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LOG OF THE SCHOONER
"ACADEMY"

On a Voyage of Scientific Research
to the Galapagos Islands
1905-1906

BY

JOSEPH R. SLEVIN

Curator, Department of Herpetology

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INTRODUCTION

For some time previous to the year 1905 the late Mr. Leverett Mills Loomis, then Director of the Museum of the California Academy of Sciences, had in mind the sending of an expedition to the Galapagos Islands, an archipelago situated on the equator 650 miles off the coast of Ecuador, and made famous to every naturalist by Charles Darwin, whose account of the voyage of H. M. S. *Beagle* has become a classic amongst students of nature.

The Galapagos have been visited several times since by naturalists but their stops were all too short and the means at their disposal for carrying on their investigations very limited. It was the idea of Mr. Loomis to send out an expedition that would have ample time to make an exhaustive survey, most extensive collections, and, most of all, to make a thorough study of the status of the gigantic land tortoises and secure specimens of the various species before it proved too late. The result was that an expedition was organized and sent out, remaining in the field for 17 months and one day, and bringing back the largest and finest collections ever made on the islands. The study of the land tortoises, of which 266 specimens were collected, resulted in straightening out many difficult problems, and, with the exception of Charles Island, showed them to be still living on all of the islands in the archipelago from which they were formally known and that they even existed on islands they were never before known to be on.



ORGANIZATION

To overcome one of the great handicaps of some of the others who had visited the islands, a vessel was purchased for making the voyage, thus avoiding the various difficulties encountered by others when depending on commercial vessels or vessels of war, and enabling the Party to proceed when and where it chose.

Of the available vessels about San Francisco at the time, the U. S. S. *Earnest*, then being offered for sale by the Government, seemed to be the most suitable, and it was accordingly secured by the Academy. The *Earnest* was built at Baltimore, Maryland, in 1875, and was a two-masted composite schooner of 80 tons displacement, 89 feet in length over all, 23 feet beam, had a draft of 7 feet 3 inches, carried two topmasts and, up to the time she was stricken from the register, was employed by the United States Coast and Geodetic Survey. The schooner was brought from the Mare Island Navy Yard to a local shipyard, where she was overhauled and had extra tanks put in so as to ensure an ample water supply. She was re-christened *Academy*, and June 25, 1905, saw her alongside the Mission Street bulkhead, San Francisco, ready to load supplies and equipment. She was loaded with sufficient food for about 20 months and carried a six months' supply of water.

The personnel of the party consisted of 11 members, as follows:

R. H. Beck.....	Chief of Party and Master of the vessel
W. H. Ochsner.....	Geologist
F. X. Williams.....	Entomologist
E. W. Gifford.....	Ornithologist
J. S. Hunter.....	Ornithologist and Mammalogist
A. Stewart.....	Botanist
J. R. Slevin.....	Herpetologist
E. S. King.....	Assistant Herpetologist
F. T. Nelson.....	Mate
J. J. Parker.....	Navigator
J. W. White.....	Cook

The expedition left San Francisco on June 28, 1905, and did not return until the night of November 29, 1906. Five

months were consumed in making the journey to and from the Galapagos and a year was spent in the archipelago itself.

The following account of the cruise of the *Academy* is taken from the official log-book of the vessel and from the diaries of the author and of Mr. F. X. Williams, who very kindly permitted his to be used.

With the exception of the two pictures of the schooner, loaned by Mr. Williams, the plates are from original photographs by Mr. R. H. Beck, who very kindly loaned them to the author, and it is with his permission that they are published.

For the convenience of those making use of the publications dealing with the results of the expedition, the following lists are given to show the dates the various islands were visited, either from the schooner or on side trips made in the small boats.

LOCALITIES VISITED EN ROUTE TO THE GALAPAGOS

1905

JULY	3-5	.....	Ensenada, Lower California, Mexico
	11	.....	San Martin Island
	13	.....	San Geronimo Island
	14-17	.....	San Benito Island (west)
	15	.....	" " " (east)
	15	.....	" " " (middle)
	18	.....	Cerros Island
	19	.....	Natividad Island
	26	.....	San Benedicto Island
	27-28	.....	Socorro Island
	27	.....	" " (Oneal Rock)
AUG.	10	.....	Clipperton Island
SEPT.	3-13	.....	Cocos Island

LOCALITIES VISITED IN THE GALAPAGOS

1905		1906		
SEPT.	24-30	JAN.	31	Hood Island
OCT.	1-2	FEB.	1-14	" "
		JUNE	23-30	" "
		JULY	1-2	" "
SEPT.	27	FEB.	3	Gardner Island (near Hood)
	30	JUNE	27	" " " "

	1905	1906	
OCT.	3		Gardner Island (near Charles)
OCT.	3	FEB. 26	Champion Island
OCT.	3-13	FEB. 25-28	Charles Island
		MARCH 1-2	" "
		MAY 14-17	" "
		MAY 23-31	" "
		JUNE 1-4	" "
OCT.	14-18	JAN. 24-30	Chatham Island
		FEB. 8	" "
		FEB. 21-24	" "
		JULY 3-8	" "
		SEPT. 7-10	" "
OCT.	20-24	JULY 9-10	Barrington Island
OCT.	24-28	JAN. 11-22	Indefatigable Island
NOV.	5-30	JULY 11-25	" "
OCT.	30		Brattle Island
OCT.	31	MARCH 4-10	Albemarle Island (Vilamil)
NOV.	1-3	APRIL 30	" "
		MAY 1-3	" "
		AUG. 20-31	" "
		SEPT. 1-5	" "
		MARCH 11-15	" " (south coast)
		APRIL 24-26	" "
		MARCH 17-21	" " (Iguana Cove)
		MARCH 22-31	" " (Tagus Cove)
		APRIL 1-8	" "
		APRIL 17-20	" "
		APRIL 10-16	" " (Banks Bay)
		AUG. 9-12	" " (Cowley Mountain)
NOV.	20-22	JULY 25-26	South Seymour Island
NOV.	29		" " "
NOV.	23	JULY 25	Daphne Island
DEC.	1-17	AUG. 14-15	Duncan Island
DEC.	18-20		Jervis Island

1905	1906	
DEC. 19-31	JAN. 1-4	James Island
	JULY 28-31	" "
	AUG. 1-9	" "
	FEB. 25	Onslow Island
	MARCH 22	Narborough Island
	APRIL 2-5	" "
	APRIL 18-19	" "
	MAY 14	Enderby Island
	JULY 24	Eden Island
	JULY 27	Bartholomew Island
	JULY 30	" "
	AUG. 13	Cowley Island
	SEPT. 14-15	Tower Island
	SEPT. 17-18	Bindloe Island
	SEPT. 18-23	Abingdon Island
	SEPT. 24	Wenman Island
	SEPT. 25	Culpepper Island

LOG OF THE SCHOONER "ACADEMY"

1905

June 28: 10:00 A. M. tug *Relief* made fast alongside and at 10:30 hauled out from Mission Street bulkhead, heading for the Golden Gate. Set all lower sails after crossing the bar and at 12:45 P. M. let go the tug. Took departure from the San Francisco lightship, bearing NW. by compass, distant two miles. Weather slightly hazy with moderate westerly breeze. Set course for Ensenada, Mexico. Most of the party never having been to sea before succumbed rather early. Gifford and myself standing watch and watch at the wheel, the mate and navigator taking the deck. At sundown a four-masted bark under all plain sail passed to windward of us.

June 29: Moderate westerly breeze. Most of the party still seasick. Vessel making about five knots. During the



1905

second dog watch the main peak-halyard block unshipped, so the mainsail was lowered and made fast for the night. Lat. $34^{\circ} 56' N.$, Long. $122^{\circ} 42' W.$ at meridian.

June 30: Opened with strong westerly winds and overcast sky. At 1:00 P. M. set the mainsail, the seasick members turning out to lend a hand at the halyards. 4:00 P. M. winged out the foresail to starboard and ran the schooner wing and wing. Wind increasing towards evening, we lowered the mainsail and made it fast for the night. The main deck leaks considerably, making it rather uncomfortable below. Nelson and myself spending our watch below overhauling stores to prevent damage by water and plugging up leaks with empty sacks. Lat. $32^{\circ} 39' N.$, Long. $120^{\circ} 26' W.$ at meridian.

July 1: Opened with fresh westerly wind, the wind falling light at 10:00 P. M. and hauling to the northward. Members of the party feeling better today and Williams appeared at the table. In the afternoon the vessel was almost becalmed and I went out in the skiff with Beck shooting petrels. We baited them with refuse from the galley and Beck shot about eleven. Saw numbers of shearwaters and Black-footed Albatrosses. Lat. $32^{\circ} 05' N.$, Long. $117^{\circ} 41' W.$ at meridian.

July 2: At 2:00 A. M. made the land to the northward of Todos Santos Bay and stood off shore till daybreak, when we shaped course for Ensenada. At 6:00 A. M. the vessel was almost becalmed. Saw several schools of bonitas and passed by large patches of kelp. Several whales about the vessel, one passing within a hundred feet or so of us. Later in the morning the breeze freshened and at 1:15 we made the Port of Ensenada, letting go anchor off the wharf in four fathoms. Made fast sails and cleared up decks. Four days and three hours from San Francisco. Received the Captain of the Port on board and were given pratique. The seasick party feeling much better now and all of us are enjoying the warm weather.

July 3: All hands ashore collecting. The Commandante permitted us to take firearms ashore so I visited the valley back of Ensenada, bringing back 30 lizards, 12 toads and a snake, the first specimens of some thousands taken on the expedition. In the evening all hands were busy on board

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taking care of their specimens. Nelson busy overhauling running rigging.

July 4: Dressed ship in honor of Independence Day. All hands ashore collecting, and enjoying the warm weather after the trip down.

July 5: Captain of the Port notified us this morning that the ship's papers had been altered and that we could clear the vessel and stop at some of the islands off the coast of Lower California. E. W. Nelson, of the U. S. Biological Survey, who is just finishing up an account of the bird fauna of Mexico, on which he has been working for the past 14 years, was a visitor on board and had supper with us. A young couple from San Diego came on board this afternoon and wanted Beck to go outside the three-mile limit and marry them. Beck was willing, but the uncertainty of the wind forbade this and we had to let them wait in Ensenada two weeks so that they could claim residence and be married ashore.

July 6: 4:00 A. M. weighed anchor and stood out of Todos Santos Bay. Wind very light and some fog. Wind died down later in the morning and we drifted back towards the anchorage. Vessel becalmed and making no headway by noon.

July 7: Opened with very light winds. Made short tacks back and forth across the bay. Sighted a whale, two Black-footed Albatrosses and some shearwaters. This morning went out in the skiff with Beck shooting birds. About 10:00 A. M., a light breeze coming up, the schooner was put on the port tack and we stood out of Todos Santos Bay, heading for the channel between Punta Banda and Todos Santos Island. Had Todos Santos Island abeam at noon. Sighted our first turtle this morning.

July 8: Becalmed. 1:00 P. M. we were three miles SW. of Punta Banda, which we passed yesterday at noon. Williams caught a sphinx moth sunning itself on the main boom. Went out in the skiff with Beck shooting birds. Lat. $31^{\circ} 21' 30''$ N., Long. $116^{\circ} 48'$ W. at meridian.

July 9: Opened with fair breeze. Weather hazy with smooth sea. Calmed down in the afternoon, vessel making about five knots. Two doves lit on board, ate some bread

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crumbs we offered them, and then flew off. Sighted two sharks, several Black-footed Albatrosses and many shearwaters in the wake of the schooner. Four jaegers and a tropic-bird seen. All hands keeping the Sabbath. Lat. $31^{\circ} 00' N.$, Long. $117^{\circ} 14' W.$ at meridian.

July 10: Becalmed. While Williams was on watch at six o'clock this morning, a large moth (*Erebus odora*) flew on board and was caught. Vessel about 30 miles off shore. Went out with Beck shooting birds. Got nine Black-footed Albatrosses, some shearwaters and petrels. Several sharks about the schooner as she lay becalmed. Lat. $30^{\circ} 42' N.$, Long. $117^{\circ} 03' W.$ at meridian.

July 11: Opened with light winds and weather slightly foggy. At 5:30 A. M. we sighted the mainland, and at 6:00 A. M. San Martin Island. The schooner was headed down the channel and had the island abeam at noon, when we tacked ship and stood in. On approaching the island, a small sailing vessel, probably some poacher, hastily hoisted anchor and headed southward. While making up to the island, sighted a steamer bound north. At 2:30 P. M. hove the schooner to and landed a shore party. We found the island to be quite barren and rough, with only scattered patches of brush and a considerable growth of low-growing cactus, the spines of which were so tough and sharp that they went through the sides of our shoes. Towards the south end of the island we saw a large colony of cormorants and a considerable number of sea lions. The ornithologists collected some wrens, ospreys, cormorants and a blue heron. I found a gopher snake and two species of lizards. The landing party was called off at 5:30 P. M. and we headed southward under a fair breeze, the vessel making about eight knots.

July 12: Opened with light winds and warm weather. Vessel making from one to three knots on course to San Benito Islands. Sighted some whales, several sharks and a dolphin. Lat. $30^{\circ} 24' N.$, Long. $116^{\circ} 03' W.$ at meridian.

July 13: Opened with light winds, increasing towards noon, when the vessel logged seven knots. Early this morning we passed through a fair sized school of whales. At 3:00 A. M. passed a steamer bound south. 4:30 A. M. sighted

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San Geronimo Island, and Beck, having decided to try to land, we shaped a course for the north end, arriving there at 7:30 A. M. Hove the vessel to and landed a shore party. Much kelp about the island, making it very difficult to get the skiff through to the landing place. Ornithologists collected some auklets, oyster-catchers, etc., while I secured two species of lizards. The shore party was called off at 11:30 and course again set for the San Benito Islands. Wind NW. and the vessel making about six knots. Lat. 29° 46' N., Long. 115° 48' W. at meridian.

July 14: Opened with fresh breeze and fine weather. Had the west San Benito abeam at midnight and hove the vessel to. At 4:30 A. M. set course for anchorage. Wind light during the morning. At 12:30 P. M. made up to the anchorage and dropped anchor in 14 fathoms. After lunch put all boats out and went ashore collecting. Landing party found the island very barren as regards vegetation. Abalones, land shells and lizards (*Uta stellata*) very abundant. Ravens and several species of small land birds fairly abundant.¹ All hands returned to the vessel for supper. Ornithologists busy skinning birds late into the evening.

July 15: All hands ashore collecting. Party pulled over to the Middle San Benito, a low, rocky, barren island, about three-fourths of a mile in length. Found a few insects and lizards. Island almost destitute of vegetation. Spent about an hour on the island and then pulled over to the East San Benito, about two miles from the schooner. Found a large sea lion rookery and caught two pups and skinned them. All hands went in swimming and found the water very cold. Left shore at 6:00 P. M. and pulled back to schooner.

July 16: All hands keeping Sabbath. Williams, King and Nelson tried their luck at fishing over the side and caught several fine fish. Had lunch at 3:00 P. M. and found the fresh fish a most welcome addition to our bill of fare.

July 17: Turned out early and, with Beck, Gifford, Williams and King, landed on West San Benito Island to dig for

¹ On a visit made by the writer on board the Mexican Patrol Boat *Tecate* in 1922, land birds had become very scarce, no doubt due to the introduction of house cats by various fish camps.



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petrels. Got ten petrels and two eggs. Beck shot a raven and several other birds. Hunter, Ochsner and Nelson went hunting sea lions on East San Benito Island. They killed and skinned out a large bull, bringing the hide back to the vessel. Spent some hours helping to scrape fat off of it. The skin measured about nine feet in length. At 12:30 weighed anchor and got under way for Cerros Island. Fresh NW. wind and sky overcast. At 5:15 P. M. beat up to the anchorage in South Bay, letting go anchor in $9\frac{1}{2}$ fathoms of water. Made fast sails and cleared up decks. During the night the wind increased, blowing off the land with great force. At 9:00 P. M. veered chain to 40 fathoms.

July 18: Landed on a rocky beach at South Bay, finding a cross erected on a high point at the west end of it. The country about South Bay is cut up into deep gullies and traveling is somewhat of a problem. A heavy wind was blowing at the time and it was with difficulty we made our way inland along the ridges. A high cliff containing many fossils was located at the west end of the beach. On getting inland we found everything extremely dry and desolate and the bottoms of the dry washes swarming with grasshoppers. This part of the island was not found to be particularly productive, although we did not come back empty handed. I collected a few lizards and a worm-snake, the first taken on Cerros Island. Nelson and Parker sent down the fore-topmast, the fore-topsail and all the gear connected with same. The fore-topsail was found to be useless, as the schooner would not lay up to the wind with the sail set, the centerboard being out of commission. All hands returned on board at 6:00 o'clock for supper. Fine weather with fresh NW. winds.

July 19: All hands turned out at 4:30 A. M. Cook prepared morning coffee and at 5:30 we weighed anchor, setting sail for Natividad Island. At 10:00 o'clock we made up to the island and hove the schooner to off the SE. end. The landing party shoved off in the skiff, the schooner beating to windward of the landing place. On nearing the beach we were hailed by a Mexican armed with a Winchester rifle, who ordered one man ashore first, so Beck landed, giving the Mexican our permits for visiting the island. Beck then hailed

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the boat and we landed, hauling the skiff up beyond the high tide line. We found that a short time before our arrival some poachers had landed, held up the guard at the point of a gun and stole all the guano that had been sacked and made ready for transportation; hence this time the guard was taking precautions. We found Natividad a typical desert island with numbers of giant cacti scattered about. Ospreys and oystercatchers were quite common along the shores. Two species of lizards were abundant and many dead land shells were found scattered about in the sheltered gullies. The landing party was called off at 3:30 P. M., the schooner running down before the wind to pick us up. At 4:10 P. M. departure was taken for San Benedicto Island, Sail Rock bearing by compass NW. by N., distant $\frac{1}{2}$ mile. Weather clear with strong NW. wind.

July 20: Opened with clear weather and fine sailing breeze. Schooner sailing wing and wing making about six knots. All hands busy with their specimens and standing watches. At 4:00 A. M. passed a steamer heading northward. Lat. $25^{\circ} 57' N.$, Long. $114^{\circ} 13' W.$ at meridian.

July 21: Opened with fine sailing breeze and clear weather. Still have the schooner wing and wing and making about six knots. Rougher sea put some of the boys under cover. Passed the Tropic of Cancer early this morning. Weather turned very much warmer this afternoon and under clothing is being shed. A shark and many flyingfish sighted during the day. One flyingfish landed on board. Lat. $23^{\circ} 35' N.$, Long. $112^{\circ} 55' W.$ at meridian.

July 22: Opened with clear weather and light NW. breeze. Turning very much warmer. In the afternoon the breeze slackened considerably so that at 4:00 P. M. the schooner was making about one knot per hour. A large shark accompanied by some pilotfish followed the schooner most of the day. Went out this morning in the skiff with Beck shooting birds. White tried to harpoon a shark that came close under our bows but did not succeed, the harpoon bending when it struck. However, while trying his luck with a hook and line, he caught a fine dolphin. Williams caught some water striders while working with a dipnet off the martingale stay. One

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frigate-bird and one tropic-bird sighted this morning. Schooner was becalmed at nightfall. Lat. $22^{\circ} 24'$ N., Long. $112^{\circ} 14'$ W. at meridian.

July 23: Opened with calm. Went out this afternoon with Beck shooting birds. All hands busy with their specimens and preparing for the work ahead of us. At 11:00 P. M. wind hauled N.NE. and the schooner logged about six knots. Lat. $21^{\circ} 02'$ N., Long. $111^{\circ} 57'$ W. at meridian.

July 24: Opened with strong NE. winds and sea rising considerably. At 4:00 P. M. took in flying-jib and gaff-topsail. 6:30 P. M. put two reefs in the mainsail. Just as we finished reefing the mainsail a heavy squall accompanied by rain passed over us. Looking very black to the southward. Sea quite heavy during the night but commenced to go down towards morning. Lat. $19^{\circ} 26'$ N., Long. $111^{\circ} 53'$ W. by dead reckoning at meridian.

July 25: Weather clearing and wind going down. Considerable cross swell running. At 12:00 M. shook out two reefs in the mainsail and set full. Weather now calm and Beck went out in the skiff shooting birds. One wounded shearwater was grabbed by a shark before it could be reached with the skiff. At noon time the weather was very warm and the man at the wheel was complaining of the heat. Several frigate and tropic-birds in sight. Nelson put out a shark line astern and hauled in one about seven feet in length. White cut out the jaws to save and, on opening up the stomach, found a shearwater, the remains of a pasteboard box and an old pair of slippers which Gifford had thrown overboard. Late in the afternoon a large school of porpoises crossed our bow. Ornithologists busy skinning birds. Temperature in cabin 90° . Lat. $19^{\circ} 32'$ N., Long. $111^{\circ} 09'$ W. at meridian.

