooked; or panting along we would see a stake violently agitated. Out of kindness to the fish, once or twice we unhooked it, and it fell into the boat overcome with gratitude.

After a few days on the Murray we learned how best to provide ourselves with delicious fish breakfasts. We would wade out on the shallow reefs, and get a bag of mussels. Then at night, after tea, we baited our lines and sat smoking in the starlight waiting for bites. It is a pleasant thing to haul in a 10lb. Murray cod. I have often, with perhaps one cast of the line, caught a ten-pounder while Jim was cutting the tent-pegs or getting the bedding out of the boat.

No one disputes the merits of Murray cod; it is one of the finest fishes in Australia. The great river sends

Steamer with Barges.

down its wealth daily to Melbourne and Sydney, and helps to feed settlement and town. Occasionally the cod—which is really a perch—attains a weight of 80lb., but over 20lb. the flesh is coarse and meaty. The 6lb. cod is your true gourmet's size. The bigger fish are often kept on a tether, and fed until opportunity offers to send them to market. The fishermen secure them to the bank by a cord tied through a slit in the upper lip, a rather cruel method, and give them meat or rabbit entrails to keep them in good condition. In certain places and at certain times the cod will take any bait with avidity. The angler is successful with mussels, worms, frogs, shrimps, raw meat, even a red rag. The breast of a cockatoo is said to be peculiarly acceptable, and latterly the spoon bait and spinner have come into use, particularly for lagoon-fishing. I caught good fish below the junction of the Darling with the spoon bait; but in the upper reaches of the Murray it brought no results. Down in the wide water within the South Australian border several small steamers are engaged in the fishing industry; they run their catches into Adelaide at intervals. The fish attain their greatest size in the Lower Darling and Murray.

The Ovens River, which has its source in the Victorian Alps, empties into the Murray by the starved-looking hamlet of Bundalong, half-way between Corowa and Yarrawonga. From its cradle—where the mountains of God are hurled up to morning—to where it pays toll to the Overlord of Waters, it runs through much impressive country. We found this dark-looking tributary of the Murray just at sunset on a windy afternoon, and cast about for a camp. A hut, constructed entirely of sacking nailed on a rude framework of saplings, sheltered us that night. The hut had been built and occupied by a bullock-driver and his wife. It consisted of two little rooms, with earthen floors, a case for a dining-table, and boxes for chairs.

The kitchen cupboard was also a case, and the toilet-table in the bedroom still bore the lettering of a well-known brand of schnapps. Some plants in kerosene tins hinted of æsthetic aspirations.

An inquisitive youth of 15 turned up at the camp from somewhere out of the darkness, and wanted to know all about motor boats. He inquired if we were sleeper-cutters. Sleeper-cutting was the industry of the place. This child of the bush was himself earning nearly £2 a week "squaring" for the cutters. A self-possessed youth, who was learning early in life the virtue of labor and the value of money, he entertained us with information about Australian timbers, the market prices of railway sleepers, and the conditions of bush labor generally. Presently a settler and his wife appeared out of the night, and invited us over to supper. They were simple, homely people, but they set out their humble cake and wine and a plate of fruit with the grace and hospitality of an Arab household. Cultivation that year had been a failure in the district, and the settlers were eking out a livelihood by sleeper-cutting, rabbiting, road-making, or whatever offered. The settler cherished pleasant recollections of the last flood, when he and his wife had gone out with sticks and killed hundreds of rabbits in an hour, and made good money out of the pelts. It was great fun, they said, rowing their boat about from log to log, on which the bunnies were clustered, and filling it with dead rabbits.

It has come to be recognised in Australia that the rabbit is not altogether a curse. Along the Murray I found scores of people making a living by rabbit-trapping. Some of the queerest characters on the river are to be discovered among the ranks of the professional rabbiters. Many whalers follow this occupation, working up or down stream in their flat-bottomed boats, loaded with spring traps and necessary paraphernalia for snaring the nimble rabbit. Skins are

a current article of barter at the stores and on the trading steamers, and, despite the low prices of latter years, a fair living can be made when the animals are plentiful, and at least a few shillings for tucker in most places.

As an item of food the rabbit is not looked upon with general favor by the bush population. In the first place, the dish is too plentiful, too easily procured. If *pate de foie gras* could be on anybody's plate, everybody would soon be tired of it. Where a settler can go out and fill a cart with rabbits in an hour or so, rabbit does not appeal to him—he much prefers corned beef. I have had twelve consecutive meals of corned beef, and, if necessary, I could have surmounted a thirteenth, but no human being could possibly be expected to eat twelve consecutive meals of rabbit. The Australian aboriginal despises rabbit as food. He will live and thrive on the rank flesh of opossum, his natural indigenous sustenance, but grows thin and miserable and almost pale on the imported substitute. This fact, Mr. James, of the Mission Station at Barman, emphasised, when I asked him why the Murray River aborigines did not eat more rabbit. It is a consideration for scientists.

A chill wind ruffled the surface of the water, and made the detection of snags more difficult as we set out for Yarrawonga. The country had now become universally flat and monotonous. A great plain, broken by clumps of timber, met us wherever we went ashore to survey the land. Hour after hour we drove our little craft down between high, grey banks. Hour by hour the vibration of the engine continued. "Burr-burr-burr," sang the flywheel; "pit-pit-pit-pitter-pit," cried the exhaust as we sped on. Flocks of white cockatoos and pink galahs rose screaming from the timber, blue cranes flapped away lazily, and the white-breasted grebe and smellful black shag fled at our

approach. But sandbars and snags continued to enliven the passage.

Presently Jones put his hand on the cylinder, withdrew it quickly, and stopped the engine.

"What's the matter?" I asked, from my place forward.

"Run hot," he said.

"What's to do about it?"

"Dunno," replied Jim. "Get her ashore first and see."

So we chose a sloping sand-spit, and hauled up "The Lone Hand," stern first. The chief engineer went to work with a monkey wrench, and used language.

I stood by, obeying orders. I will swear that I put the disintegrated parts just where I was told to, and it *was* Jones who mixed them. Otherwise, how could the set-screw for the propeller get confused with the contact piece, or whatever it was? I ask any experienced motorist to explain this; it is beyond me.

I offered advice, but Jim begged me, for Heaven's sake, to take the gun and go inland and shoot a cockatoo or an emu or anything. He said he didn't care if I went and gunned a shire councillor as long as I didn't shoot him sitting. He made remarks about poets and writers which the bitterest and most disappointed critic would be ashamed to utter.

I was hurt. I went and sat under a tree some yards away, and told disrespectful stories about motor engines to the whole wide world in a loud voice, until Jones could bear it no longer.

He came over, pulled out his pipe, filled and lit it in silence, and then said solemnly:

"Do you know a set-screw from a cylinder-ring?"

"Never mind," I replied. "Do *you* know a trochee from an iambic?"

"No," he said.

"Or a dactyl from a hexameter?"

Clay Banks, Lower Murray.

"No, I don't; but I suppose *you* think YOU know what's the matter with the engine?"

"I do," I said.

"What?"

"It won't go!"

"Ah!" said Jones, "and *why* won't it go?"

"Ask a policeman," I replied, facetiously.

"No," said Jim, in a cold, chilled-steel voice, "the reason the engine won't go is because you have been singing to it. That's one reason. The other is because there is sand and gravel in the valve of the pump. If you will only"—and here his words fell like hail on a hot iron roof—"if you will only go away into the bush and photograph yourself in absolute silence, I will detach the pump and remove the gravel. *Will* you go?"

I saw that it was no use arguing with a motor man, so I went away shooting for about an hour, and when I came back the boat was afloat. He was sitting in it fishing, and he wore a serene smile.

Further words were unnecessary. I laid two fat black duck on the gunwale by way of a peace offering, and we proceeded. That was the nearest approach to a row we had on the trip.

It was a lonely, irritating strip of country, and when we saw the galvanised iron roof of a dwelling above the bank, I went ashore with a billycan to buy milk and make inquiries. No yelp of dogs heralded my approach; no smoke curled from the chimney of the place; no gruff bush voice answered my inquiry of "Anybody home?"

Bare, reddish earth lay within the fence of the homestead; cold ashes spread before the door of an open-air oven at the rear. The voices of children, the scream of the domestic parrot, the cackle of fowls were absent. I knocked on the back door—no answer; I went round to the front and called—still no answer. Then I sneaked on to the verandah, and looked through

the uncurtained glass of the windows. The rooms were empty and bare—the homestead had been abandoned.

The bush offers no more desolate picture than this. Miles upon miles of plain spread away from the river —untenanted, soundless, lifeless, and drear. Who were these people, and why had they gone away? Had they put up some unknown, unrecorded struggle against the forces of Nature, and been defeated? Had disaster found them?- Had the woman died or the man been stricken down? Here in the burning sunlight lay the shell that had held domestic hopes and effort. Once someone had made a garden here. A garden! Think of what a garden stands for in the scheme of life! The laying-out of the little conventional walks, the planting of the familiar flowers; the appointed plots, the seed beds; the companionship, the interest—love, and a garden.

Of all the garden there remained only an oleander tree. It stood by the dilapidated fence in full bloom. Poisonous are the flowers of the oleander tree, as every horticulturist knows. The bees will not touch them. A strong, dangerous perfume is diffused from their pink petals. I gathered a bunch of these flowers, breaking the branches in a spirit of strange, wicked reverence, and returned to the boat, with a feeling of relief. It seemed to me as if Death had suddenly appeared and pointed a bony forefinger at the house, and Life and Laughter were no more.

. . . .

Yarrawonga occurred late on a March afternoon. It was a typically-correct Victorian town, and, somehow, did not appeal to us. The only object of real interest that presented itself was an old traveller on the reserve, who had found a unique camp in a big, upstanding tree. Unremembered years before, the natives had ripped a strip of bark from this tree for a

canoe. There was a hollow in the butt, and the old fellow had made himself a hard, narrow bunk with a couple of condemned railway sleepers. On this his blankets were spread, and here he dwelt rent-free and safe from the weather. A piece of sacking covered the aperture at night. His kitchen knew no roof, and he lived—as he lived. We had a long, friendly yarn. He was a rare, grizzled old battler, and he told me that he had camped in that very same tree twenty-five years before. He had "whaled" the river for over thirty years, but the rheumatics had got into his right leg, and his swagging days were over. He rolled up his trousers and showed his shanks. Like most invalids, his mind was centred on his malady. One leg was quite withered by Heaven knows how many hours of lonely pain. The other, he said, "was as good as new." Could I suggest anything that would do him good? He had tried liniments and pills and various remedies, including the carrying of a raw potato in his pocket. I looked at the poor, grey old beggar, and suggested the hospital.

"No," he said, he was "not going into any blanky hospital—not yet. When a man went into hospital he went there to die." He was "worth a dozen dead 'uns any day."

"How long have you been camping in this tree?" I asked.

"Since December," he replied. "I took real bad about Christmas, an' couldn't get any further."

He didn't ask for any silver, and he didn't crave tobacco. I went away with the impression that there was a lot of hard grit in this crude, incidental character of the Australian bush, this soldier of the every-day. I have seen a suburban philosopher—a follower of Immanuel Kant—with the toothache, and he might have taken a lesson in fortitude from the tree-dweller of Yarrawonga with a withered leg.

. . . .

Yarrawonga is without historical significance. It is an inglorious town, with shade trees and brick pavements. It is blandly agricultural and bovine, and dull.

We left the place hurriedly, lest we might petrify there; camped below it, and grilled a steak in the golden twilight, on a nice fire of red coals. We said we would stay over for a day or two at Tocumwal.

Next night found us at Boomanoomanah station, one of the finest squattages along the Murray on the New South Wales side. There are 10,000 acres of good land along the river bank suitable for closer settlement. The whole station area finds a living for thirty people where 1000 might dwell in comfort.

The Murray squatter is, on the whole, an uncivil creature, with, necessarily, honorable exceptions. These sheep sheiks of the West have for so long held undisputed monopoly over holdings as large as European principalities that they fail to read the writing on the wall, which proclaims the beginning of a new order of things. The vast estates of the Riverine will have to be cut up for closer settlement, and the land monopolist must go. This splendid territory, embracing millions of acres of irrigable land on which a dense population might live and thrive, cannot remain for ever in the possession of a few dozen wool kings and foreign investors. It must, sooner or later, be occupied by Australians—or Japanese. Sheep can't hold it.

In any general scheme of immigration and settlement which the Australian Government may undertake, the development of the Riverina should be put prominently forward. Federal control of the Murray waters would be a first step—but discussion of these economic and political possibilities will better come after the story of the journey has been told.

Cobram East station gave "The Lone Hand" warm welcome and an invitation to come ashore and loot its orchard, where large, late peaches offered downy cheeks to the kisses of the sun. Here is one of the

finest sites and fairest residences on the Murray, and its stalwart owner represents a type of Australian pastoralists who form the honorable exception. A hearty citizen, 6ft. 6in., filled with human tolerance and democratic spirit, willingly paying the best wages, and conceding the best conditions to his employees, so that his name is honored and regarded for hundreds of miles.

We took our propeller shaft out here and straightened it. The propeller had struck some unseen object, and the blade was bent up till it had chipped out a groove in the sternpost. The river was still a waiting dragon desirous of making an end of our impudent motor boat somehow.

We lunched under the bridge at Cobram, and watched some drovers bringing over a mob of fat sheep from Victoria into New South Wales. Dogs yelped, a cloud of dust went up into the air, shouts of men, and the cracking of whips were heard—a pack-horse trotted down to the riverside to drink; two horsemen met coming from opposite directions, let the reins fall loosely, and began to yarn. One man threw his leg over the saddle, and struck a match on his trousers—it was all a beautiful panorama, full of Australian light and color, and it was grand to lounge there in the shade munching our bread and cheese, and watch it. Peace dwelt in our hearts, and the prospect of adventure made golden every hour. New scenes, new faces, new life met us at every stage, and softened in some degree the asperities of our journey.

The way was enlivened with incident, but one little happening after we passed Cobram left an indelible impression on my mind. Rounding a bend, we came upon a strange group on the bank. Two women and a lad were endeavoring to release a beast that had been bogged in the thick mud of the margin. We turned the boat inshore and offered assistance. On the bank sat an infant, with two little children beside it. The

selector's wife and her neighbor and the lad were played out—their men were away working at Strathmerton, on the railway line, and they had been trying since early morning to drag the cow out of the mud, without success. We rigged a block and tackle, got a purchase on the limb of a tree, and after two hours' hard work succeeded in hauling the unfortunate animal half-way up the bank, where it lay rolling its eyes piteously, and plaintively lowing. It was too weak to get on its legs, and its chance of surviving was about one in a hundred. It was late to go further that day, so we ran up our tent on the bank. After nightfall the woman, carrying a lantern, some bags, and a bucket of chaff, reappeared on the scene. She was a wistful, pathetic, little woman, who had apparently been a very pretty young girl; but adversity was wearing her down. They had had a run of bad luck and bad seasons, she told us. Sickness in the house had made the trials of backblock life still harder to face. But, she said, with a flickering smile, that she had a very good time before she was married, and she supposed she oughtn't to complain now.

It was a simple philosophy, curiously feminine. The lantern threw an uncertain light over a picture full of homely pathos. The cow, stretched on its side, too weak to move, kept putting out its tongue and licking up chaff from the bag on which the selector's wife had spread it. Every now and then the animal would moan in a depressing, humanlike way. There is nothing more touching than the death of domestic animals, their appealing looks for help, their awful dumbness and despair.

I shall long remember that scene on the Murray, that sad-faced woman, standing mournfully beside the expiring beast, the stars winking cruelly at their reflections in the still water, the subdued noises of the Bush, and Nature, and Night.

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Feed Time.

We arrived at Tocumwal early on a warm Saturday afternoon, and found no place of pleasant fountains and green fields and gardens, but an unpicturesque disarray of iron-roofed dwellings scattered about an area of dust and desolation. But it was always pleasing to go to the post office and get news of the world, to have word of the near ones and dear ones, even to hear how one's enemies were prospering.

Later, at Mildura, I was handed, by a mechanical official, two black-edged envelopes, that let down a dark curtain between my life thoughts and the sunlight. Death—sudden and inexplicable—had claimed a victim, and hopes and dreams were laid in pall. But at Tocumwal the mails were all good, and all the gods in gracious mood.

We went down along the river bank, and made a camp, intending to remain some days and rest after strenuous accomplishment. The strain was beginning to tell somewhat on our nerves already. Between Cobram and Tocumwal we had been aground about twenty times, our legs and arms and faces were blistered from the sun, and a plank of the boat was sprung. We had been striking snags and jumping logs continuously for a week. Jim's eyes were entirely bloodshot from constant peering ahead on sunlit waters. In the afternoons, when we were running down Western reaches, the glare was almost unendurable. The boat being right down on the water, there was no escape from this, and no relief except in language. And language is a poor anæsthetic for blistered legs and pained optics.

We began to admit now that we had made a mistake. We should not have attempted to navigate the Murray when the Murray was little more, in places, than a chain of waterholes. We should have waited for a rise in the river. This conclusion came to us early on the voyage, but too late to be of any practicable service. We had put the boat in the water,

and had begun. We must either go on or admit failure; and there is nothing a sporting Australian public despises more than failure. Rightly so. This country is too young, too virile, to condone defeated effort. Phillip, that gaunt captain of the Lost Legion, did not fail. He added a continent to an empire. Bass and Flinders did not fail, nor Blaxland, nor Mitchell, nor Sturt. They were doers, and they did.

Pride and self-respect and the memories of men came to our aid when we were tearing our hearts out tugging "The Lone Hand" over clinging sand and facing the chances. We told one another that we would go on while her planks held together. We would go on with sail and oars if the engine gave out. We would go on if it took twelve months to reach the Southern Ocean and we had to live on what we might gun and hook and steal along the road. In the light of this pious resolution we set up our camp at Tocumwal, and, after a sufficient meal, wandered up town for some necessities. Tocumwal viewed us with languid curiosity. The district was undergoing a severe drought, and had grown dispirited. An occasional kerosene lamp added to the gloom of the main street. On a pane of glass outside a fruiterer's shop we read a sprawling legend about ice creams. This fascinated Jones. He said he had not eaten an ice cream for years. It would be a fitting thing to eat ice creams in Tocumwal, as proof that civilisation had really gone West. So we went in and demanded ice creams. A tired, heat-dried operative appeared, and shook his head sadly. They had been eaten out of ice by a lot of teamsters from Finley that afternoon—would we like lemonade?

We stalked out, anguished of spirit, and went over to the pub in quest of sensation. Two violently-whiskered gentlemen were playing a furious game of billiards. A nondescript audience sat on benches round the walls looking on. Every now and then one

of the players would score by accident, and the marker would wink at the audience, and the audience would secretly convulse. When one of the combatants used the rest, and leaned over the table intent upon a shot, his whiskers would sweep the cloth like a housemaid's broom, and mop up powdered chalk and dust till the greyness of premature age appeared to descend upon him. These men had come down from the back; plodding day after day beside tired, high-laden teams. They were having their "good time," enlivening the intervals with shouts all round, and filling up the cunning, ungrateful parasites of the pub with free liquor.

It was a typical Western American scene, without the gun-play. It would probably end in a fight, but the fight wouldn't be fatal. The Australian has never taken kindly to the revolver as an arbiter of dispute. In all my experience of the remote bush, I have never seen the gun brought into play but once, and that was certainly tragical enough. I was in Northern Queensland some years ago, driving a waggonette through from Parramatta to Townsville, and I happened on a small mining rush back from Mackay. It was a place of tents, gold excitement, and a canvas shanty, selling, I do believe, the worst grog that ever poisoned the stomachs of a casual population. The manager of the main reef—which had been mopped up quickly, as usual, by a syndicate—was a Welshman (Tregarthen will do), and he had had some unspecified trouble with a gentleman named Kelly. Kelly, so everybody admitted, was a decent, good Irishman, but suspicious and quarrelsome—two failings said to be racial and peculiar. I met Kelly in the canvas shanty, and he appeared calm at the time, but restless. He knew me as a BULLETIN writer, repeated some lines that I had forgotten, and bought me an indifferent lemonade, regretting that I could not be persuaded to drink anything more virulent. After tea that evening I came out of my camp and strolled up town. There were

lights in the tents, and the sound of a concertina somewhere in the twilight brought up emotions connected with home. I bumped up in the shadows against a little knot of excited men, who, on closer contact, I found were arguing with Kelly about something.

I walked along, and presently a human form projected itself out of darkness, and went on, followed by other forms, gesticulating and still arguing. About fifty yards away stood a tent, throwing a geometrical candlelit shadow into night. At the approach of that shadowy form, and the uplifting of a voice—a voice of challenge which spelled trouble—the light was suddenly quenched. Then I saw the figure of Kelly, with a revolver in its hand.

"Come out!" cried the figure. "Come out, you . . . . you son of a . . . ; you spawn of . . ."

No man calls another man such names unless he means to kill or be killed.

There was no reply from the darkened tent. The figure in the dim light advanced several paces, and lifted its right arm.

The darkness was quickly lit by a flash of fire, and the report woke the echoes of the hills.

Then another form seemed to spring up out of night, and an answering flash and bang followed.

Flash! bang! flash!—flash! bang!—bang! The air was pungent with the smell of gunpowder as we lifted poor Kelly. His head (a fine Irish head) lay heavy on my arm. I wished to God that moment that I had kept him in the canvas grog-shop, and saved *that.* Tregarthen was doubly justified, and I hope acquitted.

I left him in the calaboose at Proserpine River, a dejected man. I don't know from that day to this how he fared, but I should judge that a North Queensland jury returned a justifiable verdict of justifiable homicide.

Growing weary of watching the uncombed West digging holes in a green cloth, we found a corner of

Fisherman's Hut, Lower Murray.

the bar-room, and endeavoured to surround a quiet drink. But the billiard party, led by the two whiskered combatants, came pounding in and commanded us to join them, which we did rather than provoke a breach of the peace. They were only half appeased because we insisted on having soft stuff. It had to be explained to them that we had made a bet at Albury we wouldn't take anything "hard" till we got to good water. Four other gentlemen, wearing long, bronzed beards, roared into the bar at this juncture. While they were yelling recognitions, and joyously exchanging curseful greetings, we slipped out into the street. The night air was thick with dust and heavy with the smell of sheep. This odor seems to cling permanently in the wool districts, especially in drought times. One breathes and eats and has one's hourly being in an atmosphere of sheep. The water tastes of sheep, the food has a sheepy flavor, the conversation is nearly all sheep. One goes to sleep at night counting imaginary sheep leaping a mental stile, and wakes in the morning to a breakfast of fried mutton. The plains are dotted with woolly bodies, the bridges are always blocked with them. You drive through compact mobs of jumbucks on the roads—the inevitable sheep-dogs in attendance; you see them bogged along the river banks, and embedded in the waterholes; you find strips of wool on the thorn bushes and barbed-wire fences; bales of wool on the teams, on the trucks, on the barges. You come on shearing-sheds, resounding with the voice of labor; and you pass sheds standing quietly waiting for the opening of the season. Squatters, station-hands, selectors, shearers, and rouseabouts talk sheep to one another from different social standpoints, and the whole Cosmos is wrapped in a fleecy veil of greasy wool, which prevents one getting a proper perspective of politics or philosophy or the ordinary affairs of life.

We struck the local agent for the Australian Workers' Union, and talked with him. The A.W.U.

is the most powerful association of workers in Australia—where labor holds more power than in any other country of the world. It is the heart and kernel of the industrial movement; its members are representative bushmen, permeated with sound Australian sentiment, holding closely to advanced democratic ideals. No finer body of men was ever more closely knit in bonds of co-operative fellowship; no such free and fearless and independent tribesmen have ever answered to the Jehad of economic organisation. This union is the keystone of the industrial arch. Its influence extends from the Gulf to the Bight; and from Sydney to Swan River its power is generally recognised, and frequently feared.

We left the A.W.U. man and went down street again looking for motor spirit, which we found we could buy at a reasonable advance on city prices. The introduction of the motor cycle into the flat country has been pretty general during the last few years, and the automobile is also becoming less of a novelty. The Australian back country is peculiarly suitable for this method of locomotion. The Western squatter mostly comes to the bush races nowadays in a French or American car, where he used to drive his four-in-hand or gallop gaily down on his thoroughbred. Livery stable proprietors in the towns are going in for cars. Police magistrates and Western officials, and private citizens who can afford, or have use for them, are following the trend of civilisation, and the empire of the horse is being rapidly invaded in Australia.

The population of Tocumwal meandered away into night. We attempted a short cut back to our camp and got bushed.

Naturally, Jones wanted to go one way, and I wanted to follow another, so we sat down on a log and argued about it. I said the river lay over to the east. Jim held that it ran right west from where we were. We might have stayed till morning discussing the pro-

position if a late resident hadn't chanced along and directed us due south about two hundred yards, where the expiring embers of our own camp-fire made a fluctuating point of light in the darkness. And then Jones said that was where he had wanted to go all the time!

We built up the fire, and finished the argument over a mug of coffee, and made mutual concessions of points of the compass until it became clear that we had both been right, and merely misunderstood one another as to details.

The natives of Tocumwal came and paid us Sunday morning visits, and inspected the motor boat, which was a new thing to their town. They made the usual sagacious remarks about the mechanism.

After the crowd had left, towards lunch time, three timid little boys remained. There was something unusual about one of these lads that attracted our attention. We discovered that he had been totally blind from birth to within six months previously. A well-known oculist in Melbourne had partially restored his sight, and the poor youngster was just able to look out dimly upon the beauties and wonders of a sunlit world. It was only right that he was given a ten minutes' run in the wonderful motor boat, to be led home afterwards by his companions, a pathetically proud little figure, with deepened knowledge of human skill and power, and a further sense of human sympathy for weakness and suffering—the greatest force of all.

We dawdled away a balmy afternoon fishing, and took our Sabbath meal in the light of a most gorgeous sunset. Our camp faced the west. As the day closed the sandaled Hours couched their dying lord on his bed, and drew over his rest-place a mantle of crimson and gold. Great sun-bars of purple and crimson flared up to zenith, and died slowly down from softer lakes and shaded vermilions and electric blues into final pink and grey. The kookaburra laughed sarcastically in

the lower limbs, and, swaying on the topmost boughs, magpies carolled evensong. The Evening Star—translucent, clear, ever-faithful—hung out her lamp of love beyond the eucalypti trees. The charmed dusk approached in robes of grey.

Long after the sun had gone, across the river lay a pathway of red which slowly faded out, and night, diademed with stars, reigned over the bush. We withdrew within our tent, and wrote letters in pencil by the light of our hurricane lamp—using gentle phrases born in us from the beauty and glamor of that sunset.

Re-petrolled and refreshed, we set out from Tocumwal, and incontinently ran upon a claybank. This was an earnest of further troubles to come before we gained Echuca. We had left Albury with one set of dry cells, which were supposed to run us 800 miles. "Put not your trust in dry cells," is a suitable motto for motorists. Leaving Tocumwal, with over 100 miles of particularly bad river to travel, we began to strike trouble with our batteries. But it was good country for fish and game; so we took things gently, and endeavored to preserve an even temper when the sparking-plug sulked or the fly-wheel refused duty. The monotony of snag-patches was relieved by claybanks and shallows, so that we had no time to cultivate *ennui*. The health of the Cave Man was ours. We attacked our corned beef and bread and stewed duck and fried fish with savage enthusiasm. We dived into the river for our daily bath, and swam against the current defiantly—shouting in splendid nakedness an uncouth challenge at Nature. When the engine was going well, and there came a run of good water, James would stand up astern and shoot round the bends, steering by swaying his body to port or starboard. Once James swayed out too far, and went overboard, amid yells of joy.

"The Lone Hand" sped on, and I failed to stop her

The First River Steamer—Tied Up for the Winter.

for nearly a quarter of a mile—I hadn't quite grasped the mechanism. Jones came down with the current in due course. He divested himself of his wet clothes, and drained himself, and sat on the petrol tank to dry —wearing only a pipe and a grin. Then I suddenly pretended to discover a house on the bank with a lot of people of the three sexes—men, women, and bank clerks—waving flags from the front verandah, and Jim dived under the thwarts and I hurriedly threw the sail over him and kept him there until we had rounded the next bend. I carried on a loud conversation with those mythical people as we passed the fabulous farm-house, and it was not until an explosion of mirth gave me away that he found the joke. But he got revenge on me next washing day—a mean, cowardly revenge. He boiled my flannels in the kerosene-tin with large quantities of soda, and they came out like garments of macerated chamois leather. They were no further use to me except as Wild West curios. So we hung them on the tent-pole to scare away evil spirits.

Excepting occasional fishermen and timber-getters, there was now little population along the banks. The timber-men were engaged in cutting red-gum for the mills at Echuca. Great stacks of hardwood logs were piled here and there by the verge, waiting for the melting of the next winter's snows on Kosciusko, which would bring a rise in the Murray. We had already struck our first river steamer—an old-fashioned paddle-wheel vessel—tied up to the bank above Tocumwal. The skipper was ashore in the bush directing a gang of lumbermen when we came down-stream. His wife and family lived on the boat, as the wives and families of many Murray steamer captains do; and they told us that their vessel would have to remain where she was for months to come. When the river rose, not before Spring probably, they would have a busy period towing down logs to the mill.

Australian hardwood is never a very manageable

timber. It will not float like Canadian pine. Consequently it has to be loaded into and slung alongside barges by stout chains, and so towed slowly to its destination. Red-gum is almost an object of worship on the Murray. Its use is universal. Its durability, its virtues, its versatility are exalted by an enthusiastic community, to many of whom it represents the Alpha and Omega of life. The mills declare dividends because of it; the sleeper-cutter keeps the pot boiling in return for his daily sweat upon it. The bullock-driver draws his Saturday night beer from it. The axeman's camp in the bush is kept supplied in tucker by it. The barge-master, the deck-hand, and the skipper of the river tramp know its value well. Steamers, barges, houses, flat-bottomed boats, fences and furniture are freely constructed from it, and it is even made into coffins for the dead. Only very brave or very foolish men, or professional pugilists, would dare to sneer at red-gum on the Murray.

We spent the first night after leaving Tocumwal with a camp of timber-getters. There were ten of them, men and youths, and they gave us rough and hearty welcome to share their evening meal. It was a thoroughly Australian community. All day long these great hairy-chested, strong-armed fellows had laid sharp steel to the butts of tough forest trees. They had gone out into the morning when the sun was just tickling the leaves to laughter. They came home with the down-going sun, what time the pale city clerk was hurrying to his suburban train. Their bodies were sour with sweat; they stripped and went into the water, laved hard muscles in the Murray, and were refreshed. Their strong hands were discolored with the life-sap of the giants they had slain. The blades of axes had swung, and the chips had fallen to right and left of them—there is a Viking pleasure in felling trees. They had lopped the softer green branches, and piled up the debris ready

for future burning. They were tired, and had earned rest. They came into camp by twos and threes, sniffing the odors from the camp-ovens, where a much-criticised cook brooded over roast stuffed loins of mutton and accompanying baked potatoes. They shot amorous sidelong glances at the bubbling kerosene-tins containing currant-freighted orbs of boiling dough. Their eyes brightened at the universal black billies diffusing a refreshing aroma of tea.

The boss of the gang was a tree-killer, 6ft. 3in.—all Australian.

He was gifted with a great blonde beard, and his open shirt-front showed the chest of a bear.

I was flattered when he closed a stained paw over my hand, and said he had read a book of mine about the sea.

He had never in all his life beheld the marvel of the waters, but he had a longing for it, and he had promised himself a trip to the coast next Christmas.

I invited him to come and find me when he hit the town. If I was above ground I would take him round, and we would behold things in company. It has been my good fortune on occasions to have charge of these simple, lovable sons of the interior where *I* could pose and lie.

Great piles of billet wood, heaped along the banks at various stages, indicated the approach to navigable waters. The river steamers all use wood fuel. The supplying of this necessity affords a living to a horny-handed few. The occupation of woodcutter to steamers is not popular on the Murray; the prices paid are low, and the work arduous. Nobody need work too hard in the Riverine, especially when fish are biting and rabbits plentiful. Down in the deep water, where river traffic is more regular, the wood piles on the banks became a feature of the scenery. I found some few permanent hands who had devoted years to the business. These people talked wood, thought wood,

were wood. At times the steamboat hands have to go ashore themselves with axes to lay in a supply from the forest. During these intervals the ship's cook fishes over the stern for cod, and the passing whaler comes aboard to "scunge" tucker.