July 26: Opened with light and variable winds. At 4:30 A. M. sighted San Benedicto Island, the north end bearing SE. by E. by compass. Had light winds until noon, when we were within half a mile of the north end. At 12:30 P. M. the landing party shoved off in the skiff, the navigator, cook and three men bringing the vessel around to the southeast side of the island. Nelson did the same with the skiff after landing the shore party. Found an immense colony of frigate-

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birds nesting in the high grass on top of the island. Ornithologists collected shearwaters and eggs. Boobies plentiful about the island and also an abundance of large grasshoppers. Nelson stood off shore in the skiff, while the schooner beat to windward of the island. The boys on board the schooner caught several fine big fish, which we had for supper. At 7:30 P. M. the schooner ran down before the wind and picked up the landing party. We then shaped course for Socorro Island. Variable winds and fine weather.

July 27: Opened with fine weather and light unsteady winds. Sunrise found us about four miles off the north end of Socorro Island. At 7:30 A. M. we hove to off the north end of the island and sent the skiff ashore to get some turtles. We landed on a nice sand beach, securing three large green turtles which had hauled out to dry off. Found many turtle nests on the beach, some with dead turtles that had just hatched out of the eggs and no doubt were literally cooked to death before they could get out of the nests, as the sand was so hot it was impossible to walk on it with bare feet. My own got so burned that they grew many large blisters. All hands returned at 1:00 P. M. and we shaped course for Oneal Rock off the west side of the island, arriving there at 1:30. Hove the schooner to and sent a landing party ashore. They found a large colony of terns and many boobies, the latter having their nests decorated with dead sea horses. Nelson caught some fine fish while standing by with the skiff. Landing party returned on board at 4:30 P. M. and we shaped course for Braithwaite Bay, Socorro Island. Winds light and variable. Many sharks swimming about the vessel. At 7:30 P. M. we were in a dead calm off the west end of the island. At 8:00 P. M. a fine sailing breeze sprang up and we kept the schooner hove to. Cape Rule bore by compass NE., distant two and a half miles, and at midnight NE. by N., distant four miles.

July 28: At 4:30 A. M. made course for the anchorage, letting go anchor at 7:45 A. M. in 16 fathoms of water and rocky bottom. Weather very hot. Found a fair-sized bunch of sheep near the landing place and some were shot for fresh meat. King ran down four small lambs and brought them on

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board. Landing party found this locality to be quite fruitful and secured large collections of birds, lizards, insects, etc. Country back of the landing place is rough and covered with a dense growth of brush, which makes traveling slow and laborious. Just back of the landing place we saw a grave bearing the date 1897 and a tablet erected by the U. S. S. *Boston* noting her arrival there while in search of the lost brigantine *Tahiti*. All hands returned on board at 6:00 P. M., Ochsner and King bringing some live sheep for a fresh meat supply. Took the skiffs on board and weighed anchor, but the wind died out and the schooner started drifting toward shore. The anchor was dropped under foot to await a change of wind. Shortly afterwards a light breeze sprang up and, in hoisting the anchor, it fouled on the bottom and the chain parted just outside the hawse pipe, losing the anchor and ten fathoms of chain. The wind being off the land, we set sail for Clipperton Island, taking departure from the anchorage.

July 29: Opened with fine sailing breeze from the north. Weather very warm. Ornithologists busy skinning birds. The young lambs King brought on board made so much noise that they disturbed the peace of the ship and were brained with a belaying pin and thrown overboard. Sighted a large school of porpoises this afternoon. Lat. $17^{\circ} 22' N.$, Long. $110^{\circ} 33' W.$ at meridian.

July 30: Opened with strong easterly winds. Rain squalls during the night and much lightning to the southward. Sea choppy. All hands keeping the Sabbath. Lat. $14^{\circ} 55' N.$, Long. $109^{\circ} 58' W.$ at meridian.

July 31: Opened clear with wind still strong from the east. Schooner making about six knots. Weather turned squally during the afternoon. Towards evening the wind hauled S.SW. and at 11:00 P. M. we had squally weather and rain. Barometer acting very uncertain. At 1:30 A. M. we took in the flying-jib and gaff-topsail. Keeping a full watch on deck on account of uncertain weather. Lat. $13^{\circ} 44' N.$, Long. $109^{\circ} 14' W.$ at meridian.

August 1: Opened clear with strong easterly winds. At 8:00 A. M. set flying jib and gaff-topsail. At 10:00 A. M.

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we were struck by a heavy squall which carried away the martingale stay, the chain parting about a foot from the martingale. The flying-jib halyards were let go on the run and the flying-jib boom was fortunately saved. At noon the wind went down and we had a heavy swell from the S.S.W. The weather became warm and sultry. King skinned one of the turtles taken at Socorro Island, while I helped Nelson repair the martingale stay. Went out in the skiff this afternoon with Beck shooting birds. Several squalls in sight to leeward of us at 6:00 P. M. Lat. $13^{\circ} 26' N.$, Long. $108^{\circ} 55' W.$ at meridian.

August 2: Opened with unsteady westerly winds and rain squalls. Heavy swell from the southwest. King and I skinned another of the green turtles taken at Socorro. 11:00 P. M. the port main lift carried away but did no damage. Much thunder and lightning during the night. Lat. $12^{\circ} 03' N.$ Long. $109^{\circ} 16' W.$ by dead reckoning at meridian.

August 3: Opened with light variable winds and calms. Nelson and I repaired the main lift. Much rain during the day. This afternoon helped King skin another of the turtles taken on Socorro Island. Some of the boys took advantage of the rain water in the skiff on deck to wash clothes. Strong current setting us W.N.W. Lat. $10^{\circ} 45' N.$, Long. $109^{\circ} 13' W.$ at meridian.

August 4: Opened with light winds and calms. Several showers passed over us during the morning but weather cleared up somewhat towards noon. Current setting us W.N.W. magnetic, rate uncertain. Many terns, shearwaters, frigate-birds and boobies flying about the schooner. Beat back and forth during the day without sighting Clipperton Island. Cabin getting rather unbearable; stuffy, moldy and hot. Lat. $10^{\circ} 47' N.$, Long. $109^{\circ} 20' W.$ at meridian.

August 5: Opened with variable winds and calms. Heavy swell from the southward makes the schooner roll considerably. Went out in the skiff with Beck to shoot birds. Shooting was difficult on account of the heavy swell but two terns and nine boobies were secured. We sighted a turtle from the skiff, but before we could get to it the turtle went under. Cur-

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rent set us N. $\frac{1}{2}$ E. magnetic during the last 24 hours. Lat. $10^{\circ} 35' N.$, Long. $109^{\circ} 01' W.$ at meridian.

August 6: Opened with variable winds and squalls. At 3:30 P. M. Clipperton Rock was sighted from the fore cross-trees, bearing E. by S. Hauled the schooner on the wind and shaped course for the island. At 6:30 P. M. Clipperton Rock bore E. by N. $\frac{1}{2}$ N. by compass, distant six miles. Wind in the afternoon more steady and weather clearing. A big school of bonitas about the schooner, but we are too busy working the vessel to try to catch any. Just at supper time a heavy rain storm passed over us. At 6:00 P. M. took in the gaff-topsail and flying-jib. Considerable lightning during the evening.

August 7: Opened with heavy winds and rain storms. Schooner beating back and forth trying to make Clipperton. Great numbers of boobies, terns and shearwaters sighted. Cabin damp, moldy and uncomfortable. Lat. $10^{\circ} 36' N.$, Long. $109^{\circ} W.$ by dead reckoning at meridian.

August 8: Opened with heavy swell from the southward with wind gradually decreasing. This morning I helped Nelson put a new kringle in the mainsail head and reeve off a new topsail sheet. In the afternoon went out in the skiff with Beck shooting birds. Found our chronometer to be out of rate about 35 seconds per day, no doubt owing to the dampness and excessive heat in the cabin. Lat. $10^{\circ} 20' N.$, Long. $109^{\circ} W.$ at meridian.

August 9: Opened with a fair sailing breeze. At 8:00 A. M. we passed through the tail end of a heavy squall. Vessel beating against the wind, and at 4:00 P. M. we were within two miles of the island. At 4:30 we made up to the land and passed close to the wharf, where we could see two men waving at us and saw in the distance on the opposite side of the island the wreck of the British ship *Kinkora* wrecked there in 1894. She was laden with lumber bound for the United Kingdom when she ran ashore in a heavy squall. It being too late to land, we stood away on the port tack, and when a safe distance away hove the schooner to, keeping a light in sight which the men on shore had put on

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top of the rock for us. At 6:30 P. M. Clipperton Rock bore N., distant three miles.

August 10: Opened with clear weather and fair sailing breeze. When it became full daylight this morning we ran down before the wind and at 7:00 A. M. hove to off the wharf, sending the landing party ashore in two boats. The surf was quite heavy and we shipped plenty of water making the landing, as we had to go through three lines of breakers and enter a boat passage through the outer reef. Messrs. Larsen and Shultz, the two keepers on the island, were at the beach to help us land. They informed us that they had been on the island since December, 1904, as keepers for the Pacific Island Co., this company holding a concession to work the guano deposits. We gave them some clay pipes, magazines, papers taken on board the day we left San Francisco, a bottle of whiskey from the medicine chest, some soda, yeast, onions and potatoes, the latter two articles being most welcome, as they never had any fresh vegetables. We found Clipperton to be a real coral atoll without a sign of vegetation, with the exception of a lone cocoanut palm growing by the house of the keepers and bearing about 20 nuts. The coral ring itself averages about 300 yards across and is about eight to ten feet above high water. There is no outlet to the ocean and the water in the lagoon is quite salty and brackish. We were told that at one time several Japanese engaged in working the guano deposits died from drinking this water. We found the island to be infested with land crabs; they were to be found everywhere. It was necessary when collecting birds to be on the spot as soon as they hit the ground, as the land crabs would have them ruined in a few seconds. In the lagoon are several low coral islets, at the time of our visit, densely populated with nesting terns. The eggs were so close together that it was necessary to pick one's steps so as not to tread on them. Clipperton Rock, a large basaltic rock about 50 feet in height, situated on the SE. edge of the reef, was found to be the home of hundreds of little lizards (*Lygosoma arundeli*), the only species on the island. Tiger beetles and damsel flies were common about the lagoon. As it was unsafe to keep the vessel about the island owing to the squalls and sudden changes in

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the weather, the landing party gathered at the keepers' house early in the afternoon, prepared to say good-bye and stand by to hail the schooner. Larsen treated us to some wine and cake made out of tern eggs taken off the islets in the lagoon. It was not at all bad. The cake was pink instead of yellow, owing to the color of the yolks, and had rather a peculiar though not unpleasant taste. When we had all gathered together and finished our good-bye, we made for the landing place and hailed the schooner. At 2:00 P. M. all hands were on board, having for the second time successfully negotiated the surf. Taking departure from Clipperton Rock, bearing N. by compass, distant three miles, we set our course for Culpepper Island, the most northern of the Galapagos group. Wind light and unsteady, hauling towards the SE. Swell going down considerably.

August 11: Opened clear with fair sailing breeze from SE. by E. Had some tern eggs for breakfast, a rather novel dish, but enjoyed by all. An observation showed our chronometer to be running slow and 2 minutes and 16 seconds out of rate. The dampness in the cabin is making leather moldy and guns rusty. Ornithologists busy with the catch from Clipperton. Nelson started to make a mast for the ship's boat. Few birds in sight this afternoon, but porpoises are becoming more abundant as we are getting towards the south. Wind got very light to almost calm during the evening. Steering full and by. Lat. $9^{\circ} 31' N.$, Long. $108^{\circ} 48' W.$ at meridian.

August 12: Opened with fine SW. sailing breeze, but later in the morning the wind went down and the schooner was becalmed. Occasional rain squalls passed over us and the weather became quite warm and sultry. Nelson started making a sail for the ship's boat. The rest of us busy with our specimens and standing watches. Some of the watch below busy breaking out stores from the hold and stowing them in the galley store room. Fine moonlight during the night and some of the boys sleeping on deck. Lat. $9^{\circ} 13' N.$, Long. $108^{\circ} 39' W.$ at meridian.

August 13: Opened with fine, clear weather, changing to calm early in the morning. Schooner sailing wing and wing

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making E.S.E. A strong odor permeated the cabin, the cause of which could not be found, until I discovered in the pocket of my hunting coat a tern, which I had taken on Clipperton Island three days ago. Lat. $8^{\circ} 41' N.$, Long. $107^{\circ} 43' W.$ at meridian.

August 14: Opened with light airs and calms. Had the skiff out this morning and caught three turtles. A large dolphin was seen swimming about the schooner, but it would not strike at the bait offered. Hunter busy blowing tern eggs taken on Clipperton. This afternoon a large shark grabbed the line we had out for the dolphin and snapped it off at the belaying pin to which it was made fast. Schooner in a dead calm most of the day. From 8:00 P. M. August 13 to 3:00 P. M. August 14 the log registered but half a mile. The navigator discovered a leak in the centerboard casing, which caused us to pump out the bilge twice a day. We were pumping out about 17 buckets of water every 12 hours. We found out afterwards that this leak had ruined a number of cases of canned goods. This evening at 8:00 P. M. we observed a partial eclipse of the moon. Took advantage of the calm weather to tar down the head gear. Current setting us to the eastward about $1\frac{3}{4}$ knots per hour. Lat. $8^{\circ} 33' N.$, Long. $107^{\circ} 21' W.$ at meridian.

August 15: Opened with schooner becalmed. Early in the morning a light NW. wind sprang up, bringing with it a shower of rain. Nelson caught a bonita this morning with a hook and white rag while fishing off the flying-jib boom. Fishing in this manner became quite a sport. Taking position at the end of the flying-jib boom, the bait was dipped to the water's edge as the fish played under the bows of the schooner. They would strike like a flash and, until we were properly rigged for landing them, we lost several, they were such game fighters. It was necessary to rig a sack on the martingale guys to drop the fish in before attempting to take the hook out. At 5:15 P. M. the wind hauled to about NE. and brought a heavy rain storm, but no violent wind. Towards evening the wind hauled SE. and the schooner was put full and by, making three to four knots per hour. Lat. $8^{\circ} 19' N.$, Long. $106^{\circ} 45' W.$ at meridian.

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August 16: Opened with heavy seas and strong S.S.E. winds. Had some of the bonita we caught yesterday for breakfast. Wind and sea increasing towards 10:00 A. M., we took in the gaff-topsail and flying-jib. Some of the boys a little under the weather but able to stand watches. At 7:30 P. M. the strop for the starboard main lift carried away. Schooner making about ten knots. Lat. $7^{\circ} 53' N.$, Long. $105^{\circ} 22' W.$ by dead reckoning at meridian.

August 17: Opened with fresh winds from the southward. Schooner making about E.S.E. and logging six to ten knots per hour. Nelson and I busy repairing the main lift, while some of the watch below are sorting out the onions and potatoes and throwing the bad ones overboard, as our stock of vegetables is getting low. The navigator repaired some of the leaks in the centerboard casing. Late in the afternoon the wind died down and at 7:00 P. M. we were almost becalmed. Lat. $7^{\circ} 45' N.$, Long. $104^{\circ} 02' W.$ at meridian.

August 18: Opened with light airs and calms, with some light showers. This morning Beck shot a phalarope. Several petrels seen flying about the schooner. Heavy swells from the S.S.E. during most of the day. Crew variously employed, Stewart making a bookcase for the cabin. Very sultry towards evening with light showers during the second dogwatch. Lat. $7^{\circ} 25' N.$, Long. $103^{\circ} 40' W.$ at meridian.

August 19: Opened with regular doldrum weather; variable light winds interspersed with calms and rain showers. Considerable swell from the S.S.E. Took advantage of the calm weather to set up and repair some of the head gear. Current setting us to the E.S.E. magnetic during the last 24 hours. Lat. $7^{\circ} 18' N.$, Long. $103^{\circ} 11' W.$ at meridian.

August 20: Opened with fresh breeze from the southward with considerable swell. Lowered the mainsail and rove off a new lace line. Wind going down towards evening and at 6:00 P. M. the schooner was almost becalmed. Passed close to a couple of turtles floating on the surface. Crew variously employed, Williams sharpening up the porpoise harpoon for future use. Current still setting us to the eastward. Lat. $7^{\circ} 15' N.$, Long. $101^{\circ} 13' W.$ at meridian.

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August 21: Opened with light unsteady southerly winds, growing stronger towards noon. Considerable rain and heavy swell from the SE. On the morning watch the strop on the port main lift carried away. One shearwater and a large school of porpoises sighted this morning. Williams and White rigged up the porpoise harpoon. Schooner sailing full and by, logging two to four knots per hour. Lat. 7° N., Long. $100^{\circ} 13'$ W. at meridian.

August 22: Opened with fresh southerly winds and rain squalls. Heavy swell from the S.SE. Crew variously employed, Nelson making a rudder for the ship's boat. Schooner making two to five knots per hour. Current set us 18 miles E. $\frac{1}{2}$ S. magnetic during the last 24 hours. Lat. $6^{\circ} 10'$ N., Long $98^{\circ} 41'$ W. at meridian.

August 23: Opened with light southerly winds and rain storms. This morning a large school of porpoises crossed our bows, the cook trying to harpoon one without success. Some of the watch below helping Nelson repair the skiffs and ship's boat. Schooner making E.SE. four to five knots per hour. Lat. $5^{\circ} 51'$ N., Long. $97^{\circ} 26'$ W. at meridian.

August 24: Opened with strong southerly winds and occasional rain squalls. A few boobies, terns and shearwaters about the vessel. Schooner making SE. $\frac{1}{2}$ E., about four knots per hour. Current still setting us to the eastward, about 20 miles during the last 24 hours. Lat. $5^{\circ} 15'$ N., Long. $95^{\circ} 42'$ W. at meridian.

August 25: Strong southerly winds still continue. Making SE. by E., about four knots per hour. A tropic-bird and many schools of flyingfish sighted this morning. A perfect and beautiful rainbow sighted in the SW. This afternoon many boobies, shearwaters and terns about the schooner. A flyingfish flew aboard and was captured. At 10:00 P. M. the maintopsail sheet carried away and the mainsail was made fast for the night. Lat. $4^{\circ} 31'$ N., Long $94^{\circ} 08'$ W. at meridian.

August 26: Opened with cloudy weather and southerly winds. Schooner making SE. by E., about four knots per hour. Lowered the mainsail this morning and rove off a new topsail sheet. Hoisted sail again as soon as repaired. Crew

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variously employed. Nelson putting chafing strips on the skiffs. At 4:00 P. M. the wind gradually went down and at sundown we were nearly becalmed. Current setting us E. true, about one mile per hour. Lat. $3^{\circ} 39' N.$, Long. $92^{\circ} 54' W.$ at meridian.

August 27: Opened with fine sailing breeze. During the morning occasional showers passed over us. Schooner logging about six knots. At 5:30 P. M. we changed course for Cocos Island, it being decided to take advantage of the southerly wind, as we were not able to make much headway towards Culpepper Island. Williams put out a fish line this afternoon and caught a fine bonita, which we had for supper. Lat. $3^{\circ} 46' N.$, Long. $90^{\circ} 08' W.$ at meridian.

August 28: Opened with fresh southerly winds. Schooner making NE. by E., about five to six knots per hour. Weather cloudy and a few showers during the day. Nelson caught another bonita while fishing off the flying-jib boom. We are now making long tacks towards Cocos Island. Lat. $4^{\circ} 58' N.$, Long. $87^{\circ} 50' W.$ at meridian.

August 29: Opened with fine sailing breeze from S. by SW. Cloudy weather with occasional rain squalls. Keeping a sharp lookout from the masthead for Cocos Island, our position being uncertain on account of our chronometer being out. At 6:00 P. M. took in maintopsail and flying-jib. The island not being in sight as darkness shut down on us, we took in the foresail and hove to for the night. Lat. $5^{\circ} 11' N.$, Long. $86^{\circ} 20' W.$ by dead reckoning at meridian. Too cloudy to get an altitude at noon today.

August 30: Opened with shifting winds and calms. Weather cleared somewhat towards noon and the navigator got a sight. At 1:00 P. M. set flying-jib, mainsail and foresail and tacked ship, making course W. Tacked ship again at 6:00 P. M., making course SE. by S. Found no northerly current here as shown on the chart. Lat. $3^{\circ} 51' N.$, Long. $86^{\circ} 05' W.$ at meridian.

August 31: Opened with cloudy weather and light SW. winds. Schooner logging from two to four knots. This morning several large schools of porpoises crossed our bow. Navigator got a sight at 8:00 A. M. and another at noon.

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putting us 100 miles off the island. At 3:00 P. M. rain began to fall and continued till 7:30. Sighted numbers of terns, petrels, frigate-birds and boobies flying towards the N.NE. Lat. $4^{\circ} 50' N.$, Long. $87^{\circ} 11' W.$ at meridian.

September 1: Opened calm with beautiful clear sky. At 5:30 A. M. Cocos Island was sighted from the fore cross-trees, bearing N.NE., distant about 35 miles. Light breeze sprang up during the morning and the schooner made N.NE., about two miles per hour. Many boobies, petrels and terns about flying towards the island. The wind failed us before noon and we were again becalmed. A great number of sharks swimming about the schooner, some appearing to be about ten feet in length. Williams saw great numbers of water-striders skimming over the surface. Counted six turtles apparently sleeping on the surface. One near the schooner was shot and hauled on board for the galley. After lunch went out in the skiff with Beck shooting birds. We collected some petrels, boobies, shearwaters and four loggerhead turtles. Weather cleared off at noon. Schooner becalmed about 30 miles SE. of Cocos Island, which is in sight from the fore crosstrees. Large schools of porpoises kept passing the schooner throughout the day. Towards sundown a waterspout was sighted about two miles off. The evening came upon us calm and clear, the schooner drifting slowly away from the island. At sundown we were about 35 miles off.

September 2: Opened calm, clear and warm. Beck went out in the skiff shooting birds. King and myself skinning turtles. Nelson working on sail for the skiff. Great numbers of sharks and porpoises about the schooner. Williams caught one shark about $7\frac{1}{2}$ feet in length. Found its stomach full of turtle meat we had thrown overboard. This evening a large devil-fish swam close under the counter. It looked to be seven or eight feet across. Schooner becalmed all day. Keeping her headed for the island when possible. At 5:00 P. M. the island was about 40 miles distant.

September 3: Opened with light breeze from the SW. At 5:30 A. M. we had the island about 18 miles off and at 10:30 had cut down the distance to about ten miles. At noon we were within two miles of the anchorage and still making a

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little headway. All hands much elated at the prospect of getting ashore, the island with its beautiful tropical foliage looking most enticing. After lunch helped Nelson bend a crown line on the anchor. At 1:10 P. M., on the 68th day of the voyage, we let go the port anchor in Chatham Bay in 11 fathoms of water. After spreading the awning and getting ready for port, Beck, Nelson and Ochsner pulled around to Wafer Bay to call on Captain Gissler and get his permission to land. Rest of the party preparing for work ashore. Great numbers of terns and boobies flying about the schooner. At 4:30 P. M. the boat returned bringing a watermelon and some cucumbers. Captain Gissler very kindly gave us permission to land and carry on our work. After supper a shore party landed at Chatham Bay, finding numerous hermit crabs in shells of many patterns and colors, sphinx moths, cockroaches, cicadas, which sing at night, earthworms, and very small stinging ants which seem to literally cover the dense vegetation. Nelson climbed a cocoanut tree and secured several nuts. Landing party returned to the vessel early and all hands turned in so as to get off early in the morning. Captain Gissler informed Mr. Beck that he had been on the island for seven years and that he is fully convinced that the famous Cocos Island treasure is buried there. He claims to have a chart showing the position, but lacks the deviation of the compass to locate the exact spot.

September 4: Breakfast at 6:00 A. M., after which the shore party in both skiffs pulled down to Wafer Bay, passing through the channel separating Nuez Island from the main island. We beached our skiffs at the mouth of a small creek entering Wafer Bay, close by Captain Gissler's house. Captain Gissler has a small corrugated iron house raised off the ground, like many or all houses in the tropical lowlands.² Back of his house is a small grove of banana trees, papayas, cocoanut palms and a small patch of tobacco. There are seven Costa Rican soldiers furnished by the government living on

² The writer again visited Cocos Island on board Captain G. Allan Hancock's yacht *Oaxaca* in December, 1927. Captain Gissler's house and all the out houses were in ruins and the rain forest had overgrown his garden and clearing on the small flat back of the houses. It presented a sad and desolate appearance compared with the day we received such a royal welcome from Captain and Mrs. Gissler on September 4, 1905.

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the island to prevent any intrusion. These men are under Captain Gissler, he being governor of the island. Gissler informed us that an Englishman, Earl Fitzwilliam, came to the island at one time to look for the buried treasure. After having an altercation with Gissler and doing some blasting in which he injured several of his men, two of them subsequently dying of their injuries, he left. Gissler conducted our shore party up the creek back of his house. Passing a tree in his garden, Williams caught two large butterflies. The creek proved to be on an average of eight to ten feet wide a mile or so from the beach and excellent drinking water. It is no wonder that the pirates, whalers and ships of war made Cocos Island a rendezvous for the purpose of watering ship. The vegetation along the creek was exceedingly dense and verdant, great tree ferns some 15 feet in height and huge palm trees 30 or more feet in height growing in abundance, while everywhere trees shut out the light from above and made the tropical forest quite dim. Ferns were everywhere and the trees covered with moss and creepers, while orchids could be seen on most every tree trunk. Little aboreal lizards (*Anolis townsendi*) hopped about on the leaves, resting wherever they could catch a ray of light or possibly sunshine between showers. Yellow warblers flying about stood out in bold contrast against the vivid greens of the forest trees. In the creek a crustacean somewhat resembling a shrimp and growing to a length of six or seven inches was quite common, as well as a small sucker which would creep up the rocks in midstream and rest there, wiggling off into the water on one's approach. The forest was covered with leaf mold and had a very rich soil. Many of the trees were 60 to 80 feet in height. Ramifying near the tops, their large cordate leaves formed a barrier over the sky. Some of these trees had a diameter of from two to three feet. Rotten logs about the forest floor proved a gold mine for the entomologist. From these were dug earthworms, millipeds, beetles and their larvæ, scorpions and centipedes. Termites and ants of several species were abundant. It commenced raining early in the morning and poured most of the day. At first the rain was checked by the great leaves overhead, but in the end all hands were soaked



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through. From this and later experience we found that there was no use of trying to keep dry on Cocos Island. It cannot be done!—at least in the rainy season. Returning to the landing place in the afternoon, we had lunch and Gissler gave us some luscious ripe bananas. At 5:00 P. M. the landing party was rounded up and we returned on board for supper. Thus did we spend our first day on the famous treasure isle. Nelson stayed on board repairing and overhauling rigging. An observation showed that our chronometer had been losing 46 seconds per day for the past 24 days.

September 5: Early breakfast this morning. Nelson, Ochsner and King started off on a pig hunt, but failed to bring home the bacon. Rest of the landing party collecting around Chatham Bay. We saw the names of several ships carved in the rocks about the landing place. The oldest of these was that of H. M. S. *Centurion* 177-³. Scenery around Chatham Bay very picturesque. One or two fine waterfalls come tumbling down over the cliffs right into the ocean. Many interesting tide-pool fishes were plentiful and Williams caught several in his bug net. I secured a large series of lizards and Ochsner many shells. All hands on board again at 5:00 P. M. Williams caught several trigger-fish while fishing off the schooner. Rain most of the morning. Nelson working on rigging. Set up the forestay and bobstay.

September 6: Landing party went ashore at Wafer Bay. Williams and I went collecting up the creek back of the houses. Captain Gissler went aboard the schooner for lunch, returning in the boat coming in to take off the landing party. On returning from our hunt up the creek, Mrs. Gissler gave Williams and me several bananas, which were always welcome. Two large whales swam close by this afternoon. One looked to be almost as long as the schooner. Some rain during the day. Very damp in the cabin. Guns get rusty over night and everything in the way of leather goods gets moldy. Nelson set up some of the head gear during the day.

September 7: All hands up for early breakfast. All hands, with the exception of Stewart, who went ashore collecting, turned to with Nelson and helped set taut all the lanyards

³ Last figure obliterated.

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on fore and main shrouds and topmast backstays, an all-day job. Started raining at 6:00 P. M. Everybody eating their fill of bananas, a most welcome addition to our bill of fare. At 8:00 P. M. a red light was seen rounding the point of the island and a two-masted schooner came in and anchored close by. In the morning she shifted her berth to Wafer Bay and unloaded supplies for Gissler. Rain stopped at 9:00 P. M. and we had a clear moonlight night.

September 8: Shore party landed at Wafer Bay. The schooner that came in last night proved to be a steam yacht flying the British merchant flag. She had some Costa Rican soldiers on board who were to report to Captain Gissler. I spent the day on board today and greased down the fore and main masts. In the afternoon went fishing with White, and, although there were many fish about, we could not get a bite. White fixed up a dish of fried bananas for supper this evening. Several heavy rain squalls this afternoon.

September 9: Began to rain heavily this morning, so no landing party went ashore. Went out in the skiff with Beck to see if we could get a few birds, but the rain drove us back. Rained heavily all day and at 6:00 o'clock it was still coming down in sheets. Took advantage of the heavy rain to water ship by hauling up the awning stops and putting a belly in it. We had previously sewed two canvas pipes on to the awning long enough to reach down into the tanks in the hold. By this method during our stop at Cocos Island we took in a six months' supply of water from the rain alone. It rains heavily at Cocos Island!! This evening I distinguished myself by winning three bananas; two off Ochsner and one off Gifford, by beating them at checkers.

September 10: No rain this morning and sky not so cloudy. Nelson went ashore at 3:30 this morning on a pig hunt, returning at breakfast time with a brown and black boar. Being Sunday, all hands indulged in a little recreation. Dinner at 2:00 P. M. Beck, Parker, Ochsner and Stewart took half of the pig killed this morning and pulled over to Wafer Bay to have lunch with Captain and Mrs. Gissler. Rained hard all afternoon and up till 10:00 P. M. Party returned from Wafer Bay at 11:00 P. M. after a dinner of chicken, fried

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bananas, whiskey, wine and beer. Heavy rains caused the water in the bay to become discolored. Captain Gissler sent us out a new supply of lemons.

September 11: Beck, Nelson, King and Stewart circumnavigated the island in one of the skiffs. They made one landing at Dampier Head, where Nelson secured several fine cocoanuts. Rest of the party landed at Wafer Bay. Mrs. Gissler treated us to some wine and lemonade. As we pulled in close to shore entering Wafer Bay, a large brown pig was seen heading up the hillside. Some heavy rains this afternoon.

September 12: Shore party landed at Wafer Bay. Williams and I went collecting up the stream back of Captain Gissler's house. With his butterfly net, Williams caught eight small birds. Saw a large sphinx moth flying about in the jungle. Cold pork for lunch today. Cocos Island pig is not bad when you can get a young one. Ochsner went pig hunting again today but failed to get any, shooting in the jungle being very difficult.

September 13: Shore party landed again at Wafer Bay to bid Captain and Mrs. Gissler good-bye. They loaded us up with bananas, papayas and eggs. We left letters with them to be sent back when the schooner came again with supplies. Nelson and Parker brought some pieces of hard wood on board for making repairs to blocks, etc. All hands returned on board at 2:15 P. M. and had lunch. At 3:00 P. M. started to weigh anchor, a long and hard job, as the anchor was much too heavy for our vessel. We were nearly an hour getting the chain hove short and did not break the anchor away till 4:00 o'clock, when we set sail for the Galapagos. Moderate SW. winds and heavy rain squalls during the afternoon.

September 14: Opened with fresh southerly winds and overcast sky. Some rain during the morning. Schooner sailing full and by, making two to four knots per hour. Shearwaters now appearing and several sharks about the schooner. Ornithologists busy skinning birds taken on the island. Lat. 4° 14' N., Long. 86° 35' W. at meridian.

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September 15: No change in wind or weather. Schooner still on the wind, making SE. $\frac{1}{2}$ E. one to four knots per hour. White made us cocoanut pie for dinner today. Several schools of porpoises passed close to the vessel this afternoon. All hands at work on their specimens and standing watches. Lat. $3^{\circ} 05' N.$, Long. $84^{\circ} 13' W.$ at meridian.

September 16: Opened with strong SW. winds. Considerable swell running this morning. Took in flying-jib and gaff-topsail. All hands enjoying the fruit taken on board at Cocos Island. Hunter and White busy killing off some of the bed-bugs which are getting so numerous they make the nights too interesting. Weather quite cool and pleasant. Lat. $1^{\circ} 33' N.$, Long. $82^{\circ} 24' W.$ at meridian.

September 17: Opened with fresh southerly winds and choppy sea. During the 4:00 to 8:00 watch this morning the schooner was making heavy weather of it and shipped green water over the bow, flooding the cabin. Wind calmed down during the afternoon and we set the flying-jib and gaff-topsail. The gaff-topsail tack carried away this afternoon and caused some trouble till repairs were made. Great numbers of flyingfish were seen today. Lat. $0^{\circ} 10' N.$, Long. $80^{\circ} 52' W.$ at meridian.

September 18: Opened with light southerly winds and fair weather. Schooner on the wind making S.SE. Several tropic-birds passed us flying to the southward. Crossed the line today and had our first view of the snow-capped Andes of the equator. At noon Cape San Lorenzo bore by compass SW. $\frac{3}{4}$ W., distant 29 miles. Lat. $0^{\circ} 40' S.$, Long. $80^{\circ} 42' W.$ at meridian.

September 19: Opened with cloudy weather and moderate sea. Fresh wind from W.SW. This morning we were about nine miles off the land, the coast line appearing precipitous and covered with forests. Several conical peaks of the Andes plainly visible back of the coastal hills. At 5:00 P. M. we made up to Manta Bay and passed a sloop laying to, close under our port bow. Several other sail in sight. Wind hauled to the westward and we passed within a few miles of the port of Manta, the adobe houses and corrugated iron roofs being plainly visible. A three-masted ship was laying at

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anchor off the port. At 8:00 P. M. we weathered Cape San Lorenzo and stood out on the port tack. Lat. $0^{\circ} 27' S.$, Long. $82^{\circ} 40' W.$ at meridian.

September 20: Opened with strong southerly winds with cloudy and slightly misty weather. Quite cool for this latitude. Schooner on the port tack, making W. by S. $\frac{1}{2}$ S. and logging five to six knots per hour. Phalaropes, terns and a tropic-bird seen. Lat. $0^{\circ} 33' S.$, Long. $85^{\circ} 03' W.$ at meridian.

September 21: Opened with steady southerly winds which grew weaker towards noon. Sky cloudy and some showers during the night. On the midwatch last night five flyingfish flew aboard. These were caught and turned over to the cook. We found them excellent eating. Several sharks and many flyingfish sighted today. Lat. $0^{\circ} 37' S.$, Long. $86^{\circ} 52' W.$ at meridian.

September 22: Opened with unsteady southerly winds. Tacked ship at 5:35 P. M. and again at 12:15 A. M. Schooner making SW. by W. and logging from four to five knots. Small drizzle during the night. Lat. $1^{\circ} 06' S.$, Long. $88^{\circ} 28' W.$ at meridian.

September 23: Opened with partly cloudy weather and fresh southerly breeze. 12:10 A. M. we tacked ship, going on the port tack. Wind died down towards afternoon and at 3:30 P. M. Chatham Island was sighted. Some gulls, petrels, shearwaters and two albatrosses flying about the schooner. All hands making preparations to land and commence work on shore. Fine clear evening.

September 24: No change in weather. At 3:00 A. M. we tacked ship and again at 4:30. At 6:00 A. M. we set course for Hood Island, arriving at Gardner Bay at 8:30 and letting go the starboard anchor in $4\frac{1}{2}$ fathoms of water. Awnings were spread and vessel made ready for port, while all hands enjoyed their first close up view of the Galapagos, a region that never ceased to be of interest during an entire year that followed. After securing ship, sent a hunting party ashore for goats to get fresh meat for supper. Ochsner returned shortly with two kids and two bucks, giving us an ample supply of meat, a most acceptable addition to the bill of fare, as

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we have had none since we left Cocos Island. From the deck of the schooner we could see large numbers of hair seals scattered along the beach opposite which we were anchored. At 5:00 P. M. Williams and I pulled in to the landing place to pick up Gifford and Beck, who brought us in our first sea iguana. Ochsner and Hunter busy skinning a couple of goat heads and the rest of the party preparing for work ashore in the morning.

September 25: All hands turned out for breakfast at 6:00 A. M. and landing party went ashore collecting. Nelson remained on board to overhaul the mainsail. While pulling in for the beach many seals followed the skiff, one large bull coming particularly close as if to make a lunge at the steering oar. Here and there on the dazzling white sands of the coral beach lay sleeping seals. They could be approached without any fear on their part and even slapped with one's hands, when they would awake, and, with much din, rush clumsily into the water. Scattered about the rocks were numbers of sea iguanas, at this time of the year brilliantly marked with large blotches of red and green. They ran with shuffling gait over the sharp lava rocks, but would not take to the water unless they were pressed too closely, no doubt being afraid of the sharks which abound in these waters. These iguanas feed solely on seaweed which they gather off the rocks at low tide, their long, sharp claws enabling them to hang on to the rocks so that even a heavy swell breaking over and entirely covering them will not wash them off. As we stood on the beach looking seaward, several large sharks and mantas could be seen just at the edge of the outer breaker line. Nelson hooked three sharks from the deck of the schooner after landing the shore party. Going inland, we found the island covered with many species of low-growing bushes, some of which were covered with thorns and made walking difficult at times. Immense tree cacti were abundant. These cacti had heavy reddish brown trunks devoid of spines, the branches with large, flat leaves commencing to grow out five or six feet above the ground. They make excellent shelters and are the favorite haunts of flocks of goats which get under them for rest and shade. As well as with former visitors to the islands, we

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found the birds to be exceedingly tame, Williams knocking down a heron with a stone. Mockingbirds were particularly trustful and hopped about the ground within a few inches of one's hand while we were engaged in turning over pieces of lava in search of insects, etc. While we were eating lunch, they would even alight on one's knee and pick up the crumbs dropped. The little finches could in many cases be caught with a butterfly net and the ground doves could be knocked over with a stick. Everybody enjoyed their first day ashore and came back laden with specimens. A couple of sacks full of sea iguanas brought aboard were put into a cage prepared for them. One landing party returned to the ship at 5:15 P. M., and the other, which went to the albatross colony, at 5:50, the latter party being loaded down with albatrosses and several other species of sea birds. What is said in regard to the tameness of the birds can also be said of the lizards. These could be killed with a switch and, like the birds, would come and pick up crumbs that dropped to the ground under one's feet. Stewart struck at the tail of a lizard with his knife, severing the tip. The lizard did not move until it perceived its wriggling tail, when it promptly turned about and grabbed it, no doubt thinking it was some insect. All hands, on returning on board, kept busy well into the evening caring for their specimens. Ornithologists sat up late skinning birds. We now have goat meat every night for supper and cold goat for lunch. We found by later experience that it is best to forage off the land when possible.

September 26: All hands up for 6:30 breakfast. Landed on the northeast end of the island with Williams, Ochsner, Stewart and White. Found lizards abundant everywhere and captured three snakes, also some geckos by splitting open the trunks of dead trees. White caught a centipede ten inches long. Ochsner found land shells abundant and shot another goat for fresh meat. Had a small shower of rain this afternoon. King stayed on board and helped skin the 24 albatrosses taken yesterday. They were finished up late in the evening. All hands aboard for six o'clock supper.

September 27: Went ashore on Gardner Island with Williams, Ochsner and King, the rest of the party landing on

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Hood. Found the fauna about the same as on Hood. Sea lions abundant and very tame. Counted 13 sea iguanas on a single small rock. No goats on Gardner Island and the vegetation not so dense as on Hood. Beck reported going to the summit of Hood and finding a few old tortoise bones. He knocked down and killed a hawk with a stick. Weather fine and temperate. Still enjoying our goat suppers. All hands generally ready to turn in early.

September 28: Went down to the albatross colony with Beck, Hunter, King and Williams, the latter keeping the boat, as the shore is rough lava at the landing place and it is impossible to beach it. Collected some sea iguanas and a few green turtles. Beck shot a nice pair of goats for fresh meat, also two bucks with fine, large horns. Remainder of shore party landed on Gardner. Nelson aboard today tarring rigging. Parker keeps anchor watch during the night. First mosquitos for the Galapagos heard this evening. Beck found some large centipedes in the stomachs of two hawks he killed. Temperate weather with fine, clear evenings.

September 29: Remained aboard ship today preparing sea iguanas to put in alcohol and skinning sea turtles. Williams and Ochsner visited the southeast end of the island today. Williams caught a centipede ten inches long, a snake and some geckos. Between the two of them, they killed 32 doves with sticks and stones and brought them back to the cook to make a dove pie. Weather warmed up some today. Ornithologists busy every evening skinning birds. Fine, clear evening with new moon.

September 30: Shore parties on both Hood and Gardner islands. Williams and Ochsner, visiting the north end of Hood, secured some large and excellent crayfish besides many interesting shells. While sitting in the stern of the skiff, which they had beached, a large bull sea lion approached within a foot or so of the stern as if to make a rush at the occupants. Williams struck him with an oar, whereupon he made a wild dash for the water. As on most of the beaches of Hood Island, numbers of sea lions were scattered about. A mother with young, being approached too closely, valiantly protected her offspring by making short rushes and snarling at

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the intruder. All hands aboard at 6:00 o'clock for a dove pie supper. Nelson shot three goats for the larder today. Weather pleasant and partly cloudy.

October 1: Being Sunday, we had late breakfast. Crew variously employed overhauling shoes, collecting gear, etc. Parker and Ochsner went ashore to kill a couple of sea-lions for oil. A light shower this morning. Sunday dinner at 3:00 P. M. and supper at 8:30.

October 2: Visited the albatross colony and kept the skiff while the landing party was ashore. Williams collected a snake and some geckos besides the usual catch of insects. Beck shot two more goats for fresh meat. Nelson and Parker took down the awning today and made the vessel ready for sea. At 8:30 P. M. weighed anchor and shaped course for Gardner Island near Charles.