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Our daily skies continued blue. The mornings were just beginning to hint the freshness of autumn. Despite the difficulties we were called upon to face with every sunrise, the up-rising of the sun was always pleasant along these sandy bends. The early morning shadows in the water—reflected forests growing, roots up, in huge water-mirrors—and the cool stillness of the trees made many a beautiful setting for our breakfast-room in the House of the Open Continent.

It was joyous to see how the Australian bush, the bush of the West, came up out of slumber. Flocks of cockatoos and pink galahs—flying together, and making a delightful color scheme of pink and grey and white and saffron—screamed across the timber, or circled cautiously down to the river to drink. Sometimes a little mob of black duck went whizzing upstream, or a brace of mottled wood duck passed by carefully out of gunshot. Rhipi the wagtail, and his feathered brother, the peewit, sought the early insect with interchange of civilities. Gay parrots streaked across stream, flashing colored images in unruffled water. All the bush world became awake, alert, industrious—full of quest and call. It was soothing to pack up leisurely, clean and oil rifle and shotgun, and get the little motor engine going for the day's adventure and discovery.

Along this stretch of country I found a few minutes' excitement, which provided subject for laughter between us for some days afterwards. Some casual inhabitant had directed us to a lagoon, which was supposed to lay in from the river about 500 yards. This

lagoon was reputed to carry wild-fowl in numbers. When we arrived and located the place, Jones said he would stay in the boat and angle for a 40lb. cod, while I went ashore and slew a score of birds. We had begun to boast our particular sporting prowess. I filled my pockets with cartridges, and set out gaily for the lagoon. About a quarter of a mile from the river I struck a herd of cattle, seemingly unaccustomed to strangers. I discovered quite unexpectedly that the herd was captained by a fine, vigorous bull. The herd moved off, and left the bull standing in the open, pawing the ground in challenge. I am not in the habit of wrestling with champion stock under circumstances of uneven battle. I surveyed the situation, and saw at once how all that territory owed allegiance to that bull. I was a mere trespasser; I had no moral or legal right there. I began to evacuate the country. The bull, with lowered head and erected tail, undertook to hasten my movement, using threatening language as he advanced. I quickened my gait. Personal dignity could not be appropriately preserved under the circumstances. I fled. Jones heard us coming. He got out on the bank, and saw me bringing the bull back to the boat. He said "shoo" to the bull, and waved his arms about, but the brute held on. I was leading the race, but from the compressed way the bull was breathing I could not tell exactly which of us would pass the winning-post first. Jones and I came over the bank together, with the animal a close third, and that motor boat got under way in record time. The bull stood up to his knees in the water, and hurled sneers and insults at us until we were away beyond the next bend.

I do not think I got my breath properly until we were down to Lake Moira.

The river narrows on approach to this lake, and the current runs rapidly between reedy banks. We came to what seemed an open, treeless plain

just before sunset. The plain was the bed of Moira—dry. In good seasons this is a fine sheet of water, the haunt of duck and swan and teal in their feathered thousands. An immense flight of blue cranes rose as we petrolled by the entrance. We ran on in the gloaming until we crashed into a snag, and were warned that the time for night travelling had not yet arrived. A camp fire on the bank wooed us, and we went ashore and were welcomed by hospitable sleeper-getters. They offered us bunks in one of their tents to save us pitching camp that evening, which we accepted thankfully. Our hosts were two young Victorian brothers, well spoken and well informed. They had shed the cities for the hard, healthy life of the bush, and were content with their choice. They were making good money, had a sulky and a couple of horses, a comfortable camp outfit, and an account in the Savings Bank. Brown and hard, they scoffed at the pale operative in his stodgy suburban residence, as they lay, filled with good camp fare, on the grass beside their fire. Their days were filled with toil, but they knew no master, and their work lay under the clean and open skies. At night they could look out and see the stars. Australia will become a great nation by the multiplication of just such lads as these.

The twinkling fires of that little community of nomadic workers died down among the trees as we smoked and talked with these young bushmen, enlivening our conversation by hauling in several wriggling codfish to our seats on the bank of the Murray. They gave us a friendly good-bye next morning at sunrise, as they swung out into the forest, axe on shoulder and billy in hand.

We went down that forenoon to Barman Aboriginal Mission Station. Here is a place for students. Here the Man of the Stone Age looks out with sad, pathetic eyes upon the Age of Steel. The neolithic

Barman Mission Station comes to View "The Lone Hand."

type of humanity is doomed under twentieth century conditions. All over Australia the aborigine is fading fast. His extermination is rapid, inevitable. What the rifle begins the roof and the rum finish. The body of neolithic man can no more resist the white man's germs than the white man's weapons. But it is meet and proper that the superior Age of Steel should extend a sophistical clemency to the doomed Age of Stone. So benevolence, allied to administration, has established various stations for the protection, encouragement, and enlightenment of the Australian aboriginal. To condemn or praise the results would be equally misleading. I have visited several of these institutions in New South Wales, Queensland, and South Australia, and in every case I have concluded that any attempt to graft the industries and habits of civilisation on to a nomad must be attended by failure. The aboriginal is neither a worker nor a house-dweller. He is by law of Nature a hunter, a fisher, and a wanderer.

Barman Mission Station is, to all appearances, well conducted. The schoolmaster, Mr. James, is a most affable Eurasian of the Parsee caste, born in Mauritius, and married to a half-caste aboriginal woman. His daughter—a handsome, well-educated girl—acts as his assistant. At the time of our visit the schoolroom was over-filled by eighty scholars. Out of this heterogeneous collection of boys and girls there were not three full-blood aboriginals—the rest of the attendance was half-caste, mulatto, quadroon.

The school went through various exercises creditably. Its singing was particularly good. As far as primary education is concerned, this tawny generation receives all the current benefits. The schoolmaster spoke enthusiastically of his scholars. He said they were docile, obedient, and anxious to learn. He had occupied his position for over twenty years, and was growing old with the Mission.

The school was called upon to stand up and sing a final song. It was a cheap patriotic melody about "Australia Fair." The voices of those dusky children went out into the morning, chanting the song of the conquerors. Across the Murray the gum trees, that had made canoes and gunyahs for the departed tribes, waved their branches in sorrowful unison. Withered flowers in the little garden patches of the Mission homes bowed their sapless heads, symbolic of the scene. The song sounded to me as the requiem of a dying race.

We walked down a dusty roadway between the cottages, where listless aborigines and half-castes whiled away the morning hours. At the Mission store a group of native women were gossiping. The natives are allowed a certain quantum of rations, which they can supplement by purchase. Some of them do well enough fishing and rabbiting, but as agriculturists or settlers they are a failure. In any case, agriculture under the conditions would not be successful without irrigation, and the pumping plant of the station is only an ordinary windmill. The people are peaceable, and fairly moral. Crimes of violence are unknown.

Victoria has expended half a million of money on irrigation works on the Goulburn River, with satisfactory results. The weir near the town of Murchison provides a storage of 670,000,000 cubic feet of water. "The Lone Hand" passed the junction of the Goulburn and Murray in the afternoon, but its crew at that moment were more interested in other matters. Echuca lay not many miles distant, and the expedition was tired, and anxious for its mails. Something went wrong with the engine after leaving Barman, and the chief pirate took to the oars while the engineer spoke to the mechanism with a spanner. It was dark when we pulled into the bank, made a slipshod camp, and tiredly fried fish for late tea—eight miles above the town. We got the motor in going order again before

Echuca.—The River Fleet waiting for a fresh.

breakfast, and descended upon Echuca early on a bright, sunny Saturday forenoon. We bore down upon the river steamer "Success," and boarded her. Captain Freeman, bluff and good-humored, nearly thirty years a river skipper, stretched out a paw of welcome, and bade us use his boat as a lodging-house. There was an unoccupied cabin aft, with wire bunks and unusual comforts. We took possession of it, attired ourselves in our shore-going clothes, and went up town.

Echuca will always be a green spot in my memory. It is a delightful, hospitable place, laid out in broad streets, planted with beautiful shade trees. It carries a population of 4000 people, whose principal occupation appears to be the entertainment of visitors. They took us up to the Echuca Club, and made us honorary members; they took us down to all the hotels, and forced us to drink. The Mayor entertained us at lunch, and a prominent councillor seized us for Sunday tea. The place overflowed with hospitality, and chronic indigestion threatened unless we cut short our stay. No resolutions could stand very long against the liquid hospitality of this Victorian port—once the second in importance in its State.

Echuca was invented in 1853 by a gentleman named Hopwood. The town has raised a granite monument to him in the local park. The first building erected in Echuca was a pub. kept by Hopwood, who added a punt to the pub. and coined money, especially during the days of the gold rushes, when the digger went about the land joyously quitting his wealth—bathing his feet in champagne and lighting his pipe with five-pound notes.

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"The Lone Hand" was now at the head of navigation on the Murray; a splendid wharf and a long line of waiting steamers, laid up for the season, indicated this. Everywhere glared evidences of the fact that

Echuca was not only a great railway terminus, but a port needing only a scientific system of river locking to give her perennial trade and prosperity. The people are all solid on the question of locking the Murray. The Mayor himself had written a poem on the subject, full of patriotic sentiment and metrical mistakes, but a well-intentioned poem in every line.

We held the proud distinction of being the first power boat to reach Echuca from Albury in twenty-five to thirty years, and, as honored guests, we were formally escorted to a spot on the New South Wales bank of the river, where portions of the Lady Augusta's hull were visible above the silt. It was in this famous vessel that Captain Cadell steamed up the Murray from Goolwa to a point above Swan Hill, and demonstrated the navigable possibilities of our inland waterways. Captain Cadell received £4000 from the South Australian Government in 1853, in recognition of his accomplishment. They seem to have paid better for accomplishment in Australia in those days.

The four days spent on the Success were among the brightest of "The Lone Hand's" time on the Murray. We cooked breakfast at the galley stove, and went up town, mostly by invitation, to other meals. Early in the mornings we would roll out of our cabin and dive off the steamer's stern into about forty feet of water, and so begin the day freshly. I made a pretence of doing some writing in the skipper's private cabin on the upper deck, but it was bad working weather.

The ladies of Echuca are specially beautiful, the men are strong and tall and brave; and if Echuca were only certain of a fall of fourteen inches of rain every year, no one would want to leave it—even to go to Heaven. The only jarring note in this harmonious recital of facts is that Echuca has two contending gramophone depots, situated opposite one another in the main street, and these institutions are continuously endeavoring to gram each other down.

The "Success"—Our Lodging House at Echuca.

The effect on the stranger is the same as if a great composer were transported to Paradise and heard a brass angel singing through its nose.

Camped on the river about here were, besides ourselves, many curious characters—travellers, whalers, fishermen, and nondescripts. I was approached by one of these gentlemen, who wanted a passage on "The Lone Hand." He offered to act as cook and fo'castle hand in return for tucker and the trip down to Adelaide. I said we were fully manned and overloaded, and then he confided to me his great thirst. I assuaged that, and we became good friends. He said he was known on the river as "Murray Tommy." A little, red-faced man, with grizzled whiskers, was Thomas. He had been an old sailorman, and sailed in "Dickie" Green's ships in the roaring days. He camped on the Success sometimes at nights when the skipper's son was ashore. The steamer lay outside a barge, and we had to climb up a wobbling, six-inch plank to get aboard. It was always a matter of gymnastics to mount or descend that bucking plank. Whenever "Murray Tommy" came aboard late at night he would put dignity aside and climb up the plank on to the barge, and then across her decks to the steamer monkey fashion. Long years of long beers had taught him discretion. It was weird to see that venerable old head appearing over the side of the barge in the moonlight, and to see Tommy, very loaded, crawling round the steamer's deck on all fours, looking for his bunk. He was one of the most pathetic inebriates I have never met, even in the back country, where the chronic drunk is a perpetual blot on the landscape. Tommy's daily diet was raw onions all the time we were in Echuca; he said he could eat nothing else when he was on a spree. His dissertations on the sustaining and curative properties of onions would gladden the soul of a Warrnambool farmer. He carried about with him the constant odor

of an onion bed which had been rolled flat with a leaking hogshead of beer.

The timber mills at Echuca were interesting. Here hundreds of splendid red-gum logs, floated or towed to their destination, waited the snarling teeth of the circular saws. Here by the riverside, also, the wheat of the district was being ground into good, wholesome Australian flour, and the district hog converted into well-cured bacon. The photographer and the dentist flourished; prosperity made patriotic citizens. The people were justly proud of their little city.

We left this place with some regret. We had made scores of friends, and received treatment generous enough for travelling princes. Re-provisioned and loaded with gifts of fruit, tomatoes, and cucumbers from a friendly grower who had read THE BULLETIN and THE LONE HAND from their respective first issues, we said good-bye at last, and turned the bow of our motor-skiff towards far-away Swan Hill. From Echuca the Murray runs nor'-west for some hundreds of miles. In good seasons the country is doubtless fertile and green. At the time of our passage it was sere and grey. Moreover, it is the worst strip along the river for snakes. A long course of Australian travel has rendered me comparatively careless about snakes; but Jim Jones cherished a rooted hatred to the reptiles. I gratified his heart by shooting a good number of them along this stretch. Every day we encountered them swimming in the water, and dealt destruction as we passed by. The evening camps became a matter of more careful selection; we shook out the rugs and blankets gingerly before we laid them down at night or rolled them up in the mornings. The people we met talked a good deal of snake—probably with benevolent intentions, but the conversation got on our nerves. The great snake area was said to end a few miles below Swan Hill. Why, no one appears to know.

About twenty miles below Echuca we met a snag boat employed by the Victorian Government in keeping parts of the channel clear. The New South Wales authorities have declined to bear any share of the expense, and the two snag boats afforded by Victoria are unable to cope with the task. Certainly we found about thirty miles of good, clear river, and were glad of it; but below that again the old conditions prevailed. These snag boats are fitted with powerful winches and stout tackle. The logs are dragged out of the fairway and piled up on the banks, to be burned off when dry. For many years the snagging parties simply hauled the timber up on the banks, and left it there to be washed in again by the first flood. Then some unknown genius discovered that the best plan was to burn it off, and the public revenue has benefited in consequence. Whoever the genius is, he should receive a pension—indications of intelligence are so rare among officials in this country. Our first day's run after leaving Echuca brought us to Pericoota out-station. Here we saw, in large tracts of green country smiling with sorghum and lucerne, the practical benefits of irrigation. On the Victorian side pumping stations became more frequent, for the Southern State is beginning to follow a regular system of rendering fertile and fit for occupation large areas of land which otherwise would remain dry and unproductive three years out of five.

From Pericoota to Koondrook was a long, weary length of banks and bends. We seemed to be going down hill most of the time. Desolate forests, covering flat, grassless plains, disheartened us when we went ashore. The habitations were few and far between. We landed next evening near a timber-getters' camp. Barney Kelly came down to the boat and introduced himself. Barney was a pleasant relief. He took us to his camp, and compelled us to have dinner with him in his dining-hall of bark and boughs.

His pretty, fair-haired wife poured out our tea with the deftness of a sylph. Then Barney gave us some personal history. He was still a young man, but he had known the strenuous Australian life. Three years before he had a little business of his own in Melbourne. He failed, and turned to canvassing for a book agency. From that, he became a traveller for a firm which imported sacred pictures and blessed ornaments. Barney's temperament, his native joyousness, his youth, his flippancy, militated against success in this avocation, which is more suitable, as he explained, to elderly gentlemen of reverent speech and pious appearance. He was "up against his luck," so he decided to hit out for the bush. He went to a registry office and booked himself and his young wife as an eligible married couple. The agency procured them a position in this capacity with a "cocky" farmer in nor'-western Victoria. The story of Barney's efforts to live up to the "cocky's" ideal of labor would make a volume. After a week's peonage, rising before dawn and lying down at 10 p.m., Barney and the "missus" unceremoniously left the farmer and took to the track. They tramped over fifty miles together before he got work cutting timber for a mill. He took a contract for forty tons at a ridiculous figure, put up a tent, and faced the situation. Now he was winning out, getting on his feet, and putting money away to start in business again. His courage certainly deserved reward—and, judging by the steak-and-kidney pie on which Mrs. Barney fed us, his plucky helpmate deserved reward also. She was grit all through, and a wonderful cook —two virtues which sit well on an Australian girl.

Barney Kelly made our sojourn by his camp instructive and amusing. His sunny nature and sense of humor brightened the hours till nearly midnight, and his conversation was as harmonious as a Beethoven symphony. He was one of those men you like to hear talk, a mimic and a wit. Before we

turned in he carried four heavy bags of chaff down to the tent, that we might have a more comfortable bed; and he roused us in the morning, and led us, arm in arm, up the bank again to breakfast. In vain we pleaded that we were trespassers. It was not every day, he said, that he got people to talk to who had known cities or understood a joke.

The following day, being Friday, was unlucky. The dry cells we had brought from Albury were giving out. We had wired to Sydney for fresh batteries to meet us at Swan Hill, but Swan Hill was more than two hundred miles away. Jones kept setting up fresh combinations with the cells in hand, while I blistered my hands on the oars. It is no holiday pulling a motor-skiff, with a full cargo, down a sluggish watercourse. The motor would run a mile or so, and then go on strike in a most exasperating manner. I began to make critical remarks about motor boats, which annoyed Jones. He seized the paddles, and invited me to have a try at the engine. I went aft and spoke nicely to it. I had learned something about volts and claw connections, and exhausts and ignition, and I thought I could talk to that engine in the language it understood. Then I put my finger on a live wire, and the battery promptly arose and bit me. I resigned, and the engineer-in-chief resumed command. He hit the fly-wheel with the starting handle, and threatened to throw the batteries into the Murray. That seemed to have a good effect.

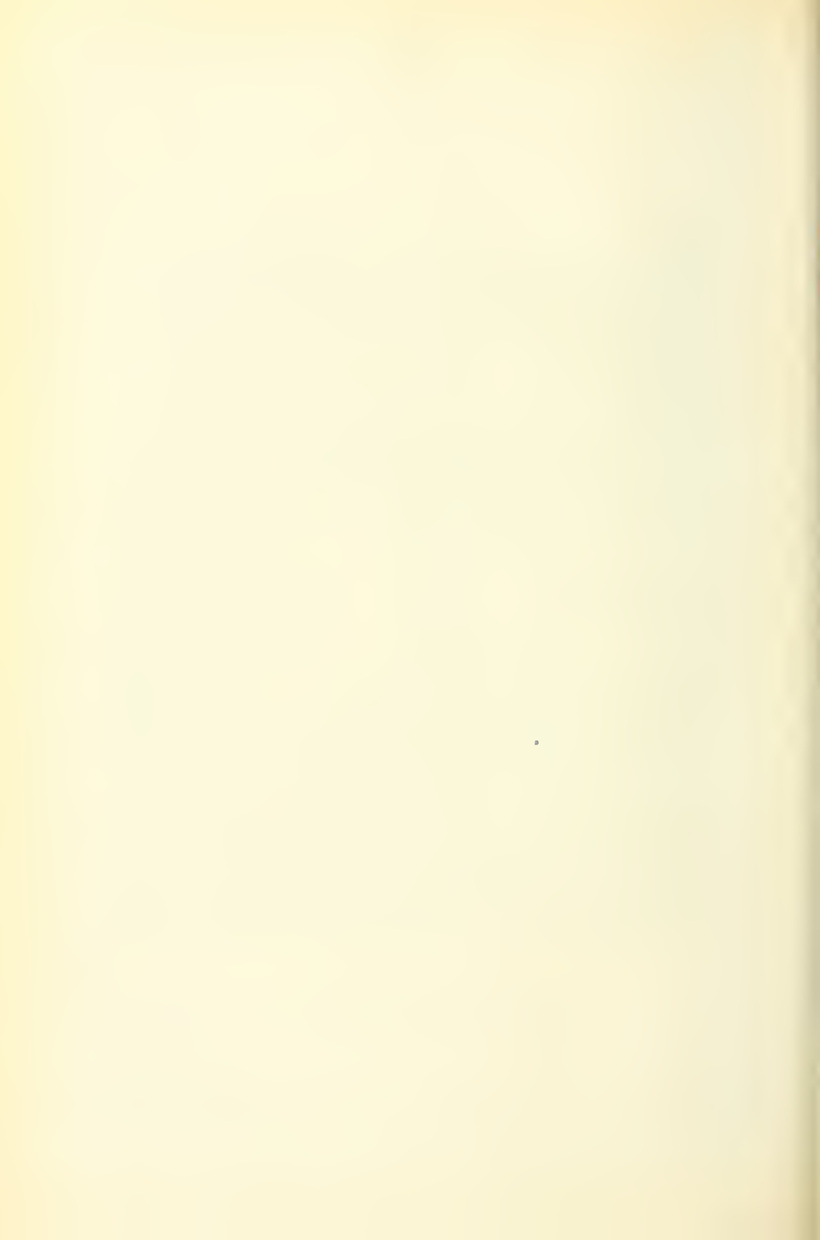
We got to a desolate-looking hut about 3 p.m. A ragged girl stood on the bank watching us; when we landed she ran away. A ragged youth started out from under a bush, and ran away also. We gave chase. After a vigorous pursuit he was brought to bay. He seized a stick, and stood with his back to a tree. We laid off and parleyed with him. When he saw that we were not out to kidnap children of the bush he became calmer. We wanted to know how

far we were from a telegraph station. Before we could get an intelligible answer from him the girl reappeared at the door of the hut, armed with an old muzzle-loader, which was probably charged with rusty nails. We made a detour round to the boat, and got aboard. It seemed better to pull on to Koondrook than seek for information in that wilderness.

"The Lone Hand" came into Koondrook under alternate petrol and hand-power. It was nearly noon on a warm Saturday morning. We might have reached the town earlier in the day if Jones had not insisted on landing to extricate bogged sheep. We levered three heavy wethers out of the mud, and when we turned the next bend three more awaited assistance. Jones said he had exhausted his stock of philanthropy. Thereafter we left the squatters of the Murray to save their own stock.

Koondrook is by no means a picturesque or beautiful hamlet. It is connected with the Victorian town of Kerang by a tramway, controlled by the shire council. This tramway is the most casual and semi-occasional institution of its kind on earth. I sat on a bale of goods at the depot, and watched the tired public inconvenience getting under way. The officials all wore long, wide beards. It was evident that they had graudated in the bullock-driving profession. The pointsman said "Whoa" to the engine when it was shunting, and I should not have been surprised if the goods clerk had come out to dispatch the 1.30 with a whip. I had raced to the telegraph office and wired to Melbourne for a set of new batteries, which should have reached us at Koondrook on the following Monday afternoon. We waited in this awesome place until Tuesday morning for the batteries, which had been promptly despatched. Then, rather than become hopelessly insane, we decided to go on to Swan Hill, even if we had to pull all the weary way. Violent

In the Red-Gum Country—
The Biggest Tree on the Murray.



wires to various railway officials brought the batteries to Swan Hill in due course, but that belongs to the sequel.

The industry of Koondrook is red-gum. The streets are paved with sawdust, which makes acrid all the atmosphere of the place. Timber-freighted barges line the banks of the Murray below the blackened wooden huts of the mill hands. Rafts and piles of logs loom up everywhere. Teams and jiggers toil along the dusty roads laden with logs. Sunken logs obstruct the channel. When a Koondrook resident has nightmare he dreams that a twenty-ton log lies upon his heaving breast. Strange to say, some of the houses are not built of logs, but sun-baked bricks painted over in pleasant colors. This indicates an æsthetic reaction against red-gum, which may lead to a revolution in time.

Opposite Koondrook, in New South Wales, stands the town of Barham, from which the road goes out to Moulamein and Balranald, across the squatters' level lands and into the heart of the great sheepwalks of the mother State.

The schoolmaster of Koondrook piloted us to a good anchorage at the back of his seminary, and we made a comfortable camp. I concocted a duck stew, while James docked ship and located a leak that had been sprung in collision with one of our many militant snags. He also rigged an awning for "The Lone Hand," which we had to take off again afterwards, and never replaced.

The quietude of a Sunday in Koondrook cannot be described. Sunday is a melancholy day in most places in Australia, but here the hours were shod with lead. We fished and fraternised with a traveller who was making for Swan Hill. The traveller had a mate; but he was of a retiring nature, and lay under a tree all day reading an ancient copy of THE CHRISTIAN HERALD. He was suffering a recovery, and inclined

to concentrate his attention on the Hereafter. The traveller had suffered *his* recovery, and was going back to work on a station near Hay. He had been in Melbourne for six weeks, and knocked down a cheque for £100—the savings of eighteen months. He was happy and hardened, and required no CHRISTIAN HERALD. He looked forward to another gay time in town after a year or two. He admitted cheerfully that he was getting through life in that way.

There are hundreds like him out West, men to whom money is only a thing to be hoarded for a certain time—then, "flung to the winds like rain." They are practical Epicureans, disciples of Omar, restless spirits, imbued with the philosophy of recklessness and devil-may-care. Their histories are often unwritten volumes of Romance, in which the faded photographs of other men's wives, ribbons of other men's loves, crushed roses and curls of dead idols have a hidden place. They scoff at commercial convenances, flout conventionalities, and laugh rudely before the altars of Society. They play their parts beyond the horizons of culture, and sometimes carry arms. They are poor respecters of law, and chafe at order; but mostly they are—Men. I have ridden and tramped, mealed and camped, thirsted and striven with this breed, and at least I can say that it is seldom small-souled or mean. When the days of red war come in Australia, when the puling politician races the pompous merchant for cover, it will be good for Australia if she can raise a few battalions of such battlers and ne'er-do-wells. Some of them will rise to be generals of division; but many of them will go down with hecatombs of dead enemy to gladden their departing souls.

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We fretted away Monday waiting for batteries that did not arrive, and, after an excusable protest, resumed our journey on the Tuesday morning. Our dry cells had made up slightly with the rest, but uncertain

ignition and frequent stoppages caused "The Lone Hand" crew constant irritation. Hereabouts we fell in with a gentleman named Bottles, who was coming up-stream from Mildura. The outfit of Bottles was a flat-bottomed skiff, covered by a tent fly stretched on a home-made frame. His barque was bound for Echuca, and ostensibly Bottles was seeking work. The manager of Gonn station told us, *apropos* of Bottles, that he never employed men who travelled the river in boats. They were all people of leisurely habit, who could not be relied upon for more than a week at the most. Below Swan Hill, all the way to Murray Bridge, I fell in with these whalers, jaunting along in all sorts of queer little craft. The squatters are very sour on them, inasmuch as they neither toil nor spin as long as it is possible to procure tucker without suffering the penance of constant occupation. They are cheerful water vagabonds, however, and present quaint character and abundance of copy to an itinerant writer.

Bottles came alongside the motor boat and enquired its cost. He had a dozen or so of rabbit-skins drying in his boat, and would have offered trade if encouraged. He said if he could make a bit of money next season he would have one of them motor boats—they saved any amount of graft. His account of the river from Mildura was not cheerful. It was a wicked, withered, weary way. Tucker was hard to get, the stations were growing more hungry every year; "a bloke had to crawl to the cook for a pannikin of flour"; even the fish didn't bite like they used to. If we expected to get graft at Mildura we would be disappointed. There had been a strike there, and the place was done. We discovered after that Bottles, with a few more Melbourne compatriots, had been engaged in strike-breaking, a most unpopular occupation out back—which sometimes ends fatally for the strike-breaker.

Having recited his wrongs and woes, Bottles

begged tobacco and resumed his voyage to Echuca, and we got down somehow to the junction of Pental Island, where we struck a ploughing camp engaged in breaking land on the N.S.W. side for the late David Syme of Victoria, station owner as well as newspaper proprietor. They were a genial crowd, numbering among them an electrician, an ex-actor, and a younger son. The younger son had grown old in Australia, but had not lost his beautiful English accent. He lived in hopes of a heritage, and was familiar with hard times. The ex-actor was suffering from boils and home-sickness. By this time I should say he has gone back to the stage. That night in his camp he drew from his slop-chest a treasured volume, in which were pasted English, American, and Australian "notices." We talked stage and players; gossiped about people "in the business," and recalled historical first-nights, away there in the soft Australian dusk, with the calling of night birds for our orchestra and the star-painted cloth of Heaven for a drop act. This is the country of the unexpected; also, it is the graveyard of lost identities.

The dry cells gave out altogether next morning. We could only get an occasional kick out of the motor, and we were thirty miles from Swan Hill! We divided ourselves into shifts, working alternate half-hours at the oars. From Echuca to Mildura the miles are marked on the trees along the banks of the Murray. We bent to the oars, and watched those tedious miles go by, hour after hour. Since leaving Echuca we had encountered many reefs. These rocky bars ran out from either bank, sometimes leaving only a narrow channel, through which the current raced and boiled. The dangers of submerged rocks had been added to the danger of snags. The voyage of "The Lone Hand" was never dull; there was always something to keep us occupied. We boiled our midday billy on a wind-swept plain, where dust and particles

Red Gum, Lower Murray.

of dried grass gyrated drearily. Towards sundown we saw the roofs and spires of Swan Hill beyond the bends, and in our glad excitement ran on to a mud-bank, and stayed there for half an hour, not without comment. There is a broad stretch of water above the town. We had saved up our last amperes, so we coaxed the engine into operation, swung down under the bridge, and saved our dignity.

The office of H.M. Customs stands by the riverside. The officer was a kindly man. He placed an empty room at our disposal, and found us wood to make a fire. We boiled coffee, and were refreshed. Then we shed our old clothes and sheath-knives, and went up town re-attired in more conventional garb, and found two fresh sets of batteries awaiting us. A great peace fell upon our souls; there would be no more galley slavery for a tired crew of two. That evening we jostled with the crowd at the post office to get late mails on delivery. Considering that they had had only one shower of rain at Swan Hill during the preceding ten months, it was a good-humored crowd, which trod one another's corns before the postmaster's desk without bloodshed.

The people who picture Australians as pessimists look at this country through the dun-colored glasses of a morbid imagination. The inhabitants of Swan Hill have everything to make them serious. The surrounding country in drought time is no more than a flat, ugly desert of red sand, which begins in the near suburbs of the town, and stretches away to the skyline. Hot and cold blasts sweep across the plains, and wake this red dust up into blood-coloured whirl-winds. Except on occasional irrigation areas no green verdure gladdens the eye. The stunted pepper trees in the main streets wear dusty-red coats, and stand like soldiers of desolation lost in a Sahara of despair. The domestic goat wanders disconsolately over the landscape, seeking sustenance from clothes

lines on washing days, or prowls about the railway yards in search of axle-grease, couplings, tarpaulins, sawdust, or other delicacies. The discovery of a straw envelope or an old newspaper leads to a goat riot, on which the townspeople bet freely. When clouds arise they also make long wagers on the possibilities of rain. Yet they are a cheerful and hopeful people, boasting proudly that there is not a penny of debt on their local hospital. They have a newspaper and stores, and a livery stable running a motor car. They took us out for a forty-mile run over the plain in their new car next day, and we came back alive and grateful. The roads were fairly level. We had a motor expert from Melbourne with us, but there was a decided tendency to quicken the landscape for the benefit of strangers. Moreover, having come from Albury as first motorists, extra care was taken that the run out and back should not be tame or unexciting. In return for hospitalities received, we took some prominent townsfolk out in "The Lone Hand," and showed them how to jump logs. We had reputations to maintain, even if it cost a propeller. Jones was not the man to be outdone in little courtesies of the kind.

We laid in a fresh supply of meat, bread, groceries, and petrol, and left Swan Hill on Saturday morning for Mildura, 325 river miles distant. The Murray here meanders through a treeless plain for many leagues. Its banks were, for the first time since Albury, unclothed by vegetation. We ran upon reef after reef, across which the river boiled viciously. Several times "The Lone Hand" struck, and narrowly escaped being rolled over in these rapids. Very often we could not spy out a passage, and simply had to go at it and take our chances. To make the day more strenuous, we took the wrong channel round Beveridge Island, and found a succession of shoals and reefs awaiting us. We were out of the boat, treading sharp shale, and hanging on to the side, a dozen times in an

hour before we got into the main river again. A half-dozen brace of plover and a fat black duck hardly compensated for this ten miles' detour. A small river steamer, towing a barge, had left Swan Hill a week previously to try for the Murrumbidgee junction. We ran on to Nyah station that afternoon, and hearing that this little craft was tied up three or four miles lower down, decided to make for her. Night had found us when we saw a dim light shining through calico by the bank, and a camp fire with a shadowy form bending over its blaze. We stopped and hailed. A plea-
back. All the way along the river we had heard of a
sant voice, speaking unmistakable city English, called
house-boat that, starting with the last fresh, was working a devious passage down stream. We were curious about this mysterious craft, and often wondered where we would meet it, who its owner was, and what tales of adventure, mishap, and escape he might have to recite. He had been on the river many weeks, and here at last we found him.