October 3: Gardner Island sighted at 2:30 A. M. At 2:45 tacked ship and hove to, island bearing NW. by W. $\frac{1}{2}$ W. At 7:00 A. M. made course for island, arriving off of it at 9:30. Nelson landed Williams, Hunter, Ochsner and myself on a steep ledge over which swept a heavy swell. Hunter lost his shotgun making the landing and we all got thoroughly soaked. Finding it difficult to reach the top of the island from this landing, Williams, Ochsner and myself got back into the skiff and pulled to the northeast side, where climbing is easier and we could reach the top more readily. Hunter and King scaled the cliffs rather than take a chance getting back into the skiff. We found the north side of the island covered with cacti and brush. Frigate-birds, doves, mockingbirds and little ground finches were found in large numbers. I collected a snake and the usual number of lizards. All hands returned on board at 1:30 P. M., when we shaped course for Champion Island. At 3:00 P. M. made up to Champion and landing party went ashore while the schooner lay to off the island. Collected some lizards and some beetles, spiders and centipedes for Williams, as he did not go ashore. Landing party returned to the schooner at 5:00 P. M. and we shaped course for Postoffice Bay, Charles Island, where we arrived at 6:00 P. M., dropping anchor in $4\frac{1}{2}$ fathoms. From this anchorage Charles looks quite barren except for a

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few places along the coast and the tops of the numerous peaks. Several of the larger islands visible from here.

October 4: All hands up for 6:30 breakfast. Beck landed near a lagoon at the northeast end of the bay, while the rest of the party landed opposite the anchorage. Here we found the postoffice after which the bay is named. It consisted of a barrel erected on top of a post and painted red. An inscription on the post reads: erected by H. M. S. *Leander*. Crews of various vessels calling at this anchorage had painted or carved the names of their vessels on the post or barrel. Among these are: His Majesty's ships *Amphion* and *Virago*, the French cruiser *Protet*, the U. S. S. *Oregon*, and the U. S. F. S. *Albatross*. This postoffice was no doubt frequently used in former days when the whale ships cruising these waters would sometimes make voyages of a year or more. The idea was that any ship homeward bound should pick up the letters, mark it ships mail, and, on delivery in the United States, it would be forwarded to the main postoffice at Washington, without postage stamps being attached. Mr. Gifford wrote to his father in Alameda, California, and mailed a letter in the barrel. We found out on our return that it had been picked up by the British yacht *Deerhound* and forwarded to Washington. The rust from the barrel hoops had obliterated part of the address, so that all that could be deciphered was—Gifford, Alameda. The postoffice at Washington traced the addressee and delivered the letter. On our return, the postoffice department, at its request, was furnished with full details as to the origin of the letter. Footprints on the beach showed that the postoffice had been visited shortly before our arrival. Williams and I struck off inland and climbed a rounded hill some 600 feet in height. All about us could be seen truncated cones and peaks of various sizes. The entire island seemed to be covered with brush and small trees. Williams got a few insects and Ochsner some land shells, but no snakes or lizards, except geckos, were seen. We saw cat tracks, signs of wild cattle, and heard the braying of a donkey, but did not meet with any. On returning to the beach, we all enjoyed a swim after a hard day bucking through the brush.

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October 5: Went to the lagoon at the northeast end of the island. The water was not very salty and Williams caught some aquatic insects. I found one lizard besides the usual number of geckos. The cats have about exterminated the *Tropiduri*, and the wild dogs the sea iguanas on Charles Island. A flock of about 13 goats was seen. They were very wild and disappeared around a large conical hill as soon as they were sighted. No doubt wild dogs had driven them away from the fertile part of the island to this dry and barren portion. Parker and White went fishing over the side and caught several nice fish, which we had for supper. Weather rather warm today with nice, clear evening.

October 6: Beautiful morning, calm and clear. Visited the lagoon again with Williams, Beck, Hunter and Ochsner. Hunter shot six teal ducks and three flamingos. The ducks were very tame and I killed one myself with a 22 rifle and dust shot cartridge. I also got five lizards besides geckos: good luck, as they are very rare on Charles Island. All hands were back on board at 11:30, when we weighed anchor and set course for Black Beach Anchorage, sailing by the wind along the west side of the island. We reached Black Beach at 2:30, letting go anchor in 11 fathoms of water. We found a sloop from Chatham at anchor here. It had brought over a hunting party to kill wild cattle and jerk the beef for the settlement. Black Beach is a long beach of black sand with a cross, bearing no inscription, erected at the north end of it. The landing place, which is the terminus of the trail leading to the interior, is just to the northward of the cross. Beck, Ochsner and Nelson landed and found a party of natives cutting up beef and hanging it up to dry. Ochsner gave them some whiskey from our medicine chest and they seemed to relish this beyond everything. The word whiskey was the extent of their knowledge of the English language. They gave some nice, juicy oranges in return, saying that there were plenty and also plenty of fresh water up in the hills. The man in charge of the hunting party came aboard with two sailors and brought us some fresh beef. Black Beach Anchorage not so good in heavy winds, as it is merely an open roadstead. Cloudy and cool towards evening.

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October 7: Landed at the camp of the hunters and started for the spring back of the highest peak on the island. With Williams and Ochsner, walked up to the base of the peak, which King and Stewart proceeded to climb. They reported the top to be bare, but in the crater they saw much damp soil and numerous ferns and rich vegetation. Working around the northern base of the peak, we found some small groves of orange trees and an immense thicket of lemon trees, forming an almost impenetrable mass. We had a good feast of oranges, which were sweet and juicy. Continuing on up the trail, we met a peon bound for the beach and driving three burros loaded down with beef and hides. Further on we saw a young pig some of the hunters had captured and tied to a tree. We found the spring in a very delightful situation at the base of a small bluff, from the top of which we could see the crater of the main peak and much open pasture land between the thickets of lemon trees. Williams collected quite a number of insects and Ochsner a number of land shells. Land shells were very abundant here, the trunks of some of the small trees being covered with them. We ate our lunch in the shade of a clump of lemon trees situated on the summit of the pass and enjoyed seeing the many little birds hopping around in the nearby trees, without the slightest fear, and eyeing us with the greatest curiosity. On our return to the beach, a peon, to whom Ochsner gave some whiskey, presented him with some oranges and a penguin stuffed with sand. All hands aboard for 6:00 o'clock supper, consisting of beef soup, teal duck, flamingo, corn-starch pudding and ripe oranges, quite a variety for a desert island. Flamingo tastes somewhat like duck but is a little drier and more oily.

October 8: All hands up for late breakfast, today being Sunday. Beck and Gifford went ashore for a short time this morning to take some photographs, and brought back with them the chief of the hunting party, who stayed for dinner. He informed us that Manuel Cobos, formerly owner of the plantation on Chatham, was killed two years ago and that one of the men who helped kill him is in his crew on shore. Just a month ago a member of his hunting party was killed in a fight, so we are not far wrong in judging from the looks of

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his party that they are a bunch of desperados. The camp cook, the only female in the party, looks like she could cut anybody's throat with pleasure. We were also informed that there are about 100 people on Albemarle Island, all free men, and about 300 on Chatham, mostly all exiles and slaves. All hands variously employed this afternoon mending shoes and preparing for work on shore tomorrow. Fine, clear day and balmy evening.

October 9: All hands up for early breakfast and everyone, except Nelson and White, went ashore. Parker went up to the orange trees to bring back a sack of oranges for the mess. Williams and I went up to the springs. Enough water drops and runs off the vegetation to form a little pool at the base of the cliff. The water is clear and cool and is excellent for drinking purposes. The spring is an excellent place to fill a canteen, but too slow and too far away from the shore to water a vessel. Around it are several fine orange and papaya trees. From a hill just above we saw several wild cattle feeding in a little open space close by the lemon thicket. Near the spring we met a sailor off the Chatham sloop with a burro train. He said he came up to get a load of meat, as the sloop is to sail for the settlement this afternoon. Nelson took some letters over to the captain so they could be sent to Guayaquil when the trading schooner left for the mainland. Returned to the landing at 5:00 o'clock and Williams and Nelson went out fishing in the skiff, catching several nice fish, which we had for supper. Weather fair with slight rains in the interior of the island.

October 10: Went ashore with Nelson, Williams and Ochsner. Nelson was going to try for a pig, but failed to get any. He brought back a sack of oranges instead. We found by experience that the early morning or night time is the best time to hunt for pigs. Ochsner reported seeing a pack of dogs chase a band of cattle, which bunched together and warded them off. Williams and I climbed about half way up the highest peak and reached the lower rim of the broken down crater when the rain drove us down to the lower levels. We then went across a long and green, open meadow, where we counted 35 fine looking wild donkeys and a huge black

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bull. We ate our lunch at the head of this meadow, from where we could see the ocean on the other side of the island. Returned to the landing at 5:00 o'clock and found that the sloop had left for Chatham Island.

October 11: Spent the day with Williams in the vicinity back of Black Beach. Collected a number of geckos and Williams got a number of grasshoppers, which were particularly abundant at this locality. King went up to the divide and brought back a sack of lemons. Very windy today. Towards noon it increased so, the schooner started dragging anchor, and Nelson veered chain to 45 fathoms.

October 12: Went up to the divide to help Williams carry down some oranges and lemons. On returning to the beach, we found that the sloop had returned, carrying the secretary of the Governor and an escort of five or six soldiers under command of the captain in charge of the soldiers stationed on Chatham. A Jamaican negro accompanied the party as interpreter. The secretary brought us letters and papers from home, the first news in 107 days. We entertained the secretary and the captain of the guard at dinner, and one would think, judging from their appetites, that they never had anything to eat in their lives before. The secretary gave Beck a letter written in Spanish to the effect that it is customary for vessels visiting the islands to call at Chatham first.

October 13: Early in the morning Beck went ashore to interview the secretary and decided it best to go direct to Chatham as requested. We took the whole party on board the schooner: secretary, captain, interpreter and five soldiers. The latter made a fine looking army. One had an old French army hat about the vintage of 1880, some had no hats nor sandals, but were the proud possessors of undershirts and trousers, which seemed to be the uniform of the day. Their firearms were about the same period as the uniform hat and were old bolt-action rifles. One had a double-barrel shotgun, the firing pins of which were rusted fast. No ammunition at all was in evidence. No doubt it is too dangerous to let the soldiers get hold of any cartridges. However, what the army lacked, the commanding officer supplied. He was dressed in a light blue uniform of French design, with red epaulets, red stripe down

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his trousers, a huge red pompon on his hat, and a cavalry saber that, for size and polish, was the last word. The secretary and the captain had breakfast with us, and the latter having ordered the army on board, we weighed anchor and set sail for Chatham. The wind died down towards evening and at 8:00 P. M. we picked up the Chatham light. We tried to beat up to Wreck Bay, but the current setting us off, we made no headway. At 10:00 P. M. tacked ship and stood off the land. Nelson and King slept on deck so as to give the secretary and captain a stateroom. All hands except the deck watch turned in early and wished our guests a good night, trusting that the bedbugs would not drive them out before daybreak.

October 14: Opened with light airs and calms. At 1:00 A. M. tacked ship and stood in towards Chatham Island, making about SE. by E. with current setting against us. At 6:00 A. M. Dalrymple Rock bore S. by E. by compass, distant five miles. Put out the skiff this morning and Beck went shooting birds, securing about 30 or more shearwaters. Sighted great schools of tuna jumping out of the water, while numbers of birds hovered over them. At 11:00 A. M. a breeze sprang up to the southward and we made up to the anchorage at Wreck Bay, letting go anchor at 3:45 P. M. in 7 fathoms of water. The secretary, captain and army landed immediately, as well as our own shore party, going to make an official call on the Governor. The settlement at Wreck Bay consists of a warehouse, the plantation manager's house, several native huts and the light keeper's house. The Wreck Bay light consists of a lantern placed on the top of a pole. The sugar plantation and upper settlement can be seen from our anchorage and is about five miles inland. Towards evening a good breeze was blowing off the land and the anchor watch was set for the night.

October 15: All hands up for late breakfast, being Sunday. Williams and Beck went ashore to call on the plantation manager, an Italian who spoke some French. Williams acted as interpreter, speaking in French. They had dinner with the manager and some of the engineers from the sugar mill, after which the party came on board to visit the schooner. The

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manager gave us permission to hunt about the island and was very cordial in his welcome. In the afternoon went ashore with Williams, Gifford and White to visit the settlement. The country looked very green and luxuriant at this time of year. The wild cotton was in full bloom, having large yellow flowers not unlike those of the Mariposa Lily. An hour and a half walk over a good but somewhat muddy road brought us to the settlement, which consists of quite a number of corrugated iron buildings, the grass huts of the laborers, and the sugar mill. We were escorted to the headquarters of General Plaza, who conversed with us through a Jamaican negro acting as interpreter. The General was found seated at his official desk, an old kitchen table with the drawer missing, attired in a white duck suit and a navy watch cap, probably donated by some sailor off of a visiting warship. He gave us some very powerful home brew to drink, and, when he observed the tears streaming down our cheeks, informed us that it may be a little strong for us, as we were not used to it. Personally I agreed with him, in that it was not only a little too strong but much too strong for any human being. After this, I took particular pains not to be included in any official visits. Even now, 25 years afterwards, whenever I think of General Plaza I can almost feel my insides on fire. The General seemed very much interested in our work when we informed him as to our plans and where we were from, etc. The interpreter then said: "The General says he can tell from your looks that you are gentlemen." This remark rather flattered us, as we had been out 110 days without a shave and only at our stop at Cocos Island had we fresh water to wash with. Concluding our visit with the general, we invited him to come visit the schooner and started back to the beach, arriving there at 6:30 and getting on board the schooner in time for supper.

October 16: All hands up for early breakfast and shore party landed for collecting. Nelson finished making a sprit-sail for the ship's boat. Beck and Williams went up to the sugar mill, Beck taking several photographs of the place. All hands aboard for supper at 6:30.

October 17: Shore parties collecting about Wreck Bay. Weather rather warm with light drizzle. Butterflies were

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numerous along the road en route to the settlement and collecting good in general. Nelson tried out the ship's boat with the new sail and found it satisfactory. He picked up the shore party and sailed back to the schooner. Williams put out a fish line and caught a fine barcalau on the way.

October 18: Shore party landed at 6:30 A. M. for half a day's collecting. During the afternoon had strong winds from the S. SE. and schooner dragged anchor. Beck arranged with the Governor to buy an old anchor to take the place of the one lost at Socorro Island, as our spare anchor was much too heavy to handle, and the kedge, despite the fact that it had some chain wrapped around the shank to give it weight, much too light to hold the schooner even under ordinary conditions. At 3:30 P. M. we weighed anchor and set mainsail and jib to sail up to the wharf and take aboard the anchor. In stopping the vessel's headway with the kedge, one of the flukes broke off. We got a line on to the wharf and ran another to the beach to hold the schooner off, as there was considerable ground swell running. Taking the anchor on board, we shackled it to the starboard chain and let go all lines, heading out of Wreck Bay for Barrington Island. Weather somewhat foggy with S. SE. wind.

October 19: Sighted Barrington Island at 12:15 A. M., we being close under the eastern point of the island when the fog lifted. Tacked ship and stood off the island till 3:00 A. M., when we tacked again and steered S. by W. $\frac{1}{2}$ W. At 4:00 A. M. the island bore S. SW., distant six miles, there being a very strong current setting to the NW. Weather foggy during the night and part of the forenoon. Wind unsteady but mostly from the SE. Had fresh breeze during the forenoon and beat up towards the island. At noon the anchorage bore S., distant three miles. During the afternoon the wind fell light and we drifted away to the northward again. Center of the island bore S. at 8:00 P. M., distant six miles. Had fresh southerly winds during the night and stood close hauled on the starboard tack.

October 20: Tacked ship at midnight standing towards the island with fresh S. SE. wind. Tacked again at 3:30 A. M. At 4:00 A. M. the island bore W. SW. Tacked again at

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6:00 A. M. and headed for the anchorage, where we arrived at 8:00 o'clock, anchoring in 11 fathoms of water. After breakfast, landing party went ashore collecting. Fine sand beach opposite the anchorage, on which were a great number of sea-lions. Pegs driven in the ground for stretching out hides to dry showed us that it had been the camping place of some hunters. Beck shot a couple of goats, always a welcome addition to our larder. On the plateau near the top of the island we found a large colony of land iguanas (*Conolophus pallidus*).⁴ Small birds were found to be somewhat scarce, but hawks quite plentiful. Nelson caught several barcalau while trolling from the skiff.

October 21: Landing party ashore collecting. Went up to the land iguana colony with Gifford to take some pictures and then worked over to the south side of the island with Williams. We found no beaches here, but the coast line ending in precipitous cliffs. For a small island, Barrington has quite a goat population, as we saw many flocks during our trip across the island. The Barrington goats are not nearly so fat and healthy looking as those on Hood. Fine weather, with warm, sunny day.

October 22: All hands keeping the Sabbath. Nelson went out fishing in one of the skiffs and caught four fine big barcalau. Weather fine with light southerly winds.

October 23: Landing party ashore collecting. King and I went in to the iguana colony and collected a series of iguanas, packing them down to the beach in sacks. Still warm and pleasant with light southerly winds.

October 24: Landing party ashore for half a day's collecting, returning at 11:00 A. M., when we weighed anchor and shaped course for Indefatigable Island. At 3:00 P. M. we made up to the SE. coast and dropped anchor in six fathoms at Puerta de la Aguada. Heavy swells made the schooner roll considerably and, further in towards the beach, we could see that hidden reefs caused big breakers to go rolling in. Beck, Nelson, Ochsner and Williams took the big skiff and pulled in for the beach, bringing a water breaker in case any

⁴ On a second visit to Barrington some months later, this colony was found to be nearly exterminated by some natives from Chatham who had visited the island.

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fresh water was found. The party encountered a rough trip, going in between reefs where the breakers rolled in high. The beach itself is fine white sand with gradual slope and well protected by reefs outside, so that it affords an excellent landing place. About a hundred yards back of the beach was found some comparatively fresh water in a half dried-up lagoon surrounded by a thicket of willow-like trees. About half a breaker of water was taken and found fit enough for washing purposes only. The boat's crew had a hard pull back owing to the heavy swells, which sometimes broke close on to the skiff.

October 25: At 5:30 A. M., Parker, who was on anchor watch, rushed down below and called to Nelson to let go the port anchor, as we had started to drag with the one anchor down. The heavy swell at this anchorage makes it a poor berth. The shore party left the schooner at 6:30 A. M., taking both skiffs in. On landing and hauling up the skiffs beyond the high tide line, all hands headed inland towards the base of a hill about two miles off, as in this direction appeared the best looking tortoise country. We found the going very rough, the country being covered with a dense growth of cacti and thorn bushes. Mockingbirds and doves were quite plentiful and tame. Near the base of the hill, Beck discovered a small tortoise, which King and I proceeded to skin, while the rest of the party went looking for more. All hands rounded up early in the afternoon where King and I had skinned the tortoise and Hunter and King carried it to the beach. Beck, Williams and myself started for the beach by another route. We found two tortoises' nests alongside our trail and, digging down, discovered 11 eggs in one and 12 in the other. The eggs are white and spherical, about the size of a billiard ball, and with a hard and thick shell. Close to these nests we found two very large tortoises, one a male and the other a female. The latter we killed and took out the liver to bring back for supper. The male tortoise was turned over on its back and all four legs stretched out and made fast with lashings to the nearby trees so he would not travel inland and make us pack him further on the following day. The shore party got back to the landing place about five o'clock, reaching

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the schooner at six after a hard day's work, but nothing to what the morrow had in store for us. Cloudy weather during the day with S.S.W. winds.

October 26: All hands up early and hoisted the port anchor. After breakfast landing party went ashore and made for the spot where we had killed the tortoise yesterday afternoon. Had some difficulty following the trail, but, by the use of a machete, we improved it for future use. On arriving at the spot where we had tied up the big male tortoise, we discovered that, in his struggles for freedom, he had dug a miniature crater in the ground, broken all the lashings, the ends of which were still fast to the trees, and had traveled a considerable distance up the hill, where we found him after following his trail through the tangled undergrowth. All hands started skinning operations at once and we had both tortoises skinned out by three o'clock in the afternoon. They were then lashed on poles with a blanket wrapped around each end of the pole so that they could be carried on the shoulder. With two men to a tortoise, we began the journey to the landing place over rough lava and through heavy undergrowth, which had to be cut away at times to make way for the packers. The tortoise packing was worked in relays, as it is hard on the shoulders despite the padding of blankets. We packed for about 20 minutes over the rough country and 30 minutes over the smoother parts and then took a relief for the same period. It took about three hours to reach the landing place, after a long and hard journey. We had tortoise liver for supper this evening and found it a little oily and of a peculiar taste, but not at all bad when one becomes accustomed to it. During future times on the expedition we always lived on tortoise liver when obtainable, with the exception of that of the Duncan Island tortoises, which we found to be dark and tasteless. The liver of the Indefatigable tortoise is rich yellow, as is that of the tortoises of all the other islands except Duncan. Weather cloudy during the day with moderate southerly winds.

October 27: Stayed on board with King and worked cleaning up the tortoises taken yesterday. Rest of party ashore collecting. Williams reported seeing a great many hawks about

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and collected seven of them for the ornithologists. While King and I were cleaning up the tortoises, we put the shark hook overboard and hooked a ten-foot shark. Shore party returned at six o'clock. Beck brought in a small live tortoise and reported having found another fair-sized one, which we will pack out tomorrow. Had a slight drizzle today.

October 28: Landing party ashore collecting. Williams, Beck and myself went inland and skinned and packed out the tortoise found yesterday. Our shoulders are getting sore now after the past few days and packing is becoming somewhat painful. We reached the landing place at 6:30 after a hard afternoon's journey.

October 29: All hands turned out at 5:00 A. M. Got under way at 6:00 A. M., shaping course for south Albemarle. Weather slightly foggy with S.S.W. breeze. At 9:00 A. M. the wind hauled to the S.S.E. and we had fine weather the rest of the day. The schooner was kept on the port tack until 7:30 P. M., when we were close on to the coast of Albemarle. We were too late to make an anchorage, so kept beating back and forth between Brattle Island and the south coast of Albemarle. Light winds and clear weather during the night.

October 30: At 8:00 A. M. hove to off the west side of Brattle and landed a shore party. Brattle Island is a broken-down crater rim with steep sides, no sand beaches, and poor landing places. We found a rock we could jump ashore on and scramble up the side of the crater. On reaching the top, we found the island to be crescent-shaped, the inside of the crater rim being precipitous cliffs straight down to the water's edge. We collected some sea iguanas, lizards, snakes, grasshoppers, beetles and scorpions. Very few plants were secured, as the island is almost destitute of vegetation. At 10:45 the schooner ran down before the wind and took off the shore party, when we headed for Turtle Cove, south Albemarle. We arrived at the anchorage at 1:15 P. M., letting go anchor in two fathoms of water. Anchorage is well protected by outlying reefs, but is only suitable for small vessels. Dipped our colors to the Ecuadorian flag on shore and cleared up decks, making ship ready for port. Three men and a Jamaican negro as interpreter boarded the schooner. We asked about obtain-

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ing water ashore and were informed that there is plenty, and good drinking water. Beck, Nelson, Ochsner and White went ashore, returning early in the afternoon with two small watermelons presented to them by Don Antonio Gil, the owner of the settlement. They reported the water as hardly fit to drink but good enough to wash clothes in. A party from the settlement is coming aboard after supper to visit the schooner. Fine, clear weather with S.S.E. winds.

October 31: Started watering ship with south Albemarle water, a rather slow process, as it has to be carried from some little distance inland on mules, two small casks to a mule. Took on 150 gallons during the day. All hands took advantage of the opportunity to wash clothes this morning. This afternoon swung the main boom out to port in order to list the vessel for cleaning and painting. Sunny, pleasant weather and plenty of mosquitoes on board.

November 1: Shore party working about the vicinity of the settlement. Williams, Ochsner and myself went up the road leading to Santo Tomas, the upper settlement situated on the edge of the forested area of Vilamil Mountain. The road slopes very gradually from shore, winding about the lowlands and passing through scattered groves of trees. A native who had a small garden which we passed presented us with a watermelon and a papaya, both of which tasted very good and were quite a luxury to us, as we had not tasted fruit for some little time. Found collecting in our various lines quite productive. Returned to the beach at 4:30 P. M. and had a visit with Don Antonio Gil. The natives were quite interested in looking over our catch and gave Ochsner's pistol a minute examination. Nelson and Parker busy painting the vessel. Listed her over to starboard this morning to clean the water line. Fine, clear weather with S.S.E. winds.

November 2: This morning Beck, King, Williams and myself, taking the small skiff, started westward along the coast from Turtle Cove to pick out some landing places and look for tortoises. We pulled down the coast about seven miles and beached the skiff on a fine sand beach, back of which was a lagoon surrounded by a dense growth of trees. A few wild cattle were about the lagoon, but did not show any fear

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or pay much attention to us. About half a mile inland we found five tortoises, one of which we skinned and carried to the beach, and the others we lashed to poles and carried out alive, a good, hard job. We launched our skiff into shallow water and got all the tortoises into it; then, with Williams and myself at the oars and Beck at the steering oar, started to pull outside the breaker line. With four men and five tortoises in a 14-foot skiff, there was very little freeboard left. Crossing the breaker line, we shipped a sea which very nearly swamped us. King got busy bailing the skiff out and we got safely beyond the breakers. It took us three hours to get back to the schooner. Arriving there at 6:20 P. M., we immediately shifted into dry clothing, as we got a good soaking getting through the surf. Weather clear to partly cloudy.

November 3: Landing parties ashore working about the vicinity of Turtle Cove. Went up the road leading to Santo Tomas again and enjoyed another feast of watermelons given to us by the native in charge of the garden. On arrival at the beach after our day's hunt, we were presented with a chicken and another melon. Nelson brought both skiffs in and we towed one full of water breakers back to the schooner. We found it quite warm about the lower levels, but could see the clouds and mist above on the mountain about the vicinity of Santo Tomas. Nelson busy during the day taking on water. Took on some atoyas today. These are a sort of coarse potato with rather a sweet taste and take the place of the potatoes long since used up. Mosquitos rather troublesome during the night. Cloudy during the day with light southerly winds.

November 4: All hands up at 6:30 A. M. Took skiffs on board and weighed anchor, setting sail for Indefatigable Island. Beat out against a very light southerly wind and did not get out of the channel between south Albemarle and Brattle islands till 1:00 P. M. Nelson busy repairing and painting boats. King and I built a tortoise pen on deck between the main hatch and the foremast, putting several tortoises in it to leave them to skin at odd times. All hands busy working with the specimens secured on Albemarle. At 8:00 P. M. we were about five miles off the west coast of Indefatigable and hauled

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the vessel on the wind for the night. Many shearwaters and petrels flying about the schooner. Fine, clear night.

November 5: At 4:00 A. M. Barrington Island bore E.S.E., distant about two miles. We tacked ship and stood in towards Indefatigable Island with a light S.S.W. wind. Weather foggy at times. At 10:00 A. M. we made up to the anchorage, a small bay on the south coast to the westward of Puerta de la Aguada. On nearing the spot where we were going to let go the anchor, we struck on a submerged reef just about the middle of the bay. No damage done and we hauled the schooner off with the kedge, letting go anchor in two and a half fathoms of water with fine, sandy bottom. We found that at low tide the top of the reef we had struck was just exposed above water. We named this bay *Academy Bay*, after the schooner, and it is now shown as such on the Hydrographic Office charts. From our anchorage, the center of Barrington Island bears E. by S. $\frac{1}{4}$ S. magnetic and the highest peak on Indefatigable N. by W. $\frac{1}{4}$ W. After making ship ready for port, we made a survey of the bay, finding just back of a small sand beach at the head of it a hole of "fresh" water. It is possible to drink this water without getting sick and it can be used in an emergency for watering ship. However, it is not to be recommended except as a last resort. Close by the water-hole, we found the remains of a grass hut, which, we afterwards found out at Vilamil, was used by a negro who had been marooned on the island by Manuel Cobos, the owner of the plantation on Chatham. We saw this man at Vilamil and he told us of being on the island for a whole year, living on raw tortoise meat and what shellfish he could gather. He was discovered by a passing vessel and taken to Vilamil. Several nice lagoons at the end of the bay abounded in fish, crayfish and oysters clinging to the mangroves. Weather cloudy today with occasional showers.

November 6: Shore party landed after breakfast. King and I stayed on board to work on tortoises. Williams reports going inland with party and finding an old trail running through rough country overgrown with cacti and thorn bushes. This trail was lost about a mile or so inland, where a green zone began. This zone abounds in large trees, the

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cacti becoming scarce as the elevation increases. Further up the mountain, creepers and small ferns appeared, the latter growing on the moss-covered rocks. Orchids, one species of which has a pretty pink flower, also put in an appearance. At the lower edge of the green zone Beck found a large tortoise. The shore party returned at 5:30 and was picked up by Nelson in the sailboat. Rain clouds covered the top of the island most of the day and we had a few light showers on the coast during the morning.

November 7: All hands ashore collecting. Went inland with Beck, King and Williams, Beck and I taking provisions, water and blankets for camping over night. Shortly before noon we reached the tortoise Beck found yesterday and started skinning it. After lunch, Williams and King left for the beach with the tortoise, taking five hours to make the trip. Beck and I went further inland looking for tortoises and camped over night in the green belt. It was cool enough to need blankets during the night. There were so many rats running about that we had to tie our provisions up in the trees with ropeyarns. We found in the morning that they had been gnawing on the handles of our skinning knives, which were well soaked with tortoise fat.

November 8: King returned to our camp this morning and, with his assistance, we started to skin and pack out three tortoises which Beck had found. Williams, Ochsner, Stewart, Gifford and Nelson, with three-days' provisions, started up country to try and make the summit of the island. Each man carried, besides provisions and blankets, a canteen and a gallon molasses tin full of water. They followed the regular trail that we packed the tortoises out on and reached the upper edge of the cactus belt where orchids and ferns put in an appearance. The ground became damper and the soil thicker as they ascended. Large trees were much in evidence, with a heavy growth of vines, creepers, and succulent vegetation. A little above this belt the undergrowth became rank and higher, the morning-glory vines causing much difficulty and it became necessary to cut a trail every inch of the way. At 3:00 P. M. camp was pitched and a little place cleared to build a fire, a rather difficult manoeuvre in such a country. After a supper

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of beans, coffee and canned fruit, some collecting was done, and Williams caught some beetles and a sphinx moth. Several bats were seen and some owls heard. Ants and mosquitos made sleeping rather impossible. To make things more interesting, it began raining at dark and a tarpaulin was rigged to keep bedding as dry as possible and to catch rain water for the canteens.

November 9: Beck still camped in the tortoise country, while I was helping to pack out the tortoises King and I had skinned. The mountain climbers still inland. Williams reports, after the first night out, all hands arose early. Stewart and Ochsner started back over the trail, while the rest of the party continued up the mountain. The country they now traversed is fairly level, but vegetation exceedingly thick, even worse than that of Cocos Island, if such could be possible. Nettles became very thick and troublesome and the undergrowth reached seven or eight feet in height. Several showers passed over the climbers during the day and they all got thoroughly drenched. The ascent was very gradual and slow, about four and a half hours for two miles according to the reckoning. Just before noon a halt was made under a grove of trees and the party decided to retrace their steps, as provisions were getting low and progress too slow and difficult. Gifford collected some rails and small land birds en route, also three rats. Williams collected a bat he found sleeping on some vines. The party camped at the same place as the previous night. Rain started falling at supper time and a small bottle of alcohol Williams had for collecting beetles was poured on the fire to keep it going so they were able to cook supper and have a camp fire during the night. Parker reported that during the day the vessel swung on her anchor chain and touched bottom at low tide. Shock not severe, but a little more so than when we struck bottom coming to anchor. The anchor was lifted off the bottom and the schooner hauled a little further out with the kedge. Weather cloudy with light showers today.

November 10: The mountain climbers broke camp at 6:30 A. M. and headed for the beach, collecting as they proceeded down the trail. All hands were thoroughly drenched by passing showers, which made traveling rather uncomfortable.

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Williams and Nelson developed sore feet to make things more interesting. The party reached shore at 12:30 P. M., pretty well tired out. Rest of the ship's company ashore packing out tortoises, a long, hard job at this particular place, as they are found quite a distance inland and the country is very rough. Occasional fine rains and southerly winds during the day.

November 11: All hands, with the exception of Gifford, Nelson and myself, went ashore to pack out a tortoise Beck found yesterday. I stayed on board to get the tortoises already skinned in the pickle tanks and clear up some of the previous catch. The shore party did not get back to the landing till 5:00 P. M. and had one of the largest tortoises taken so far. Cloudy all day with southerly winds.

November 12: Sunday. All hands enjoying a day of rest after a hard week of tortoise packing. Fishing over the side and repairing shoes indulged in by some. King and Williams went about one of the lagoons at the head of the bay and gathered some shells. Gifford ashore taking photographs. Weather cloudy and somewhat sultry today.

November 13: Williams and Gifford set out for the high country with provisions and gear to camp over night, Williams taking a reflector lamp for collecting at night, but not meeting with much success. King, Beck and myself camped in the tortoise country below, where three more tortoises were staked out ready to skin. Fine, clear weather with southerly winds.

November 14: Still ashore with Beck and King skinning and packing out tortoises. While King and I were coming down the trail with our pack, we were overtaken by Williams and Gifford on their way down from the green zone. Williams gave us a lift and reported finding a small tortoise just above the cactus belt. This is the farthest up the mountain we found any. At the beach we met Stewart and Hunter, who had started down ahead of us with another tortoise. Beck still camped inland searching for more tortoises. Williams reported seeing a hawk capture and eat a large centipede. Nelson finished filling water tanks today. Fine, clear weather with southerly winds.

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November 15: Went up with Williams to skin and pack out the small tortoise found yesterday. Reached the tortoise by eleven o'clock and had it skinned out by two. Being a small tortoise, it was easy packing and we reached the landing about five o'clock. Here we met Stewart, Beck and Ochsner, who had packed out another tortoise. Weather during the day exceptionally fine with light southeast winds. Mosquitos rather troublesome at night.

November 16: Most of the shore party collecting around the landing place. Beck, King and Hunter went up country to pack out a small tortoise, the fifteenth and last one taken on this visit to Academy Bay. Nelson went out in the ship's boat to visit a big rock off the main island, where he found a great number of sea-lions and sea iguanas. All hands returned on board for supper at 6:30 P. M. Fine weather with southeast winds.

November 17: All hands turned out early. At 6:30 A. M. set sails and weighed anchor. Tried to beat out from the anchorage, but the wind was too light and we could make no headway. At 8:30 A. M. we dropped anchor under foot and waited till 10:00 A. M., when the wind freshened up we beat out of Academy Bay, getting clear at 11:30. Set course around the island in the direction of Gordon Rocks. Wind freshened in the afternoon and we had a fine sailing breeze. At 4:30 P. M. we dropped anchor in 15 fathoms of water in a little cove on the northeast side of Indefatigable. Found a very strong current running and schooner riding to a taut chain. From this anchorage, the island appears to be very barren and the shore line is marked by several steep cliffs, extending to the water's edge. Numbers of turtles and sharks about the schooner. Lots of shoe repairing going on after our tortoise packing during the past few days. Sky overcast and a cool wind blowing this evening.

November 18: Beck went inland several miles to examine the country and look into the possibility of reaching the top from this anchorage. He found the country very rough and a long, gradual slope up to the wooded portions of the island. Prospects of reaching the top from this side did not look good, so no attempt was made. The lower country was found

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to be extremely desolate and covered with cacti and dried grass. Remnants of land iguana burrows were found, but the burrows were long since deserted. Ochsner found some good fossil collecting in the cliffs close to the anchorage. Strong southerly winds all day, the schooner at times dragging the anchor and making our navigator quite ill at ease.

November 19: All hands taking a day of rest. Nelson and Ochsner went fishing in the sailboat, catching eleven big barcalau, the largest about two feet long and weighing about twelve pounds. Gifford went ashore to take some photographs of fossils embedded in the cliffs. Williams had the shark hook overboard and caught one shark about seven feet long. Strong S.S.E. winds all day.

November 20: All hands ashore collecting until eleven o'clock. Nelson and King gathered some driftwood and brought it on board for the galley. 11:30 A. M. hoisted sails and weighed anchor. Hard work getting the anchor off the bottom. It took us about an hour to get the 30 fathoms of chain in. Set course to pass around the north end of North Seymour Island. Sailing wing and wing and making about seven knots. Early in the afternoon we rounded the end of North Seymour with fine sailing breeze. Breeze then became variable and at times the schooner was almost becalmed. At 4:30 P. M. we let go anchor in a large shallow bay on the southwest side of South Seymour Island in six fathoms of water. Fine, sandy bottom and good holding ground. Went ashore with Beck and Ochsner. Beck shot a couple of goats for fresh meat and Ochsner and I caught a large turtle on the beach. We tried to catch a second one, but it was too close to the water, and, when we grabbed it by the hind flippers as it made for the surf, it gave us a fine bath and some good, hard slaps with its flippers. Fine weather during the day with southeast winds.

November 21: All hands, with the exception of Beck, who stayed aboard to skin birds, ashore collecting. Found land iguanas abundant and scattered all about the island. Collected several of these, putting them in sacks and packing them down to the landing place. Goats were found to be plentiful and not so wild as those on Barrington Island. Just to the northwest

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of our anchorage was a fine lagoon, separated from the ocean by a long sand beach on which the surf broke furiously.⁵ Curlews, turnstones and ducks were found about the lagoon. Land birds seemed to be scarcer than on the other islands we had visited so far. Seymour is a low, flat island covered with lava flows, the whole ground color being a brick red. Nelson beached one of the skiffs and repaired and painted the bottom. Fine weather with southeast winds during the day.

November 22: King and I stayed on board to scrape and paint tubs used for the salt and alum bath to soak tortoises in. Rest of party ashore, doing general collecting. Williams and Beck went to the south end of the island, where there is a narrow and shallow strait separating Seymour from Indefatigable. They brought back some goat meat and two snakes. Late in the afternoon another shore party landed, Nelson and King to hunt goats and the rest of the party to bring back the big skiff, which had been left bottom up on the beach for the paint to dry. Nelson and King returned just before supper with three goats. After supper, returned to the beach with Hunter, Ochsner, Williams and Gifford. Hunter caught seven rats during the evening and Williams quite a collection of beetles and moths. All hands returned to the schooner at 10:00 P. M. Strong southeast winds during most of the day.

November 23: 6:15 A. M. weighed anchor and set course for Daphne Island, a small island to the westward of Seymour, forming an almost perfect crater some 250 feet in height. At 8:00 A. M. Nelson landed the shore party on the south side, the only place that we found accessible. He stood by with the skiff, while the schooner beat to windward of the island. Overhanging ledges seemed to extend around most of the lee side of the island, making it impossible to get up the side. The interior of the crater was found to have a fine floor of white sand about on the same level as the sea. It is almost bare with the exception of a small growth of cactus around its edges. On the floor of the crater was quite a large colony of boobies, and, among the rocks at the top of the rim, many tropic-birds were found nesting. While everybody was busy

⁵ When the writer visited South Seymour in December, 1927, on board of Capt. G. Allan Hancock's yacht *Oaxaca*, this lagoon had entirely disappeared.

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working about the island, Hunter, who happened to be on the rim of the crater, saw the skiff drifting out to sea with nobody in it. He immediately sounded the alarm and, while all hands were making for the landing place, Hunter and I went down towards the spot opposite to where we saw the skiff. We hailed Nelson and he answered back, saying that the skiff had got away from him while he was up on the rocks gathering some shells and he could not get up on the island on account of the overhanging ledge. We informed him that all hands were making for the landing and that we would hail the schooner and pick him up. Circling around to the landing place and finding all the party mustered, we fired off our guns and waved our hats to attract the attention of the schooner as she sailed by. Ochsner and White put off in the small skiff and picked us up. On returning to the schooner and landing some of the party, Gifford, Hunter and I went to pick up Nelson. We found him on a ledge of rock, where he was blocked from going in any direction. He made a dive off into the water and we backed in and picked him up. Hurrying back to the schooner, we got aboard and then ran down before the wind to pick up the lost skiff, which, in the meantime, had drifted far to leeward. As we approached it, a swell suddenly caught it just right, turning it turtle, the oars falling out and floating away. Nelson, Ochsner and Williams put off in the sailboat, which we had towing astern, to rescue the oars and the skiff. After gathering up the oars, the skiff was righted and bailed out. Nelson in the skiff and Ochsner and Williams in the sailboat, started to pull back for the schooner. Our navigator, trying some fancy "seamanship," attempted to pick up the painter of the sailboat while running before the wind. As a consequence the main boom tackle fouled the mast of the boat and swamped it, throwing the occupants into the water. Nelson, coming up close behind in the skiff, rescued them. The sacks of sand used for ballast in the sailboat were dumped overboard and the boat bailed out. The schooner in the meantime was hove to and both boats pulled up and were taken in tow. Course was shaped for Daphne Island and we again landed at 2:30 P. M. The party was called off at 4:30 and the schooner was headed for the coast of Indefatigable, where

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we dropped anchor off the north side in seven fathoms of water. Fine weather during the day with fresh southeast winds.

November 24: Landed with Stewart opposite our anchorage, while Beck, Nelson, Ochsner and King continued down the coast to the eastward, entering a large lagoon extending a half mile or so inland. Many turtles, mantas and sharks were seen in the shallow waters, one of the latter coming towards Nelson while he was in the water gathering shells. King struck the shark with an oar and sent it heading full speed in the opposite direction. At noon I met Williams coming down the beach and stopped and had lunch with him. Continuing on our way back to the landing place, he killed an oyster catcher with a stone and turned it over to the ornithologists. Nelson came in with the skiff and picked up the shore party. All hands aboard for supper at 6:30. Fine, calm and clear night.

November 25: Stayed aboard with King and skinned turtles. Rest of the party ashore opposite anchorage, except Williams, Nelson and Ochsner, who went down to the lagoon collecting shells and turtles. They reported the lagoon to be a wonderful place for turtles, shells, fish, sea urchins, oysters and various forms of marine life. The party brought back quantities of shells and three turtles. Owing to a choppy sea and head wind, it was a long, hard pull back to the schooner. Beck returned on board with three dozen doves for making a dove pie. Weather warm and partly cloudy today. Mosquitoes put in an appearance this evening.

November 26: All hands resting and doing odd jobs about ship. Hair cutting and beard trimming indulged in before breakfast. A party going inland getting gear in shape in order to get an early start in the morning. Roast doves for dinner make a welcome addition to the bill of fare. Light southerly winds during the morning, shifting to northerly in the afternoon.