"Are you the house-boat from Albury?" we shouted across.

"Aye, Aye!" came the answer. "Are you 'The Lone Hand' motor boat?"

"Aye!"

"Heard all about you. How did you get on?"

"Tough time. How did *you* find it? Heard about you, too!"

"Tough!" the house-boat called back. "I was snagged up above Lake Moira. Had to get the family ashore in my dinghy. Hauled the boat out with a team of bullocks. Been nearly wrecked a dozen times."

Curiosity overcame me.

"Excuse me," I ventured, "but what the mischief are you doing it for?"

The shadowy figure laughed.

"Health," it shouted, "and amusement. Did you get any fishing?"

"Plenty. How many miles a day do you make?"

"I'm not travelling for speed," the house-boat replied. "Sometimes four. What are you making?"

"Thirty to fifty, in good water."

"You'll get to Adelaide before me, I think. Will you come and have some tea?"

We thanked our unknown contemporary on the bank, and said we were making for the steamer. He said she was tied up around the next bend. We hailed good-bye and good luck to one another, and parted—"ships that pass in the night."

We overhauled the vessel from Swan Hill. She was moored with her barge against the steep edge of New South Wales. The skipper and his engineer and crew of three made us very welcome. They relit the fire in the galley stove, and after we had boiled our billy and fed we talked river and inland navigation.

They had been ten days coming from the port we left that morning. They had to warp over many places by hitching a wire hawser to a tree and hauling their boat ahead. They called down blessings on the head of the enterprising owners who sent them out on a low river. But the stations wanted supplies and fodder. The river-men must try and toil their freight along. The skipper had spent twenty years of his life on the Murray. He served his apprenticeship with a German captain on the South Australian reaches.

The old man had a dog ("Charley") who was as well known on the river as himself. Charley would stand in the wheel-house beside his master, and howl when he smelled shallow water. That old skipper cherished a rooted delusion that his dog "Sharley" was a hunter as well as a navigator. When "Sharley" got a chance he would leap ashore to pursue rabbits. The dog would bolt across the plain on a mythical scent,

A Backwater, Lower Murray, S.A.

and the captain would have to pursue "Sharley" and bring him back. The boat was held up by the bank in consequence, and the hands rested. One day the captain dropped down to the fact that his crew secretly inspired that dog with the lust of chase for their own idle purposes. Next time "Sharley" went ashore and laid up the steamer, he set his ship's company to cutting wood for the engine-room. Thenceforward "Sharley" seemed to lose his enthusiasm for rabbit-hunting, and re-centred his canine intelligence on navigation.

There was a tarpaulin over the barge, and under this all hands bunked, except the engineer, who was a taciturn, solitary Scotchman. He had been in deep-sea ships, and spoke—when he spoke at all—in contemptuous dialect about the rivers and all they held. He said the Murray was a "domned puddle hole, and nae fet place for ony mon wi' a ceertificate, let alone a mon wha had been i' the Atlantic trade." That Scotchman had a grief or a repentance hidden about him somewhere. But you cannot get to a Scotchman's sentiments, even if he wears a danger-signal nose. No Scotsman bares his soul except on Hogmanay, and that only occurs once a year. If the Scot had the imagination of the Celt, the flag of St. Andrew would float over the earth. If the Celt had the reserve of the Scot, a green flag would occupy the saluting base for all nations. As it is, the Union Jack carries far, and the three little peoples make a fortuitous combination to overrun the planet. All of this occurred to me watching that Scotch engineer's sharp, red nose.

We bunked under the tarpaulin with the crew in a close atmosphere, redolent with the musty odor of chaff and station stores. The skipper lay on his back repeating passages from popular Australian writers. His knowledge of literature was confined to that of his own country, and, like hundreds of bushmen, stockmen and back-blockers, THE BULLETIN was his Bible.

The purely Australian sentiment is steadily growing in the bush, for the generation of the later-born knows no other land. In time Australian politicians and newspaper proprietors will come to realise this fact.

We left our friends while the mists of morning were still on the water. We struck a solitary selection about late breakfast time. As usual, the family turned out at our coming, and sought the bank to behold and comment on "The Lone Hand." I asked permission to fry a pan of bacon and boil the billy at their kitchen fire. The selector was a voluble little man with a grievance against the Government. He said the authorities in Melbourne were not dealing fairly with settlers in the Mallee. He was so insistent that I couldn't get away from that cooking stove until the bacon was absolutely fried to chips.

Jones was sitting in the boat with a cold hungry stare on his face, when I returned, pan in hand.

"You haven't been long," he remarked, sarcastically.

"No," I replied, "bacon fries quickly these cold mornings. Would you mind just going up to the house for the billy? I've forgotten it. I'll get out the mugs and things." My mate went up the bank. He did not re-appear for half an hour; the tea was cold.

"Damn the Mallee!" he cried, flinging himself viciously into the boat.

"Yes!" I agreed.

I handed him a tin plate of black bacon chips.

"Curse the Victorian Government!" he yelled, dumping the lot overboard.

"Amen!" I said, throwing my share after them. We breakfasted on cheese and bread and jam and cold tea.

I trust the responsible Minister will some day be compelled to receive a deputation, headed by that little man, and I pray the deputation may arrive just before dinner time.

. . . .

We bumped along over reefs and snags, and came abreast of the second Murray snag-boat at noon. A heartier, happier, better-fed ship's company I have never met. They had been looking out for us, had read of our exploits in the newspapers, and extended a brotherly welcome, coupled with an invitation to Sunday dinner.

The skipper was a Breton Frenchman, with an explosive laugh. Jollity oozed from him. The oil of good humor exuded from his crew. The cook was a genius—a stout, fresh-complexioned genius, whose roast stuffed mutton and inimitable plum pudding would make envious the *chefs* of the Savoy or Paris House. The cook at the ploughing camp had compelled us to accept two large sample loaves of his "brownie." I would advise those dyspeptic city folks to whom "brownie" is unknown to take a pilgrimage to that ploughing camp.

But in the cook of the snag-boat he has a dangerous rival. They will, perhaps, meet some day, and all the Riverine will watch the contest with watering mouths. We had two plucked wild duck in the boat, and I handed them tenderly to the jolly Breton's cook. He tenderly returned them to me on our departure—a poem in brown. There was a basket of newly-caught codfish on board the snag-boat, and if anything could induce me to break the day's run, I think the prospect of fish fried by that cook would have done so.

But the most dangerous and difficult point on all the Murray River lay before us that afternoon, and we were anxious to face it and have it over one way or the other. Six or seven miles below the snag-boat was the "Bitch and Pups," so called on all the river charts, and, therefore, needing no apology. The nomenclature of the Murray is rude but expressive. We had the "Devil's Elbow," "Hell's Gates," "Hospital Bend," and the "Bitch and Pups" in turn.

We had heard of this place as far back as Echuca,

All the river men had warned us of it, and now the people of the snag-boat advised us seriously not to attempt to drive through it, but to lower our boat over carefully with ropes, steadying her by lines on either side of the bank. They said that even when the river was navigable the steamers warped over, and sometimes took a full day to do it. They gave us final directions, and we set out not altogether free from anxiety.

Briefly described, the "Bitch and Pups" is a cataract over which the entire volume of the Murray goes violently down into a hole, 30 feet in depth, with an eternal roar. We heard the roaring of this sinister river devil a mile or more before we came in sight of it. Coming round a sharp bend, the long-anticipated "Bitch and Pups" lay before us. The cataract was situated in a curve of the New South Wales bank. On the Victorian side stood an island, the inner channel of which was dry. From the point of this island to the opposite bank was not more than 20 yards. Through that narrow gut the Murray raced and howled across a rocky bar. The foam rose up to a height of several feet—white, frothing. Boulders, slippery and water-worn, projected at intervals; black, ugly boulders that gave warnings of ship-wrecked motor-boats, and a crew of two swimming round and round like rats in a huge churn. It was not pleasant to think of battling for life in that whirlpool.

We turned into a back water and surveyed the problem before us. I looked at Jones and he looked at me. He was navigator; I waited for him to speak first. Jim did not speak. He took a long, deep, thoughtful view of the country ahead. Then he slowly divested himself of his coat, and rolled up first one leg of his trousers tightly above the knee, then the other. Then he rolled up the sleeves of his shirt. I dutifully followed suit. He stood up, got final bearings, and turned to me.

"I'm going to put her at full speed," he said. "I can't see any other way."

"Tell me what to do," I said.

"Well," replied Jones, "the current here is running about twelve miles an hour. There must be a big fall in the river-bed. It's a kind of slope-down, and then the Murray falls over a rocky bank into deep water."

"Seems a geological fact," said I. "But tell me just what to do for the preservation of human life and the prevention of accidents.'

"Go forward," replied Jones, "until we hit the rip; then, when I sing out 'Aft!' you come aft at once."

We made our dispositions accordingly; tucked the guns under the seats, tied the handle of the camera-case to something, and carefully covered our bedding and effects with the sail and sheet of waterproof. Then we got full speed on the motor, and put "The Lone Hand" at it, much as a huntsman might put his charger at a ditch. The 300 yards' race into that cataract was like going down a switch-back. We shot towards the boil.

Crunch! crunch! I heard the keel of the boat grind on the rocks as we entered it. I fully expected then that the next ten seconds would find us battling in the whirlpool. But the combined speed of the current and engine bumped and forced the boat to the cataract's edge. As she met the shelf of rock, and dipped her nose over into the flying spray, Jim yelled "Aft!" I was back beside him almost before the word had sped, and "The Lone Hand" fell with a mighty splash into deep water. We turned as she arrowed out into safety, and hurled our compliments at the "Bitch and Pups." It was the most thrilling five minutes on the whole trip.

We entered now a gloomy, desolate, length of river, with high, mysterious banks. Hillocks and ridges of red sand, on which scattered pine trees grew, darkly

green, rose here and there, adding to the monotony of the landscape. We were nearing the junction of the Wakool. We found a deserted house here, but it stood so lonely and ghostly, so skeleton-like with its bare windows, vacant as the eyes of a skull, that we went down below the Wakool to make camp. It was an eerie afternoon and an eerie spot, hinting all sorts of shuddersome mysteries. We felt uneasy about distant friends, and talked sombrely. Some accursed night-bird kept uttering cries, as if an infant were being strangled, all the time we were pitching camp in the after-dusk. There are places in the bush which seem to be haunted like this—strange, shadowed nature corners, over which some evil demon surely presides. Even in broad day, in these terror-haunted gullies and scrubs, one feels the goose-flesh creep coldly over the skin, and one's hair bristles with that animal instinct of danger, felt but unseen, which belongs to the primal days of Man.

We boiled our noontide billy next day at the Murrumbidgee junction. Here 78 years before Sturt and his boat's crew first saw the Murray. The great explorer found the Murrumbidgee in its upper reaches "a stream with strong current, whose waters, foaming and eddying among rocks, gave promise of a reckless course." Where it weds the Murray the "reckless" stream is quiet and still. It looked to me a narrow and insignificant waterway beside the broad river we had been travelling. It brought me visions of those sheep-covered plains that spread away to Lachlan side. Wearily it laid its tribute of green waters, gathered from the east and north, at the feet of its overlord—the Murray. Gladly it almost seemed to hand the burden over to a stronger Seneschal of the Rains, that he finally might render full return to a blue-robed Cæsar, waiting where the maids of Goolwa walk beside the Indian Sea.

The story of Charles Sturt's expedition is about the

S.A. Farmers Treking into N.S.W.

finest thing in Australian history. No one can read the account of that 84 days' voyage to and from the sea in an open whaleboat, on three-quarters of a pound of flour a day, through territory occupied by hostile tribes, who had never seen a white man, without recognising Sturt's eternal claim to fame. It is a much nobler theme than the battle of Elands River, recently recommended by an English writer as a subject for the perpetual inspiration of Australian poets.

The scene lay just as quiet, and almost as primitive, as on that January afternoon, when Sturt, with his three soldiers and four convicts—all gallant men—rowed out into the main stream, and the brave captain gravely lifted his hat in response to the cheers of his brave little company.

We had thought that after leaving the junction our passage would grow easier. Instead, the difficulties seemed to increase. The river was wider, but sandbar after sandbar kept us in perpetual trouble. We would follow what seemed to be a channel, to presently find ourselves hard and fast on a sandspit or sandflat, over which the boat had to be dragged somehow. We lessened our draught on these shallow flats by hanging out over the gunwale, and petrolling her through on her side. Twice in attempting this feat I rolled out and took a splash bath. We also tried jumping out, and by keeping the engine going drove our vessel foot by foot over the sand, jumping in again as soon as her bow dipped into deep water. The sandbars dropped precipitously, as a rule. Once we missed the exact psychological moment, and "The Lone Hand" dived gaily away without her crew. Luckily she ran on to another sandbank down stream, and we swam out and re-manned her. Had it been straight, clear river, we might have had a bare-footed chase after a runaway motor boat for miles.

Below the 'Bidgee ducks were plentiful, and grilled teal and top-knot pigeon on toast also formed an item

on our breakfast menu. Clumsy emus fled at the sound of the motor. Two shots from the Winchester had already added two emu skins to the mementoes of the trip, and it was not fair to destroy more. The dry weather had brought numbers of these birds down to the river for water. They were perishing from drought out back.

Youngeira Station is not the place a person of delicate habit would choose to spend a holiday. It would be too flat for a painter and too drab for a poet. But even at this outpost we found kindliness and cow's milk for our tea. The boss and his wife were away, and the station hands spoke dejectedly of the outlook for winter. The whole district was drooping for lack of moisture, the plains were bare of feed, excepting salt-bush, and the everlasting curse of rain-want was over everything. City dwellers, unfamiliar with the conditions of the West, can hardly realise how their back-block cousins live and remain cheerful. They are a lion-hearted people, and this writer devoutly urges the Government of Federated Australia to take their case in hand. Only three millions of money are required to lock and make constantly navigable the waterways of the Riverine. Australia could not possibly lay out her money to better advantage. She will reap in production, in population, in wealth and power a thousandfold. Millions of acres of good fertile country will be rendered capable of closer settlement. Billions of cubic feet of water can be conserved in lakes and billabongs, and the arid interior converted into green fields and flowering gardens. Facts, figures, and statements can be piled upon one another to prove that this is no romance, but a living possibility. Royal Commissions have already collected volumes of evidence. The people of the West, our best, our bravest, most generous-spirited pioneers, are well aware of what their country can do with proper treatment. They wait year after year for this

national work to begin. The question of riparian rights looms largely now; it will surely grow to a cause of disunion in a few years. Let the Federal Parliament lift its political soul above trivialities and attack this subject before any other. I have seen the Senate of Australia, the highest legislative body in the land, waste an afternoon in seriously discussing whether or not an operative was rightly dismissed from his employment!! But no Senator, to my knowledge, has yet moved the adjournment of the Chamber to call attention to the fact that millions of pounds value are wastefully going down these inland rivers yearly to the sea, while uncounted acres of Australian soil are just waiting the exercise of a little legislative intelligence to render them capable of carrying the vast white population that Australia needs, and must induce if she is going to hold her own among the nations of the earth.

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There is no electric-lighting plant at Euston, but the kerosene lamp of a bush hotel throws a dull glamor over the main street for a radius of fully ten yards. This beacon was burning for the guidance of thirsty strangers as we came to town. A bearded goat stared curiously over the bank at our coming; otherwise the place showed no signs of life. It is a cheerless village, but on going ashore we found the people just as kind and friendly as elsewhere in the Riverine. That night we again took possession of a steamer docked by the Murrayside awaiting a good river, and heated our billy of stewed black duck in the galley. The owner strolled down and lit up his boat from the acetylene gas generators on board, in order that we might meal comfortably. He also placed the ship's cuddy and its contents at our disposal, and forbade us to use our own groceries. Furthermore, he presented us with a spare gallon of motor spirit which he happened to have in stock, and declined payment for it. If we had not, out of very shame, checked the generous impulses of that hospitable Westerner, I believe he

would have given us the boilers or the upper deck in his earnest desire to make us feel at home.

Leaving Euston, the Murray winds away to the south and returns upon its course, forming a 90-mile bend. Kilpatrick, of "Tammit," is located in the heel of this bend. He came down upon us like a Highland chieftain next afternoon, and we bided with him that day and night, talking irrigation and hearing songs of far-off civilisation discoursed by phonograph. Here was a squatter testifying to the benefits of irrigation from practical experience. A few years back the droughts had nearly crippled him, but he took heart and installed a first-class pumping plant and watered many good acres. Now his stacks of fodder left him without dread of dry incoming winter or a red summer passed. His lucerne paddocks waved high and green, his stock were safe, and the braw Kilpatrick exhibited the confidence of a general who knows that he holds reserves strong enough to outmatch the enemy.

. . . .

It was a wrinkled whaler that we camped beside on a sandspit next night. Many Western suns had given him a face of parchment and simian hands. He scorned a covering, and slept rolled in his blue blanket in a hollow of the sand. A wise old vagabond was this who had bearded many station cooks in his day. Seven years had he "whaled" the Darling and the Lower Murray, and now he was trekking up stream with his dog for companion. He invested that mongrel with extraordinary virtues and talents. At least, the animal was an accomplished thief. He looted our corned beef under cover of night, and adopted such an air of injured innocence when charged with the crime next morning that nobody had the heart to kick him.

About noon next day we passed the 750-mile tree, and shook hands. Half the distance had been accomplished. We did not know then that we were not destined to finish the journey together. We ran down this long, tortuous bend at a speed of fifty to

Irrigation Channel on the Murray at Tammit Station.

sixty miles a day. There was little life on the banks —no stations or settlements or houses, only a few camps of fishermen, with long miles of river between them.

At night we bided with a peculiar company. It was a travelling biograph show and "variety entertainment." Their little launch (not much bigger than our own) was theatre, travelling home, and circus. It had a canvas covering, with side blinds to drop when the company retired for the night. The troupe consisted of a man, a woman, a young half-caste variety star actress, a girl, and a lad, three monkeys, a parrot, and a performing dog. The company mealed in common. Quarrels between the monkeys were constant. The dog and the parrot hated one another like Cain and Abel The business manager's time was constantly taken up in preserving peace among his assorted cast.

No advance agent travelled ahead of this unique company. Its entertainments were given in shearing sheds sometimes. It engaged halls in the towns other times, and put up handbills to coax audiences. It led a gipsy life on the rivers, drifting from one part of the country to another. It caught fish, shot ducks, and "whaled" flour and mutton from the stations of the Riverine. It was very Australian.

We passed through "MacFarlane's Reef" safely, and came down to Mildura at midday on Saturday. Two letters edged with mourning lay among a voluminous mail!

Their contents burned my heart with a sadness deeper than it had ever known. The light had gone out of the day. What mattered anything? Only those who have lost, from that inner circle of friends which makes one's human world, the nearest and dearest, can understand. A chill wind of Death had scattered the white rose petals on the grass—the flower would bloom no more.

We had intended to remain a week in Mildura to recuperate and rest, but bad news makes hateful the most pleasant place of abiding. We said we would leave on the coming Monday, and added no camp of ours to the scores along the river's banks.

Meanwhile, to kill thought, I made many notes of this marvellous settlement. Mildura is one of the most interesting places in the Commonwealth. Prior to the year 1887 the mallee lands of Victoria were regarded as hopeless of cultivation. The 9000 acres in which the bursting fruitfulness of Mildura now stands were not worth five shillings an acre. To-day their annual rateable value is near £30,000! The fruit produced in one year is worth over £100,000. To a family of long-headed Americans—the Chaffey brothers—this fairy transformation of a wilderness into a garden is primarily due. They saw the possibilities of irrigation, and put out faith, energy and capital to the making of Mildura. With a strong-souled band of pioneers, they went out and *did*. The State Government, under agreement with the Chaffeys, twenty years ago set apart an area of 250,000 acres, under the rule of the first Mildura Irrigation Trust. There are in that district over 30,000 acres of irrigable land served by the main channels of the system, and a third of the area is under irrigated culture. One hundred and seventy aggregated miles of channel deliver water to the ten-acre blocks into which the land is subdivided. The cost of supply is met by rates levied by the Trust, varying from 10s. to 40s. per acre, according to class. The year is divided into five irrigation periods—one in the winter months, the other four following each other quickly during the hot summer days.

Mildura forms the extreme railway point of Victoria. Its three trains a week are the slowest and most comfortless known. If the ghost of Stephenson ever found itself in a Mildura train it would be over-

Preparing Fish for Adelaide Market at Renmark Wharf

Aboriginal Canoes and Fishing Gear.

come with remorse. The journey to and from Melbourne fills the best part of two days with misery for the unfortunate passengers. It is the rule in Victoria to make every railway journey as disagreeable and dangerous as possible; the journeys to and from Mildura hold a bad pre-eminence for torture.

Mildura, being the only prohibition town in these States, is alleged to be about the most drunken spot on the face of the Continent. The illicit thirst of the population is slaked at grog shops masquerading as "clubs." Entry to these clubs is readily gained. They are haunts of Bacchus, wherein that dangerous god receives his grossest form of worship on secret altars, thinly screened from the light of day. The abolition of the "club" system, and the establishment of well-regulated hotels, will brighten the future of this promising settlement.

The irrigation districts of Mildura and Renmark are now supplying the Australian markets with all the currants and raisins they consume, at Trust-fixed prices. The grape season in Mildura covers February and March. Then come workers from near and far to the ingathering. Then a-down the long, green rows of lexias passes a miscellaneous cohort of men and women, drawn from the rivers, the plains and the cities, by the bait of "six bob a day." Then Mildura pulsates, lives, lusts, loots and labors. The warm nights are filled with the murmur of voices, the river banks are reddened with camp fires, the harvest moons gleam on white tents of tired Bedouins of the Bush. Then the air is heavy with the languorous, intoxicating perfume of grapes. A thousand trays, filled with fresh-cut fruit, are offered daily to the sun. The land grows drowsy, drenched with the wine of harvest, and heavy with the odors of fertility. It is like a Greek pastoral or a page from the Levant. At the heels of Labor sneaks Laziness, bent upon filching the fat purse of Toil. The drones and parasites of the shear-

ing sheds appear in another field, to pursue the devious ways of parasites and drones the world over.

It is a pleasant oasis, Mildura, full of garden shade, and odorous with the breath of olive and of vine. The luscious mouth of the guava offers tropical kisses to the lips of gourmands; the fig and pear and prune cast their ripeness on the fatted earth. The almond presents a delicate Oriental sweetness to summer-tired visitors, and in Spring its blossoms fall as softly on Australian earth as the blossoms of its parent stock fell upon Hebron, or in the gardens of Hauron al Raschid.

Here under the fig of Smyrna a man may sit and read the Arabian Nights. Or, in season, he may bathe his senses in the perfume of orange blossom—most seductive of blooms, and fitly chosen as a chaplet for brides.

But in this lotos land—where an acre of lemons yields 500 cases, and an acre of grapes five tons—we might not long abide.

The Serpent of new grief blurred the face of Eden. I strained to open the gate of departure to go forth again into a wilderness of saltbush and sere sand, more fitted to a sad man's mood. Poor old Jim was worn with the eternal strain laid upon his shoulders by weeks of anxiety. The constant vibration of the engine, the continued tension, had affected his nerves, more than I realised at the time; but he sympathetically answered my call to let us both begone, and we set out for Wentworth.

The heavens had poured out their rains at last in the North—hundreds of miles away, weeks before. Flood waters were coming down the Darling, and the yellow drainage of far-off Queensland hills and downs would bear "The Lone Hand" joyously to the sea.

We got over the last sandbar a few miles from Mildura, and entered a broad, deeper stretch of river. We drove on and on, enjoying the novelty of uninter-

rupted passage. The day had been intolerably hot, with that fierce, relentless inland heat that knows no kindly sea breezes. The sun died, with red, unlidded eye, glaring malice to the last. A three-quarter moon silvered the trees along the banks. The water around us seemed to have lost its clearness.

"We must be near the junction," I called to James from my post forward.

He was absorbed in his engine. It was the first really good, clear run we had made since Albury, now 800 miles behind us.

"Not yet!" he said. "She is running lovely!"

I kept peering at the banks for another mile or so, and presently descried a light and the dim outlines of a dwelling.

We stopped and hailed.

"How far are we from the junction?"

A voice from the stoop answered back: "About a mile. You've passed it! That 'The Lone Hand' motor boat?"

"'The Lone Hand,' yes! Is there a hotel in Wentworth?"

"Four. You'll be late for tea!"

We turned about, and entered the Darling by full moonlight. The current was running strong—another tribute of waters for the Great Overlord. It seemed as if we were sailing up a river of milk, deep and wide.

Two steamboats, with barges wool-laden, and covered by tarpaulins, were tied up below the bridge. Smoke from their funnels told us that at last "The Lone Hand" had come within the radius of active navigation.

We drove under a fine iron bridge, and made fast—the worst part of our long voyage was over.

We had intended to go on again next day, but next day my mate fell ill. Days followed, and, his condition showing no improvement, the doctor forbade his

continuing the trip. Jim swore and protested against this, vowed that he would go on if he had to be carried into the boat; but ultimately I persuaded him to return to Sydney, where he might get treatment that the strenuous West could not afford.

It was a sorrowful shake-hands when he weakly mounted the Mildura coach at last, *en route* for Melbourne. For weeks we had faced a tough proposition together, in day-shine and star-shine, sunrise and sunset, burning noon and dewless eve. We had sat by the same camp-fire, shared thoughts and shredded tobacco; and no man likes to lose a good mate, for mateship is more than a mere term in Australia. Meanwhile I abided with John Leary, and many things happened.

The engine of "The Lone Hand" had to be refitted; the trip had to be reorganised and completed. I spent three weeks in Wentworth, weeks in which the life and character of the West crowded pictures into my memory. These weeks were filled with kindliness, hospitality, and the wit and wisdom of my preceptor and friend, honest John Leary, the man with the biggest heart and the biggest boots in all that big-hearted land.

" 'Tis an act of Providince has put you down here," said John, in the mellifluous tongue of Tipperary. " 'Tis you will be the poor scholar, and me that will be the taycher to you. Come in now and have a dhrink wid me frind Dhraffin an' me frind Woodhead, an' be inthroduced."

I was introduced.

Here was Draffin, the young schoolmaster, with examination certificates and degrees a yard long, spending his years in a purgatorial climate that the children of the West might have education, loving his work, and filling his post manfully and well.

Here was Woodhead, the newspaper man, bringing out his little weekly sheet in an oven of an office, and

The Murray in Flood at Wentworth.

Photo—F. Gorman.

battling against the cold indifference of Governments for the crying wants of his district. Here were a hundred good Australians manning the outposts of civilisation in the face of drought, neglect, and uncertainty, and remaining hopeful and resolute withal.

Compared with the idlers and dandies of city life, they stood as men of Brobdingnag above men of Lilliput. They were giants towering over pigmies; monuments overshadowing vegetables; strength and usefulness opposed to weakness and inutility. But here, also, there were human wreckage and failure.

"Come to me bahr," said Leary, "an' luk at the wasthers an' vagabonds. 'Twill be a warnin' an' example to ye, me litherary Bo-hemian."

"For twenty-foive years," said John, "I've been selling dhrink. 'Tis an awful thrade."

I found that a good deal of Leary's profits went out in secret charities. I also found that when the rouseabout or the wanderer came to Leary "stripped" he never went away without a drink, a feed, and, if Leary liked his man, a word of curseful good advice, coupled, mayhap, with a small loan. It was here I met "Spare-me-Days," "Texas Jack," "Brummy," "Dotty," "Stumpy," "Peter Dawson," "Tommy the Cadger," and a string of identities.

Spare-me-Days and Brummy were just finishing a long spree. They slept in out-rooms, tremblingly breasted the bar at the first of day for a reviver, and went to bed glorious and fightable at midnight.

That was the morning of my arrival at the pub.

Brummy fixed a bloodshot eye on the morning, and informed me that he was going to quit that —— day.

Each succeeding morning for a fortnight Brummy avowed that he was going to quit that —— day. Every night I heard Brummy in his back room singing the same song of seventeen verses, with which he lulled himself to sleep. At last he mounted a raw-boned, flat-footed animal that had been waiting for

its rider somewhere, and loped off into the desert with a long-eared cattle dog trotting thankfully behind him. Brummy had gone to pick up a job on a station 200 miles across the plains. The "civilisation" of Outback would see and hear him no more for months or years.

Spare-me-Days was a little old man with a bald head, and a skin the color of spilled blood. He kept constantly on rum until a blue boa-constrictor began to inspect him. In order to escape the attentions of this reptile, he walked into the river. He was swept down the Darling, and snagged just above the police magistrate's residence, and opposite Texas Jack's camp. Texas Jack fished him out with a wool-hook, and applied first aid to the drowned in the form of whisky, whereat he revived and proceeded to walk into the river again. He was still under restraint when I left the township.

Dotty claimed my attention from the fact that he tried to sell me a bottle of strychnine one morning for the price of two drinks. Dotty had been poisoning rabbits prior to the inauguration of *his* spree, and the strychnine was his last asset. He was also a little old man, with the beard of a patriarch, and the face of a deacon gone to seed. I asked him what he was. He replied in polite accent and flawless English that he was "a mere extraneous circumstance and a wonderful example of unquenchable thirst." Whereat I chummed with Dotty, and bought him drinks, and he told me two romantic, wonderful stories of his career within the hour, distinct and contradictory in almost every detail; from which I concluded that Dotty was an unfathomable liar.

Nobody knew anything definite about Dotty, except that he had been on the Darling for over twenty years, and had never been sober for more than a week at a time.

Texas Jack desired to buy "The Lone Hand." He

offered me £8 10s. for her every day for a week, and then offered to fight me for the boat and £8 10s. I did not trade.

The coming and going of "Greenhide Jack" interested me during my stay in the Far West. It made a typical drop act to "O'Leary's Wild West Show":—

There was water in the Darling. The steamers were coming down, towing wool-barges in their wake. The smoke from their funnels clouded out across the plains by day; at night the light from their reflectors lit up the river bends. The trees grew out of darkness, flashed greenly for a moment, and sank bank into shadow. Sparks from wood fires in the furnaces shot upwards; yellow water curled at the bows; the laughter and loud talk of deck-hands, smoking on the rail, gave a touch of human presence to the prevailing loneliness.

Greenhide Jack sat forward on the deck of the Lord Nelson, side-wheeler, of Goolwa, S.A. He was cutting thongs from a strip of raw bullock-hide. Most of his spare time, which was considerable, he spent in making sundry articles for use, ornament, or profit out of rawhide.

You will often meet by the waterside grave, elderly mariners, who apparently live by fixing up models of full-rigged ships in narrow-necked bottles. The same instinct, in a changed form, prevails out West.

Greenhide Jack could do more with a hairy pelt than most people. Hence his nom-de-guerre. His waistcoat was of cowskin, red and white; his belt of plaited greenhide. His boots were laced with strips of the same durable material, and his kit was chiefly rawhide in various stages of preparation—and perfume.

A voice rose out of the darkness aft.

"Ja-ack!"

"Greenhide" spat sullenly into the water, and went on scraping with his knife.

The acetylene gas-burner overhead threw a squat

shadow on the deck near the empty kerosene case on which he sat.

"Jack! I say, Jack!"

"What yer want?" growled the man with the hide.

A portentous whisper—

"Say, Jack, there's a dead cow floatin' just ahead. What about arsking the old man to stop 'er while y' take the 'ide?"

"Go to ——!' asserted Jack from his kerosene case. "Y' got no more sense than a native bear." He turned the strip of hide over, eyed it with a critical squint, and repeated,

"No more sense than a native bear, an' not half as good-lookin'."

"Ja-ack!"

The smokers on the rail stopped talking. Greenhide went on scraping and shaping.

"Jack!"

No answer.

There was a titter forward. Someone threw a cold boiled potato, which caught the man on the box under the ear, and diffused itself clammily down his neck.

Greenhide Jack sprang to his feet, and lurched forward with the avowed intention of "clouting someone's —jaw."

His foot slipped on the potato peel. He reeled, sprawled, crayfished, lost his balance, and fell, the knife underneath. There was a curse, a groan, a squirt of blood on the deck, and everybody, expressing sympathy and contrition, crowded round the fallen man.

Brummy Williams, who threw the spud, "for a lark," as he tearfully told all hands, lifted Greenhide tenderly on to a bundle of loose woolpacks. Somebody undid the victim's shirt, and they rapidly examined the injury. It was a mere flesh wound in the groin, but Greenhide refused to believe that he had more than twenty minutes or half an hour to live.

"Y' can't tell me," he groaned. "It's intarnal. I'll be cold as a dead sheep be the morning. This comes o' leavin' a good job to jine a coughin', starvin' pig of a——"

"Here," whispered somebody, winding a hairy arm gently round his neck, and placing the edge of a tin cup to his lips; "drink this."