November 27: Stayed on board with King and skinned turtles. Hunter, Ochsner and Williams, loaded down with provisions and water, made for the interior prepared to camp for two or three days. They found it difficult to push through

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the dense brush and over the lava flows and progress was anything but fast. Late in the afternoon they made camp and had some doves, which they had killed on the way inland, for supper. Four owls, attracted by the light of the camp fire, were shot and a few moths and beetles collected. Party on ship working at various localities. Two went to Daphne Island in the sailboat after birds and two went back to the lagoon, bringing back four more turtles. Fine weather with light, variable winds during the day.

November 28: Stayed on board all day and skinned turtles. Williams and party still up country. They reached an altitude of 1,060 feet above sea level. Warm weather and rough country made further progress impossible, as the water supply was getting too low for comfort. Party started back at noon time. At 5:00 P. M. a fire on the beach announced their arrival and I went in with the skiff to pick them up. Their water supply barely lasted them to the beach. Another visit was made to the lagoon today and two more turtles brought back. We have quite a collection of them on deck now. Fine, clear weather all day with light, variable winds.

November 29: Nelson and Gifford shoved off in the sailboat intending to visit Daphne Island. The wind failed them and course was changed for South Seymour. They collected some birds and three goats for fresh meat. Leaving the island at 4:00 P. M. under a variable breeze, the schooner was reached at 6:30. Beck, Ochsner and Williams went back to the lagoon shooting some petrels on the way. They pulled the skiff into an arm of the lagoon and hooked seven turtles with a gaff. Party returned loaded down with turtles and shells. I stayed on board all day with King and skinned turtles. Fine, clear weather with variable winds.

November 30: Thanksgiving Day! All hands turned out at 6:00 A. M. for 6:30 breakfast, after which we all went ashore to hunt doves for our Thanksgiving dinner. By nine o'clock we mustered at the landing place with 96 doves between us. We plucked and cleaned them on the beach, bringing them on board for the cook, who gave the dishpan an extra good cleaning and used it to bake a dove pie in. Dove and cocoanut pie dinner at 2:00 P. M. After dinner Wil-

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Williams put the shark hook overboard and caught a shark. It made quite a fight, but was pulled to the surface and despatched with a bullet. Pulling it in on deck, it was found to measure nine feet, to have transverse dark stripes on the sides and a wonderful set of sharp teeth. A goat hide and a few balloon fish were found in the stomach. Several other large sharks were seen swimming about the schooner. After a late supper of turtle egg cake, cold goat and fruit, Ochsner gave us a concert on his flute and all hands turned in. Variable winds and calms during the day.

December 1: All hands up for 6:30 breakfast. Hoisted sails and shortened chain to 15 fathoms to await enough breeze to get under way. At 8:00 A. M., under a light breeze, we weighed anchor and shaped course for Duncan Island. Light winds during the morning, but in the afternoon a good sailing breeze sprang up and at 6:00 P. M. we made up to the island. The skiff was put out and soundings taken to buoy an anchorage. Sandy bottom was found close in to shore, so the anchorage was buoyed and the schooner, sailing up to the buoy and coming up into the wind, dropped anchor on the northeast side of the island in eight and a half fathoms of water. Rather cool with strong breeze this evening.

December 2: Stayed on board with King and skinned two turtles, and also a tortoise brought down from the crater by Hunter. Rest of the party ashore collecting. Williams went to the top of the island, taking about two hours for the trip. The sides of the island are very steep, rough, and covered with a dense growth of thorn bushes and cactus, which makes traveling quite difficult. There is no real green zone at the top of the island, but small ferns, moss, and a couple of species of orchids were found growing among the rocks. On the southwest slopes of the island, where most of the tortoises were found, the brush is covered by a heavy growth of lichen, on which they feed. Beck returned late in the afternoon, reporting that he had found 12 tortoises. Strong southeast winds during the day.

December 3: All hands keeping Sabbath. Nelson did some fishing without much success. Rest of party mending clothes,

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cutting hair, etc. Strong winds from the southeast throughout the day.

December 4: Still very windy. Williams stayed on board and helped King and myself skin turtles. Rest of party ashore collecting. Hunter, Ochsner and Stewart brought back a small tortoise apiece. A large school of porpoises passed close to the schooner this afternoon. Weather rather cool and sweaters were worn while working on deck. Beck and Nelson camped ashore this evening. Strong southerly winds throughout the day.

December 5: Stayed on board this morning and skinned turtles. After lunch Williams and I started up the trail loaded down with provisions and gear for camping out. Reaching a small valley near the top of the island, where Beck and Nelson had established a camp, we made our beds out of a tall grass that grew abundantly in the vicinity and prepared for an extended stay. We rigged up a tarpaulin to shelter us from the wind, and, with an abundance of grass for a bed, we had quite a comfortable campsite. The shore party coming in each day brought us water and what food we needed. Nelson acted as camp cook and was a first class one. A plentiful supply of doves was always at hand and we all agreed that we had a first class camp. No mosquitoes here and not many rats about camp at night. The weather is nice and cool and we all sleep under blankets. Beck and Nelson skinning and packing out tortoises today. A meeting place was selected at a point where the trail descended down the side of the island and the tortoises were brought to this point so that the shore party going back to the schooner could pick them up, leaving Beck, Williams, Nelson and myself in camp hunting and skinning.

December 6: In camp on Duncan Island skinning and packing tortoises. We have several staked out about the valley and adjacent hillsides. They are quite common and we have no difficulty in running across them just as fast as we can skin them. We find that they are more abundant on the southern slopes of the island, where there is a heavy growth of moss covering the underbrush. Fine weather, but a little windy at night outside the shelter of our tarpaulin.

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December 7: Still in camp on Duncan, sending down about four or five tortoises a day. Weather continues fine. This afternoon we caught a hawk and made it fast with a rope-yarn to a small dead tree alongside our camp fire. We kept it there during our stay in camp and fed it on tortoise meat every day.

December 8: Today the shore party packed out one large male tortoise alive. One or two skinned and one small live tortoise to a man is the plan here, as the tortoises are usually small and packing is much easier by this method. A plentiful supply of doves every night for supper. Weather still continues fine.

December 9: Williams and I went over on the south slope of the island to skin a tortoise Beck had staked out, but, not finding it, we skinned and carried out another. Nelson also skinned out one and packed it up to our meeting point, finding three or four more on the way. In order to take a day of rest and spend Sunday on the schooner, we all left camp at four o'clock, Beck carrying three small skinned tortoises in a sack, Nelson a medium sized tortoise alive, Williams a small live one, and myself a large skinned one. We got to the landing place about 5:30 and all took a wash for the first time in five days. Beck shot a lot of doves on the way down for our Sunday dinner. 29 tortoises were packed out during the week. We have 12 more staked out in various places. Weather still fine and clear.

December 10: All hands aboard ship keeping the Sabbath. Williams went fishing over the side and caught 20 or more fish of various kinds. Doves and cocoanut pie for Sunday dinner. Weather fine and clear with a little less wind than usual.

December 11: With Beck, Nelson and Williams, went back to camp again to start skinning tortoises. We kept at work till sunset skinning and packing. Nelson is a fine camp cook and we enjoy our dove suppers every night. Full moon tonight with fine, clear weather.

December 12: Skinned and packed tortoises all day. About the middle of the night Williams and I awoke to find rain

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coming down on us. We posthaste got the tarpaulin unrigged and spread over us, then tried to get to sleep as best we could.

December 13: Turned out rather miserable and wet this morning and took a brisk walk down the valley to try and warm up. Weather cleared early and we took off our clothes and hung them up to dry. The rain brought the tortoises out of the thick brush and we saw many walking about feeding on the wet moss and drinking from water holes in the lava.

December 14: Two of the boys from the schooner came in today and helped skin tortoises. Both returned in the afternoon each with a tortoise. The rest of us still keeping up the camp so as to save time going back and forth. Weather improved somewhat today and it is about back to normal.

December 15: Hunter came up to camp today and helped with the tortoises. Rest of the party ashore collecting and helping to carry down the day's kill. The hawk we have for a camp mascot gets a fill of meat every night and probably never lived so high before in its life.

December 16: 18 tortoises packed out today, making a total of 51 for the week. We broke camp this afternoon and packed all the gear down to the landing. We cut the hawk adrift as we left the camp and now it will have to work for a living. The deck of the schooner is now covered with live tortoises and the pickle tubs are full. Took another wash this evening, the first for a week. It was strictly against camp rules to use water for anything except drinking purposes.

December 17: All hands keeping the Sabbath after a hard week. Williams went fishing over the side and caught nine big barcalau, some of which we had for supper. One small shark also hooked. Weather clear with fresh southerly winds.

December 18: All hands up for six o'clock breakfast. Hoisted sails and weighed anchor, setting course for Jarvis Island. We arrived off the northeast side at 1:20 P. M., letting go anchor in 7 fathoms of water. This afternoon helped Nelson and Williams break out some provisions for stowing in the lazaret. We also stowed about 45 turtles and tortoises away in the hold. Rest of party ashore collecting. Hunter reported seeing some tortoise tracks. Strong winds from the S.S.W. this afternoon.

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December 19: Beck, Ochsner, Gifford and Nelson put off in the sailboat to visit James Island, the rest of the party landing on Jervis. I went up to the top of the island with Williams, collecting a snake and some lizards on the way. Close to our anchorage we found a lagoon with several ducks on it and a cave full of sea-lions. Supper was delayed this evening to await the arrival of the boat party. At 7:45 there was no sign of the boat and we put up the anchor light so that they could locate the schooner. At 8:40 they returned, after bucking a head wind all the way across the channel. They brought back two turtles and a sea iguana. The boat was slightly damaged getting out of a lagoon, the keel striking on a submerged reef. Party reported seeing many wild donkeys on the higher slopes of the island and, at the landing place, a large lagoon full of turtles. Weather partly cloudy with fresh southerly winds.

December 20: Nelson and I beached the sailboat opposite our anchorage and repaired the keel. We had repairs completed about 11:00 o'clock and sailed for the turtle lagoon on James Island. Rest of party ashore on Jervis. Beck found the tortoise supposedly left here by Baur in 1892. It was found at the head of a slide of cinders about 500 feet up the hillside. In the afternoon the shore party brought some lashings ashore and pulled the tortoise down the slide, bringing it on board alive. Nelson and I made the run over to James in about an hour and a half, collected four turtles, one of which is about the largest yet taken, and started back for the schooner, reaching it shortly after 6:00 P. M. Weather cloudy with fresh southerly winds.

December 21: Shore party returned to the schooner at 11:30 A. M. and we weighed anchor, setting sail for James Island. We made James Bay at 4:30 P. M. and anchored off a long beach of red sand in nine fathoms of water. We found later on that there was a very strong undertow here and that it was sometimes difficult to get on and off the beach owing to the heavy surf. A large recent lava flow is in sight just to the south of our anchorage. The island appears to be well wooded with a fine green zone

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at the higher elevations. Fine weather with fresh southerly winds during the day.

December 22: Stayed on board all day and skinned turtles. Rest of the party ashore collecting about the vicinity of the bay. Hunter shot 12 ducks on a lagoon just back of the beach. Nelson and Ochsner went up towards the top of the island in search of a pig, but only saw one, which they did not get a shot at. Williams and Gifford went well up into the green zone, finding plenty of large trees and the undergrowth not so thick as that of Indefatigable. This morning, while landing the shore party, took one large turtle off the beach. Fresh southerly winds during the afternoon.

December 23: Stayed on board skinning turtles. Nelson and Ochsner ashore again after pigs and this time got two. King and Beck went out in the skiff shooting petrels. Several large sharks were seen about the schooner feeding on the turtle meat thrown overboard. Fine day with strong southerly winds.

December 24: All hands keeping the Sabbath and mending clothes, shoes, etc. No landing party ashore today. Weather remains the same.

December 25: Christmas Day!! 181 days out from San Francisco. Late breakfast this morning and another holiday. The cook made us plumduff for dinner. Weather about as usual, but a little less wind. This evening it is almost calm.

December 26: With Beck, Williams, Gifford and King, took the big skiff and pulled around towards the north end of the island. Beck and Williams took three days' water and provisions, intending to go inland on a tortoise hunt. We pulled down the coast for some miles and beached the skiff, going through quite a heavy surf. King went inland a couple of miles with Beck and Williams, carrying a can of water, which was cached for the return trip of the tortoise hunters. He then joined Gifford and myself and hunted about the lowlands in the vicinity of our landing place. We found the remains of an old camp just back of the beach, no doubt one used by former tortoise hunters. Carved in the rocks close by the landing, we saw some inscriptions giving the names of

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some of the old New Bedford whalers, the names of the captain and mate, the number of days they were out, and the number of barrels of oil obtained. My note book in which I copied down these data was unfortunately lost, as our skiff was swamped a couple of times getting through the surf. Williams and Beck, after leaving King, proceeded inland through heavy brush and cactus, making camp at 5:00 P. M. at an elevation of about 1,900 feet. There are plenty of trees at this elevation, but no green zone, it being much higher up on this side of the island. Williams reports that, after a sleepless night, in which they saw many rats running about the brush, they ate breakfast and traveled another mile or more to the green zone, camping at the foot of two large trees.

December 27: Stayed on board all day skinning tortoises. Rest of party collecting about the vicinity of the bay. Williams and Beck still camped inland in the green zone. They found a couple of little springs which had long since dried out. Beck took a long tramp around in a northerly direction and found the remains of an old tortoise shell, but no live tortoises nor any signs of them. Several pigs and burros were seen, the latter not especially wild. They make fairly good trails through the brush, which makes traveling somewhat easier at times. Hunter and Ochsner went up country to camp overnight. Weather fine with fresh southerly winds.

December 28: Stayed on board all day skinning tortoises. The rest of the party, with the exception of Beck and Williams, who are still camped up in the green zone, working about the vicinity of James Bay. Beck started out this morning in search of tortoises, leaving Williams collecting around the vicinity of the camp. Beck returned about noon time after an unsuccessful search and they both headed back for the coast, reaching the landing place about five o'clock. Nelson put off in the skiff and picked up everybody ashore, getting back to the schooner at 6:00 o'clock. Wind somewhat variable today, hauling from S. to NW. and in the evening hauling to S. again.

December 29: Beck started for the south side of the island to hunt for tortoises. Williams and I worked about the vicinity of the bay and collected much excellent material. Late

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in the afternoon Nelson and Hunter came ashore with the intention of making camp on the shores of a lagoon back of the beach and get a shot at a pig. Fine, calm evening tonight.

December 30: Went ashore with Williams to visit the camp by the lagoon. The hunters did not succeed in shooting any pigs, nor did they even see or hear any. However, they told us that during the night they were nearly eaten alive by mosquitoes. Hunter shot some ducks and a flamingo. Beck returned this afternoon, having camped out overnight, and reported that he had found no signs of tortoise. All hands aboard for supper this evening. Strong breeze from the southward at sunset.

December 31: All hands keeping the Sabbath. Beck threw a few bird bodies over the side and they attracted a large school of balloon fish, Williams catching several with a dipnet. Lots of shoe repairing and mending of clothes going on today. With Ochsner, Williams, Hunter and King, I stayed up to see the new year in. We ushered it in with the ship's foghorn and turned out all hands and the cook. Weather conditions about the same.

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January 1: New Year's Day and the 188th day of the voyage!! Late breakfast today and no shore party landed. Some of the boys making preparations to go inland tomorrow and camp over night. The cook made us pumpkin pie for supper. Weather cloudy with strong southerly winds.

January 2: All hands, with the exception of White, Parker and myself, landed after breakfast, carrying water and provisions for three days. I landed one boat load and pulled back to the schooner to work on tortoises. The party started for the top of the island, making slow progress at first on account of the heavy packs and thick brush. They halted at the one thousand-foot level for lunch and rest. Proceeding upwards, the brush became thicker and the vines and overhanging branches made progress more difficult. Late in the afternoon some burro trails were followed, which made traveling easier, and at 4:30 P. M. the party pitched camp at the edge of the green zone on a small grassy slope surrounded

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by some fair sized trees. A shelter was erected as protection against the rain, which passed over in showers. Mosquitoes were found to be somewhat troublesome during the night. Weather on the coast fine during the day with some fog at night.

January 3: Stayed on board skinning tortoises. Party in camp were all up early. Ochsner, Williams, Hunter and Gifford made the top of the island, which they found, according to the aneroid, to be 2,750 feet above sea level. On the journey up, they had to make a halt for the fog to thin out, but on reaching the top the weather cleared and they had an excellent view. The masts of the schooner were visible and Bindloe and Abingdon islands could be seen off to the northeastward. The trees on top of the island were found to be somewhat stunted and had their trunks enveloped in ferns and moss. Groves of tree ferns also helped to cap the summit. The party ate lunch on top and, returning to camp, found Nelson with a couple of pigs he had killed while out hunting. Stewart and King started down from camp, collecting on the way. Swinging to the southward, they got out of the brushy country and came down some recent lava flows, which made passable walking at times. Tonight the mountain is fine and clear and plainly visible from the schooner.

January 4: Stayed on board and skinned tortoises. Party camped up the mountain started down this morning. Nelson shot four pigs on the way, the younger ones not being such bad eating. About five o'clock sighted the party on the beach and went in with the skiff to pick them up. While the boat was being loaded, caught two turtles and brought them on board. Fine weather with unsteady winds during the day.

January 5: All hands up for early breakfast. At 7:00 A. M. weighed anchor and set sail for Indefatigable Island. Very light southerly winds during the morning and light unsteady winds during the afternoon. Hoisted the large skiff in on deck for overhauling and repairs. King and myself busy during the day skinning tortoises at odd times. Nelson broke out the hawser and kedge, so in case we get to drifting we can try and pick up bottom somewhere. Beck went out in the small skiff to shoot some birds and brought back about

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40. Great numbers of terns and shearwaters about the schooner. Tonight we had some James Island pig for supper. At midnight we were about five miles from James Bay. Fine weather with light airs and calms during the day.

January 6: Wind freshened up a little during the morning and we worked up towards Nameless Island. About 6:00 P. M. we passed in between Jervis and Duncan islands. Ornithologists busy all day skinning birds and King and I were working on turtles. In the evening the wind fell light again and we made no progress, there being a current setting us to the northward. Weather fine and clear during the day.

January 7: Opened with light airs from the S. SE. The schooner was almost becalmed at times during the day. We made short tacks close on to the coast of Indefatigable and at 6:00 P. M. we were 3 miles southeast of Nameless Island. The wind falling light, we drifted back towards Nameless and at midnight we were within a few cable lengths of it. A great many sharks were about the schooner most of the day, no doubt attracted by the bird bodies being thrown overboard.

January 8: Wind still light with occasional spells of calm. Current setting us to the NW. and at noon the schooner was off the Crossman Islands, which bore by compass SW., distant 2 miles. Some fog during the morning, but weather cleared towards the afternoon. All hands busy standing watches and working with their specimens.

January 9: Opened with a light breeze from the SE. Later in the morning the breeze freshened somewhat and we got some steerage way. At noon we were about one mile off the coast of Indefatigable, the highest peak bearing N. NE. In the evening the wind died down again, leaving us close to the Indefatigable coast and drifting to the northward.

January 10: Opened with occasional calms and light breezes from the SE. The schooner drifted back several miles, not being able to stem the current. At midnight the Crossman Islands bore W. by compass, distant 3 miles. Everybody taking advantage of this time at sea to pack up collections and straighten things up in general.

January 11: A fair sailing breeze during the night brought us up to the coast of Indefatigable, but, in the early morning,

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it died down and we started to drift again. At 8:30 A. M. we let go the kedge in 25 fathoms of water about a quarter of a mile off shore, the main peak of the island bearing N. $\frac{1}{2}$ E. by compass. Beck, Hunter and myself went ashore, pulling the skiff into a small lagoon. We found old signs of tortoises and collected some of the largest sea iguanas we had yet seen, some being over four feet in length. We returned to the schooner before noon and, hoisting the kedge, beat up against a light wind towards Academy Bay, where at 7:00 P. M. we dropped anchor in three fathoms of water. The mosquitoes gave us a warm welcome this evening and kept us awake most of the night.

January 12: All hands ashore collecting and filling water breakers at the water hole. After breakfast Nelson left the schooner in the sailboat bound for South Albemarle to get a load of atoyas, as our stock is running low. He made Brattle Island towards evening and anchored under the lee of it for the night, starting at 2:00 o'clock in the morning for Vilamil, which he reached early in the afternoon. Light southerly winds and fine weather throughout the day.

January 13: Went inland with Beck in search of tortoises and found two, which we tied up for the morrow. The rest of the party collecting around the landing place and helping to water the schooner. Hawks are plentiful around the water-hole and Ochsner and Parker killed nine of them by knocking them down with sticks. This evening we burned a smudge fire in the cabin to get some relief from the mosquitoes. Fine, clear weather continues.

January 14: Late breakfast, today being Sunday. Went ashore with Williams and King to wash clothes at the water-hole. Beck went to a nearby lagoon to take some photographs and gathered some crayfish, which the cook made into a salad for supper. Hunter fumigated the cabin with cyanide and killed a number of bedbugs, flies and cockroaches, not to say anything of the mosquitoes. Some of the party mending shoes and making preparations for another trip inland. Weather somewhat warmer today.

January 15: Went inland with Beck and King to skin and carry out a tortoise. Ochsner, Gifford, Hunter and Williams

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started for the green zone prepared to stay over night. They pitched camp in the same spot as on their former visit. This afternoon Nelson left South Albemarle in the sailboat with a cargo of atoyas. He beat out to Brattle Island and anchored under the lee of it for the night. Beck, King and myself skinned out a large tortoise and packed it down to the coast, arriving there about 5:30.

January 16: Ochsner, Gifford, Hunter and Williams camped in the green zone trying to make the top of the island. They collected several rats, a barn owl and some rails. In the afternoon they pitched camp in the middle of the trail they were cutting and made a shelter of Canna leaves to keep them dry during the night. With the help of some kerosene, they started a fire to cook supper. Cooking is somewhat difficult, as the forest is kept continually wet by the clouds that cover the top of the island most of the time. After a supper of beans, coffee and canned fruit, all hands turned in early. It started raining before daybreak and, despite their shelter, all hands got thoroughly drenched. Beck, King and myself were up in the cactus belt skinning and packing out a tortoise. Nelson, in the sailboat, left Brattle Island at 7:00 A. M. and made for the southwest coast of Indefatigable, which he reached at 10:00 P. M. and anchored for the night. Fresh to moderate southerly winds and fine weather during the day.

January 17: Beck, King and myself started back for the cactus belt to skin and pack out another tortoise. We got back to the landing place with it about 5:00 o'clock. At 6:00 o'clock this morning Nelson started for the schooner and reached it early in the afternoon. He brought back 300 pounds of atoyas. We find these a very necessary addition to our stores, as they are the only fresh vegetable we can procure. The party up the mountain, after a wet and disagreeable night, found it impossible to make any headway against the jungle and started down the trail they had cut. On reaching dry country, a halt was made to prepare some coffee and flap-jacks, as cooking in the wet zone is next to impossible. They made camp for the night and were nearly eaten alive by mosquitoes. Weather about as usual, warm and sunny at the lower levels.

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January 18: After breakfast, started back for the cactus belt with Beck and King to pack out another tortoise. The party up the mountain started for the coast this morning, collecting as they came down the trail. They reported having reached an elevation of 1,100 feet, when the jungle became impassable, and it became necessary to cut trail all the time. The green zone extends considerably lower on the south side of the island. Nelson busy during the day watering ship. Fine weather still continues.

January 19: All hands, with the exception of Gifford and Nelson, went up to the cactus belt to skin and pack out two large tortoises Beck tied up yesterday. Nelson busy watering ship. About 9:00 o'clock we reached the tortoises and skinning operations began at once. We had them skinned out by noon and, after lunch, started for the coast, reaching the landing place about 5:00 o'clock. Weather fine with light southerly winds.

January 20: Went up to the cactus belt again with Beck, Nelson, Ochsner, Hunter and Williams to skin and pack out another tortoise. Got back to the landing place at 4:00 o'clock and all hands enjoyed a swim. Weather quite warm today and somewhat sultry. All hands aboard for supper this evening, and, being Saturday and the last day of tortoise packing for some time, we celebrated the event by having codfish balls and plumduff.

January 21: All hands keeping the Sabbath. Williams did some fishing over the side and a swimming party went over to the lagoon at the west side of the bay. Being Sunday, we had late supper this evening. For some unknown reason the mosquitoes were not so troublesome this evening, which is a great relief.

January 22: Beck, King, Williams and I went ashore to wash clothes at the waterhole, returning to the vessel at 10:30. Rest of party cleaning off the schooner's sides. At 11:00 A. M. hoisted all boats and weighed anchor. We beat out of Academy Bay against a light breeze and set course for Chatham Island. Light breeze from the S.S.E. during the day. At 8:00 P. M. Barrington Island bore by compass S. by W., distant eight miles.

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January 23: A fair breeze during the early morning brought us up under the lee side of Chatham Island. Worked vessel close in shore to get the benefit of the current. At noon Kicker Rock bore SW. by W., distant two miles. Had some rain this morning and we spread the awning to try and catch some rain for drinking water, as the Indefatigable water is none too good. On the higher parts of Chatham it appeared to be raining most of the day. At midnight Kicker Rock bore by compass SE. by E., distant two miles.

January 24: Opened with light winds from the southward, hauling to S.SE. and freshening up about 2:00 A. M. Steered SW. till 5:00 A. M., then tacked ship and stood inshore. At 8:00 A. M. Kicker Rock bore N.NW., distant one mile. Somewhat hazy with light showers during the morning. Wind freshened from the southward about noon and we made short tacks along the coast towards Wreck Bay, which we reached at 4:45 P. M., letting go anchor in five fathoms of water. Light rains and cloudy weather during the afternoon. Ochsner and Gifford went ashore after supper to see about getting our mail. The plantation owner informed them that it would be brought down to us in the morning.

January 25: Raining this morning and it is impossible to do much work. Beck went up to the settlement to visit the plantation owner. Williams and I spent the morning collecting along the road to the hacienda, which is now quite muddy from the recent rains. The mail came down about noon and we spent the rest of the day reading letters and entertaining company. The Governor came aboard this evening for supper. Raining most of the day.

January 26: All hands ashore collecting. Williams and I went up the road to the hacienda. On the way we met several natives going down to see the schooner and bringing along bunches of bananas for us. Returned to the beach in time to board the schooner for supper, Beck and Williams staying on shore to have theirs with the plantation manager. Cloudy and threatening all day, but no rain. Light S.SE. winds.

January 27: All hands ashore collecting. Went with Williams to the higher levels of the island and found everything soaking wet and had very poor collecting. We therefore re-

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turned to the lower levels, collecting along the road on the way down to the coast. The Governor sent us some more bananas today. We now have about 14 bunches hung on the strongback of the after davits. Weather clearing somewhat today. Fresh S.S.E. winds.

January 28: All hands keeping the Sabbath. Most of us writing letters and entertaining company. One of the men we met on Charles Island hunting cattle came aboard to see us. A Barbados negro was given a hymn book, which he seemed to prize highly. Some more bananas brought aboard today. This afternoon Beck and Williams went ashore to see the plantation manager about settling for the anchor we had purchased from him and partly paid for. He was given some flour and soap, both of which articles are very much in demand. Beck bought some native coffee to take the place of the "coffee" in the ship's stores. The manager asked us to be very careful to see that no firearms got into the possession of the natives. Fine weather today with light S.S.E. winds.

January 29: All hands ashore collecting. Williams and I went to the top of the island. The summit is a symmetrical cone, covered with a heavy growth of club moss a foot or so in height. The plateau surrounding the cone is covered with beautiful green pastures and hedges of agave, the sides of the cone itself having many small tree ferns, which give it a somewhat tropical aspect. From the top, several small lakes are visible, and the country in general is excellent for the many cattle which could be seen scattered about the plateau. We found a remarkable absence of bird life and no reptiles at all. Gathering some land shells, which we found clinging to the moss, we started down towards the coast, arriving there at 5:00 o'clock. The natives brought us more bananas today and also some pineapples. Fine weather all day with fresh S.S.E. winds.

January 30: All hands turned out early and, after breakfast, got the vessel ready for sea. Beck and Williams went ashore to bring some supplies to the plantation manager and purchase some more coffee: 100 pounds for \$15 gold. Some barrel hoops to repair the tubs used for soaking tortoises were also purchased. On the return of the boat from shore, we

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hove short and were about to get under way when a sloop was sighted heading in, so we waited to see if she came from the mainland and had any mail for us. As she passed in, we hailed her and found out that she had come from Indefatigable and Seymour islands. On board could be seen a bunch of live goats, no doubt taken off of Seymour. Proceeding to break out the anchor, we sighted a native in a canoe paddling towards us for all he was worth, so the schooner was held close to the wind until he came alongside. He had two pineapples for us, presented with the compliments of the Governor. He no doubt was fully aware what would happen if he failed to deliver the pineapples: hence the burst of speed. Sky clouded over this afternoon and we had light SE. winds. Sailing full and by, bound for Hood Island. Considerable swell running. Passed McGowans Reef at 3:00 P. M., $2\frac{1}{2}$ miles to windward. Tacked ship at 4:30 P. M. and made short tacks during the night.

January 31: Opened with fresh breeze from the SE. At 6:00 A. M. Hood Island bore E. $\frac{1}{2}$ S., distant eight miles. Worked the schooner up to the north side of the island, making short tacks close inshore. Found a very strong current running between Hood and Gardner islands. At 2:30 P. M. let go anchor in three fathoms of water in Gardner Bay. Cleared up decks and spread awning. Quite a ground swell and schooner rolls considerably. Shore party landed and Beck and Nelson went after goats for fresh meat. Williams and I went in at 5:00 o'clock and picked up the shore party. We shipped a couple of heavy seas getting off the beach, but no damage was done. Nelson got two goats and Beck one. Chatham Island pineapples and Hood Island goats for supper. Wind fresh from the SE. at nightfall.

February 1: Beck, King, Gifford, Williams and myself took the large skiff and pulled down to the albatross colony. It being impossible to beach the skiff here on account of the rocky coast, I landed the shore party and then pulled out and anchored the skiff to await the return of the hunters. No albatrosses were taken, but a number of tropic-birds, gulls and their eggs were collected. We pulled back to the schooner in a fairly heavy sea and then picked up the other shore party

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from opposite the anchorage. Goat meat every night for supper and occasional banana pies made from our Chatham Island bananas make everybody have a good appetite after some of the menus we have had. Nelson busy during the day oiling down the decks. Weather partly cloudy with SE. winds.

February 2: Ornithologists busy on board skinning sea-birds taken at the albatross colony yesterday. King stayed on board and skinned a turtle. Williams and I went inland towards the top of the island and found the country quite dry. We are always in hopes of picking up a tortoise and try to visit the greener parts of the island. Nelson ashore again after more goats. It is necessary to get fresh meat each day, as in this climate it will not keep any length of time. Fine, clear weather and southerly winds.

February 3: All hands, with the exception of Beck and Ochsner, landed on Gardner Island, the latter landing on Hood. Gardner is a very small island exactly the same type as Hood, but lacks the abundance of cacti. Williams and I spent the day on the island and found many interesting specimens. The remainder of the party left at noon. Beck returned from the top of Hood, having found some old tortoise bones and brought in a supply of doves for the galley. Ochsner brought in a couple of goats, so we are living high for the present. Nelson on board today oiling down decks. Fine, clear weather with SE. winds.

February 4: All hands keeping the Sabbath. Williams put the shark hook overboard this morning, but met with no success. Beck spent part of the day ashore taking photographs. Fine, clear weather with S.SE. winds.

February 5: With Beck and Williams, again visited the albatross colony. Rest of shore party landed opposite the anchorage. Williams kept the boat this time and I landed, gathering in a couple of sacks full of sea iguanas and a small turtle found on the beach a little further down the coast. Beck collected a lot of seabirds and shot a couple of goats for the mess. We returned to the schooner early in the afternoon. Nelson finished oiling down decks. Weather partly cloudy with S.SE. winds.

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February 6: Again visited the albatross colony and held the skiff while the ornithologists were ashore collecting. Williams went to the top of the island and reported seeing many goats. Ornithologists collected a number of seabirds, but reported seeing no albatrosses. Some old eggs were the only signs of the colony at this date. Ochsner came aboard this afternoon with two goats for the mess. Several large sharks seen about the schooner today. Fine weather with SE. winds.

February 7: All hands turned out at 5:00 A. M. After coffee, weighed anchor and set sail for Freshwater Bay, Chatham Island. Light winds from the SE. during the morning, freshening towards noon. At 2:30 tacked ship about one mile SE. of Whale Rock and found we were not able to make the bay. At 4:00 P. M. shaped course for Bassa Point on the northwest side of the island, where we let go anchor at 7:00 P. M. in five and a half fathoms of water. Full moon and smooth sea at nightfall.

February 8: All hands ashore collecting. Williams and I went up to the thousand-foot level and found the country very rough and the brush too thick to get through in places. The ground had been soaked by recent rains. It started to rain early in the afternoon and continued till we reached the landing place, soaked to the skin. Nelson came in to pick us up and, as the sea was quite choppy, we shipped two or three getting off and got an additional soaking. Nelson busy during the day cleaning off seaweed from the waterline. Southerly winds with squalls and rain throughout the afternoon.

February 9: All hands up for early breakfast. At 7:00 A. M. weighed anchor and shaped our course for Sappho Cove, about four miles to the northwest. We had light winds and calms throughout the morning and did not reach the cove until 1:45 P. M., when we let go anchor in two fathoms of water. Here we found the sloop *Josephine Cobos* from the Chatham plantation at anchor. The crew is making a new rudder and cleaning off the sides. Beck, Hunter and Gifford went ashore and collected some birds and nests. Mosquitoes seem to be plentiful here and we have discovered that the tank of fresh water at present in use is full of mosquito larvæ.

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Light breezes from all quarters of the compass and fine weather throughout the day.

February 10: All hands ashore collecting. Beck returned late in the afternoon, having found a live tortoise, the first that had been taken on Chatham in many years. Nelson went out in the skiff to take some soundings and found that there is only six or seven feet of water at low tide where the chart shows 15 feet. Williams went ashore to do some night collecting, and, as the tide was going out, the skiff was left high and dry, so he could not get it off alone. He built a fire to summon help and King and I went in and helped launch the skiff. Light showers during the morning, clearing up somewhat in the afternoon. The *Josephine Cobos* left for Wreck Bay at 4:00 P. M. Mosquitoes are thick and troublesome, both on board and on shore.

February 11: Late breakfast, today being Sunday. Put out the kedge this morning and hove the schooner a little further into the cove, as she was touching bottom at low water. Later on, we put out the kedge again and hauled her further in, as she touched on the reef forming the outside of the cove. Beck and Gifford ashore taking photographs. Fine, clear weather and plenty of mosquitoes still with us.

February 12: All hands ashore collecting. Nelson put out the kedge astern to hold the schooner in position, as she was touching bottom at low tide. This morning Beck and I started inland on a tortoise hunt with all the water we could carry and three days' provisions, King helping us in part way and then returning to the schooner. We traveled through rough country much overgrown with cacti and thorn bushes. It started raining early in the afternoon and we both got thoroughly soaked. Towards nightfall we began to think of a camping place for the night, and, as we walked through the brush, came upon a fairly good sized tree protruding from a hole in the ground. Getting onto the top branches and climbing down, we found ourselves in an immense cave. As it was just about getting dusk, we gathered some firewood and built a fire to cook supper and to dry our clothes. The cave proved really to be a huge lava tunnel, and, getting well in from the mouth where the ground was perfectly dry, we lay down and

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went to sleep, waiting for the morning to explore our camping place.

February 13: Most of the party ashore collecting. Nelson remained on board to paint the counter at low water. Beck and I awoke early in the morning and, after a breakfast of hardtack and coffee, started in to explore the cave or tunnel we were so lucky to find. It proved to be some 50 or 60 yards long and in it the skeletons of 17 tortoises were found. They had no doubt fallen down the mouth of the tunnel and starved to death many years ago. We took two of the best preserved shells and all the best preserved skulls and bones, packing them in moss for transportation back to the schooner. Leaving our gear and specimens in camp, we started off to look for some living tortoises, but after traveling all day through the heavy undergrowth returned to camp without having seen a sign of a living tortoise. We cooked supper and turned in after a hard day's work. Weather cloudy throughout the day, but fortunately for us it did not rain.

February 14: Nelson busy cleaning and painting the schooner's waterline. The schooner was aground at low water and her stern lifted about a foot. Beck and I turned out early in the morning and, after a breakfast of coffee, hardtack and beans, started back for the coast, each carrying a tortoise skeleton. Our provisions being exhausted and our water supply being low, relieved us of much weight and traveling was fairly easy. Reaching the landing place at 5:00 P. M., we found that Nelson had shifted the schooner's berth into deeper water and held her in place with the kedge. Weather somewhat unsettled with some passing showers and rain squalls.

February 15: All hands up at 6:30 to get the schooner under way. We hoisted all boats and hove short, but, the wind being very light and unsteady, we were not able to break out the anchor till 7:30, when we got a light wind from the eastward. The schooner touched bottom passing out of the cove, but no damage was done. The wind freshened during the afternoon and we tacked ship twice as it hauled around. At 6:00 P. M. Finger Point bore by compass S., distant five miles. During the night the wind hauled SE. but was not

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steady. At midnight Finger Point bore S. by W., distant seven miles.

February 16: Opened with clear weather and unsteady winds from the southeast. We worked up to the north end of Chatham during the day and at 6:00 P. M. were close inshore to the westward of Terrapin Roads. At midnight the north end of the island bore by compass S.S.E., distant six miles.

February 17: Opened with very light winds from the E.S.E. and a strong current was sweeping down towards Finger Point again. At noon we were uncomfortably near to Kicker Rock and came very near being swept against it by the strong current. However, fortune favored us, and, as we passed very close to it, the wind freshened and we tacked off shore. At 4:00 P. M. we passed Finger Point again and made short tacks close inshore. At midnight Finger Point bore by compass SW. by S. $\frac{1}{2}$ S., distant five miles. Fine weather during the day.

February 18: Opened with clear weather and light variable winds. This morning, making short tacks, we worked the schooner close inshore and at noon we were within one mile of North Cape. However, owing to the strong current against us, we could make but little progress and at midnight Finger Point bore S.S.W. by compass, distant about 20 miles.

February 19: Opened with fine weather and light southeasterly winds. Took advantage of the fine weather to oil down the jib-boom, also the fore, main and staysail booms. Tacked ship at 5:30 P. M., Mount Pitt bearing by compass SW. $\frac{1}{2}$ W., distant about 25 miles. Fine, clear evening and we have an excellent view of the Southern Cross to the southeastward.

February 20: Opened with light southeasterly winds and fine weather. At 5:30 A. M. tacked ship, and again at 11:00 A. M., when Mount Pitt bore by compass S. by E., distant eight miles. At 1:00 P. M. shaped course for Wreck Bay, as we found it impossible to round the east point of the island. The wind died down at 8:00 o'clock and we had only small puffs during the night. At midnight Kicker Rock bore NE. by N., distant $4\frac{1}{2}$ miles.

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February 21: Very light unsteady winds and calms up to 4:00 A. M. Towards daybreak the wind steadied down to the southeast and we made up to Wreck Bay, letting go anchor at 6:15 in five fathoms of water. After breakfast, a shore party landed, King and I staying on board to skin a couple of tortoises. Hunter went up to the hacienda after mail and found that a revolution had taken place in Ecuador since our last visit to Chatham and that a new Governor had arrived. Fine weather and quite warm today.

February 22: Shore party landed and went up to the hacienda. A negro, who acted as our interpreter when occasion offered, guided us south of the plantation to a small lake, out of which flowed a stream in the direction of Freshwater Bay. We found the country similar to that around the main peak, great open grass lands. In this type of country there seemed to be a scarcity of bird life and no reptiles at all. Some sailors from the trading schooner *Manuel J. Cobos* came aboard this afternoon and brought us some bananas. The talk of the village is the revolution in Ecuador. Fine weather during the day with southeast winds during the morning, shifting to the westward in the afternoon.

February 23: All hands ashore collecting. Gifford and I went up to the hacienda and purchased some Guayaquil chocolate at the store. The natives brought us down several bunches of bananas, for which we gave them some hardtack in return. Today the thermometer went to about 80°, the highest we have seen it since arriving in the Galapagos. Williams ashore this evening collecting with a light and securing many excellent specimens of moths. Fine weather with southeast winds during the morning, changing to northwest in the afternoon.

February 24: All hands up for early breakfast. Beck went ashore to settle accounts with the plantation manager and Williams to get food for some caterpillars he is raising. Everybody was back on board at 8:00 A. M. and we hove short. Just as we were about to break out the anchor, the Governor, who came to say good-bye, and a boatload of sailors from the trading schooner came alongside with a load of bananas. When Beck asked them if they wanted some whiskey there

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was a loud and immediate response of "Si si señor!!" Our stock of whiskey in the medicine chest being somewhat depleted, Ochsner and I arose to the occasion, and, hurrying down below, got some clean alcohol out of a barrel, diluting it to about 75 per cent. A hurried trip to the galley was then made, and some juice bailed out of a dish of stewed prunes gave our home brew the desired coloring. After shaking well, we poured the concoction into a whiskey bottle. In less time than it takes to tell it, we had a drink that seemed to hit just the right spot, as the sailors drank it down in great gulps. The Governor made some queer facial contortions and seemed to think all was not well, as he declined a second drink, a thing never heard of in these latitudes. However, he was too polite to say anything and thanked us profusely. Bidding our guests good-bye, we got under way, and, clearing the entrance to Wreck Bay, shaped our course for Charles Island. Weather fine during the day with light southeast winds. At midnight Enderby Island bore by compass SE. $\frac{1}{2}$ E., distant two miles.

February 25: Opened with light unsteady winds. Shaped course around Onslow Island and at 2:00 A. M. let go anchor in Comorant Bay in $5\frac{1}{2}$ fathoms of water. Strong current setting to the S. SE. After breakfast, Beck and Gifford went ashore to take photographs. There is a fine lagoon opposite our anchorage with great flocks of ducks and flamingos on it. Today being Sunday, we had late dinner and kept the rest of the day a holiday.