The dying man swallowed, coughed, lifted up a hand, closed it firmly over the strange hand that held the cup, and kept it there until the half-pannikin of brandy was safely stowed.

"Feel better, Jack?" asked Brummy Williams anxiously. He was on his knees, staunching the wound with his best shirt.

Greenhide made a pass or two in the air with his hands, like a man feeling about in the dark.

"That you, Brummy?" he asked in a frog-like voice coming up with great difficulty from a deep well.

"Yes, Jack."

"You threw the spud, Brummy?"

"Yes, Jack; but I meant no 'arm, old man."

"No, you meant no 'arm, Brummy, but you've done for me—done for pore old Jack."

"S-s-sh, Jack; no, no, you're all right. The bleedin's almost stopped now."

"Stopped," said Greenhide, in a hoarse, awful whisper. "But it's bleedin' inside. I kin feel it."

There was an uneasy rustle among the crowd. "Give him some more brandy," said a sympathetic voice. "He looks bad."

Greenhide's head fell ominously to one side. The hairy arm went round the sufferer's neck again and steadied it.

"Put water in it," gasped Greenhide faintly. "Too strong!"

He drank it slowly, with eyes closed, and lay back on the woolpacks.

The Lord Nelson's paddle-wheels churned up the

flood waters of the river steadily, as with a strong current to aid her she steamed rapidly around the bends.

The bargemaster in the wake, seeing that something was happening aboard, shouted anxious inquiries at the steamboat. Presently the skipper put his head out of the wheel-house, and shouted back that Greenhide Jack had fallen on a knife and hurt himself.

The head was withdrawn immediately, leaving the bargemaster in a state of nervous excitement bordering on insanity. He stretched his neck and turned his head from side to side like a turtle, but all he could see was an occasional figure mysteriously humping along the deck with something resembling a bottle or a bandage in its hand. Once somebody rushed aft to the engine-room with a billycan for hot water.

Everything conduced to the bargemaster's annoyance. The barge was towing at the full length of her line, the night was dark except for the stars, and the reflectors only illuminated the banks on either side of the channel straight ahead, leaving the group on the deck in exasperating half-shadow.

In the combined endeavour to keep abreast of current happenings and hold the wool-laden scow on her course, the excited outsider presently ran his barge aground; the tow-rope parted, and the steamboat disappeared round a bend, leaving the shipwrecked bargemaster to pour out his soul to the stars.

The Lord Nelson came to a full-stop down-stream, and the man in the wheel-house added a few lurid items to his account on the debit side of St. Peter's ledger. His language was re-echoed by the crew, who forgot Greenhide Jack for a full hour while the barge was being hauled off the bank and put in tow again.

Then the skipper gave the wheel to another man, while he went below to examine the invalid.

Greenhide announced, in a faint, thick voice, that

he did not expect to see the morning's light. He asked plaintively for more brandy. The skipper shook his head. He was a temperate man, who had been accused of belonging to a Blue Ribbon Lodge in Port Pirie. He had been brought up a Methodist, and although he backslid and used bad language on occasions, his early training clung to him.

After a cursing bout, when he coined phrases that no bullocky might be ashamed of, he always grew repentant. In this state of mind he would go about admonishing the crew, and mentioning their souls to them in a way that made a man regret the possession of a soul.

"No more brandy, Jack," said the skipper, sadly. "It's the curse of God's earth. It's a device of the devil to snare weak human souls."

"But, Boss, I'm dyin'," gasped Greenhide, "the knife's gone right through me."

"Then die sober, Jack," said the skipper. "Don't face your Creator with the smell of drink on you."

He stooped over the recumbent form on the woolpacks, and whispered—

"Would you like me to pray with you, Jack?"

Greenhide's disgust was too great for expression. "Gimme a tot of grog, first," he demanded.

"No, Jack, not a drop; besides, the cook has emptied the bottle."

"Oh, Lord," groaned Greenhide; "to let a man die like this. To let a man die on a raspin', rotten, hungry scow, run by a half-bred wowser, with a drunken sot of a Cockney cook that guzzles the only drop o' grog on the ship. How far is it to The Junction?" he demanded, breaking off and sitting up.

"Six hours," replied the skipper; "but—Jack——"

"Oh!" cried the patient, sinking back again, and groaning dismally. "Confound you an' the boat, an' Brummy Williams, an' the whole lot of you. I'll have the law on Brummy for this, anyhow."

"Look here, Greenhide," cried the captain of the Lord Nelson, "it's no use exciting yourself like that. You'll only open up the cut again. I've got a box o' Cockle's pills aboard——"

"'Ave you?" said Greenhide, in a voice of unutterable scorn. "Oh, 'ave you? A box of Cockle's, eh? A whole box? Well, you go and take 'em pills, box, label, an' all, an' leave me alone! Leave me alone, I tell you!" he yelled hysterically. "Go to the devil, and leave me alone."

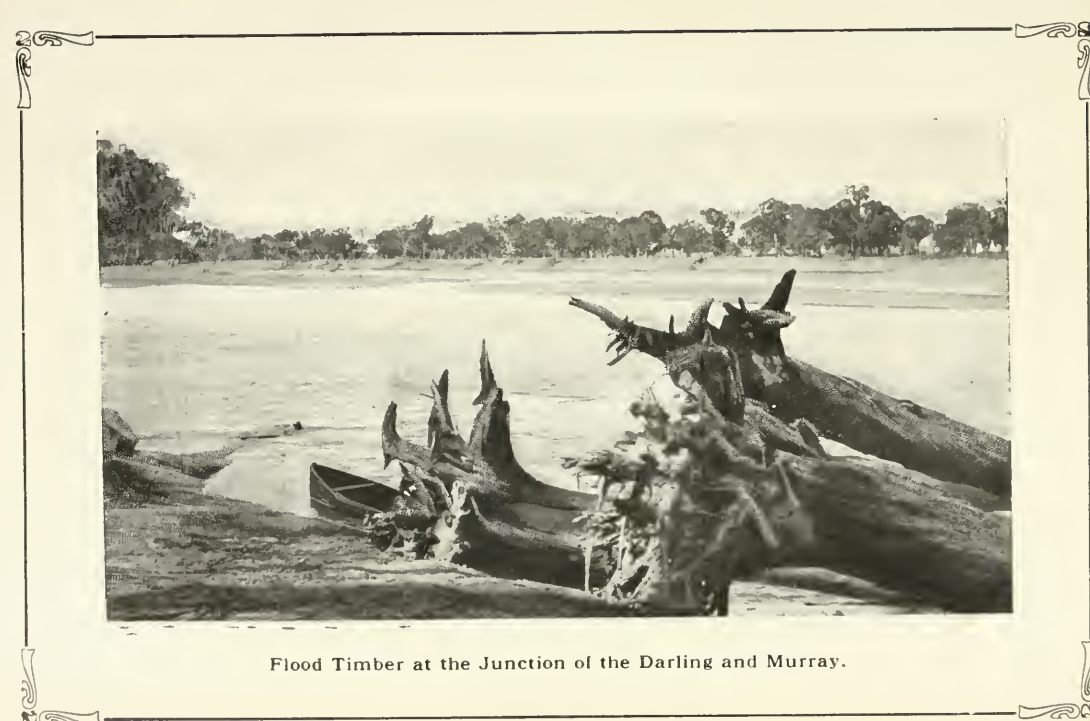
The skipper shook his head, and went up to take the wheel again.

From the movement of his lips, it was apparent that he was forgivingly pleading for the injured deck-hand's spiritual welfare.

The steamer plunged on through the night hours. Gradually the outlines of overhanging trees became more definite. The stars died away, and a cold, grey light crept across the plain. By-and-by, at the eastern edge of the saltbush waste, the blood-red rim of the sun showed. It glided up into a large, smooth, crimson-coloured globe, carrying all the fiery promise of another hot day.

. . . .

At this time I abided with John O'Leary, of the Junction Hotel. I had breakfast in the general dining-room, with Con Cullen, the saddler, who had just come up from the Ana Branch, and was starting his annual spree. Con wore a wooden leg. He had wakened me at daylight that morning stumping about my bedroom, emphasising each invitation to get up and drink by stamping his timber violently on the flooring boards, until O'Leary, who stood 6ft. 6in., lifted the little man up in his arms and carried him out, with the wooden leg pointed at the ceiling, like a signal of distress.



Flood Timber at the Junction of the Darling and Murray.

Con toyed with a plate of fried steak, while I ate the tough beef and drank the strong tea of the Far West.

The saddler was in the middle of a story about the '92 strike when the hoarse whistle of the Lord Nelson arrested the scattered interests of the Junction. People who had any business pretext knocked off what they were doing and began to stroll leisurely towards the sloping wharf. Other people, town loafers, deck-hands, fishermen, out-of-works, bushmen from further back, the casual population of a Western town, drifted along and joined the group. Next to a fight or a funeral, seeing a steamer in and out was the chief amusement of the place.

The side-wheeler churned down the last reach and made fast in leisurely fashion. No one hurried; there was no display of excitement, no rush, no undue haste to come ashore or get aboard. The men, who looked more like station hands than anything else, obeyed their captain's few brief orders in a deliberate, friendly, independent manner. They were more requests than orders, anyway, and framed with a knowledge of Western temper and Western ways.

When I went aboard with O'Leary, Con Cullen stumping unsteadily at our heels, Greenhide Jack was sitting outside the cook's galley, with his back against the woodwork and his hand to his side. His face bore an expression of cultivated pain.

"Hullo!" said O'Leary. "What's the matter with you? Gripes?"

"I'm stabbed!"

"Stabbed! Who stabbed you?"

"He done it hisself," volunteered the cook. "Brummy chucked a spud at 'im for a lark, and he run after Brummy an' fell on his knife. 'E bled about a pint, an' made out 'e was goin' to die."

"Did I?" ejaculated Greenhide angrily. " 'Bout a pint, did I? 'Arf a bucket, if I bled a drop, an' this sot collared the only drop o' brandy aboard an' wolfed it."

The cook retreated to his galley, and began shifting the pots about on the stove with a loud noise. Greenhide Jack, having secured an audience, held forth eloquently on the subject of his wound and his grievances.

He threw out dark hints about court work and actions for damages, doctor's expenses, and the hospital. Every now and then he would stop to press his hand to his side and contort his face into an expression of agony suggestive of something on a Japanese vase.

Brummy Williams could bear it no longer. He came amidships, and loudly, in the presence of witnesses, disclaimed all malice prepense. At the same time, he offered to give Greenhide Jack "half-a-quid" to settle the matter. After twenty minutes' argument, in which Con Cullen acted as referee, the action for damages was compromised for eleven and six, the odd eighteen pence being immediate drinking silver.

Greenhide rose to his feet with some show of physical weakness, and shook hands with Brummy.

With one arm linked in that of his late enemy, and one in Con's, the injured Greenhide, now visibly recovered, proceeded to get ashore. As his feet met the wharf, the skipper called out from the upper deck:

"Hi, there, Greenhide!"

"Wot?" replied Greenhide, facing about with a realisation of what was coming.

"Going ashore?"

"I'm goin' to consult me medical adviser, sir," replied the recovered Greenhide, with mock humility—"Doctor O'Leary, there."

"Got your kit? No! Well, get it."

"I'm not leavin' the boat."

"Oh, yes, you are. I say you are!"

"Right!" cried the whaler; "gimme me money. A week's notice or a week's screw. That's the law!"

"Is it?" replied the skipper. "Is it, by ——." The remembrance of early training came to him just in time. "Is it, you loafing, malingering, whaling—may God give me strength to restrain myself—you idle impostor, you. Didn't you come aboard at the wood-pile, and beg for a passage to Renmark to go grape-picking?"

"I did," replied Greenhide Jack, "but didn't you set me to work—menial labour, peelin' spuds for your drunken cook? I'm surprised," he went on, in a voice of virtuous indignation, "at a man like you, that pretends to be religious an' a teetotaller, 'avin' a cook like that aboard yer ship. Ain't y' goin' to pay me anything for the work I done for yer?"

"You've had three days' grub," cried the skipper; "that's more than enough for you. Get!"

"Right!" said the unblushing Greenhide. "Gimme me swag, boys."

He hitched his "bluey," tied with rawhide, on to his shoulder, and fired his Parthian shot.

"So'long, ole church on paddle-wheels. Say, chaps"—he sank his voice to a loud shout, disguised as a whisper—"look out for the skipper. He'll have you all singin' hymns before you get to Morgan. He wanted to 'old a prayer-meetin' over me last night, an'——"

But the captain of the Lord Nelson had slammed the door of the wheelhouse behind him, and was holding on to the spokes with his teeth clenched and the muscles of his jaws bunched up like knotted cords.

In this way Greenhide Jack, river-whaler, came ashore at the Junction.

Out in the wide, arid West, the little things that civilisation considers of first importance become remote and trivial. Children who have never eaten penny

ices, men who have never ridden in penny tramcars, do not see life with the eyes of the city.

They do not miss the thousand "conveniences" of crowded centres, because they have never known them.

Mentally and physically, they belong to another race.

They are simple-minded, from the city point of view, but they have a wisdom of their own and a knowledge of Nature that enables them to live where the average man of the cities would perish helplessly.

"The hard, strenuous loife of the West," said O'Leary, the philosopher, "makes *min*. For twenty-foive years Oi've been sellin' dhrink in the West, an' Oi ought to know."

"Yes," said I, "you ought to know."

"Make no mistake," rejoined my friend of the Junction Hotel, big-footed and big-hearted, "Oi know it's a cursed thrade, but if Oi didn't, another would, an' at laste I sell 'em clane grog."

Which, to the O'Leary's credit, I knew was a fact. I also knew, though not from O'Leary himself, that more than a fair proportion of his gains were disbursed in secret charities.

Under the rough exterior of this great, roaring Celt, tolerance and good nature lay hidden like the springs under the rock.

He had all the Celt's native inspiration, and the weeks I spent at the Junction watching the wonderful panorama of Western life under O'Leary's tutelage were a better education to me than a course of University lectures.

In fact, he stood towards me as a wise professor to a student in his first year.

It was O'Leary's Wild West Academy, and the lesson was the lesson of life.

The arrival of Greenhide Jack at the Junction became known to Scotty M'Gill about noon. The blacksmith's striker had gone out to the Barrier Ranges

A Darling River Steamer en route to Adelaide.

to bury his mother-in-law. With all due deference to filial grief, the blacksmith announced that he could stand no more of it.

The striker had had two weddings and three funerals inside of six months, and he had taken a full week to recover after each function.

So Scotty M'Gill, having once, on his own assertion, been a master farrier, was filling the vacancy—indifferently well.

The temperature under a hot iron roof next the forge was trying.

The general rainfall of the Junction is about one thunderstorm in two summers.

The good seasons, when they come, are good beyond description. The grass billows waist-high across hundreds of miles of flat country, the anabranches and gilgas are full of water, and the population is full of joy and other intoxicants—but the good seasons are as one in seven.

Scotty looked out from the forge on a scene of drought.

There was water in the river, truly, plenty of water, but it was all coming from the north and west of Bourke, hundreds of miles away. Rain in Queensland does not necessarily mean rain in New South Wales, and lacking an irrigation system, all that valuable water was going down to Lake Alexandrina wasted.

Scotty, sour sweat of toil upon him, sighed discontentedly.

In the distance a mob of goats were nibbling saltbush.

Under the shade of a pepper tree two stockmen made mud maps on the dusty footpath, and argued violently about the exact location of an artesian bore in Central Queensland.

The blood-red sun of morning had redeemed its

promise, and the air was as dry and hot as if it had come directly from the mouth of a furnace.

Scotty M'Gill threw down his hammer, and moved off.

"Where y' goin'?" asked the blacksmith.

"Pub," replied the striker briefly.

"What for?"

The blacksmith's voice was strident, with a note of helplessness in it.

"Beer," replied Scotty.

"Have one, and come back. I want to get these tyres fixed to-day."

The striker made no answer. He strode on with determined step to O'Leary's. Jerry O'Leary was in the bar. Scotty put his arms on the counter, measured Jerry with his eye, and observed:

"I'm workin'. Gimme a beer! Pay y' on Saturday."

Jerry, wiping a tumbler vigorously, was considering the proposition when Greenhide Jack, with Con the Saddler stumping after him, entered.

Recognition lighted Scotty's eye.

"Why, it's Jack!" he cried; "the Greenhide. Don't you know me? Don't you know your ole mate, Scotty M'Gill?"

"Know yer!" replied Jack, extending a knotted hand, "I'd know yer skin if I saw it hanging on a bush. 'Ow goes it, Scotty?"

"Rotten!" growled M'Gill. "Country's gone to 'ell, Jack. Not like it used to be in our day. What y' doin' now, Jack?"

"Been whalin' the Darlin' the last six months."

"Any good, Jack?"

"Good!" said Greenhide, disgustedly. "Good! Give us drinks, Jerry—drought, blight, starvin' sheep, 'ungry squatters. Was the Darlin' ever any good to any man?"

"I dunno," began Con Cullen. "Twenty year ago——"

"Twenty year ago," interrupted Greenhide. "You wasn't on the Darlin' twenty year ago."

"I beg your pardon," cried Con, fetching his wooden stump down on the floor with a bang, and rising on it. "I bet you five quid I was! I'll bet you five quid to five bob I was."

"Where?" demanded Scotty and Jack together.

"I was shearin' on Netley station," shouted the Saddler, "and, what's more, I'll bring ten men in this town to prove it."

"Orright, orright," said Jack. "Don't get yer monkey up."

But the Saddler, perceiving that he had won a point in argument, went on with fire in his eye.

"An' I say that twenty year ago the Darlin' was good—as good as anywhere in Osstralia."

"Orright, orright; we ain't disputing it. 'Tain't any good now, is it?"

"I dunno," replied the Saddler, resting on his laurels. "I wouldn't go so far as to say that. There ain't so much money knockin' about, nor so much traffic on the river as there was, but there's worse places than the Darlin'."

"Is there?" said Jack. "Well, I don't want to see 'em. Look at me! Whalin' down from Bourke for the last six months, jest gettin' enough to keep me soul in me body. Get a job on a 'ole scow to work me passage to Renmark; stabbed in the brisket, an' put ashore to starve. Gimme another rum, Jerry. Con's payin' fer these!"

"How'd y' get stabbed?" asked Scotty.

The victim shrugged his shoulders.

"Never mind," he said, with an air of mystery. "I ain't sayin' anything. What y' doin' now, Scotty?"

"Strikin' for the (adjective) blacksmith," replied Scotty, "an' I'm full."

When the blacksmith arrived an hour later to look for his striker this was literally true. Scotty was full. The blacksmith sacked Scotty, had a drink, and left.

Scotty and Jack were sitting on a stool in a corner of O'Leary's bar, with the Saddler between them, vociferously arguing about the colour of a fox-terrier once owned by a rabbiter at Pooncarie.

They ignored the blacksmith completely.

The rabbiter was dead ten years. The fate of the dog was uncertain. They agreed as to the wonderful properties of the animal, but differed on its markings.

Three times in the next half-hour the Saddler set up drinks to divert a fight; but the controversy went on and on, until a wild-eyed rouseabout, who was knocking down a cheque, projected himself upon the company, and called for liquors so rapidly that they both went out and laid down in the sun to get calm.

The rouseabout remained in the hotel. He was a lean, sunburned fellow. He wore no coat, but a blue shirt, with many pockets in it, a pair of tight "colonial tweed" trousers, a leather belt, cossack boots, and spurs. He was bow-legged from the everlasting saddle, and walked with the lurch peculiar to Australian horsemen. He remained in the hotel.

. . . .

Three days later John O'Leary, who ruled his patrons with a rod of steel, mostly for their moral and physical good, broke the unwelcome news to Greenhide Jack and Scotty M'Gill that they could get no more liquor and no more credit at his establishment. They could take one bottle for the track, and go. Scotty had been hanging round the town for too long, and Greenhide was no acquisition at any time.

These facts John stated in his firm, forcible fashion, and his voice was audible as far as the lockup.

They accepted the fiat with mournful, curseful resignation. It was the law of the West, and they knew and recognised it.

Waiting for Good River.

For an hour or more these two typical whalers—Scotty, grey-haired, and almost venerable-looking, and Greenhide with a face wrinkled like a dried plum—consulted, devised, and argued under the shade of a pepper tree.

We viewed their departure from the hotel verandah—a casual outgoing common to the every-day life of Outback, but to the stranger full of uncouth pathos.

Before the door of the Junction Hotel a grey, heat-parched plain spread away to the arid heart of Australia—a clump of stunted box trees, a bare stretch of level country, with scattered areas of saltbush, another clump of dusty timber, another stretch of plain and saltbush, and so on. No cloud in all the sky, no sound in the still, hot air. No life except a distant mob of sheep moving across the plain in a white dust, or a thirsty emu loping along with awkward strides towards the river, like a drunken doormat on stilts. The prevailing impressions were heat, silence, immensity. The mind intuitively *felt* the distances beyond that far-off rim of plain. Out there Burke and Wills staggered, thirst-stricken, to doom. Out there Leichhardt vanished. Out there, under the wind-driven sand, under the shade of the myalls, nakedly under the sky, lay the bones of lonely dead men with mouldering swags and perished water-bags beside them. The heat was all-pervading, ever present, but still it was a dry, healthy heat whereby no disease germs generated; a heat in which men might still enjoy their food and move about freely. The woodwork of the buildings, the iron roofs, the furniture radiated heat, and where the air stirred it seemed to disturb new centres of warmth. In this landscape two figures moved slowly. Greenhide Jack and his mate were taking the track. Each of them was going through the horrible process of suffering a recovery. Across their backs, from right shoulder to left loin, was hung a swag. One man carried a blackened billycan, the other a waterbag.

They faced the verandah as they hoisted their swags, and said:

"So-long."

The action was neither friendly nor aggressive; just a mechanical phrase of courtesy, which might equally have been followed by a curse or a word of thanks. Neither would have mattered to anybody, because nobody was concerned.

I watched the figures of Scotty and Greenhide plodding on across the plain, growing smaller and smaller, until they were dancing like marionettes in the mirage.

Outside the world that these tramps knew was the crowded world of civilisation, with its three-minute tram services and latest editions, its lighted streets and frequent ham-and-beef shops. Their crude habits and coarse amusements called for none of these things. Water, matches, tea, tobacco, mutton, and flour, and a few days' work now and again to buy boots, breeches, beer, and an occasional cotton shirt. These primal necessities satisfied, the life they led was good enough for them.

As the two "whalers" went finally over the rim of Outback I turned to O'Leary.

"A queer outfit, that, John," I said.

"A little picture av the West," replied O'Leary; "but, remimber, not all av it. Don't be judgin' the dog be the tail entoirely, me frind. The wurruld to the loikes av thim without grog wud be loike a house without flures—it 'ud howld nothing."

"The life suits them," said I.

"To a Tay, me frind. Isn't it as plain as the nose on your face that they're thrue Bohemians," replied John of the Junction, with a dry smile.

The lower river was open, and passenger steamers were running from Morgan to Wentworth twice a week. When the Ruby's whistle was heard below the junction, the town would turn out and stroll down to the sloping wharf where the steamboats

The "Gem" and the "Ellen" Waiting for Good River.

berthed. Presently, churning round the bend, yellow river waters frothing at the bow, and her side wheels stroking steadily, would appear the South Australian packet. The river fleet makes a little commerce of its own. It is another life and another world, unique in Australia. The Gem, the largest vessel on the river, is a craft of some pretensions. She is built somewhat on the plan of the Mississippi packet, with three spacious decks, saloons, smoke-rooms, commodious cabins, and accommodation for a hundred passengers. Unfortunately, the Gem, drawing four feet of water, can make her regular running, between Morgan and Mildura, only from June to December; she is laid up the rest of the year. I found her empty and cold, like an untenanted villa, at Morgan when I arrived. The river traffic languishes, through uncertainty of water; but there are many comfortable boats fitted up for the passenger trade, carrying also goodly cargoes from town to town.

In years gone by, when the squatter was lord of all he surveyed, the principal cargoes on the Murray on the upstream trips were stores and station requisites, and wool on the homeward journeys. All this has been altered. The Chaffey Bros., George and William, enterprising Americans, started a new era when they established the irrigation colonies at Mildura and Renmark. Having passed through many vicissitudes and troublous times, these settlements stand to-day as a monument to the courage, skill and foresight of their founders. Years later came the settlements started by the Kingston Government, on the banks of the Murray, which were intended to solve a serious unemployed trouble. Although they cost the State of South Australia a considerable sum of money, their indirect benefit in settling people on the banks of the Murray cannot be set down in figures. Pioneer German farmers took up their dwellings on the scrub-lands, and proved the productiveness of the

country from a wheat-growing point of view. Loxton, which not many years ago consisted of a single hut, is now a flourishing township. All the time the swamp lands are being reclaimed, and new dairy farms established.

The result is that with wool, wheat, fruit, dairy and other produce the trade has grown far beyond the dreams of early pioneers. Those settlers who depend on the Murray for the carriage of their goods were beginning to fear that they would not be adequately catered for, when, a little over a year before this book was due for publication, the Gem Navigation Coy. Ltd. was formed. Its promoters are filled with a great faith in the potentialities of the Murray. From a carrying and passenger point of view, the future of the river is assured. Since its foundation the company has purchased several vessels of the type most suitable for low-water conditions. Without these it is impossible to cope with the wheat traffic on the Lower Murray.

At the present moment the Gem Navigation Company has a fleet of 40 odd boats of various types. The passenger steamers which previously belonged to those old identities of the river, Messrs. King and Landseer, were of the deep draught kind. It has been found necessary to modernize the river craft. A considerable amount of money has been spent in bringing the Gem and Ellen up to proper standard for winter trips, when there is a plentiful supply of water, but as they are of too deep draught for anything below 6 feet, the Company has built new boats for the passenger trade.

The Marion is the first of these vessels. On her first trip she carried a Parliamentary Party of 50 from Goolwa to Mildura and back to Morgan, a distance of 1000 miles. The Ruby, after having new machinery of the latest description installed, is being put into commission. The Company has purchased a number of vessels of the lightest draught, and is building

The "Gem" Coy's. "Marion," near Kingston, S.A.

others. It is the intention of the Gem people to construct vessels with refrigerating chambers, to carry fruits, dairy produce, fish and other perishable goods. They will be of the latest type and of the lightest draught. These vessels cannot be built for less than £10,000 each. Full enquiries are being made in America, England and elsewhere as to the most suitable vessels for the Murray and its tributaries.

The value of the Gem fleet at present is between £60,000 and £70,000. It can be seen that this Company, of which Mr. A. Leishman is the Manager, is fully alive to the importance and future magnitude of the river trade. When everything is in full swing, the Company will have a fleet of steamers and barges which will be able to cope with the trade for years to come, and satisfy every requirement of the fast-increasing army of settlers on the banks of the Murray.

All the way along the river from Mildura to Lake Alexandrina one could see what a happy hunting ground the Murray might be made for tourists. Of course, few people could spare the time to take it on as the writer did, from Albury, nor would it be advisable for the average pleasure-seeker to go steeplechasing in a motor boat over red-gum logs and immemorial snags on the upper reaches.

But where it broadens, by Mildura, adown that wondrous sweep and curve of clearer river, which is churned by the paddle-wheels of Lower Murray steamers, the tourist can pass a pleasant and instructive holiday.

A reference to the guide-book shows that the Gem Navigation Company Limited of Adelaide, in conjunction with the South Australian Railway Department, is offering facilities for visitors who desire to make an inland voyage on the waters of the Mississippi of Australia.

Since his first series of Murray articles was pub-

lished in the *Lone Hand*, the writer spent two pleasant weeks aboard the S.S. "Marion," one of the Gem Company's passenger steamers.

The voyage, which extended from Goolwa to Mildura, enabled him to view the river under different conditions.

Like other vessels of the Gem fleet, the "Marion" has been fitted up for the conveyance of passengers in comfort.

The "Marion's" cook was an enthusiast. His ambition in life seemed to be that everyone on board should surround at least five elaborate meals a day.

The boat was provided with comfortable two-berth cabins, hot and cold water baths, and smoking-room, and had accommodation for about eighty people. Other vessels of the Gem fleet carry more.

Electric light was installed throughout. The dining saloon, with its piano, pictures, and crimson plush upholstery, was reminiscent of a modern ocean-going steamer, but the seasick traveller was conspicuous by his or her absence.

Unlike the little "Lone Hand," the "Marion" did not tie up to the bank at sunset.

With her great electric reflectors lighting up the drooping trees along the Murray's banks, she churned on steadily at night.

Every mile was just as full of interest as the down-river journey in the motor boat had proved, and it must be confessed that the surroundings were more comfortable.

There were places, too, where a sportsman might have pulled off and spent a few days, places where wildfowl abounded, and the good fat codfish had his haunt.

I can imagine nothing more pleasant than a trip up-river in one of these steamers.

If the journey were undertaken in the shooting season, with a few days' sojourn by one of the back-

The Dining Room, "Gem" Coy's. "Marion."

waters, or adjacent to some of the lagoons, the heart of the sportsman would surely be made glad.

For along the Lower Murray the fatted black duck, the teal, and the wood-duck, with many and varied wildfowl, abide.

Here, too, one gets the top-knot pigeon, the bustard, and many another good game bird of the Bush.

For my own part, I would ask for nothing better now than a two or four weeks' holiday along the Murray. Even as I write I can see, in fancy, the mottled wood-duck flying ahead of the steamer as she rounds the bends. I can hear the black swan piping at nightfall from the swamps.

In imagination, once more it is moonlight on the Murray. Steadily the steamer pounds her way upstream. The wood sparks pour out of her low funnel. The trees on either bank, lit up by the headlights, come greenly out of shadow, and go back into shadow in her wake.

The cool, clear night air is good to breathe; the stars overhead, in a sky of darkest blue velvet, are good to see.

All around lie the great impressive Australian plains, whitened by the moonlight. The saltbush gleams like frosted silver—the moon upon the saltbush is worth a lover of the beautiful travelling many miles to see. The frogs are croaking in the lignum swamps. From the lower decks comes a murmur of voices. Somewhere below a deck hand is playing the concertina. Anon a hoarse whistle is heard, and another steamer comes into view around the bend, salutes with her siren, and passes on into the night. . . .

To them who would see Australia in an aspect new and strange, but infinitely pleasant and interesting, I would say, "Take a holiday on the Murray."

And if any reader of this book is sufficiently interested, and contemplates an inland voyage, he or she can obtain fuller information from the Director of the

Tourist Bureau in Adelaide—who lives to make people happy—or from the manager of the Gem Navigation Company, in the same hospitable city.

. . . .

The arrival and departure of the steamer in Wentworth are made popular functions. The Youth and Beauty of the Bush turn out gaily, and the wharf is as much a trysting place as the railway stations of our inland towns. Passengers crowded on the upper deck shout greetings or good-byes to their friends ashore, and the eternal feminine, with the eternal tears and the eternal pocket handkerchief, is ever present. These boats are not run in man-of-war fashion, nor do they always run to time; but a voyage down the Murray is pleasant and interesting to tourists with ambitions to behold other phases of Australian life.

When the down-river boats arrive at night the wharf is lit with flare lamps, and the great reflectors of the ship are kept burning that the hands may have light to discharge the cargo. It is a busy time, but the river stevedore moves about in much more leisurely fashion than the lumper on Sydney wharves. He is no hustler, but a gentle, unmethodical worker, who finds time for chaff and raillery and frequent spells. Mostly he wears whiskers, and it takes several of him a very long time to get a piano case ashore. His captain and officers wear no uniforms, and issue commands in friendly, familiar tones. The gap between boss and man is narrowed inland. The life of a river stewardess is not made gruesome by the sea sickness of her women charges, and the steamboat cook never receives back his dishes untouched.

I was taken out by patriotic townsmen to view the Wentworth irrigation area, a small section set apart by the N.S.W. Government on the western bank of the Darling, and let out on thirty years' leases in allotments of five to thirty acres, under a water rate of £1 a year per acre, and an annual rental of from 1s. 3d. to 1s. 6d. an acre. Here, in the heart of apparent desert,

The Junction—Murray and Darling.

was another oasis growing lucerne four feet six inches in height, colossal melons, and pumpkins of fabulous girth, oranges in profusion, grapes, currants, and grain crops. Outside the fences lay bare saltbush plains, capable also of yielding abundant harvests under similar treatment. If a callous Administration could forget provincial jealousies, and spend a petty £7000 in deepening the Ana Branch, a natural channel which debouches into the Murray a few miles below Wentworth, an area of 250,000 acres, suitable for irrigable farms, would be converted into a national asset at once. The red, sandy loam of these districts is rendered pre-eminently fertile by the simple application of water. The misguided Solons who assert that there is no country inland capable of close settlement are recommended to a closer study of facts. One station alone holds 700,000 acres, which, divided into 1040-acre blocks, would, it is asserted, support 600 families. Out here on the Edge of Things, areas of Crown lands, greater than German principalities, are occupied on pastoral leases at a nominal rental of a farthing per acre a year. Thirty acres of these lands, under irrigation, would carry an Australian household; and 2500 acres are sufficient to make dry farming profitable. Canada and the United States, by making their agricultural lands available for settlement, have leaped ahead in the race of nations. Australia, by following a policy of alienation, stands still an unpeopled continent, offering the loot of another Peru to an Asiatic Pizarro! A gentle Socialistic people were the ancient Incas, as history tells, with a fair system of local government and no firearms. History has a beastly habit of repeating itself where similar conditions obtain.

. . . .

With a fresh supply of necessaries, and Melville John Gilligan to tend the motor, "The Lone Hand" was ready to continue her voyage. The 23rd of April, 1908, was clear, cloudless, and promising. The good

friends I had found in Wentworth assembled on the river bank to say farewell. I left that remote town with a fuller, wider knowledge of the West, a deeper insight into national problems, a still higher estimation of the sterling qualities of the Man Outback. A broad, yellow river, free from snags and reefs and bars, carried me on its rapid current through the heart of a great continent. On either hand lay boundless plains, over which the sun moved slowly in a blue archway, unbroken by any cloud.

Once again, as night fell, the little motor boat turned towards a sand strip, and the camp was pitched —nearer the bank than usual. Once again the wood fire burned, and the gridiron gave up its incense of grilled chop.

Melville John Gilligan was twenty-two, and of an adventurous spirit. He was a youth of few words, wore an inappropriate hard hat, and served me dutifully and well.

The nights had grown colder, the mornings crisp and sharp. I lingered over the breakfast fires, and spent the forenoons in an overcoat, with my toes to the cylinder of the engine. An out-station at the Ana Branch was the first place of habitation to present itself. I went ashore and conversed with an unimaginative station-hand while he skinned and cut up a sheep. The conversation was mainly on my side.

"Good-morning," I began pleasantly.

The man favored me with a reluctant nod.

"How far is it to Morna?"

He went on with his work, plying a very sharp knife with great dexterity.

I repeated my question, loudly.

"Dunno," said the man, "never bin there."

"Can I buy a loaf of bread here?"

"Naw!"

"Haven't you got any bread?"

"Naw; ain't baked."

More knife play.

"Can I get any bread at Morna?"

"Dunno!"

Slish-slash of knife over the hanging carcase.

"Know if I can get any bread anywhere?"

"Naw."

"Dry country, this?"

Several scientific cuts, which relieved the skin.

"Dry country!" I repeated.

"Dunno. Yairs."

"Say," I cried, determined to drag him out somehow, "did you read yesterday's papers?"

"Naw! Don't get 'em."

"Then you didn't hear the news?"

"Naw. What's that?"

Knife still working rapidly.

"James the Second is dead."

"Naw. What of?"

"Barcoo rot!" I announced, and left him cutting up his sheep.

No bread was obtainable at Morna. The presiding satrap, whose out-station is fifty miles from headquarters, declined my polite request, and read me a superfluous lecture on labor conditions. He said if he gave or sold bread like that his cook would make trouble. I think he wanted to impress me with the idea that the democratic policy followed by my proprietary was ruining the country. I left him standing in his delightful station garden, amid his nicely-cropped hedges and gravel walks and refreshing blooms—complete Master of the Wilderness. Lower down the river a mere struggling commoner replenished the bread bag of "The Lone Hand" with a loaf, and absolutely declined payment.

Morna, mail change, is an old brick place, which had once been an hotel. It stands on a red sandhill, sparsely covered with stunted saltbush, and presents a picture of perfect desolation. But the man who had

his solitary existence on that barren sandhill told me he didn't feel the least bit lonesome. He had lived all his life in the bush, and had never seen a town bigger than Wentworth.

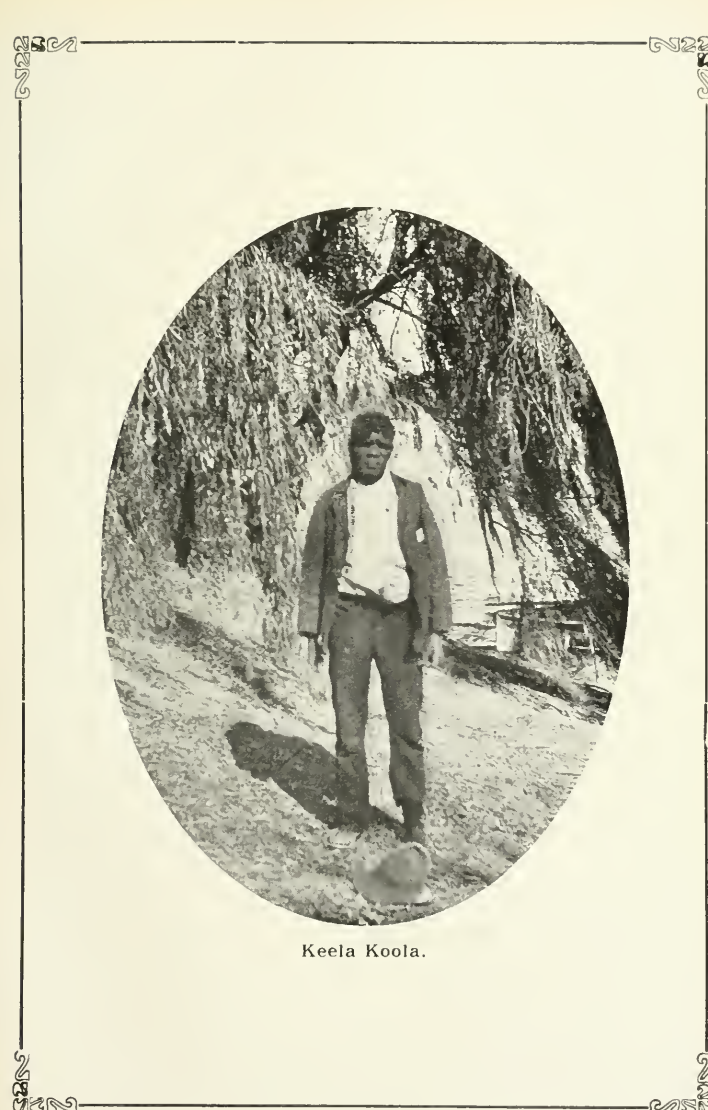
We camped at Ned's Corner that night. This station (run by an Adelaide syndicate, I understand) is located on the edge of a great plain, with a blue line of mallee scrub bounding its further distance.

Again I wooed a station cook; but he was cold, and declined to sell me bread. The Bread Quest along this track developed into a sort of modern pursuit of the Holy Grail. We were out of the region of bake-houses, and for the making of damper we had no time.

Next morning we spoke the Marion, of Wentworth. She had been down to Goolwa for overhaul, and was on her way home. The Marion lay alongside the bank, with her captain and crew ashore, cutting fenders. The owner's daughters, returning from a holiday in Adelaide, commanded the ship. They begged, those gracious Australian girls, for just a little run in "The Lone Hand," that they might have to say afterwards they had been in the now celebrated motor boat which went from Albury to the sea. The veriest pirate that ever scourged the Western Main might not refuse a beauty call like this. With Melville John for chaperone, I petrolled a joyous company of ladies round several bends.

The Marion was fitted up for trade. She was, in fact, a big floating general store, freighted, not with beads and red parasols and striped prints, but with all the every-day requirements. She traded the Darling to Wilcannia, and should be a profit-maker for her merchant owner in Wentworth.

Lignum and red gum, billabong and lagoon went by, with mobs of duck to break the monotony of things, till we reached Lake Victoria Station. Here I held interesting converse with Keela Koola—an aboriginal stockman. Keela came from Moonta, in



Keela Koola.

South Australia, where his twenty-one years had been mostly passed. He was almost the first full-blooded native I had seen on the Murray. He told me confidentially that "drink was a damn-fool game, an' he didn' lak it." His joy at being photographed with a view to publicity was beautifully childish.

Below Lake Victoria lies the most picturesque scenery of the Murray. Here rise wonderful banks a hundred feet above the river. Red, white, and brown, these clay hills stand like the minarets and battlements of a Moorish city. One almost expects to see white-turbaned horsemen in scarlet cloaks galloping across their summits; to hear a fanfare of trumpets, and catch an echo of lutes from distant *miradors*. The monotony of flat grey banks was henceforward relieved every few miles by these painted cliffs, overhanging the deepening reaches of a broader river.

Cal-lal is the last outpost of settlement in New South Wales, and the last settler's name is MacGregor. Cheers for MacGregor! He has held the utmost corner for twenty-five years. The sandy ridges of his 10,000-acre selection afford good grass for his sheep in fair seasons, and on the flats by the river he is making headway with irrigation. A fair-spoken man was MacGregor, the last pioneer of the Mother State. He gave us "Good luck" as we petrolled away from his holding towards the South Australian Border.

The legend, "Police Station," was nailed to a tree overhanging the water, a little further on: the last N.S. Wales official represented law and order.

It was Saturday afternoon as we drew near to the Border line. The sun was setting behind a red sandhill on the Victorian corner. In the cities crowds were going their merry ways, coming from football matches, returning home from yacht races, filling trains and trams.

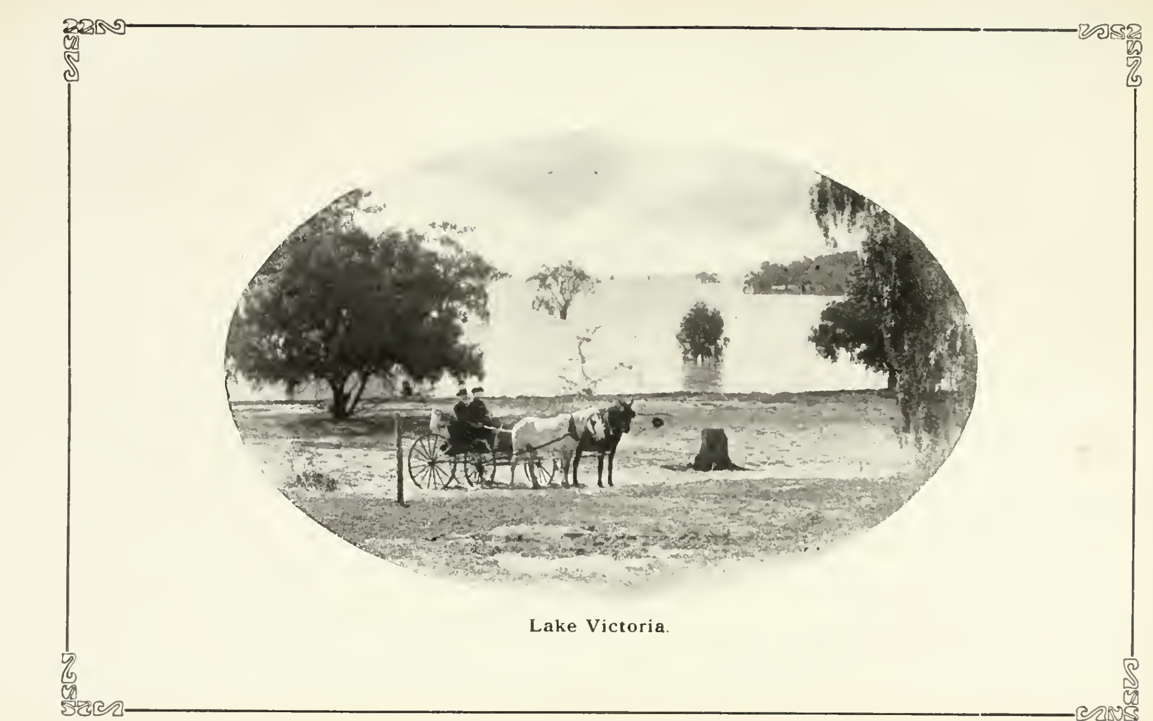
Stillness reigned over the Bòrder. Wide, unpeopled distances spread to all the compass points. In the

sunset dark pines stood out like sentinels upon the red sandhill, the last sunrays burnishing their tops till they shone like helmets of brass. A couple of graceful black swans swam ahead of the boat, parting the water with their breasts in all the stateliness of a Venetian gondola. Cockatoos screamed over the high timber, and wood-ducks left the banks in hurrying mobs. It was better out there than in the bustling town that Saturday afternoon.

"The Lone Hand" left N.S. Wales and Victoria, and entered the territory of South Australia with loud war-whoops. The Custom House here was occupied by a German farmer—the abolition of Border duties had rendered it no longer an official dwelling.

. . . .

In the bush are all trades, occupations, nationalities. Our evening neighbors were two rabbiters, working slowly upstream from Renmark, where they had put in a few weeks at grape-picking. Nomadic workers like these drift to and fro with the seasons. The next January harvest would perhaps find them down about Swan Hill or Mildura. They would fill in the months fishing or trapping till shearing commenced in August; get a few weeks' work at the sheds, go grape-picking again, cadge tucker, and live on johnny cake and rabbit during the bad times. They are a careless, happy-go-lucky crowd. Although most of their conversation is made up of tirades against Governments and complaints about their cruel, hard lot, not one in a hundred of them would live any other life if it were offered him. The rabbiters' boats were tied up to the bank. One of these men was squat, grumpy, and morose. His language was a series of grunts. The other man was lean, tall, loquacious. They sat in the firelight, munching mutton and johnny cake, and throwing occasional scraps to a wire-haired mongrel, squatted on its



Lake Victoria.

haunches at the stout man's elbow. That unlucky dog got his foot caught in a rabbit-trap later in the evening, and his yells wakened all the echoes of the Border.

When the meal was over, the stout man, growling and grunting, lighted a hurricane-lamp and went off into the darkness with a string of rabbit-traps over his shoulder.

The lean man heaved a sigh, lit a black pipe, struck another match, and commenced to rummage in his boat. He came up the bank presently with a leather instrument-case under his arm, settled himself by the fire, carefully drew out a banjo, and fooled awhile with the strings. After a look round, and a look up, the lean man began to play. I listened, first diffidently, then with interest, finally with enthusiasm; the lean man was master of his instrument—one of the best banjoists I have ever heard.

Seated on a log by the fire, with the stars overhead, the river flowing at his feet, and the bush before him, the lean man played on. Instrument and music harmonised with the surroundings. The furthest corners of three States echoed back old familiar folk-lore tunes. In the smoke of the camp-fire I saw pictures—kilted Highlanders marched, with their pipers before them, down mossy gorges and across fields of heather; Rabbie Burns rolled home again from a late carousal; under an Irish hedge crouched a band of rebels, awaiting the rising of the moon, and in their hats they wore the green; pig-tailed seamen trained the guns of Nelson's ships upon the high hulls of France and Spain; General Sherman, on his charger, rode ahead of a gaunt, iron-faced squadron of men in blue; through a wide ballroom fair-haired couples drifted sensuously. Peasants and princes, lovers, brigands, gypsies, beggars went by. All the gardens of romance, of which music holds the key, that lean rabbiter opened to a lonely audience of two—coaxed from the strings of a common banjo by his wizard hands.

He put the instrument down at length, relit his pipe, and looked across the fire with a smile.

"I used to play the d——d banjo once," he said.

"So I should think," I replied.

"Played all over the world in my time—London theatres, South Africa, States, India, Australia. I've seen some good times; seen times when thirty quid a week wasn't enough for *me*."

"Couldn't stick to it?" I ventured.

The lean man laughed. "Could you?"

"Haven't, so far."

"Nor won't," he asserted.

"Why?" I questioned.

Again the lean man laughed.

"You wouldn't be out here to-night if you could. D—— it, man, you've got it in your blood—like me."

"Got what in my blood?" I inquired.

He stood up, waved his hand towards the forest, pointed to the river and the stars. "All that," he replied; "all the things that draw us away from the gaslight and the girls, from houses in rows and streets in straight lines, and level, easy ways, to eat corned beef and bread and jam, drink black tea, and sleep in a blanket on the ground. Good-night, mates; I'm going to bed."

He had built himself a breakwind of boughs beside a log. He spread out a couple of sheepskins, woolly side up, rolled himself in an ancient travelling rug, and, with his banjo case under his head, presently began to snore.

The other man came back with a string of dead rabbits, cursed his mate for a useless loafer, pegged out the wet skins, crawled into his boat—which was partly covered over with a strip of calico—and left me to digest the lean man's prophecy. The dog lay beside the fire, licking his injured foot and whining. The distant whoot of a night howl, the splash of a fish, were the only other sounds upon the Border.

What Navigation means to South Australia.

I wakened again by starlight, and roused Melville John Gilligan. We breakfasted by firelight, and set out with daybreak. Mists rose gradually and disclosed a noble river, with finger posts directing navigation into the right channels.

South Australia has a proper appreciation of her splendid waterway, and is doing her best—the best of a poorer sister—to develop its trade.

One fact occurred to me very soon after the "Lone Hand" entered South Australian waters—the Government of that country valued the great river sufficiently to keep it clear of snags.

Long before the "Lone Hand" reached Renmark, it was made plain that the matter of inland navigation was considered, down on the Lower Murray, to be one of no small importance.

At Renmark, for the first time, I came to seriously consider the complicated but interesting question of riparian rights.

This has now become *the* burning question on the Lower Murray.

Before I terminated my long river journey below Murray Bridge, I was convinced that, if ever the harmony of the Federation is to be broken, if there is ever to be a civil war in Australia, the waters of the Murray are more likely to be the cause of the rupture than any other quarrel that can apparently arise out of existing or future conditions.

The subject, apart from its constitutional interest, is of sufficient importance to be approached seriously. Three Australian States are immediately affected by the Murray Waters question. Unless these States can strike some common basis of agreement in regard to their individual rights and privileges, the disputes which have been going on for years will be accentuated in the future. They are prolific of ill-feeling, and pregnant with disaster.

The old system of water-waste in Australia is

definitely at an end. All the States concerned now realise the splendid asset the Murray System forms in the great national schemes of irrigation which are meditated by their various Governments.

The irrigable soils of the Lower Murray Valley are said to be the richest of all, inasmuch as the silt and wash of ages have come down to them from the immense drainage area that extends over the greater part of New South Wales and Victoria, and from Charleville and Augathella, round to Toowoomba and Warwick, in Queensland.

South Australia, moreover, possesses a quarter of a million acres of reclaimable swamp lands along the Murray, as rich as the alluvial of the Nile or the Mississippi.

These swamps, drained or undrained, are free from fevers, and as healthy as the plain country around them.

South Australia's eastern boundary lies below the junction of the Darling with the Murray, and the Darling is the last great tributary which the parent river receives.

Now, if the flow of the river were to be interrupted beyond that border line—and hundreds and hundreds of miles of streams lie beyond the border—thousands of people in South Australia who are already depending for their existence on the regular and even flow of the Murray—would be utterly ruined.

The Government in Adelaide is keenly alive to the value of its irrigable lands. The State, in many districts, suffers from an uncertain rainfall; but in the Murray there lies not only a splendid source of water supply, but a broad highway through and beyond the State into the interior of a country destined to carry the largest population in Australia.

To apply the precious water. which South Australia receives from the far-off catchment areas of the Murray, for the support of many new village settle-

South Australian Traders.

ments, to establish thereat hundreds of new Australian homes, and convert thousands of idle acres into wealth-producing areas, is now the declared policy of the State.

But if either, or both, of the States up-stream were to cut off the flow of the river, or so reduce it as to leave an insufficiency of water in dry seasons for the requirements of the Lower Murray, the people down there might be brought to ruin and despair.

One can imagine a situation such as this becoming so intolerable that the country affected would be tempted to resort to force. One can see why the question of storage and delivery must be subject to an agreement of the three partners in receipt of goods. One begins to understand, moreover, why the argument must be concluded *now.* In fifteen or fifty years from now, if it is not settled, the Commonwealth is in for very serious trouble.

But the Federal spirit will doubtless be strong enough and reasonable enough to avert a certain future trouble by effecting a present agreement that will ask from each of the partners according to his capacities, and render to each according to his needs.

For the filling up of its open spaces Australia cannot afford to wait until it is too late. "Effective occupation" must take place if the white owners of this continent are to make good their title. Nowhere can closer settlement—which is "effective occupation"—be carried out to a greater extent than along this great river system of the interior. The three States can all benefit, but they must come to an early understanding, which will clearly and for all time establish their mutual and individual rights to the use of the water that flows into the Murray.

Without doubt, there is a sufficiency of rainfall over the Murray watershed, and on its effective catchment area, to meet all requirements, if the water is mutually conserved and fairly distributed.

The whole question, therefore, becomes ultimately one of engineering, and engineering nowadays is reduced to a simple matter of cost.

To what extent and at what cost the requirements of both navigation and irrigation can be met by storage is one of the questions on which the engineers of the three States are to report to the Premiers by the end of 1911.

A way out of the riparian rights dispute may be found in some harmonious agreement between the States concerned, whereby the cost can be charged in proportion to the delivery. Each State would, like the householder, pay according to the reading of his meter.

For many years past the Murray waters have been a bone of civil contention between South Australia and Victoria. The institution of an extremely vigorous irrigation policy by the latter State has been the occasion of much misgiving and no little reasonable anxiety to the former.

New South Wales, prior to the commencement of her Burrenjuck storage and Northern Murrumbidgee irrigation scheme, had little at immediate issue; but her attitude has been, and is, one of seeming fairness to South Australia.

I have rejoiced many times that I did not go into the political history of the Murray until the motor voyage was over. The weight of Blue Books which have accumulated on this subject would have been too much for a small craft. One Royal Commission report alone runs into 359 foolscap pages.

Conferences and Commissions have taken place since 1886. But the question is not yet settled.

It may be settled this year or next, or it may not. If it is not, there is ultimately going to be war of some kind.

Nothing is surer than this. The sooner the people

The site of the First South Australian Lock.

of Australia realise it, the better for the whole Commonwealth.

After the report of the Interstate Commission of 1902 it was thought that an agreement would be reached, on the lines of a fair delivery to South Australia, that the rivers would be locked, and storage reservoirs constructed by the three States. The report of the Commission, however, was not adopted.

In 1908 an agreement was drawn up, on the lines of resolutions come to at the Premiers' Conference of 1906. and was subscribed to by the heads of the States.

For the sake of the Federation, it is to be regretted that this agreement was not carried into effect.

This Premierial understanding, which was to have been ratified by a simultaneous Act of each of the three Parliaments, provided that an Interstate Commission of Control should be appointed, that the diversions (for irrigation, etc.) by New South Wales and Victoria should be in proportion to the contributions by those States, and that, "for all time," 60,000 million cubic feet per annum should be allowed to South Australia, subject to a *pro rata* reduction if the total flow proved less than 321,000 million cubic feet for the year.

The construction of Lake Victoria storage, and a complete system of locks, was to be immediately proceeded with, at the joint cost of the three States.

The agreement, apparently a fair and honorable one, was loyally accepted by the Government, and would, in due course, have been submitted to the Parliament of New South Wales; was submitted to, and would have been accepted, by the Parliament of South Australia; but at the eleventh hour Victoria seceded from the agreement, and appointed a Royal Commission of her own to report as to "the respective contributions of the States," the manner in which the respective shares in the stream of each State should be determined, and other matters.

South Australia contends that on Victoria the blame of the whole Murray trouble now lies.

The report of the Victorian Commission still leaves the question to be decided by further interstate argument or the Federal Court. Meanwhile, Victoria is pursuing her vigorous policy of diversion and storage on her Murray tributaries and along the main river.

South Australia has claimed for many years that the States which abut upon the Murray are riparian proprietors in respect of each other, that the Common Law of England applies to these States, and governs the use and enjoyment of the Murray and its tributaries by them and their inhabitants.

The Common Law of England lays down that—"When land abuts upon a natural stream the owner of that land has a right to take and use the water as it runs past him for all reasonable purposes." "As against the upper proprietor, he (the lower proprietor) has this right; he is entitled to have the flow of the water in the natural bed of the river coming down to him unaltered in quality and quantity, subject only to the right of the upper proprietors, such as he has against the proprietors below him to take the water for reasonable purposes."

As the construction of the second clause leaves room for infinite legal quibbling, it is to be regretted that Victoria saw fit to withdraw from the agreement of 1908.

When the Bill to ratify the agreement was introduced into the South Australian Legislature in 1908, the people of that State fondly hoped that the long-disputed question of the Murray waters would be settled at last, and their State left free to pursue its projected policy of storage and irrigation in safety.

The matter of delivery is vital to South Australia. The agreement definitely fixed the minimum quantity of water which the sister States were prepared to grant her annually. Renmark formally protested against the

Lagoon at Lake Barmera Landing, S.A.

agreement, for various reasons; but the Government of the day in Adelaide brought forward its Bill in good faith, although the measure, to some extent, waived the long-asserted rights of its State in regard to navigation.

Navigation as it concerns the Murray is a very important matter. Water carriage is cheaper than rail. Not only would the river settlements of South Australia profit by a navigable river, but all the other districts of the interior, which can be served by this magnificent Australian waterway.

This aspect of the question was brought forward at the pre-Federation conventions. Finally, navigation, like the Post Office, was made a matter for Federal control by the framers of the Constitution.

Had Victoria not drawn out of the agreement of 1907-8, South Australia was apparently ready to forego much of her previous claims regarding navigation, and put her legal riparian rights aside, providing that she might secure a permanent settlement of the dispute, and a fair delivery for the purposes of irrigation, and of maintaining (except in some months of such a year as 1902, when the discharge was the lowest recorded) the effectiveness of the locks.

The Premier of South Australia, the late Mr. Tom Price, put the whole question before the people in a clear, liberal, and logical statement of great length. The history and law of the matter were both eloquently traced, the arguments of opponents carefully criticised, and the important measure laid upon the table of the House in a manner which made for peace and harmony as far as the interstate outlook on the Murray Waters question was concerned.

The outside States in the Federation, Australia generally, were hopeful that a long-standing dispute, always pregnant with unfraternal possibilities, was about to be permanently settled.

But owing to the subsequent refusal of Victoria to

adopt the Premiers' agreement of 1908, the Act was rendered futile.

Since the simultaneous Bill was set aside, the Premiers of the three States have again met in conference. At their last meeting it was decided that engineers from each of the States should obtain evidence and draw up a report for a further conference to be held in the latter part of 1911, when it is hoped by the more optimistic that some finality may be arrived at.

The policy of the existing South Australian Government regarding the Lower Murray is one of decided expansion.

Both the Premier (Mr. Verran) and his Treasurer (Mr. Crawford Vaughan) desire to get on with the work of locking, conserving, irrigation, and closer settlement.

Wherever irrigation has been tried within their territory it has proved successful. One estimate gives South Australia half a million acres of irrigable land, but the State does not ask for water enough to irrigate that immense area. Traversed by a navigable waterway, the fertile soils of the Lower Murray are capable of carrying a large and prosperous population.

Whatever future deliberations between the States may lead to, the locking of the Lower Murray has been determined on. Lakes Barmera and Victoria are to be converted into enormous storages. It is anticipated that the whole river frontage, from Cobdogla to the border, will be occupied by irrigationsts.

The realisation of this scheme must prove of incalculable benefit to the State.

The proposed Lake Barmera area, which the writer has personally inspected, is, without doubt, one of the finest irrigation sites in the world.

This lake, under a comparatively inexpensive engineering scheme, can be rendered capable of holding 19,000 million gallons of water.

From this storage it is proposed to ultimately irri-

gate about 17,000 acres of the finest soils on the Murray. This irrigable country has the advantage of being backed up by large tracts of first-class agricultural land.

Apart from the Barmera scheme, the Government proposes to provide for the irrigation of 25,000 acres, with a maximum lift of 60ft. at Chowilla and Ral-Ral. At Berri, 2000 additional acres will be served.

Between Overland Corner and Chowilla, 45,000 acres are, at a rough estimate, to be brought under irrigation, exclusive of the existing settlement of Renmark.

This one strip along the Murray is easily capable of supporting 2000 families, which, in turn, would mean the adding of probably a million sterling to the annual wealth of South Australia.

At Waikerie, Ramco, Kingston, and Loxton settlements the areas under irrigation are to be increased, and, in addition to this, water will be pumped out in certain places into the back country for the farmer's stock and domestic supply.

Whatever may be the result of future interstate conferences, the Government of South Australia emphasises the fact that it will proceed with the locking of the Murray within its borders, and the carrying out of its storage schemes.

An engineer with locking experience is now being engaged to carry out the work, and the Director of Irrigation is travelling the arid countries of the world to gain additional knowledge from example.

The Government announces its intention of aiding settlers in regard to finding markets for their produce. It will exercise a paternal care in seeing that the most suitable and profitable crops are determined by experiment. The people who elect to become irrigationists will be given every opportunity to acquire and hold their land under easy terms and conditions.

With the object lessons of Mildura and Renmark

before her, with the encouragement afforded by the final successes of her smaller village settlements, South Australia may confidently hope that this wise policy will be fully carried out.

Along that 300 odd miles of river frontage, between her border and the sea, the Southern State possesses an asset in real estate the value of which she cannot yet fully realise.

The present Government has awakened to this fact. The expenditure it contemplates is none too great in view of the results.

Again and again on my voyage down the Murray the importance of irrigation was brought home to me. Everywhere I saw how its successes might be enlarged. extended, increased to an almost unlimited extent.

The problem of the arid interior had been solved. It was no longer a problem, but a solution—such a solution as neither the first explorers nor the earlier settlers ever dreamed of. It meant that almost lifeless wastes may be converted into centres of population. It meant that silent lands can and will be made, before many years, to echo with the anthems of industry.

It meant that, where only scattered sheep once gained an uncertain sustenance over huge distances, prosperous families will draw comfortable, easy livings from ten-acre blocks.

South Australia, holding her hundreds of thousands of irrigable acres, is entitled to participate to the full with her fortunate sisters in the benefits which the fertilising waters of the Murray can confer upon her.

Her claim is just. The writer is sure that it will be recognised and established by the Commonwealth at large.

We, as Australians, are too closely knit together by a common purpose, mayhap a common danger, to permit an injustice to any one section of our people. We can afford to waste no more national opportunities. We want no more centralisation. We want no rich

Stripping Wheat, Lower Murray, S.A.

and poor States, but a general prosperity and a rapid development for all.

From time immemorial the waters of the Murray have flowed seaward without deference to surveyors' lines drawn upon a map, where, for the conveniences of colonisation, certain hypothetical boundaries were laid down.

The spirit of Australian nationalism is too strong and growing a factor to insist upon any such arbitrary distinctions.

From Albury to the sea, though my way lay through the hearts of three great States, I found Australians—of whom I am justly proud—differing nothing in language, and next to nothing in racial characteristics.

On either side the Murray, to the South Australian border, and down the Murray from the border to the sea, I met the same open-handed, open-hearted, brave, healthy, broad-minded, and industrious people. The English, Irish, Scotch, and foreign names they bore were mere accidents of birth. In occupation, in surroundings, and in mutual interests they were all Australians.

Such being the case, there is no reason why this over-protracted Murray Waters question cannot be settled without undue delay.

It must be realised that South Australia is in the position of the recipient, that the sources of supply are beyond her boundaries, but that, as a State of the Federation, she is in a measure dependent on the just and equable treatment of New South Wales and Victoria.

It would be against the very spirit of Federalism for any two States to endeavor to monopolise the coastline of a third State, and deny her access to the sea. Neither would it be in the Federal spirit for them to shut off the vitalising currents of their flowing rivers, so far as to wreck or imperil the interests of the recipient downstream.

Rather will it be in the spirit of true Federalism for the parties concerned, or for the Federal Parliament itself, to devise a common agreement which will confer the maximum of benefit on each.

Every partner must have a fair deal. In a case such as this there must be give and take on all sides; but no sophistry and no amount of argument in equity or Common Law can alter the justice of facts.

The writer confesses that he came away from the Lower Murray with a greater amount of sympathy for South Australia's position than he had anticipated. This sympathy was born of wider knowledge and a fuller understanding.

It is easy enough for the arm-chair philosophers of Sydney or Melbourne to declare, in comfortable security, that South Australia has been too clamorous as regards her riparian rights.

If the said philosophers were occupants of irrigable areas on the Lower Murray, haunted with a constant dread that the diversion works up-stream were going to absorb so much of the river's flow that some dry summer their own supply would be cut off altogether, or so diminished as to be useless to them, it is likely they would drop philosophy and take to agitation.

All things considered, South Australia has put forward her claims very patiently and mildly.

She seems to have entered the Federation in the belief that the riparian question, like the question of navigation, would ultimately be settled by the Commonwealth on a basis of strict justice, or she was convinced that the points of difference between herself and the other States within the Murray watershed were not too great to be disposed of in friendly conference.

One thing I repeat—this matter must be settled soon. Australia may have enough outside trouble before long. She wants no dissension within her gates. The issue is too portentous to be set aside for an indefinite period. It is too fraught with possibili-

ties of future ill-feeling to be handed down to posterity. It cannot be shelved. An immediate settlement *must* be reached. Until an amicable working agreement is effected South Australia can only pursue her policy ot closer settlement—a policy which entails considerable expenditure in resumptions and public works—with an uneasy feeling.

Until there is an honorable understanding between her and her sister States, which will ensure her a sufficient annual delivery to cover her requirements, her Government will naturally be handicapped in its good intentions by a feeling of responsibility.

It would never do for her to risk the disastrous chances of a future shortage of water.

That shortage, if it did occur, would certainly occur just at a time when the water was most wanted—in a dry season.

Under these circumstances, the taxpayer of South Australia, being also a Federal taxpayer, naturally demands that there shall be a security of investment as far as irrigation works in his State are concerned. And the Federal taxpayers throughout the Commonwealth, *being jointly and severally concerned*, should see that he gets it.

The interests of South Australia are as much a matter of Commonwealth concern as the interests of New South Wales or Victoria.

If the dispute should ever reach a deadlock, this aspect of the question is probably the one that will appeal to the Federal Government.

The last Interstate Conference (January, 1911) left South Australia free to follow her policy of locking the Murray within her own territory, and confirmed that clause in previous agreements which gave her, "without prejudice," the right to convert Lake Victoria into a storage reservoir.

She has not conceded anything of her legal rights as a riparian State. But she is no nearer to a settle-

ment of the urgent question of delivery than she has ever been.

And being the recipient, "delivery," as I have said, is an all-important question to the last-come, last-to-be-served of the triumvirate.

The engineers of the three States will, on December 1st, 1911, present a "report and recommendations, based upon new data available, and on such further data as they shall obtain by that date, which will, in their opinion, be essential or conducive to a settlement by agreement between the States of New South Wales, Victoria, and South Australia, of the question of the Murray River and its tributaries."

So, in severe official phraseology, the mandate runs.

Whether the engineer—who is of a somewhat more cosmopolitan mind—will succeed where the politician has failed, remains to be seen.

If an agreement as fair to all parties as that of 1907-8 can be arrived at, and honorably adhered to, a fruitful cause of interstate friction will be removed.

The Press of South Australia, the Government, and the people generally take up the position that, having loyally accepted the agreement of 1907-8, the State is entitled to all it covered at least. Failing such an acceptable agreement, it is suggested that an appeal should be made to the High Court of Australia.

This is an expensive and unsatisfactory way of arriving at an understanding. Still, it may be better to go to law than go to war.

South Australia has already obtained the highest legal opinion on the question of her riparian rights, and is convinced that she has a strong case. Her advisers pronounce that "the riparian law here is exactly what it is in England, and anything which altered the natural course of a river in such a way as to make a substantial difference to those lower down the river would be an unreasonable use."

She is also assured that "her rights are to a regular

Sorghum Growing on a Government Reclaimed Area, S.A.

flow of the river, and any diversions up-stream which interfered with the regular flow could be stopped under the Federal system. The said rights do not depend upon the locality of the watersheds, either in law or equity."

Certain legal opinion in the other States is, of course, diametrically opposed to this view. Lawyers the world over differ upon every conceivable issue—except fees.

Meanwhile, other authorities are urging that the Commonwealth should take control of the river in order, first of all, to maintain navigability. It has been pointed out that Commonwealth control means undivided control, and that a Federal administration would not be affected by the selfishness of individual States.

Whether the final outcome of the dispute is Federal control or not, South Australia has set herself to the task of locking the Lower Murray, so as to make it navigable from Wentworth to the sea.

The objection has been raised by the other States to the waste of water which occurs by the filling up of the two huge lakes at the mouth of the river. Why, it is asked by New South Wales and Victoria, should we allow this life-giving moisture to flow past our fertile lands simply to be evaporated in Lakes Albert and Alexandrina, and thence to flow uselessly into the sea?

Though it might be said in reply that the conservation and distribution works of Victoria involve great losses in seepage and evaporation, South Australia has recognised the reasonableness of this claim, and is prepared to construct works to prevent or diminish the waste caused by natural conditions. The Government has expressed its intention to reclaim the smaller lake, which has an area of 41,000 acres of irrigable land. The channel leading into this lake is but quarter of a mile wide, and as there is no flow, and the bed of the

lake is 6ft. below that of the river, there will be no engineering difficulty in reclaiming it.

The conditions are similar in the case of Lake Alexandrina, which has an area of 140,000 acres.

The soil of the lakes has been tested, and found to be as rich as that on the river flats, which analysis proves to be the richest land in nitrogenic properties known in the world.

One feature about Lake Alexandrina is that an artesian supply has been tapped under the bed of the lake of beautiful fresh water which comes from the Mount Lofty Ranges, and flows out over the bore. For irrigation, therefore, the people settled on the bed of this great lake would probably be independent of river water.

Excavating machinery suitable for the work of reclamation has already been procured.

That State has, therefore, entered upon a scheme of river improvement which will make the best and most economical use of the flow of the river from Wentworth to the mouth, for irrigation and navigation.

It is sincerely to be hoped that a further agreement will enable South Australia to follow up with certainty her commendable policy of reclamation, conservation, irrigation, and close settlement. The empty lands of Australia must be filled. Each State should be encouraged and aided in its endeavor to promote settlement. The progress of this young nation depends more upon common Australian sentiment and combined interests than mere State boundaries. We have no time for provincial selfishness or parochial quibbling.

We are confronted, if we can only recognise the fact, with problems as serious as the most complex problems of European politics, and we have been given no specified time to reach our conclusions.

My journey through the heart of a continent, my subsequent study of the whole subject of irrigation,

A Reclaimed Area, Lower Murray S.A.

my outlook as an optimistic Australian, convince me that, in the irrigable lands traversed by the Murray River and its tributaries, this continent possesses a potential wealth which cannot be expressed by sums of money.

To convert that potentiality into production is the function of each and all of the Governments concerned. But in that endeavor each self-governing territory, while maintaining its own just rights and privileges, is bound to respect the rights and privileges of the others.

None of the States is justified in monopoly, but each is entitled to a fair proportion of what will spell additional wealth and progress to each—the regulated flow of that great river system with which Nature has providentially endowed an arid interior.

The sooner the proportion is determined and agreed upon the better for the future of this Commonwealth.

Let the dispute be settled, amicably, or by friendly suit, if it must be, but let it be settled *now and for all time.*

If, in this consideration of the politics of the Murray, I may have, in some sense, held a brief for the State through which the final course of my journey carried me, it is because I recognised, long before I came in sight of Lake Alexandrina, that the South Australia Murray, without tributaries, meant so much, both as a waterway and a feeder, to the people of that State.

To deprive South Australia of a fair river, and a full proportion of water for her irrigable areas, would be like tying a ligature round the main artery which conveys the blood from the heart to the limbs.

That such a selfish and insane policy could ever be seriously contemplated by any of the peoples concerned in the Murray's flow, or tolerated by Australia at large, is, to me, simply unthinkable.

I have no doubt that national reason and justice will prevail, that all these really secondary considerations

of appropriation and delivery will be satisfactorily adjusted, and that the States will share, each to the fullest degree, in the incalculable benefits that must result from a wise general policy of locking, conservation, and irrigation all along the splendid Murray and its golden streams.

There was much more life on the river. We passed several comfortable houseboats, small trading steamers and ancient side-wheelers, which had been converted into floating dwellings. Hawkers, whalers, fishermen, wanderers, sportsmen—there are many between the Border and the sea. Poor-looking country spread away from the banks here—flat, uninteresting, and sparsely clothed with stunted forest; but the river itself had become a proud, imperial stream. The Merle steamed past us, loaded to the gunwale with goods and machinery, just at sunrise. A little girl came out of a cabin on the upper deck, and, leaning over, called out, "Eva!" A stewardess stood out of the saloon doorway, and smiled at the child on the upper deck. A group of passengers standing outside the wheelhouse waved to "The Lone Hand" as the stern-wheeler churned her way upstream and left us dancing in her wash.

Thus, picture after picture flashed past like a continuous cinematograph film unrolled by night and day.

We struck a wreck that morning.

A barge, deep-laden with merchandise and fodder, had snagged and sunk in deep water. Part of her lading was visible above the yellow Murray; more of it was strewn along the edge, and a pile of recovered goods stood, covered with a tarpaulin, on the bank. We encountered bags of chaff floating downstream. At a fisherman's camp the miscellaneous contents of cases of drapery were spread out in the sun to dry.

At Renmark, friend Taylor, of the PIONEER, received me enthusiastically. He had been to Paraguay with William Lane, who found many recruits in

A River Wreck—Sunken Barge.

South Australia. He forbade further passage before I had inspected the settlement, and seen what the soils of his State could produce under irrigation. So I journeyed forth with my brother pressman into a wonderful garden, many miles in area. The day was crisp and clear, rich with odors of ripened fruits and newly-turned earth. The country was criss-crossed by irrigation channels, fed from the river by powerful pumps. Dark groves of olives, rows of green orange trees, bearing golden burden, paddocks of waving lucerne, vineyards and orchards, with comfortable dwellings, nestling among shade trees—such is Renmark Irrigation Colony.

Without its boundaries, dry bush and ugly plains make significant contrast. It was another object-lesson in irrigation.

We pulled up our horses at the holding of one Peppercorn, a German settler (South Australia is blessed with a large German agricultural population); and here I saw the results of close culture. From ten acres this pioneer was gaining a good living, and the rainfall troubled him little. We culled late grapes, large, juicy bunches of the choicest sorts, and fed as we walked admiringly a-down his beautiful orangery, talking democratic politics and applauding scientific agriculture.

Renmark was founded in 1877 by the Chaffey Brothers. In 1893 it was incorporated as a Trust by special Act of Parliament, securing the water right and supply to the landholders themselves. The Trust holds 13,500 acres of land and 16,000 acres commonage. Over 4000 acres are irrigated. The annual levy for water is £1 an acre, with five full irrigations a year. Special irrigations cost 3s. an acre.

The fruitgrowers of Renmark have a packing shed of their own, conducted on the co-operative principle, where the output of raisins and currants is stemmed, graded, packed, and made ready for market. The

Renmark colony numbers among its inhabitants several celebrities, including a Spanish countess and a stepson of Adam Lindsay Gordon.

Renmark also boasts a municipal hotel—the only licensed house in the town. The management is by a committee of five landowners of the district, elected annually on the House of Assembly vote of Renmark. Electors must have a six months' residence qualification. So far this communal hotel—a fine, modern, well-kept hostelry it proved—has been a success. These 4000 acres of irrigated land have already yielded up to £100,000 value of fruit in a year. They are providing a comfortable livelihood for over a thousand people. A million acres along the Murray could be turned to like account; but the whole problem of the Riverina will have to be studied in a newer legislative light, and this writer again contends that its solution lies in the direction of Federal control.

I did not get away from this pleasant little community till late Monday afternoon. I bore with me a memory of charming people, prosperously dwelling amid the most idyllic surroundings. I also carried a loot of choice table raisins and dried fruits, presented me by the genial secretary of the Trust. A crowd of kindly Southerners stood on the bank to cheer "The Lone Hand" off.

I made a pathetic and affecting speech—to the engine, which hesitated about starting. I believe that engine was possessed of some kind of intelligence; it realised that Renmark was a good place to stay at. If ever I visit that generous settlement again, I hope to have a barge in tow. I might then be able to carry away all the dried fruit offered to me. Next day the crew of "The Lone Hand" was indisposed, suffering from a surfeit of "London layers." I do not think it is wise to consume more than six or seven pounds of table raisins in one day. Melville John Gilligan was of the same opinion.

Drying Apricots, Renmark.

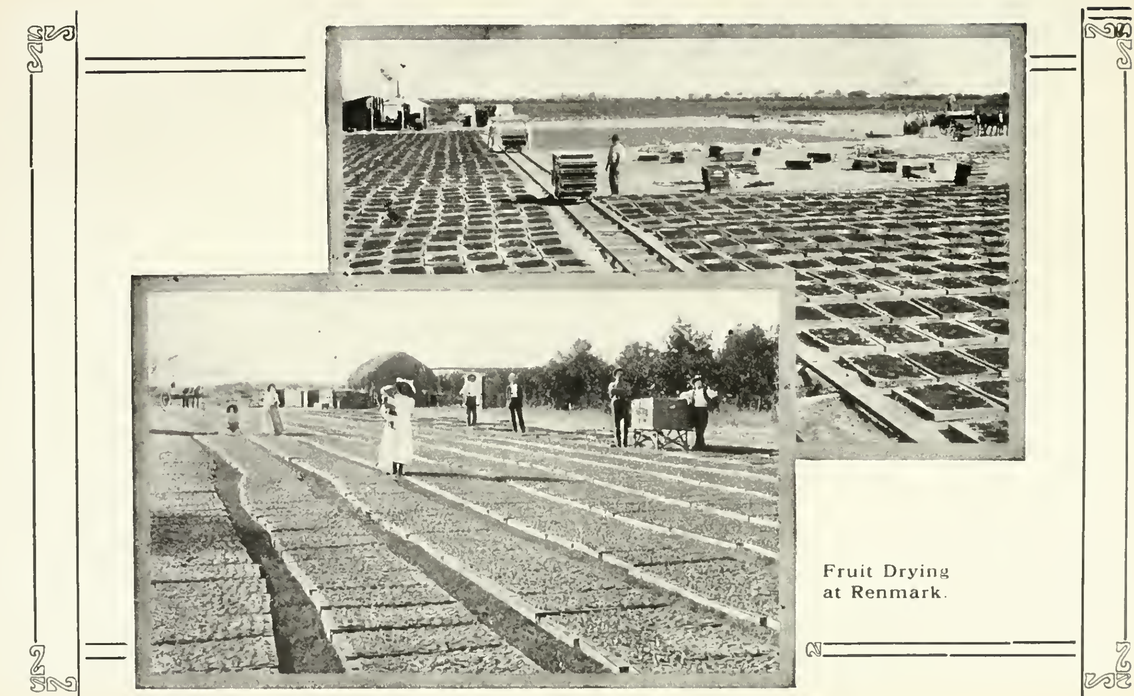
We lay below Renmark by the home of a German settler. The house—typical of the lower Murray, where a Teutonic population preserves many traits of Fatherland—was built of grey freestone. The sheds and cow-bails were of stone, with thatched roofs. Huge chimneys and great fireplaces told of bitter winters, but the stout families are well protected from the cold. They are excellent colonists, these Germans, good citizens, and good agriculturists, and they have converted the sheepwalks between Renmark and Morgan—which were looked upon a few years ago as half-desert—into productive wheat lands. From this point onward we passed the grey-stone houses of German farmers at every few miles. Gretchen at the stoop gave us many a friendly hand-wave as we sped along, and Hans looked up from his furrow and saluted. Whole families would come out sometimes and flutter handkerchiefs, hats, and sun-bonnets. The cordiality of the population induced us frequently to go ashore and yarn. I began to dimly understand why Goethe occupied most of his idle moments embracing the waists of German maidens between rows of green peas. Genius is seldom at fault in these matters.

At night now we saw the river steamers going by, lighting up the banks with huge reflectors, which brought out every object distinctly, and showed the steersman where the channel lay. He rolled the long river chart out yard by yard, and watched the bends and turns with hawk eyes from his high eerie above the upper deck. In his wake generally followed a barge or two, laden with wool or merchandise, the barge master following with quick revolutions of his wheel the course of the steamer towing ahead. Wider, longer, straighter grew the Murray. One magnificent reach gave us a clear run of eleven miles, down a water road half a mile wide. The shallow, winding

river, choked with sand bars and snags, was surely part of a dream.

I went ashore, of a grey, cold morning, at the irrigation settlement of Lyrup, which began as a communal colony of 4600 acres, and became an agricultural community on more individualistic lines. Communism proved, as usual, a failure. The settlement was mostly German. There were twenty-four holdings of from ten to sixteen acres; the crop was raisins, averaging a ton to the acre. The packing-shed was full of fruit awaiting shipment. Lyrup lays claim to prosperity. The soil of the settlement under irrigation is especially fertile. The surrounding country is singularly unbeautiful.

We spoke the Daisy, of Adelaide. She was engaged in the cod-fishing industry. Her owner, a blonde Deutscher, dwelt aboard with his wife and family. The bulwarks were wire-netted to keep a yellow-headed progeny from tumbling overboard; the family washing was hung out forward to dry. From the ship's stove went up, out of the mouths of bubbling pots, the song of the family meal. We passed many such craft occupied in similar fashion, and every hour caught fresh glimpses of river life. Small covered boats there were many—some tied to the banks, some paddling upstream, some propelled by wheels worked with a treadle like a sewing machine. Barges lay alongside the banks loading up with wheat; steamers pulled in by the wood-piles, getting fresh fuel aboard, or sent their crews ashore to cut it in the bush. Boat life and tent life seemed the manner of the country. The brown, strong women of the camps washed and cooked in booths of boughs or scrim—their lives were being spent under tent or tarpaulin, and their children were getting depth of lung and strength of muscle in the open air, under the Australian sun. It was evident that, outside the fringe of regular settlement, a scattered, moving population was



Fruit Drying
at Renmark.

getting a living from the Murray. There were fishermen, traders, woodcutters, bush workers, loafers—all manner of folks—among whom an Anglican mission steamer was ministering. I spent an evening in this steamer's comfortable cabin—the minister was ashore holding service. I yarned with the skipper, who gave me specific directions and a rough chart of Lake Alexandrina, at the mouth of the Murray, at the same time assuring me that "The Lone Hand" was not a fit boat to make the passage; moreover, if I did attempt it, I should probably have to wait weeks for an opportunity, as the surface of the lake was swept by continuous winds. All of which I discovered to be good advice.

"The Lone Hand" put up her record run for the trip along the wide river that leads to Morgan—ninety miles in one day. We broke camp before daybreak, and ran on until the river was a mirror of stars.

These last days on the Murray were fair and pleasant. The morning sun came over the lignum, and drew aside the fog from the river, as a lover might gently remove his lady's veil. Ducks and swans rose out of the mists; the smoke of our fires curled up in blue and white pillars, that clung about the tree-tops ere they disappeared into rainless skies. There was a homeliness about the stone houses on their sloping sandhills; albeit, few of them were brightened by flower gardens or shade-trees. It was good to hear the churn of paddles round the bends, the whistle of the river steamers; to watch at night the glare from the furnaces lighting up the faces of the engineers. High cliffs and colored banks threw their shadows into deep, sluggish waters. As we drew nearer to the sea the distant prospect was relieved by hills, and the banks by fringes of waving reeds and swaying willows, which recalled the verdant Clarence and the rivers of the East. Wheatfields, having given up

their yield, lay waiting in stubble for the plough, and hayricks and wood-piles told of coming winter.

We passed the Overland Corner, and saw a crowd of migrating South Australians on the trek with their teams and household effects. They were going to take up land in New South Wales. Among them—the younger members of the party—might be another Minister for Lands. The Overland Corner has already produced one, but I looked in vain for his ancestral home. I mentioned this on my return to Sydney. The ex-Minister laughed. The ancestral home, he informed me, had long ago been converted into trousers for the family by a prudent pioneer mother. The home had been a calico tent.

The trekkers carried household effects and supplies on low German waggons. Behind one of these waggons they trailed a hooded buggy. In other waggons with calico tilts the families camped at night. They had come many hundreds of miles, had hundreds more to travel; but they went blithely, with great confidence in the country and in their own futures. Years of patient toil, unknown difficulties, and certain dangers lay before them. Still they knew that in the end return for their labor would be fairly sure. It is citizens of this type that the Commonwealth needs; every possible sphere of settlement and production should be thrown open to them.

Morgan is the principal shipping depot of the Murray. Here the railway trucks discharge their freight of up-country requirements into waiting steamers, which, in return, refill the trucks with the wool and produce of the rivers. Grey stone buildings present cold, unornamental fronts to bare, hilly streets. Like most South Australian townships, Morgan wears a "blithered" appearance. It may be a good place for forwarding agents, but it is certainly no place for anyone seeking the æsthetic life. "The Lone Hand" pittered in with the early morning, and pattered out

Moorook, S.A.

before lunch, preferring the prospect of olive groves and open farm lands along the river to that treeless town of grey stone and galvanised iron.

The hills of the south were still Australian in contour and color. The familiar blue haze hung over them; typical bush homesteads nestled on their slopes, with wire fences and timbered ridges; alternate forest and clearing; a hedge now and then; a red road winding round the foothills, and losing itself in a dark belt of gums—it was good to look on it again after the eternal plains.

We drove along under cool willow reaches, avoiding the heat of the midday sun. From the reeds and rushes water-fowl rose at the sound of our coming—I spent my last days on the river in a joyous atmosphere of sport. What was the use of taking surplus cartridges back to the cities? Besides, little presents of game made equable payment for milk and eggs when we called at a riverside farm.

The first day of May fell clear and sunny. A sea-gull flying upstream reminded me how Sturt and his companions hailed these birds as a welcome sign that *their* long journey was nearing its end.

That forenoon we came into Mannum, destined, no doubt, to become some day a great maufacturing town. Here they construct modern motor engines, and, in the splendidly-equipped foundry of the Shearer Brothers, good Australian iron was being hammered into ploughshares at the rate of fifty dozens a day.

They were interesting men, these ironfounders. The younger Shearer hath built himself an observatory, wherein, with his eye to a fine reflector, he rests his brain from sordid business cares by studying sun spots and the channels of Mars. As a relaxation after travel, I examined a fine storm on the sun's surface that morning, and exchanged ideas on Jupiter's moons. Here was an intellectual oasis, peopled by a Fellow of

several astronomical societies—whose other hours were spent in building strippers and ploughs!

It was pleasing to converse over the telephone with friends in Adelaide who were waiting to welcome me. After all, civilisation is not a bad thing to return to. It seemed years since I left it. I had not slain an oyster for eight weeks! Memories of the fried sole I had trifled with in a Melbourne restaurant two months agone came to me, and the stirrup cup which Lalage had filled. . . .

The lights were lit at Murray Bridge when "The Lone Hand" came down the last reach, and drew in beside the fleet of barges and steamers by the railway siding. The Melbourne express thundered across the long bridge, a fiery caterpillar wriggling away into darkness. "The East was calling." I inquired my way to the telegraph office and hit the East with triumphant wires. I had brought the first motor boat down the Murray, end to end, and I claimed a world's record for river distance with a marine engine. I was somewhat pleased.

We made our last camp on an unoccupied steamer, and went out and demanded dinner at the hotel. The proprietor made no profit on that meal.

Next day we rose early, and petrolled downstream until the shores of Lake Alexandrina appeared beyond fertile flats and seaward hills. Strong winds raged across that splendid sheet of water. I had to abandon the idea of crossing over to Goolwa in the skiff, but 1500 miles of river lay to my credit. It was enough. The paint was all scraped from "The Lone Hand's" keel; but the brave little boat had finished her task faithfully and well.

I brought her back tenderly to Murray Bridge, and began to pack up, rather sorrowfully.

"Say," cried a voice from the bank. "When did you arrive?"

"Last night," I replied, looking up.

Clay Cliffs and Wide River.

A holiday party of four entire strangers, including two ladies, were regarding "The Lone Hand" with curiosity.

Strangers, but a community of interest soon made us acquainted.

They were motor enthusiasts, and they knew all about that Murray trip from the newspapers.

"When are you going over to Alelaide?" they asked.

"In the morning—first train," I said. "I'm just packing up."

"Well, come across with us," they said. "We've got a car here. You'd better finish by motor, all the way."

The idea was good.

These good folks loaded my dilapidated baggage into their car, and bore me away from Murray Bridge.

As we mounted the nearest hill I turned about to get my last glimpse of the great Australian river, whose winding course I had followed for fifteen hundred miles. The shallow watercourse of Albury had widened to a mighty stream, on which a setting sun cast warm reflections from reddened banks of cloud. Some day, I knew, that river and its tributaries would be feeding a vast population from thousands of irrigation channels. Some day its fertile flats in rolling Riverine would wave with the harvests of village settlements. Some day those endless plains would carry more than a million people, and echo the pæans of labor and industry.

As an Australian, my heart leaped up at the golden vision of the future—the car wheeled round a bend in the road, and the Murray was lost to view.

My acquaintances of the journey's end left me with congratulations and good wishes at the "South Australian," and Fred Johns, of the REGISTER, seized me for an interview without delay. I said only what I believed to be the truth about the Murray question;

but the generous people of Adelaide, when they read the Register next day, chose to regard it in another light. They proceeded to make a sort of political Paladin of a modest and unassuming pressman within their gates. The Government sent round its motor-car at once, with a request that I would endeavor to make my brief stay in the City of Churches as pleasant as possible.

After the Bush, the comforts and luxuries and amusements of a city can be attacked with new zest. The simple, everyday conveniences of modern life become novel and charming. Even the double-decked horse-cars of Adelaide seemed strange and wonderful. I did not ride in any of them; but people who had done so assured me that they were quite safe.

I went to hear a learned local professor of literature lecturing on the exciting subject, "Was Hamlet Mad?" It was an excellent discourse, delivered before a large and apparently serious audience. But I had been too long away from the sources of culture to appreciate it as I should. I left before the conclusion of the lecture, fully convinced that if Shakespeare had been a critic, he would not have created Hamlet; he would never have found time to do it.

South Australia is the most deeply interested in the Murray problem of all the States. All the weight of her politics must necessarily be thrown in the balance for the locking of the rivers, and safeguarding their waters for purposes of irrigation and navigation. The policy of South Australia is, or should be, the policy of all Australia.

On my way east I met a prominent Federal politician in Melbourne. I endeavored to interest him in this great national question.

"Oh, d—n the Murray!" he ejaculated, finally.

"Yes, dam the Murray," I said; "that is the solution of the whole problem."

The S.A. Trade; River Boats at Murray Bridge.

Every winding river somewhere finds the sea; every story has its ending. But as the homeward bound Kyarra lifted her huge iron bulk into the roll of the Southern Ocean, away beyond the haze, I saw in fancy the great overlord bringing his tribute, gathered from a watershed of half a million square miles, unto Cæsar—the sea. I saw the reaches sparkling in the sun. I saw the moon rising above the tree-tops, and heard the curlews call, and I bore away in memory all the mystery, the glamor of my days and nights, upon the Murray, the King River of Australia.

Burrenjuck-Goondah Railway.

Cyclops and Ceres

Away back in the days of Antiquity, as the human intellect evolved from primeval to barbaric stages, Asia and Africa learned the value of irrigation.

The Pharoahs erected barages and cut canals to freshen and fertilize the arid lands of ancient Egypt from the Nile.

Accadian emperors carried out tremendous engineering works by the banks of the Tigris and Euphrates. India and China have known how to save and use the waters of their mighty rivers for centuries.

Both in ancient and modern times the densest populations of all the Continents have been supported along the great river beds.

Australia possesses, in that territory which is crossed by the network of long, sluggish rivers debouching into the Murray, an invaluable asset of millions of acres of irrigable land, the most fertile in the world.

Modern Australia, like modern America, like ancient and modern Egypt, is now being made the theatre of great national works for the storage and application of water.

Since the writer's motor voyage down the Murray four years ago, the rich and progressive State of New South Wales has hurried towards completion, at Burrenjuck, between Yass and Tumut, on the Mur-

rumbidgee watershed, a storage reservoir which, with the exception of the Assouan dam, is said to be the largest work of its kind in the world.

Before "River Rovers" went to press, it was arranged that the writer should include a special chapter descriptive of this colossal dam, and of the irrigation settlement down the river which it will supply.

. . . .

"Catch the Southern mail to-night and get off at Goondah," said the Chief Engineer for Irrigation over the telephone.

So I caught the mail, and went South and West, over the silent, slumbering land of New South Wales.

At a quarter-past three in the morning the sleeping car attendant softly enquired "if I was awake."

As the fat man sleeping overhead in the top berth of my compartment had trumpeted, gurgled, and chortled in a dozen octaves of snoring from the time we left Campbelltown, there was no occasion for the attendant to repeat his question.

A few minutes later the Southern mail pulled up somewhere in the darkness.

A sharp official voice reiterated outside the carriage windows:

"Goondah! *Goon*-dah! Goon-*dah*!"

A few sleepy passengers hauled forth their rugs and portmanteaux, and stumbled out on to the platform. The train whistled, snorted, and passed on into the night.

Overhead the sky was steel bright with stars. The night officer stood before me, holding a bull's-eye lantern, like a soldier with his bayonet at the charge.

I showed my ticket, and Mr. Smith, resident engineer at the Burrenjuck Reservoir, took me in hand.

He led me across the road into a scrim hut, where a good fire burned in an open hearth.

Murrumbidgee River, above Burrenjuck,

Several rough-and-ready-looking fellows were drinking coffee in an outside room.

We had 4 o'clock a.m. tea and toast before boarding the little narrow-gauge train that runs down its twenty-six miles of two-foot track to Burrenjuck dam. The train started off in the chilly end of night that presages dawn. The small carriages swayed forward and rocked to and fro.

Just in the grey of morning the resident engineer brought me from a promising doze with the announcement that we were going down the mountain.

I looked out of the window as our midget train. drawn by a bantam locomotive, fussily began its breath-taking descent of seven miles, by serpentine curves and steep down-grades, towards that basin in the hills, which is soon to be filled, like a Cyclopean cup, with the rains and snow-waters of the rapid Murrumbidgee.

As the train noisily turned round, snake-fashion, biting at its tail, the engineer mentioned difficulties which met the Government surveyors who came at the beginning of the job to lay down a route for the railway builders.

But the locomotive went out of sight a corner or so ahead, and brought our carriages abreast of a gorge that distracted my attention.

The footboard overhung its depths. I calculated, if we left the track just there, the next object to affect us would be a clump of forest oaks about a mile and a half below.

I mentioned this to Mr. Smith.

He smiled an indulgent smile, and assured me that the line was quite safe. For appearances sake he had put in a bit of concrete just there. but the journey was as sure as engineering wisdom and Westinghouse brakes could make it.

We arrived by a series of incredible curves at a break in the hills, and saw the Murrumbidgee glisten-

ing like an aluminium band in the sunrise far beneath us.

Grey wraiths of fog, lifted from dewy flats by the morning, floated along the tops of the river timber, and dissolved mysteriously.

As we rattled down that sinuous red gash which the railway builders have made along the mountain side, day opened over and under us like a rose.

It was a gorgeous Australian picture, painted in crimson and scarlet and gold on the blue canvas of the East, with just enough cloud to give it meaning and variation.

A final slope-down revealed the roofs of Burrenjuck township. Below the little tin city ran a typical bush road, and beyond that, at the feet of the giant hills that are destined to become the banks of the second greatest reservoir in the world, the ancient Murrumbidgee sang the song it learned when the summits of those hills rose hundreds of feet higher towards the clouds.

After breakfast at the Government accommodation house, we boarded the bantam German engine as she passed the platform.

With a load of timber-laden trucks behind us, we puffed and twisted round another two miles of curves and grades into a gorge that grew narrow, like the neck of a flagon, until at last we broke out upon a rocky amphitheatre, crowded with life, industry, activity and effort. With unexpected suddenness, right in the wild, rugged heart of Australian hills, we found ourselves facing a gigantic ring, in which the young gladiator of Science fought for certain victory with the primeval genii of the mountains.

Where the sword of creative Nature had cleaved a deep, narrow rent in the ranges to let the river through, with Black Andrew standing sentinel on one side, and Burrenjuck on the other, there had been thrown up a huge ant bed, which was crowded with busy individuals, tun-

Burrenjuck Township.

nelling, burrowing, guiding, hauling, and, withal, constantly, lifting up and setting down. Below us, uprearing from the river bed, stood a grey, inchoate mass of masonry and concrete, overhung by steel cables that stretched from high wooden towers on either side of that rocky gorge. This growing mass was surmounted by gigantic cranes, and surrounded by all the labor-saving appliances of modern invention. Here was a coming together of Titanic forces! Here, above the angry roaring of the river among his ancient boulders, was heard the rattle of the winding gear, the constant burr of dynamos, the steady "chug chug" of pumps, the persistent purr of drills, the crunch, crunch of the stone-breaker, the rocking of the gigantic machines which mixed the concrete, the whistling of locomotives, and the murmur of human voices.

The soul of Cheops, ancient builder of pyramids, might have looked down enviously on that wonderful harnessing of mechanical powers to achieve speedily what the old Egyptian architects attempted so laboriously.

Perched upon the mountain slope stood a long shed, built of prosaic galvanised iron. Here, in the form of three mighty dynamos, beat the heart of Burrenjuck, six hundred horse-power strong.

From this centre of electrical activity—presided over by a modest, affable, Scotch engineer—was delivered day and night the invisible power that, under the guidance of human intelligence, is slowly creating one of the wonders of Australia: one of the wonders of a modern world.

I conversed with that amiable engineer. I felt that I ought to have spoken to him with my hat off, as he stood before the switch-board, gently rubbing his hands on a wad of cotton waste. At his right elbow purred, cat-like, a generator weighing two tons, which,

with its two fellows, had been brought into the gorge in pieces.

On a previous summer an old grandfather thunderstorm had come down the valley to have a few words with its tame relations. It bombarded the power-house for two solid hours with ear-splitting civilities and enquiries about the dynamos' health.

That was why, the engineer said, they had put two lightning arresters on the building. A job that was paying 400 men £3,000 in monthly wages could not afford to be held up by any unticketed electricity that came along to leave a visiting card in the shape of fused wires without invitation. The perpetual "At Home" which the N.S.W. Government was holding in that remote mountain fastness had to be conducted with decorum.

After a glance at the great furnace, which stalwart arms were feeding with logs of mountain gum to born the steam that gives birth to the electricity that gives life to the works, I passed on by blacksmith's shop, carpenter's shop and sawmill and plant store, to the stage overlooking the wall of the dam.

Following the resident engineer up a steep ladder, I found myself under the wooden tower that commands the aerial cable-way.

The master of ceremonies here was clothed in blue dungarees. He stood beside a lever, behind an enormous drum whereon was wound and unwound a quarter of a mile of pliable steel cable.

A telephone bell rang out its orders. The man in dungarees pressed the lever gently.

Away down in the valley, 400 feet beneath us, I saw a sort of open cage, crowded with figures that looked like dolls. The cage lifted slowly up and up until it reached the level of the tower, and stopped in mid-air. The man behind the drum seemed to manipulate another lever. The group in mid-air swung towards

Murrumbidgee River, at site of Burrenjuck Dam Wall.

us, growing larger and larger, until they landed on our platform, full-grown men.

In this way the aerial railway receives and delivers men, materials, and machinery by night and day.

The engineers experienced some difficulty in carrying it across the gorge. The first connection was made with a schnapper line!

Looking down from the tower, one gradually got a better idea of the magnitude of the work. Under that line of suspension rope 1,200 feet long and 400 feet high, capable, by the way, of supporting a weight of 15 tons, stood the hub of effort at Burrenjuck. In order to make a wall 240 feet in elevation (the height of Sydney General Post Office, from the pavement to the top of the tower), and 752 feet in length, capable of impounding a greater volume of water than is contained in Sydney Harbor, an enormous quantity of material must be shifted.

The concrete work on this wall will absorb no less than 50,000 tons of cement!

To quote the descriptive words of Mr. L. A. B. Wade, the chief engineer, before whose revisionary eye the completed dam already appears in perspective:— "The Cyclopean concrete work, which will form the dam wall, is built up of a series of units, each separate unit representing the average quantity of concrete that can be placed in one full day's work. Each of these units practically represents the space occupied by a good six-roomed cottage. They are designed so as to break-joint in every direction, and in this respect represent a gigantic form of masonry construction. The object aimed at is to have each unit a solid mass without any joints or breaks caused by an intermission of work."

Down at the resident engineer's office they produced later a box containing a great number of little wooden cubes and squares, which fitted into one another with mathematical exactness so that no two

joints lay opposite. The whole set, when dovetailed together, made a miniature model of Burrenjuck dam!

I stood at the edge of the platform and watched that set of cubes and squares being slowly converted from plan to fact.

The Murrumbidgee had been turned aside and the first foundations of the wall levelled, cleaned and swept as the housewife sweeps her floor before she lays a carpet. Through a tunnel in the masonry the river was pouring. When the engineers are ready that tunnel will be closed, and the flow of waters regulated by three immense conduits.

When they require water for an irrigation down at Yanco, where the irrigable areas begin, over 200 miles away, the officer in charge will wire to the officer in command at Burrenjuck—and the water will be there not an hour late or a cubic foot short of the quantity ordered!

This is the conquest of Nature as the modern engineer understands it.

With this end in view the red granite hearts of the hills were being scarped and torn, blasted out with explosives, slashed by railway cuttings, scooped with machines, and pock-marked with excavations.

Finally, Black Andrew and Burrenjuck will be wedded with a hoop of concrete and masonry so strong that no flood can ever divorce them,

Five thousand square miles of catchment area lie above this wall. The natural basin at the junction of the Murrumbidgee and Goodradigee Rivers, when filled, will provide a storage wherefrom the irrigation areas below Narandera can be kept green and garden-like through all the droughts of all the years to be.

So the movable cranes below me reached out their long, steel fingers to pull down heavy masses of rock, which were broken into boulders some fifteen tons weight, lifted up by iron claws, swung across by the swaying cableway, dropped softly upon the summit

Foundations under Burrenjuck Dam Wall.

of the wall, each in its appointed place and built solidly into the great structure with concrete.

"Plums" they call these terrific boulders. The Engineer drops them into his pudding just where they are wanted. There is an unlimited supply in the cupboard at Burrenjuck.

So the trucks of sand grated over the rails, brought up by a special line of narrow-gauge railway from down the river.

So the faithful little engines puffed to and fro, and the busy belts whirled endlessly round and round.

So the smaller cranes marched about like iron birds, with slow, deliberate movements, picking up gravel, concrete, anything that was wanted, and delivering it here and there.

And all the time that great bastion was growing steadily, surely, smoothly across the channel of the Murrumbidgee, as steadily and surely as a bank account.

Out of the chaos and clamor of this cyclopean workshop in the Australian hills the facsimile of that set of cubes and squares in the box at the Resident Engineer's office was being converted from idea into fact.

The waters that had met my motor boat at the junction of the Murray and the Murrumbidgee would no longer run wastefully into the Indian Ocean.

They would be held back at Burrenjuck, and from many an irrigation channel between Narandera and Gunbar pour out prosperity in the near future for hundreds and hundreds of happy and prosperous homesteads.

I had seen what the mingled waters of the Murrumbidgee and the Murray have done at Mildura, at Wentworth, at Renmark and elsewhere, and I knew that soon there will be another flourishing colony in Riverina, which will receive its vitality from Burrenjuck as the veins receive blood from the heart.

Behind this Titanic wall the water will be backed up for 45 miles. Another freshwater lake will have to be marked on the map of New South Wales. There is a plan hanging over the wooden box at the office whereon it is already painted—a pleasant blue!

The office itself will be only a few feet above high water mark. Passengers by the narrow gauge railway will be able to throw biscuits to the swans as they swing around the curves.

The high shoulders of the hills are dotted by a line of white posts, marking the future levels.

I tried to imagine the trees along the valley, as they would be, with 25 fathoms of water over them. I saw in fancy the fishes swimming through their leafless branches, which for immemorial years had soughed and swayed to the pressure of the winds.

Three years have gone by since the wall began. In another three years the work will be completed, the plant removed, the greater part of the galvanized iron town gone, the channels of escape sealed.

Then the water will begin to rise, slowly. It will cover the river oaks and gums; creep up the hillsides, cover the mossy boulders, cover the flowering wattles, cover the dark pine trees and clustered scrub. Higher than the highest flood it will go, until it reaches the place whereto the finger of human intelligence has pointed it!

There it will stop, halted in obedience to the will of man.

Meanwhile, away down in the narrow neck of that deep southern valley, over which those two sentinel hills have brooded for innumerable centuries, the belts revolve, the stone-breaker crunches with irresistible iron jaws; the dynamos whirl round with incredible rapidity, and the huge "mixers" rock their measured contents of sand, cement, and stone as a chemist shakes up a prescription in a bottle.

The path from Burrenjuck to the wall, which five

Byepass conveying River flow past Foundations, Burrenjuck Dam Wall.

years ago was difficult to negotiate on foot, runs alongside the railway line, and is trodden hard by the feet of the gangs going to and fro.

In fine weather the works are lit at night by arc lights, and the shifts go on until the dawn. It is expected that the first water for irrigation purposes will be available by December, 1911.

The source of the Murrumbidgee is about 70 miles from Burrenjuck, in a straight line, but 200 miles by following the windings of the river.

The Federal Capital site is only 40 miles away. It can be supplied with electric light from the dam.

These facts the Resident Engineer imparted to me as I looked down upon that strenuous theatre of labor which had been opened with an overture of explosions in the heart of wild Australian hills.

My mind was too crowded with impressions for the moment to take in all the significance of this colossal work.

I could only dimly realise that this dam was to be the mammoth goblet into which the water from a catchment of 8,000 square miles would be poured until it overflowed.

Within that gigantic sweep of range and plateau stood mountains 5,000 feet high, whose summits were yet white with the snows of winter.

In spring the snow waters from these mountains will help to fill the reservoir, and provide for the needs of midsummer, when the garden areas below Narandera grow thirsty and no rain falls.

As a rule the snow water begins to come down the 'Bidgee the second week in August. Its flow continues until the middle of October.

These melted snows are destined in future to moisten those arid but fertile lands two hundred miles away.

As Summer sweeps across the Riverine, less

favored districts will brown beneath his feet. But the irrigation areas will still wear the colors of Spring.

For years past measurements have been taken of the Murrumbidgee's annual flow; all the rest is a matter of calculation. The engineer knows how much water to expect from the catchment area; the irrigationist learns how much water he will require. The centres of supply and demand simply converse amicably over a telegraph wire, as occasion arises, and the settlers down the river add twelve or twenty-four inches to the annual rainfall of Yanko or Gunbar, as the requirements of their tilth may be.

In many kinds of culture—raisin drying, for instance—it is a decided advantage to control the season's moisture in this way.

Those prospective settlers below Berembed Weir, armed and invulnerable, are going to be on a better wicket than the Western pioneers who fought the drought with naked hands. Valiant as their efforts were, the battle was too often a cruel crushing combat, carried on to defeat by overwhelming odds.

The new men will hardly be able to realise how the men of old were handicapped.

Conditions will be so vastly improved for them, the element of uncertainty will be removed; there will be no starving stock. no waterless wastes in summer, no dry, heartbreaking outlook for winter—*the rain* (*or its equivalent*) *will come when it is wanted*!

It will *always* come when it is wanted, and in the exact quantity required!

Intending settlers need have no fears on this head; all the moisture needed to ensure from the highest class lands in Australia a maximum of growth and cultivation will arrive as surely as sunrise. All that will be required from them is the payment of a small charge and the exercise of sufficient intelligence and energy to make their holdings return them comfortable

Site of Burrenjuck Dam Wall (showing Cofferdam and Byepass).

livings. The N.S.W. Government is prepared to be a beneficent wet-nurse to some thousands of them.

While I was turning these thoughts over in mind the whistle blew for lunch.

The air down the 'Bidgee is a great creator of appetite. I tramped back to midday meal at the accommodation house awed, but hungry.

Filled with an abundance of excellent food, such as the good housekeepers of the bush delight to offer the city stranger, I charged my pipe and descended again upon the Resident Engineer at his office. We had another look at the box containing all those little wooden Maltese crosses.

That box had a curious fascination for me. Each block in it represented an area of 1,020 square feet of concrete. I had been watching that concrete "batched," I had seen it swung down in cyclopean hods to the wall.

The unit that each wooden block stood for was 45 feet long and 36 feet high, and would weigh anything from 600 to 800 tons if it could be detached from the composite mass. So cleverly was the whole work put together that there always was a difference of 3 feet between adjoining units, and no one join lay opposite to another; nor did any two units stand immediately one on top of the other.

The scheme was devised by the co-operative engineering brain of the Department.

It will stand forth in fact as the Burrenjuck Dam, long after the men who gave it birth have gone the way of all flesh.

It will endure as a perpetual testimony to the wisdom and courage of the Government that inspired and nursed it, and a lasting monument to the skill of the Department which carried it out.

That night I looked down on the temperance town of Burrenjuck, which for a brief season longer will

offer habitation, under strict government, to its thousand odd souls.

Patches and blurs of light glimmered through a drizzling rain.

Beyond the tinkling of a cracked piano and the nasal twang of a gramophone I heard in imagination the wavelets of a great freshwater lake breaking softly along a shore-line marked by white posts; and beyond the temporary dwellings of Tin Town I saw a mighty settlement two hundred miles away in rolling Riverina, with green vines glistening and purple lucerne flowering on a thousand farms.

. . . .

The following afternoon I set out from Burrenjuck en route for that settlement of the plains which is soon to be.

Gallantly the little locomotive climbed the steep shoulders of the hills. Gradually the song of the rapid Murrumbidgee died away, the dull but stately river oaks dwindled into toy trees below, the precipices grew deeper, the mountain crests drew nearer.

Night closed in as we breasted the summits grade by grade.

By and by the dim lights of Goondah appeared again, and the kindly voice of Mr. Baker, the line superintendent, was heard beside the footboard of the miniature railway carriage, offering the comfort of a bed at his place until the Southern mail came through.

The mail was crowded with commercial travellers taking their early-in-the-week trails for the cities of the South and West; but five hours' sleep at Goondah, coffee at Harden, and a good hot breakfast at Junee strengthened me to fight my way to a seat in the train bound for Hay.

Through flat country, gay with a glorious spring, we ran down by Coolamon and other prosperous places of the plains to Grong Grong.

Here Mr. W. D. Campbell, one of the Government

Burrenjuck Dam Wall (looking down stream).

engineers engaged in the laying out of the irrigation area, was waiting with a motor car.

A run of thirteen miles across country that looked like a vast square of green velvet pile carpet, brought us to Berembed Weir.

At this point a granite bar crosses the channel of the Murrumbidgee 220 miles from the Burrenjuck Dam, and a little over 500 miles from where the 'Bidgee joins the Murray.

These rocks offered a good foundation for the engineers to construct the diversion weir from which all the irrigation canals, channels, and watercourses are to be filled and fed.

The irrigable district extends on the north side of the river from Narandera to Gunbar, a distance of 130 miles. It covers an area of 358,000 acres. Of this, 196,000 acres have been classified as first-class land.

Allowing a maximum of 100 acres to a holding, the area will carry 3,580 homesteads at least, which would certainly mean a population of 25,000 people.

This is a minimum.

Another approximation fixes the carrying capacity of this belt of agricultural country under irrigation at anything up to two hundred thousand souls.

This calculation is based on the fact that 11,000 acres of irrigated land at Mildura, on the Murray, are at present supporting 5,000 people.

From the weir at Berembed, whatever its future population is destined to be, the area will receive all the water it requires for purposes of irrigation.

These diversion works at Berembed are another example of how modern engineering controls natural forces.

At "low river" the whole of the Murrumbidgee's flow can be shut off by simply lifting a set of collapsible iron shutters, which, during flood time, are laid flat on the river bed.

Into the mouth of the main canal—that like an

aorta will feed all the arteries and veins of the settlements—the necessary quantities of water will be turned by a stout concrete regulator.

Cement and iron give a massive and imposing appearance to this weir.

Pulleys and cog-wheels, iron shutters and screens, gates and pillars make up a huge mechanism, the function of which is to intercept and deliver so many million gallons of water forwarded to order.

The weir is a sort of clearing house, where the wholesale goods are taken in, checked, and passed out again to the retailers.

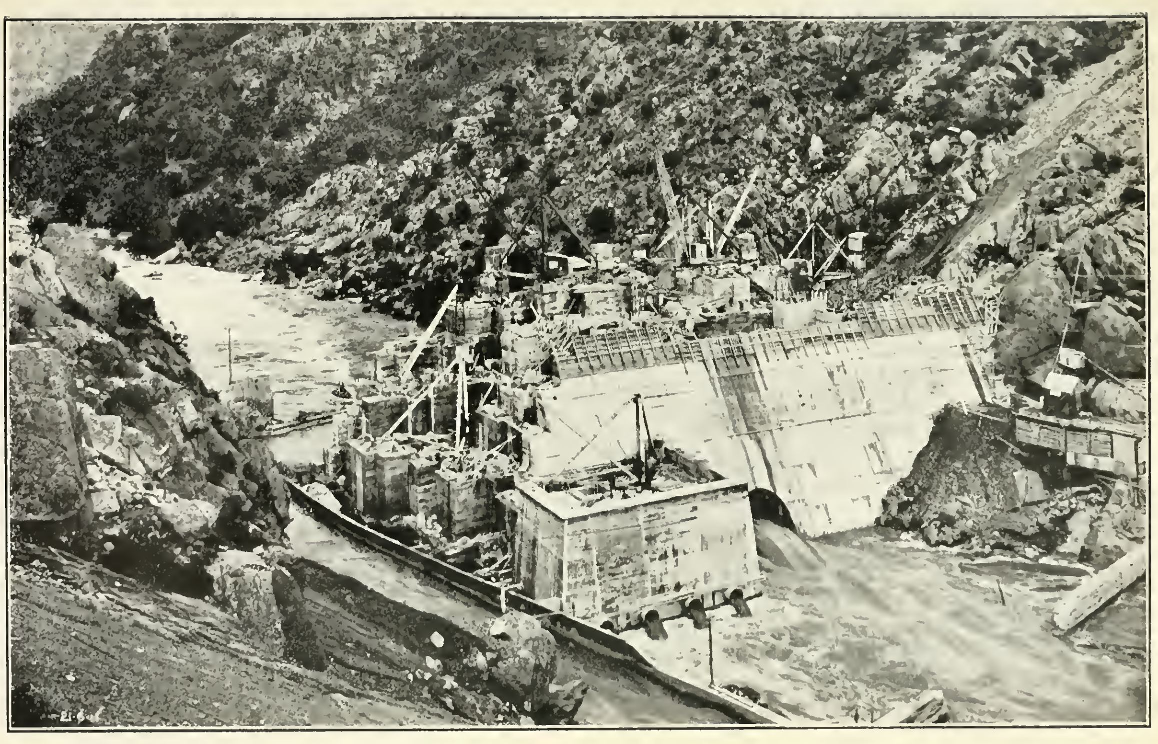
A lock has been provided for passing steamers up and down through the weir when it is in use.

Into the main canal the precious offtake will pour instead of going down, as of old, to join the Murray waters, and, after a long, inutile journey, losing itself in the salty Indian Ocean.

By this main canal—50 feet wide at the bed and 8 feet deep—it will be accepted and passed on in an even flow at the rate of 1,000 cubic feet of water per second. The total length of this feed channel will be 130 miles. The fall is 9 inches to the mile. For a short distance, a natural watercourse, known as Bundigerry Creek, is utilised.

When the irrigable areas are reached the water is distributed by a series of major and minor channels, so laid out as to make the highest point of each block of land to be irrigated the point of delivery.

The whole network of artificial watercourses is under complete control. Regulators and escapes provide for the disposal of surplus water in flood times. Each individual irrigator can base his labors on a sense of security. All the chances of seasons will be, for him, reduced to profitable certainties. Neither flood nor famine need he fear. He is simply called upon, by the exercise of ordinary judgment and reasonable



Burrenjuck Dam Wall (looking up stream).

energy, to justify a paternal Government in giving him a leg-up on the rapid climb to fortune.

It is estimated that fully a thousand miles of ordinary distributing channels will have to be constructed across this Northern Murrumbidgee area.

These will have their stops and sluice gates, for carrying off the surplus water which flows from culverts and crossings. Provision has also to be made for draining the lower areas after irrigation.

Another thousand miles of channel, much smaller, of course, will be required to effect this gigantic drainage.

The total cost of these various channels has been set down at £521,000.

It seems extravagant; but the outlay is more in the nature of investment than speculation. The people of New South Wales are not only going to get their money back with interest in due course, but they are adding an incomputable asset to the sum total of national wealth, in the shape of additional population and increased production.

The weir and works at Berembed were constructed by the Department under the day labor system; the excavations are carried out by contract, and the work appears throughout to be well and faithfully done.

It is claimed that the country which has been chosen for this vast national enterprise is among the richest in the world. It ranks equal, if not superior, to the very best irrigated lands in India or the United States. That it is destined to carry a large and prosperous population the writer has no doubt.

Analysis and experiment have shown that the soils within the area are rich in all the chemical properties that make for absolute fertility.

The very aridity of the country has been Nature's savings-bank provision against the future.

The absence of heavy and continued rainfalls over an even or slightly undulating surface has allowed the

deep red soils below Narandera to retain all their fertilizing properties.

Age followed age, aeon wore on aeon, while these ruddy lands were being slowly enriched.

While the higher lands year by year were writing off losses, the natural savings banks of the West were adding to their deposits.

The full heritage of the centuries now falls to the people of Australia. All the deep, loamy country of the great plains needs is water, and the water only needs engineering like this to make it available by simple gravitation.

Agricultural production on these lands can be infinitely varied. On the Lower Murray eight crops of lucerne a year are cut under irrigation.

The growth of lucerne implies successful dairying, pig farming, and the fattening of lambs for market.

Soil and climate are alike suitable for the production of currants and raisins, the perfect cultivation of oranges, olives, peaches, plums, grapes, apricots, figs and other profitable fruits.

This country is perhaps the healthiest in the world. The dry heat of inland summer is more endurable than the moist lower temperatures of coastal regions, and, what the stock-breeder and the culturist equally desire, it is free from fruit pests and animal diseases.

. . . .

The hospitable wife of a hospitable overseer of works had laid a table heavily with lunch for a party of five. Nor would these good Westerners accept from the visiting strangers more than thanks, as, well-filled, they climbed again into their car to resume a delightful journey of inspection.

The day was cloudless, warm, benign; the roads level and firm; the air exhilarating and pure. Beautiful red-soil plains, indescribably green, circled us, broken here and there by shapely cypress pines, or drooping myalls.

Murrumbidgee River, at site of Berembed Diversion Weir.

On emerald flats, stately white, straw-colored and black and white ibis stalked in scattered regiments, picking up insects with their long, curved beaks.

Flocks of pink and grey galahs and crested cockatoos rose ahead of the car.

Gorgeous Buln-Buln parrots, and grass parrakeets in hundreds, flashed like thrown jewels across the lawny green-sward as we sped.

By rolling acres of wheat lands covered with crop, past lush acres of swamp frequented by plover, duck, and swan; through natural avenues of trees as regular in outline as if they had been pruned and planted by the hands of a landscape gardener, we came to the thriving little city of Narandera. Here, on his table at the Crown Lands office, Mr. Campbell spread out the general plan of the Murrumbidgee Northern Irrigation Scheme, and explained its salient features.

A typical Westerner, tall, lean and brown, he traced with professional pride the progress of the work, followed the winding courses of the canals, outlined the already resumed areas and marked off the proposed extensions.

The plan showed a stretch of 130 miles of irrigable country, divided into districts of from 47,000 odd to 70,000 acres.

The surveyors—one of whom, the genial Mr. Lloyd, stood at his elbow—had crossed and recrossed it with a multitude of straight lines. These were the boundaries of the holdings that are to be offered to settlers by the New South Wales Government on the easiest of terms and conditions.

The present determination of the authorities in Sydney is that each settler will be allotted 50 acres of irrigable land with an optional 150 acres of dry country in addition. The latter can be utilised for depasturing stock, sheep raising, or wheat farming, as season and requirements provide.

Beside these subdivisions, ten acre blocks for hor-

ticultural purposes, and two acre blocks for farm and other laborers will be allotted.

Two townships will be established and laid out on the most modern plan. They can, and doubtless will, become two of the most attractive towns in the Australian Commonwealth—garden cities verdant and shady with trees, and sweet with the perfumes of flowers.

The horticultural blocks are to be located in the vicinity of these towns; the workmen's blocks will be scattered in groups around them and through the whole of the areas, forming small villages.

The occupants of these blocks will be given an opportunity to share in the general prosperity of this new province.

While living handily to their occupations they can grow their own fruit and vegetables, keep their own cows, rear their own pigs and poultry.

The first area to be made available for settlement is one of 5,000 acres adjoining Yanco railway siding, on the line to Hay.

The next area, on the northern side of Mirrool Creek, will be served by an extension from Barellan. No block is to be further than ten miles from a railway.

Provision has been made by Parliament for the resumption by the State on a reasonable valuation of the whole of the lands to be benefited by the scheme. Under the provisions of a carefully-devised Act the direct administration of the area devolves upon a Board or Trust, at present composed of the Ministers for Lands, Works, and Agriculture.

The great benefits of this closer settlement policy are association in settled communities, elimination of waste, co-operative effort, and the inspiriting example of success.

The settlers will have all the advantages of civilisation added to the pleasures of a healthy rural life.

The Government offers them every encouragement

Berembed Diversion Weir.

and assistance, and practically ensures them against failure.

The form of tenure decided upon is that of perpetual lease, between which and freehold lies only the difference of a term. Rentals to be charged are at the low rate of 1½ per cent. per annum on the capital value of the area taken up. This is all that will be asked for the first five years of occupation, when a grant may be issued.

Afterwards 2½ per cent. per annum is charged for the remainder of the lease.

The rights of bequeathment and sale are conserved. The holder can will his holding as he chooses. Or he may sell.

To quote the official edict as it stands:—

"The capital values are subject to re-appraisement at intervals of fifteen years from the issue of the grant. It is proposed to increase this term to twenty years. Residence must be commenced within three months after confirmation of application, and may, with the concurrence of the Land Board, be by deputy until the issue of the grant, after which it must be by the lessee, and cover a continuous period of seven months in each year. Residence may be conditionally suspended or omitted, or may be carried out under certain conditions, on the holding of a member of the same family, or in a village or town within reasonable distance, on application to the Land Board. A holding may be protected against sale for debt by registering an instrument under the Crown Lands Act. The holder may dispose of his interest at any time after issue of the grant, and is entitled to tenant-right in improvements should the lease be surrendered at any time to the Crown."

A paternal Government is going to go further than this.

It will prepare the settlers' blocks for irrigation before they occupy them.

It will erect yards and buildings, the cost to be paid off by annual instalments.

It will provide plans showing the exact level of the blocks, and the most suitable places and ways for putting in the most suitable and profitable crops.

It will erect, in the first place, factories and buildings where the different products of the land may be graded, treated, and made ready for market.

It will supply tested stocks from State nurseries.

It will refund to successful and unsuccessful applicants alike one-half the railway fares paid by them on their visit of inspection, and on any journeys they may have to make to appear before the Land Board in connection with their applications. Successful applicants, their families and belongings, will be carried at half-rates, also such live stock in their possession as may be sufficient for the area taken up.

In addition to all this, the Government has already established a Demonstration Farm on the settlement, for testing the suitability of various commercial plants and stocks, and instructing settlers in regard to soil and cultivation. Experimental plots will, moreover, be laid out in different localities.

Apart from all these object lessons and concessions, the Government is now making ready to erect dwellings for its clients.

From a number of plans prepared by Government architects the intending settler may choose his cottage of four or six rooms, with the conveniences his heart or the hearts of his women folk desire, and lo! his Mæcenas will dower him with a home on the easiest of terms!

It is whispered also that the Government will supply fencing material at low rates on beneficent terms, so that the £300 capital, which it is advisable that a settler should possess, shall be left practically intact for the purchase of stock and the making of a fair start.

Collapsible Shutters, Berembed Weir.

Without doubt the charge for water which it is proposed to make during the season of irrigation (5s. per acre foot) is, if not the cheapest, among the cheapest in any country where irrigation supplies have been made available by either public or private enterprise. Powers are provided under the Act for reducing this charge by one-half in the first year of occupation by the settler, being then increased each succeeding year until the fifth year, when the full charge must be paid.

If the farmer should require water over and above what his water right of one all-over foot per acre confers on him, he can get it at the same rate in summer, and for less in the winter season.

This is a general statement of the conditions of settlement. If any reader desires fuller and further information, he will obtain it by applying to the secretary of the Murrumbidgee Irrigation Trust, Public Works Department, Sydney, N.S.W.

. . . .

Narandera wears an air of general prosperity and cheerfulness. As a junction of two lines of railway, at the heart of the South-West, it rejoices in its importance, and looks forward to becoming a metropolis when the great irrigation scheme is an accomplished fact.

In its wide, main street, bullock-drays and motor-cars pass one another, representing the Old Australia and the New.

After we had got from the plan a mental outline of the country about to be inspected, we set off again, under the same cloudless sky, for Yanco.

On our right ran a line of low hills, marking the distant northern boundary of the country which is going to be irrigated.

The road in places was like a red-ink line drawn across a map colored bright green.

Two things impressed themselves on the observer's memory—the wonderful symmetry of the native trees and the vivid plumage of the birds.

It was a dream land, through which we journeyed swiftly and noiselessly, wearing its very brightest aspect, no doubt, under the influences of an unusually good season.

Spring tripped like a coryphee over the carpeted stage of Riverine. There was water in all the creeks and gilgas, and grass on all the plains.

We ran down across the main canal, through more native pine avenues, and stretches of saltbush, yarran, and boree, to Yanco homestead, a red-gabled brick and stone mansion, standing in spacious grounds, surrounded by orange groves and orchards, rose arbors, and ornamental trees.

At Yanco and its environs Sir Samuel McCaughey has already demonstrated the capabilities of this country under irrigation.

Yanco is a horticulturist's paradise, a botanist's delight, an agriculturist's joy, an orchardist's dream.

Its paddocks of irrigated lucerne cover 5,000 acres. It has its pumping station, miles of channels, vegetable gardens, mammoth barns bursting with dry fodder, its granaries, nurseries, engineer's shop, shearing and machinery sheds, motors, graders, drays, harvesters, ploughs, scoops, traction and portable engines, and plant of all descriptions.

The head station is lit by electricity. Few suburban mansions can compare with this splendid barony of the plains for comfort, elegance, and convenience.

We found its hospitality of the usual liberal Western character, and abided within its commodious guest-house under what seems to be an unquestioned traveller's right.

From wide verandahs, shaded by vines, one looked out on a scene of wealth and tilth that testified to the resources of the surrounding country.

Murrumbidgee Canal.

Golden wattles were blooming adown the carriage drives; spreading currajongs, cedars, and pepper trees dappled the grass with patches of shade.

Flowering jonquils and roses gave out their perfumes. African box thorn, hawthorn, and saltbush made hedges of cosmopolitan variety.

Clumps of sugar gums, acacias, and flowering shrubs added to the picture. It is said that irrigation, even under the comparatively imperfect methods pursued by Sir Samuel McCaughey, has added 50 per cent. to the carrying capacity of Yanco sheep station.

. . . .

A twittering of sparrows and the calling of the water-hens along reedy channels by the homestead roused us early in the morning. After the usual ample bush breakfast of fresh milk, porridge, mutton, toast, and tea, we motored off towards the northern hills, which overlook the irrigable area, and have, in some measure, been set apart as its "back country."

We traversed much good, deep, red soil en route, crossing the main canal again, and driving through wide tracts of wheat lands promising rich harvest for the coming season.

From the slope, looking back, we got a fine view of the Promised Land, soon to be occupied by an invading army of settlers in peaceful conquest.

Reminders of drought had met us in the native trees lopped to feed starving stock, as we came over from Yanco, but there was no trace of drought just then in all the wide, green plain that lay below.

Never again will its irrigable acres be held in the remorseless grasp of rainless summers; never again will it appear as a grey picture of desolation under the Australian sun.

While cloudless skies arch pitilessly over less-favored inland regions, its greenness will endure.

Constantly freshened and revived by the rains and

melted snow waters stored in far-away Burrenjuck, receiving, as occasion demands, all the moisture requisite for its needs, the land that smiled beneath us would preserve its beauty and its glory throughout the coming years.

It was glorious, magnificent, tremendous; an achievement for Australia to be proud of; a tribute to the genius of democratic government; a testimony to human wisdom; an everlasting monument to human skill.

One looked down in reverence upon that golden scene.

Dark and dignified stood its cypress pines. Solemnly grouped its clustered yarrans, crowned just now with gold.

The solitary myalls and boree drooped their graceful foliage. Green and yellow spread the level lands. The fertile wheatfields waved softly in the wind.

Through it all the great main canal, a red artery, followed its appointed lines and curves. Here and there stood the surveyors' white pegs, marking out the boundaries of roads and channels and homesteads that are to be.

If one might only come back in fifty years and look at it again!

. . . .

We passed down by a red road from those low hills, where the mallee grows thinly, recrossed the main canal, boiled a billy by one of the squatters' dams, and enjoyed our midday meal of beef and bread and tea under the yarran trees.

A regiment of fat "Shropshires"—their faces all turned the one way—watched us with that air of venerable stupidity which is characteristic of sheep.

Topknot pigeons whirred from belt to belt of timber, and flock plover ran through the long, green grass.

A Yanco Irrigation Channel.

There will be plenty of game, fish, fruit, vegetables, salads, fresh mutton, and good fat beef for the settlers on these fertile flats along the 'Bidgee.

The cost of living should be reduced to a minimum on the irrigable areas. Any family with saving instincts should arrive at independence in a few years.

Over many broad, wire-fenced tracks, that cross the vast sheep paddocks of the plains, we travelled south by west, at varying rates of speed, until we came to the foot of some low-lying hills, which are marked down on the map as the Macpherson Range.

A climb of about 300 feet brought us out on to a flat surface of conglomerate rocks, showing large water-worn pebbles embedded in the clays of past geological periods.

Primeval forces had baked, boiled, and pressed the whole mass into a curious natural concrete platform, on which we stood and looked back over the valley.

A wonderful panorama, indescribably still and green, rolled away to the horizon.

This wide expanse of irrigable land was crossed by distant lines of fences.

Far away one saw again the red artery from which it is to draw the waters of perennial spring.

The hills on the opposite shore, beyond this sea of green, presented that dark blue appearance typical of distant mallee everywhere. It was hard to realise that they were the same hills we had skirted and mounted only a few hours before.

Green squares of wheatfields—some of them hundreds of acres in area—were dotted here and there like little squares of silk on a patchwork quilt.

The country spread beneath us in beautiful design, a landscape garden, alternating between lightly-timbered groves and open plains.

Its dominant colors were scarlet, green, and gold.

Wherever the soil had been bared, by Nature or man, it displayed a pronounced redness, which pro-

claimed its richness and fertility. If under the light rainfall of spring it presented such a delightful picture, how will it gladden the eyes of future beholders, when these rich soils are constantly moistened and cultivated, when its orchards are all in bloom, its fields covered with tall lucerne, its vineyards glisten in the sunlight?

Then the smoke of its hamlets and villages will curl upward in blue spirals; the silken-coated kine and woolly sheep will graze over dewy pastures; the hedges will be fragrant with roses, and the water channels wind like silver ribbons sewn upon Nature's gown of velvet sheen.

Then, too, ploughshares will gleam along red furrows, the burr of separators will be heard in the dairies, the healthy laughter of children and the songs of women will answer from happy homesteads nestled among their bowers of foliage.

And, above all, the proud anthem of human industry, with its inspiring choruses of prosperity, will arise as a joyous echo to the clanging of the machines in that distant gorge where Burrenjuck and Black Andrew stand as silent sentinels either side of the massive gate that is closing in upon a treasure of precious waters, whose future value to the State of New South Wales can hardly be computed in mundane pounds, shillings, and pence.

As our little party lingered on that rocky platform, taking in all the beauty, all the glory, of the present scene, and realising something of its future, I think that the feeling within our hearts was akin to prayer. One could have stayed a full day on the summit, but we had only a short afternoon left to get back to Yanco for the night.

Across another stretch of fine irrigable country we ran down to Whitton railway station, where high stacks of late wheat and early wool awaited trucking.

These small townships within the irrigation dis-

Typical Country, to be irrigated under the Murrumbidgee Scheme.

trict seemed destined to a still greater prosperity than recent good seasons have enabled them to enjoy. The influx of population cannot fail to benefit their many interests.

At present, with teeming wheat harvests, good clips, and the local expenditure of much money on public works, they are visibly sleek and contented.

We put in another comfortable night at North Yanco, sitting after dinner before a huge log fire in the spacious dining-room of our quarters, and listening to yarns spun by the overseer and his staff about sheep and squatters and the characters and customs of our Australian back-blocks, which are rapidly falling further and further back towards the heart of the continent.

Next morning, on our road of travel, we saw the bridge builders at work, putting in one of the many solid structures that will be required to carry the settlement's roads across its canals.

Hard by a gang was busy erecting Government workshops. The area is going to find employment for many workers in wood and iron outside its agricultural population.

The spades of the diggers had sunken deep into a soil almost blood color, rich enough to grow in profusion all the fruits, cereals, and fodders of the temperate zone.

The uprights of the buildings were to be of cypress pine, hewn locally. This knotty, aromatic timber, of which many Western houses are built, is immune from white ants.

We left that scene of open-air activity, typically Australian in its environment of tents and camps, and went down a little further to North Yanco shearing shed, where 53,000 sheep were destined to leave their wool before the "cut out."

The shed covers an area of 10,000 square feet.

Between forty and fifty shearers and rouseabouts

were busily removing and handling fleeces of Australia's staple product.

A modern shearing shed, such as North Yanco, is unromantic enough.

Everywhere there is grease and the smell of greasy wool.

One sees a line of men standing two by two beside a wooden partition, whereon a long shaft revolves unceasingly. All the cutters are connected with this revolving steel rod.

Each stooped figure retains a silly-looking sheep between his knees. All along the line the fleece is falling away, as if it were being pushed off by the hands of the men who are stooping over the animals.

Boys with baskets rush the severed fleeces to the greasy tables. The wool classer toils busily. The men and boys at the press move to and fro at their work.

The shorn sheep, bare and humiliated, are hustled down the shoot, and the work of the woolshed goes on evenly until the whistle blows.

The whole atmosphere is tense with industry. This modern woolshed resembled somewhat a huge barber's shop where forty customers were rapidly and unceremoniously relieved of their wool all at the one time.

The whiskered shearer of tradition is passing away, but I noticed a fair percentage of bald heads along the board.

There is a railway siding alongside Yanco shed, and the bales are passed out directly into the trucks.

From the shearing shed we drove down to Yanco Experimental Farm.

Here the Government has set aside 320 acres, many of which are already planted with vines and fruit trees of most promising growth and appearance.

The varieties are far too numerous to list, but offi-

Irrigated Hay on the Yanco Estate.

cial reports go to show that a wide range of agricultural production lies before the district.

The farm is hedged by graceful eucalypts, planted for "breaks." Avenues of flourishing young palms, rows of almond trees in blossom, trellises of grape vines, orangeries, evenly-pruned orchards of plum, peach, and nectarine; gravel walks, bordered by silky oak and currajong trees; crowded vegetable plots, and comfortable residences for officials and students, made the farm a scene of pleasing promise.

In this College of the Open Air some fifteen or twenty students were at work.

The cook at the students' quarters avowed that the twenty individuals for whom he catered ate as much as thirty shearers, a testimony to the general healthiness of climate and occupation.

The people who take up land on the Northern Murrumbidgee irrigation area are apparently not going to need much medical attention.

As I had now circled and crossed a good ninety miles of the area, viewed it from all points of the compass, and accumulated a volume of notes and impressions far beyond the requirements of a short descriptive article, the car was headed for Narandera, to enable the three Sydney visitors to catch the afternoon train.

A crowd of happy-looking people boarded the cars at Coolamon. They had been down there for the Show, and were returning home.

We dropped the most of them at different stations along the road to Junee. The red-brick buildings of that important junction came into view at sundown, and the Southern mail delivered the writer safely on a Redfern platform before breakfast the following morning.

But that journey to Burrenjuck and the settlement has left impressions on his mind that the years will not efface.

When I look back on those wonderful weeks spent along that great river, which, hundreds of miles from their sources, receives the Murrumbidgee and the Darling; when I think of those vast fertile plains of Riverina, arid, but capable, under scientific treatment, of producing in utmost profusion a wealth beyond human dreams, I am convinced that the Government, which is investing a million and a half of money in this vast storage and irrigation scheme, has shown a wisdom and foresight which will justify its policy throughout the future.

I have contended elsewhere that there is room in Riverina for millions of white people. The whole problem of the closer settlement of these lands lies in water conservation and irrigation.

Its solution is now a mere matter of engineering. plus scientific treatment and wise administration.

Before the Northern Murrumbidgee irrigation scheme is an entire success there will be difficulties to overcome, mayhap minor failures to record, but that its ultimate success will be written in golden letters on the brightest pages of Australian history there is, in my mind, not the slightest doubt or smallest fear.

The rains and snows, which the Murray would otherwise receive from the Murrumbidgee, and carry wasted to the sea, stored at Burrenjuck, and delivered on those irrigable areas lying between Narandera and Gunbar, are destined to turn that 130 miles' length of arid country into a land of beauty and prosperity as fair as any land in the world.

The men and women who take up that country can rest assured that, under the auspices of a most paternal Government, they have every chance of success.

A POSTSCRIPT

ON

NARROW GAUGE RAILWAYS

The success of the narrow gauge railway, which has made the construction of Burrenjuck Reservoir possible, should be accepted as an object lesson by every Australian Government that wants to push its State ahead, and by the Federal Government, which is supposed to stand for the good of all Australia. This country, with the problem of effective occupation before its immediate consideration, may find in the narrow gauge system a solution of many perplexities. Into country where engineering difficulties make it impossible to put broad gauge railroads, the 2-foot gauge can be cheaply and safely carried.

As feeders for main trunk lines, and on proposed irrigation areas and elsewhere, the narrow gauge line possesses all the advantages of cheapness and efficiency. It will make lands capable of occupation which otherwise offer no inducement for settlement. It will throw already-occupied areas into closer settlement, and make poor lands richer, by bringing them within reach of markets. It will also help to make non-paying trunk lines profitable.

The average cost of construction for the 2-foot gauge, with "Krauss" locos, trucks, passenger cars, and complete rolling-stock, in ordinary country, is as low as £1000 a mile!

It must be remembered that not only is this figure infinitely below the cost of the ordinary gauge, but the upkeep of such lines is infinitely less.

The trucks are capable of carrying 10 and 15 tons; sharp curves, up to 11½ chains radius, can be safely negotiated, and the lines can be laid on a gradient as steep as one in thirty.

The little "Krauss" locos on the Burrenjuck railway possess a greater tractive force than the ordinary broad gauge engines; that is to say, that more power can be got out of the "Krauss" engine, for its size, than the big hauling locos. of the South-Western Line develop in proportion to their bulk and weight.

There are already 80 of these locos doing good work in Australia—at Mount Lyell for example, and there should be work for many more.

On the West Coast of Africa they have laid a 2-foot railway 250 miles long, and France and Germany now have a thousand miles of 2-foot feeders.

Australia, the country of "vast distances," could link up and develop large areas of territory by narrow gauge railways. The Burrenjuck line has shown Australian engineers the way.

Districts which will probably have to wait another 20 years for their railways could be quickly served by these lines at a minimum cost to the Treasury.

If the inherent official objection to everything effective and modern could only be overcome, this country might be sent half a century ahead within 10 years by the construction of feeding and developing lines like the 25 miles of narrow gauge road which has played an indispensible part in the building of the second greatest storage reservoir in the world.

"Krauss" Locomotive and Carriages.—2 ft. Gauge.

THE WOOD PIPE.

A MODERN APPLICATION OF AN OLD IDEA.

At Mildura, where Australian enterprise has converted arid lands into smiling gardens by the application of water, the writer was introduced to an innovation which is going to effect a wonderful saving on irrigable areas and elsewhere.

This is the system of wood water pipe, comparatively new in Australia, but perhaps as old as the earliest irrigation works in the world.

There is a section of an old wooden main in the Technical Museum in Sydney, that was taken up in Oxford Street, London, a few years ago. After being in use for 150 years, it was dug up, and found to be, and still is, quite sound.

The water mains at New Orleans, installed by the French, were wooden logs, 18ft. long, with 5in. bore. They served the city for over 100 years, and when replaced recently were found to be quite sound.

To cite an instance of the durability of old bored wood pipe in Australia, a considerable quantity of this class of pipe was recently dug up from Sydney streets, and on examination was found to be excellently preserved, after being underground for 70 years.

These facts proved the durability of wood pipe. It only remained for modern industry to discover a new method of applying old ideas, and the revival of wood pipe was certain.

Laying 18 inch "Pioneer" Wood Pipe
Mildura Irrigation Trust.

Three lines of 54 inch pipe, showing Compound Curves.

This class of conduit is much cheaper than cast-iron or any other metal. It is lighter to handle, saves labour and freight, and can be readily and easily laid down. Added to this, if kept constantly wet, wood will last longer in the ground than iron or steel.

The carrying capacity of wood pipe is 20 per cent. greater than metal pipe, and delivers the water as clean as from the source of supply. It is not affected by acids and salts in the water or soil, and no tuberculations form on the inside of the pipe.

Under these circumstances, it is not surprising to find that, for water supply for towns, for mines, for irrigation areas, and for all the various functions of pipe, it is coming into general use in Australia, as it has done for many years in Canada and America.

Among others, the Public Works Dept., N.S.W.; the Metropolitan Board of Water Supply and Sewerage, Sydney; Melbourne and Metropolitan Board of Works; South Australian Government; Goldfields' Water Supply, Perth; State Rivers and Water Supply Commission, Melbourne; N.S.W. Government Railways; and Victorian Railways have effected installations of "Pioneer" Wood Pipe.

In the domain of irrigation, particularly, there is a big field for the use of this cheap, effective, and satisfactory water conduit.

People who are going to take up irrigable areas, and people who are already living by them, will appreciate this modern application of an old idea.

Before this book went to press the Author visited the works of the Australian Wood Pipe Co. Ltd., at Balmain, and saw the process of manufacture.

Briefly, the pipes are made of selected and carefully-seasoned pine. The long staves are dressed, tongued, and grooved, and bound round with heavy-gauge galvanised wire by special machines. Then the pipe is immersed, and completely covered on the exterior surface with a heavy coating of bituminous

Section of 1½ miles of 18 inch "Pioneer" Wood Pipe, installed for Mildura Irrigation Trust.

Continuous Stave Pipe running through a Gorge.

composition. It is finally wrapped round with hessian cloth, receives another coating of the composition, and is rolled in sawdust to facilitate handling.

A wood sleeve or collar is used on each length of pipe to connect the pipes together when laying.

These pipes can be manufactured to safely withstand pressures up to 500ft. head, and experiments have shown that wooden pipe is absolutely watertight under pressure.

In America and Canada there are many thousands of miles of wood pipe used by various cities, towns, and irrigation trusts, and some of these lines have been down for nearly 40 years, and are still in an excellent state of preservation.

The demand for wood pipe has been so great in Australia that The Australian Wood Pipe Co., Ltd., the pioneers of this industry, have been compelled to enlarge their plant at Sydney to double its capacity, and, besides, are now erecting new branch works at Footscray, Victoria.

I predict an enormous demand for this useful article of manufacture.

COMMERCIAL ENTERPRISE ON THE MURRAY RIVER.

WHAT SHEARER BROTHERS HAVE DONE IN SOUTH AUSTRALIA.

When the Author of "River Rovers" arrived at Mannum in 1908, the river bank down by the foundry yards was crowded with Shearer's strippers, waiting shipment.

The shop could hardly keep pace with its orders.

When I went back to Mannum, via the Murray, with a South Australian Parliamentary party, in the latter part of the year 1910, I found that the Shearers had just gone into new premises. On the slope of the hill above the river stood an immense building, covering I know not how many square feet of the Australian Continent, fitted with still more up-to date plant, with long lines of steel shafting, pulleys, belts, furnaces, and all the latest appliances for melting, hammering, moulding, beating, tempering, drilling, rivetting and generally treating iron and steel.

The name and fame of "Shearer's, of Mannum," had so gone abroad throughout the land that this new factory became not only possible, but necessary. All of which, to me, as an Australian, was very satisfactory indeed.

But what pleased me as much was to hear that, in the fitting up of their new village of industry on the Lower Murray, the proprietary had taken into consideration the fact that this country desires sanitary working conditions as well as fair rewards for the

wealth-producers of the Continent. D. Shearer, under whose supervision the new works have been erected, is one of those somewhat rare individuals—a modern manufacturer who strives for proficiency as much as profit; who never forgets that without Labor the efforts of Capital would be fruitless.

He is proud of the fact that the best of his workers are Australians, and endeavors to treat them as Australian workers should be treated, more like partners in a joint enterprise than as mere automatic wage-earners.

Shearer's establishment is an example of a strenuous fight put up by plucky commercial people against the dragon of centralization which has become, in a great measure, Australia's greatest curse.

Shearer's has been like a "red rag to a bull" to those people who think that all the manufacturing should be done in Melbourne. Up to 1905, river wharves were free to all rail-borne goods, but by an agreement made between the Commissioners of South Australia and Victoria, heavy wharfage tolls were clapped on the river traffic. It is remarkable that ploughshares coming from the Mannum factory have to pay about three times as much wharfage rates at Murray Bridge as are levied on the private wharves at Port Adelaide.

Implements are carried from the manufacturing centres in Victoria (such as Melbourne, Sunshine, and Ballarat), from Serviceton, by the South Australian Railways, for less than half the rates charged on the same class of goods when carried from Murray Bridge to Serviceton.

No wharfage charges are made in Victoria on its own products.

It is interesting to see wheat carted by road from places near the river to Port Adelaide, having immense hills to traverse, in order to save the high wharfage rates at Murray Bridge. These are only a few instances to show the vigorous growth of centralization, and it is still going strong. All political parties

are to blame for this clogging of the internal trade of the Commonwealth.

This firm has striven hard to get the South Australian Railways to carry goods on payable mileage rates throughout, but, instead, "special rates" have increased to such an extent that they would put an American Trust to blush.

This centralization policy of the South Australian Railways has forced the Shearer Bros. to start a branch factory at Kilkenny for the manufacture of ploughs. Then, with both places growing, and to save running them as a capitalistic concern, Mr. John Shearer, with his sons, took over the Kilkenny works, under the style of "John Shearer and Sons," and Mr. David Shearer, with his sons, took over the Mannum factory, as "David Shearer and Co.," each place retaining its respective specialities. In the former place ploughs and cultivators of all varieties are manufactured to meet Australia's needs, whilst at the latter are made strippers, harvesters, ploughshares, harrows, scrub rollers, scrub rakes, etc.

Neither of the firms has, so far, had labor troubles, and both are strongly in favor of decentralization for the country's good.

I had an opportunity, on my last visit to South Australia, of seeing some examples of the ploughs turned out at Kilkenny by that branch.

Away back in my salad years I did a little experimental farming on a ten-acre orchard block in Central Cumberland. The sight of those brand-new Shearer ploughs, fresh from the factory at Kilkenny, brought home to me the memory of a wooden-beam, American implement which I, a callow agriculturist, had trustfully bought from a city agent just after the purchase of my ten-acre block. A young plough horse got away with it at his heels into the uncleared section, and converted it in ten minutes into the most complete wreck on record. But those Shearer ploughs presented a different proposition to my somewhat critical eye.

They were fitted with what in the parlance of ploughs is described as "a patent lifting device, and a new patent foot and share and concave mouldboards." They were "stump-jumpers." Anyone who has trodden a fresh furrow on new or old ground knows the advantage of the stump-jumper.

I felt my jaw reflectively as I surveyed Shearer's "stump-jumpers," resplendent in new paint and good workmanship. I remembered my old wooden beam, and the days of my amateur farming—it was more a jaw-breaker than a stump-jumper, and about as well fitted for pulverising and ploughing the hard soils that these implements would readily overcome, on a light draught, as a child's toy spade is fitted for excavating a railway cutting.

I came away from D. Shearer's factory and the observatory at Mannum regretting that I had got my farming experience so young. If I had made a fair start with one of those stump-jump ploughs, and worked up to the stripper stage, I might not have grown discouraged, and given over agriculture for the less profitable and less certain business of writing books.

Strippers waiting Shipment at Shearer's Mammoth

IRRIGATION AND CHEAP MECHANICAL POWER.

SCHULTZ SUCTION GAS PLANTS.

Cheap power is one of the most potent factors in the development of Australia. In a country where the standard of wages is unusually high, it is essential that the mechanical agencies of production should be made as economical as possible.

The generation of force by more simple and less expensive methods has been the chiefest study of modern inventors and engineers.

During the last decade, inventors the wide world over have set themselves to find new methods of generating and applying power. The conquest of Mind over Matter has gone steadily on.

New laws have been discovered, new principles applied, new machines invented. Every year some advance has been made, some cheaper, handier application of mechanical energy worked out from theory to practice. As a result, we have machines to-day generating force at a tenth of the cost which machines of a quarter of a century ago involved. The mechanical genius of the twentieth century strives not only to save the cost of labor, but endeavors to reduce the cost of power as well.

The invention of the Suction Gas Plant has, in a great measure, revolutionised modern mechanism.

So far, Suction Gas has proved itself the *cheapest power obtainable* in the whole range of applied engineering.

The particular attention of people who are interested in irrigation and pumping plant is directed to this fact.

In the preceding pages of this book the Author has endeavored to impress upon Australians the important part that irrigation is destined to play in the occupation and development of this continent.

Any contrivance or invention, having a bearing on irrigation, or public or private water supply, is worthy of mention in these pages.

The writer recently had an opportunity of inspecting a plant in the making.

This is a Schultz Suction Gas Plant—manufactured by E. Schultz, of West Melbourne—of which several installations have already been effected by the manufacturer for the Victorian Government.

At the instance of the Rivers and Waters Department, a 20 h.p. Schultz plant, for pumping purposes, was some time ago erected at Birchip, with gratifying results.

At Dimboola another Schultz plant, of 55 h.p., is giving absolute satisfaction.

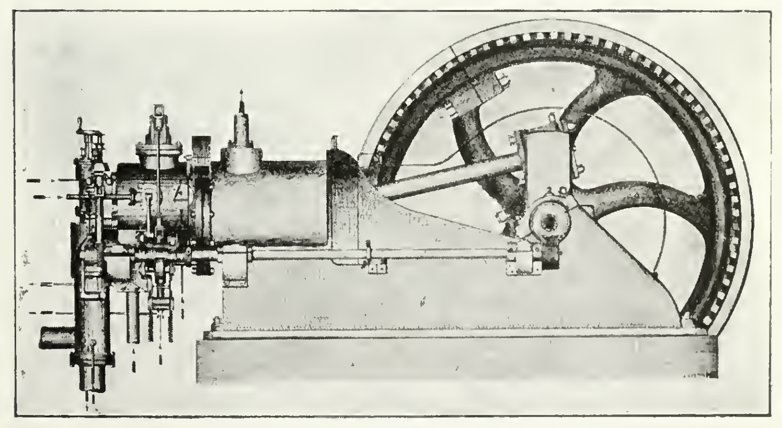
The 21 h.p. plant under construction at present is intended for Beulah, Vic.

Now that the efficacy and cheapness of Suction Gas have been definitely proved, there is no doubt that the immediate future will see an almost universal application of the principle.

The advantage of Suction Gas, as compared with other power, is, first of all, simplicity and easy handling.

No certificated engineer is required to run a Schultz Suction Gas Plant.

Any operative or youth with ordinary intelligence is quite capable of controlling a highly powerful plant. *The element of "skilled" labor can be dispensed with*, and there is no risk.



55 H.P. Suction Gas Engine and Producer Plant, installed at Dimboola.

The second qualification which puts a Schultz Plant easily first in mechanical competition is *Economy*:

Suction Gas is 375 per cent. cheaper than Electricity.

Suction Gas is 275 per cent. cheaper than Town Gas.

Suction Gas is 225 per cent. cheaper than Steam.

Now, the saving of money in the expenditure of power is one of those problems which every producer, every manufacturer, everyone who uses machinery at all, must consider.

In this age of competition, no firm, nor individual, nor public body can afford to overlook that fact.

This is why the Suction Gas system is leaping ahead. It eliminates waste, and gets through the work cheaply, safely, and effectively.

Another recommendation is that, with Suction Gas, there is *no danger of explosion.*

For the installation of Suction Gas, very little floor space is required; a powerful plant can be set up in a comparatively small space, and there are no expensive chimneys or smoke-stacks.

The principle of the Suction Gas is interesting enough for a short, non-technical explanation.

Briefly, coke or charcoal is burnt in an enclosed chamber, through which a mixture of air and steam is drawn.

The gases produced by this combination are then purified, and (mixed again with air) introduced into the cylinder of a gas engine, and ignited, under compression, by an electric spark.

The resulting pressure is transmitted to the crank. The burnt mixture escapes into the open air, and the engine automatically sucks up a fresh mixture.

To anyone with the slightest knowledge of applied mechanics, the whole principle is simplicity itself.

The generation of force by explosion is, of course, similar to the familiar method of the modern motor or oil engine now in such general use.

Australian Suction Gas plants, such as those manufactured by E. Schultz, can be used for all purposes.

As a valuable adjunct to a modern farm, nothing could be better, simpler, or more profitable; the power generated by Suction Gas can be applied in a multitude of ways.

For driving pumps for irrigation purposes, for the supply of electric light, for sawmills, refrigerators, machine shops, all the operations of industry, the Suction Gas system can be applied with the best results.

Messrs. E. Schultz and Co. have gained a reputation for manufacturing Gas Engines which can favorably compare with any of imported make. One of the main features of the Schultz Suction Gas Plant is its simplicity and strength. Perhaps the best proof of its reliability and efficiency lies in the fact that the Victorian Government recently placed a third repeat order with this firm.

It must be expressly mentioned that the Schultz Suction Gas Plant is, in all its details, designed and built by Australian workmen, at the firm's works, 33 Stanley-street, West Melbourne.

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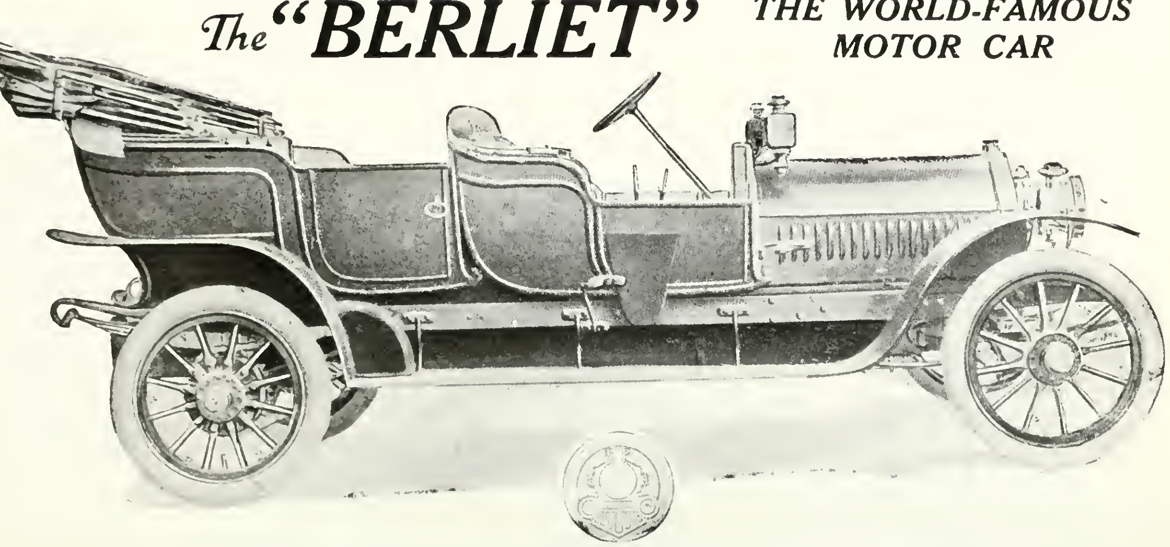

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New South Wales presents an unrivalled field for the tourist, holiday-maker, and health-seeker. The climate is, upon the whole, one of the mildest and most equable in the world. It ranges from the Arctic snows of Kosciusko, through the mildness of the tablelands

The Hotel Kosciusko, N.S.W. (6000ft.)

and mountains, to the sub-tropical glow of the Northern coast. At Sydney, the capital, 17 degrees Fahrenheit measure the difference between the midsummer and midwinter readings. The scenic beauties of New South Wales are diverse in character, and cover an extensive field.

Within half an hour's journey from Sydney, the tourist reaches the gay Pacific beaches, alive with surf-bathers, and the numberless picnic grounds at the bays and inlets of the peerless harbour of Port Jackson. Within forty miles are the Blue Mountains, where he imbibes the health-giving air, and is moved by the grandeur of the solitudes and the enchanting beauty of the sweeping valleys, tinkling cascades, and fern-fringed ravines.

The marvellous underground caverns at Jenolan, Yarrangobilly, and Wombeyan blend the beautiful with the mysterious. In these subterranean vaults and corridors of living rock are scenes of transcendent beauty, which the experience of the dweller in the older world can offer nothing to parallel.

The South Coast district—Nature's own picture gallery—the tourist has marked as his own. Here there is a magnificent succession of sweeping panoramas of seascape and landscape, where there meet mountain, forest, valley, meadow, stream, and sea, under cloudless summer skies.

The Kosciusko Range is unique. Mount Kosciusko, Australia's highest point, lies sixteen hours from Sydney by rail and motor. In summer its bracing atmospheres are a tonic to the system, its glorious views delight the mountaineer, and its trout streams are unexcelled. In winter, around the palatial Hotel Kosciusko, in the heart of the snows, the famous winter pastimes of Norway and Switzerland are indulged in. Ski-running, tobogganing, and ice-skating courses lie close to the Hotel, which offers every comfort, and is artificially heated throughout.

The New South Wales Government Tourist Bureau, Challis House, Sydney, will gladly supply the fullest information, pamphlets, folders, maps, booklets, and itineraries dealing with the State's scenic resorts.

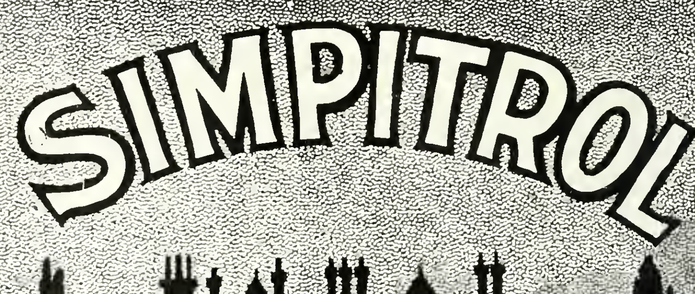
A Tree-Dweller at Yarrawonga.

Straightening "The Lone Hand's" Propeller Shaft.

Hauling a Bogged Beast Out of the River.

A Native Camp.

A River Steamer with Wool Barge from the Darling.



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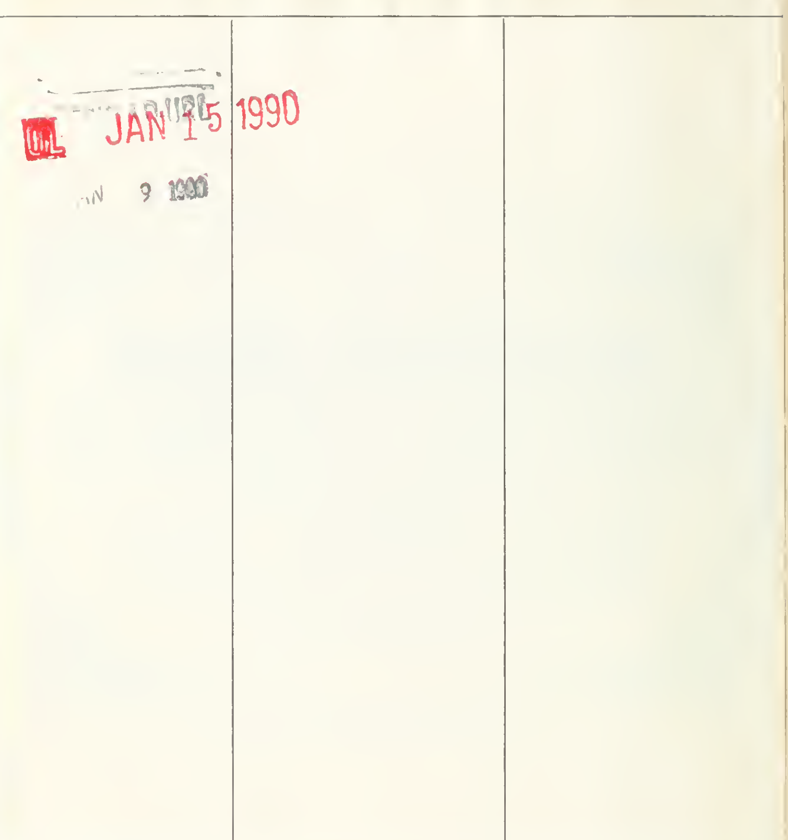

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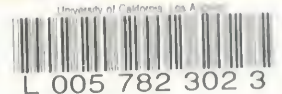

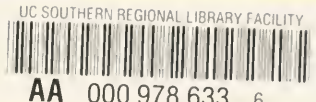

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