February 26: All hands up for early breakfast. Nelson and Gifford took the small skiff and pulled over to Champion Island, the rest of the shore party landing at the lagoon. Beck, Hunter and Ochsner got about 24 flamingos and some ducks between them. All hands were back on board at 2:15 and we set sail for Black Beach Roads. The wind failed us shortly after we got under way and at 8:00 P. M. we were a mile or so off Black Beach. At 10:00 P. M. we let go anchor about half a mile to the southwestward of the anchorage in ten fathoms of water.

February 27: Weighed anchor at 7:00 A. M., shaping course for the Black Beach anchorage. We made the anchorage at 7:45 and let go anchor in seven fathoms of water. Had

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flamingo for breakfast this morning. It tastes much like duck, but is a little more dry and has somewhat of an oily taste. Nelson and Ochsner went up to the spring to camp over night and get some fresh beef. Rainy weather all morning, clearing up about noon. The island is fine and green at the present time and showers are frequent.

February 28: All hands ashore collecting. Williams and I started up to the spring and, on the way, met Nelson and Ochsner coming down the trail loaded with beef and pork, as they had also killed a pig. They returned during the afternoon and we all spent the night in some caves near the spring. No doubt one of these was the cave inhabited by Patrick Watkins, the Irishman who lived on Charles in 1809. We found sheves and a fireplace cut out of the solid lava. Flies and fleas made things interesting for us in our new-found home. Nelson acted as camp cook and we had beef, flapjacks and coffee for supper. We heard many wild dogs and donkeys during the night, most of which was spent keeping the fleas on the move.

March 1: All hands up at daybreak. Hunter went after more beef, while I returned to the schooner to skin out a tortoise which had died yesterday. Williams and King brought a load of lemons and oranges down to the schooner. An immense lemon thicket covering the plateau on top of the island and the orange trees growing about the spring furnish us with a plentiful supply of fruit. Nelson and Ochsner stayed in camp for the night. Fine, warm weather with light variable winds.

March 2: All hands ashore collecting and gathering oranges and lemons for the mess. At 5:30 P. M. we weighed anchor and set sail for south Albemarle. Steered NW. up to midnight, when Brattle Island bore by compass N.NE., distant three miles. Fine weather during the day.

March 3: Opened with fine weather and light northeast winds, freshening towards afternoon. Schooner drifting to the westward on account of the strong current. We tried to beat up close inshore, but, the wind failing us at 7:30 P. M., we let go anchor off the Albemarle coast in eight fathoms of water. Brattle Island bore by compass E. by N. $\frac{3}{4}$ N.

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March 4: Opened with moderate easterly winds and fine, clear weather. After breakfast, Beck and Nelson went ashore opposite our anchorage to see if the country was worth while investigating, but found nothing that would warrant our stopping. At 10:00 A. M. got under way and beat up the coast against a light breeze. We arrived outside Turtle Cove at 6:00 P. M. and let go anchor in five fathoms, as the captain of the brigantine *Nellie*, which we found at anchor, told us that the bottom of the cove had changed owing to a recent earthquake.

March 5: Landing party ashore after breakfast. The brigantine *Nellie* started loading cattle for Guayaquil this morning. The captain expects to take about 60 head and get them over alive. The *Nellie* has an auxiliary wood-burning engine and makes about five knots an hour in calm weather. Nelson brought some ship's stores ashore this morning to trade for tortoises. Flour is very much in demand and most welcome. All hands aboard for supper. Weather fine and clear with light easterly winds.

March 6: Landing party ashore after breakfast. One of the natives guided Ochsner to a bed of fossils some distance inland. Williams and I went up the trail leading to Santo Tomas, the settlement part way up the mountain, and returned to the beach early in the afternoon. The crew of the *Nellie* is busy loading supplies and fodder for the cattle. This evening we sent some letters over to the captain, as he expects to get off in the morning. Several of us sleeping on deck now, as it is quite warm below in the cabin. Fine weather during the day with light southerly winds.

March 7: The brigantine sailed at 8:00 o'clock this morning for Guayaquil. Hunter and Gifford left for Santo Tomas, Don Antonio Gil, the owner of the settlement, having furnished them with a couple of mules. Rest of the party collecting about the vicinity of Vilamil. Nelson busy watering ship. The water here is salty and tastes strong of sulphur. The best you can say for it is that you can drink it without getting sick. Herr Brugermann, the German book-keeper for Don Antonio, came aboard this evening for supper. Fine weather with fresh southerly winds during the day.

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March 8: Beck left at noon to go up to Santo Tomas and stay over Saturday. Hunter and Gifford returned this afternoon, reporting that they had seen hundreds of tortoise skeletons scattered along the trail and about the waterholes. No living tortoises were seen below the settlement and the natives report them as having been killed off in that vicinity. However, they report them common about the top of the mountain. I stayed on board today and made some fresh pickle for soaking the tortoises. King helping Nelson water the schooner. Don Antonio Gil came aboard and had supper with us this evening. Fine weather with light southerly winds.

March 9: King and Nelson working all day watering ship. Williams and I worked along the beach to the westward of the settlement and came back early in the afternoon to help with the water breakers. Ochsner and Beck still up at Santo Tomas. Rest of party working about the settlement. Fine weather with strong easterly winds.

March 10: This morning we finished watering ship, having taken on board 1,050 gallons. Beck and Ochsner returned from Santo Tomas early this afternoon and all hands were on board by 3:00 P. M., when we weighed anchor and proceeded down the coast to the westward of Vilamil, anchoring off a long sand beach at 7:45 P. M. in seven fathoms of water. Light southerly winds during the day, falling calm about 5:00 o'clock, when we drifted with the current. A long rolling swell makes the anchorage rather uncomfortable as the schooner lies broadside to. Had a light shower of rain during the night.

March 11: Went ashore with Beck and located two tortoises, returning to the schooner at noon. Rest of party keeping the Sabbath. Not much work done today, as it is the first Sunday we have taken off for some time. Weather fine and warm. Calm during the morning with fresh southeast wind during the afternoon.

March 12: All hands, with the exception of Parker and White, who were left in charge of the schooner, took both skiffs and, pulling down the coast about two miles, landed at low tide on a fine sandy beach, back of which we found the wreck of an old grass house, probably the last remains of

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what is known as the Old Cobos Settlement. A large lagoon was found just back of the beach, surrounded by a growth of mangroves and big trees. Tracks of wild cattle were all about the edges and two tortoises were found half buried in the mud close to the bank. Hunter, Nelson and Ochsner went hunting cattle and shot a large, red and white bull. We had some of the meat for supper and wouldn't blame anyone for being a vegetarian if they had no other meat than Albemarle bull. Beck, King and myself went after tortoises and found several. They are not rare in this particular locality. We skinned out one large male and packed it down to the beach, so we could pick it up with the skiff as we pulled back to the schooner. Making our way back to the landing, we got lost in the mangrove swamp, and, as the tide was coming in, we had to make our way through the tops of the trees. Finally arriving at the skiff, we found it floundering about in the mangroves and half full of water. Nelson, Hunter, Ochsner and Gifford had already left for the schooner. With the assistance of Williams, we beached the skiff and dumped the water out. Making a good getaway through the breakers, we reached the schooner shortly after six o'clock, having left ashore the tortoise we had skinned in hopes that we can pick it up in the morning. King is a little under the weather this evening, having drunk too much water out of a mudhole near the lagoon. We heard several wild dogs barking while we were ashore, but none came near enough for us to see them. Quite warm now and nearly everybody is sleeping on deck tonight.

March 13: Had heavy showers this morning with the wind blowing off the land. Went ashore with Beck, Nelson and Gifford. Beck and I, taking advantage of the low tide, packed the tortoise we skinned yesterday around by the beach to the landing place. We then went inland after more tortoises, while Nelson went after fresh meat for the mess. We found one tortoise, and, roughly skinning it out, made full speed for the coast, reaching the skiff just before dark. Nelson and Gifford were awaiting us, the former having shot a fine young calf. Launching our boat, we pulled back to the schooner, arriving at 7:30.

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March 14: All hands up for early breakfast. At 7:00 A. M. weighed anchor and set course for Cape Rose, a few miles to the westward of our present position. At 9:00 A. M. we got a very light breeze from the southwest, which held on during the day and fell to calm late in the afternoon. We had the big skiff out to try and pull the schooner's head around, but could make no headway and at 6:00 P. M. let go anchor in 13 fathoms of water $\frac{1}{4}$ of a mile to the eastward of Cape Rose. King and I finished skinning the tortoise taken yesterday. Hunter busy mending shoes for the party, he being the official shoemaker. Early in the evening some rain squalls passed over us and the top of Iguana Cove Mountain was buried in clouds. Considerable swell running and it makes the anchorage somewhat uncomfortable. A great many sea turtles about this part of the coast, more than we have seen any place so far.

March 15: A landing party, consisting of Nelson, Hunter, Williams and Stewart, pulled down the coast, passing the westerly point of Cape Rose, but could find no sand beach or place to land, as the surf was too high on the rough boulder-strewn shoreline. Returning to a point nearer our anchorage, they made a landing in the shelter of a small rocky point. Beck, King, Ochsner and myself, in another boat, kept on down the coast past Cape Rose and found a small cove and sand beach which afforded excellent landing. We found a small rough lava plateau well cut up with cattle trails and with a heavy growth of cactus. It proved to be excellent tortoise country, as we found six during the day. We returned to the schooner at 7:00 P. M. with six tortoises and four men in a 14-foot skiff, rather a heavy load, as it left us with about an inch freeboard. Weather partly cloudy with a few light showers. Light southwest winds in the afternoon, with the morning calm.

March 16: All hands up for early breakfast. At 7:00 A. M. weighed anchor and set sail for Iguana Cove. Very light winds and calms. At 8:30 we had to let go the kedge to prevent drifting ashore. At 9:30, a light westerly breeze sprang up and we hove up the kedge and stood off shore. By 6:00 P. M. we had made three miles to the westward. King

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and I skinned tortoises all day. Wind freshened during the evening and hauled towards the north. Several small rain squalls passed over us.

March 17: Opened with calms and light airs, the breeze freshening later in the morning. At 10:00 A. M. we made up to Iguana Cove and sent a boat in to sound for an anchorage. Nine and a half fathoms with rocky bottom was found about 150 yards off shore and the spot was buoyed. At noon we brought the schooner up to the buoy and let go anchor. There is a very heavy surf breaking over the point and the schooner rolls considerably. Iguana Cove Mountain towers above us and is so green and densely covered with trees that it somewhat resembles the tropical jungle of Cocos Island. Many steep rocky cliffs, bare of any vegetation, can be seen on the mountain side. The shoreline here is most forbidding and ends in abrupt cliffs with heavy rollers breaking against them. Beck, William, King and myself took the small skiff and pulled about two miles down the coast, the remainder of the shore party landing at the cove. We located a small boulder beach, on which we landed with no great difficulty, and proceeded inland after tortoises. Back of the beach we found a small flat covered with a dense growth of brush and cactus, which made it necessary in places to follow the tortoise trails on hands and knees. We had been hunting only a short time when we found three large males. The three of them were only a very short distance from the beach, so we drove them down to the landing place by prodding them with sticks. As it was getting late in the afternoon, Beck decided to load all three tortoises into the skiff and pull back to the schooner. As the tortoises were quite large and heavy, we could not launch the skiff with all three in it, so Beck thought we might be able to parbuckle two of them in. We put the first one in and launched the skiff, then started to parbuckle tortoise number two into it. However, this was not so easily done. We listed over the skiff and got the tortoise part way in when its front leg got foul of a thwart and we could neither get it in nor out. During this procedure our skiff turned broadside on to the swell and, an extra heavy roller coming in, the skiff capsized, throwing both tortoises, the oars,

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and the remaining contents of the skiff overboard. Fortunately, King, who could not swim, was left on the beach and saw the tortoises and some of the oars go floating out to sea. Beck could not swim either, but hung on to the stern of the skiff. Both Williams and myself felt perfectly at home in the water and finally got the skiff righted. Beck crawled in over the stern and, finding one oar which had caught in a thwart as the skiff went over, got it into action and sculled for the shore. We all landed on a rough ledge of boulders, getting somewhat cut up on the sharp edges of the lava, but otherwise none the worse for wear. Beck took the painter and started hauling the skiff along the edge of the rocks, when an extra heavy swell coming in crashed it down on a sharp point of rock, smashing it to pieces. All that was left on the painter was the ringbolt. As it would soon be dark, we decided to make down the coast for the schooner. Beck had lost his shoes and had to go in stocking feet. Fortunately I had left my pants, shoes and hat on the beach, and was a lot better off, having lost only a shirt. As we walked through the brush in the dark, I felt as if there was not a cactus or thorn bush on all Albemarle Island that I missed running into. However, I wouldn't have traded places with Beck for anything. When it got to be 7:00 o'clock and the boys on the schooner saw no signs of the skiff returning, a searching party was organized and Nelson, Ochsner and Hunter put off in the other skiff to hunt for us. As we were making our way slowly along the coast, we heard a whistle and, looking out on the water, saw a light. We then hailed the boat and told them to keep away from the shore, that we had lost our boat and that nobody was hurt. Nelson answered back and told us he would pick us up at the cove. After what seemed a journey that would never end, we reached the cove at 9:15, tired out and very hungry. The skiff picked us up and brought us on board for a much-belated supper. Thus ended the 263rd and about the most exciting day of the voyage. Fresh S.S.E. winds make us practically anchored on a lee shore and the navigator is quite ill at ease.

March 18: Sunday morning and late breakfast. Williams, happening to go on deck, sighted one of the tortoises we lost

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yesterday drifting down past the anchorage. It was bobbing about like a cork, its long neck protruding far out of the water and giving it a very grotesque appearance. We put out a boat to the rescue, and, making a line fast around one of its legs, towed it to the schooner. Several pieces of our skiff came floating by as we proceeded with our tow, but we sighted nothing worth picking up. Later on another tortoise was sighted and we put out in the skiff to rescue it. This one had evidently had a rough passage, as its shell was broken and punctured by being battered against the rocks. A great number of pelicans, sharks and penguins about the schooner today. We had two good showers of rain during the day and the weather is quite sultry. Showers continued during the night, making us sleep below.

March 19: Beck and I went down the coast to where we lost the skiff and picked up some wreckage. We also got the tortoise left behind on Saturday. We found two more, which we tied up till we can come back for them tomorrow. Rest of the party landed at Iguana Cove. Rainy weather with light variable winds.

March 20: With Beck, Ochsner and Nelson, went down to where we tied up the tortoises yesterday. The coast is bold and rocky where the tortoises were found, and, as they were too big and heavy to pack out alive, we lowered them over the cliffs with ropes and let them drift out to sea, where we picked them up with the skiff and towed them back to the schooner. We got three tortoises off and got back to the vessel at 5:30 P. M. King stayed on board and skinned out one of the tortoises we picked up yesterday, it having died of its injuries. Weather calm and sultry with cloudy sky. One shower passed over us this afternoon.

March 21: Landing party ashore collecting about the cove. Beck and Ochsner brought back some large sea iguanas and Hunter several penguins. King and I stayed on board and skinned out two tortoises which died of injuries received while being lowered over the cliffs into the water. At 10:00 A. M. all hands returned on board and we weighed anchor, shaping our course for Narborough Island. Had a fair breeze and at times the schooner logged seven knots. At sundown

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we hove the schooner on the wind off the east end of Narborough. Weather clear and warm with southerly winds, becoming almost calm towards midnight.

March 22: Opened with calms and light airs, the wind freshening towards noon. At daybreak we were not far from last night's position. At 8:00 A. M. we made up to the east point of the island and sent a party ashore, the schooner standing off to windward of the landing place. The island appears as one large cone of black lava with a few patches of green on the sides. The top is often above the clouds. Landing party returned at noon, having found a colony of flightless cormorants and a herd of sea-lions. They report the country most desolate, the worst we have seen so far. Our course was now shaped for Tagus Cove, north Albemarle, which was reached at 3:30 P. M., and we let go anchor in 14 fathoms of water with fine sandy bottom. Tagus Cove, named after H. M. S. *Tagus*, is by far the the best anchorage in the islands. Beck, Ochsner and Williams pulled over to the waterhole, which is just outside the cove, and about a mile below the entrance. They returned at 5:00 P. M., having found the main waterhole was full. We get about a barrel of water a day out of it and find it of much better quality than that taken aboard at Vilamil or Academy Bay. King and I stayed on board all day skinning tortoises. Weather warm today with fresh northerly winds at nightfall.

March 23: Opened with strong gusts of wind blowing from between the hills about the cove and causing the schooner to swing to her moorings in all directions. Nelson and I stayed on board and overhauled the fore hold, restowing some of the provisions to make room for tortoises. Beck and King went inland and found two tortoises, one of which they skinned and packed out. Rest of party working at various jobs on board the vessel. The wind went down towards evening and the cove became as calm as a millpond.

March 24: Went inland with Beck and King to skin and pack out one of the tortoises found yesterday. Rest of party ashore doing general collecting. Nelson took aboard 50 gallons of water from the waterhole. Unsettled fresh winds inside the cove. Outside, it is steady from the S.S.W. Some of

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us went swimming over the side, but did not stay in long on account of the sharks, which appear to be numerous about here, several having been sighted today.

March 25: Late breakfast, today being Sunday. Helped Nelson water the schooner. Took 50 gallons aboard. Williams put a line over the side and caught several fine fish, which we had for supper. Light variable winds during the day and calm weather in the evening.

March 26: Beck, Ochsner, Stewart, Gifford and Williams, carrying all the provisions and water possible, started inland to climb Tagus Cove Mountain, King and I going part way in with them and then leaving to skin and pack out a tortoise we had tied up. The mountain climbers followed up the lava flows, in order to avoid the heavy brush, and reached the summit at 5:00 P. M. after a rough trip. Part way up the mountain, Beck and Williams, having found a large, green tree with plenty of soil around the base and leaves to shelter them from the sun, made camp. While Williams collected about their camp, Beck went out hunting for tortoises, finding three fair sized ones close at hand. Nelson fumigated the schooner today, as the bedbugs, dermestes, flies and cockroaches were getting too thick for comfort. He also took advantage of the smooth water in the cove to clean off the waterline. Weather fine and clear with light unsteady winds.

March 27: Nelson opened up the cabin and hatches this morning and found plenty of cockroaches still alive, the dose of sulphur not having been strong enough. However, we got rid of some, as well as a quantity of flies. Shore party still camped up the mountain. Williams left camp this morning and made the summit, reaching it shortly after 10:00 o'clock. No real green zone was found, but maidenhair ferns and moss grew in cracks and crevasses in the lava. The summit of the mountain is comparatively flat, with a fine crater about two and one-half miles in diameter, some hundreds of feet deep, and abruptly sunken in the middle. Williams returned to camp at noon and helped Beck carry a tortoise down the lava flow, where King and I met them with a supply of water, and packed the tortoise out to the coast. Beck and Williams re-

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turned to camp for the night. Fine weather throughout the day with light, unsteady winds and calms.

March 28: King, Hunter, Ochsner and myself went up the mountain to pack out two tortoises. Beck and Williams had one skinned out when we arrived at their camp. Skinning out the other, we packed them both down to the coast. Beck and Williams broke camp and returned to the schooner, all hands reaching the landing place at 6:00 o'clock. Nelson let out the port anchor and chain to lighten the bow so the water line about the cutwater could be painted. All hands aboard for supper, the first time in some days. Fine, clear weather with light unsteady winds.

March 29: Beck, King and myself went up the mountain to re-establish camp and hunt for tortoises. Beck found two small tortoises while en route to the foot of the mountain and carried them back to the landing place, returning to the foot of the lava flow, which we used for a trail up the mountain and camped there over night. Williams and I went along up to the tree where the original camp was made and had to go with a cold supper and no fire at night, as Beck had the entire supply of matches with him. Nelson busy on board the schooner, painted the waterline on the port side and greased down the foremast. Fine, clear weather with light westerly winds.

March 30: Beck, King and myself in camp skinning tortoises. Four of the party came inland and packed out two tortoises we had skinned for them on arrival at camp. We have two more tied up ready to skin and pack out tomorrow. The tortoise packers reached the landing at 5:30. The tortoises here are not thick-shelled and heavy and the country is fairly open, so packing is not as hard a job as in some places. However, the distance they have to be packed makes up for this to some extent. Today Nelson gave the waterline another coat of paint and greased the mainmast. Took 50 gallons of water on board today. Fine, clear weather with light airs and calms.

March 31: Two of the party came in to help out with one of the tortoises. We had two skinned out by noon and broke camp. King and I on one tortoise and Hunter and Ochsner on the other, started for the coast, arriving at the landing at

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6:00 o'clock. Nelson painted the waterline on the starboard and took on board 50 gallons of water. Fine, clear weather with light variable winds and calms.

April 1: Nelson gave the starboard side a second coat of paint and took on 50 gallons of water. Williams put over the fish line and caught several nice fish, some of which we had for supper. All hands resting during the afternoon, it being Sunday. I mended some clothes and shoes today after a week of tortoise packing. Fine, clear weather with light variable winds.

April 2: Went up the mountain with King to pack out another tortoise we tied up Saturday. Beck, Hunter and Nelson left in the sailboat for Narborough Island with provisions and water to last about four days. They landed at Mangrove Point late in the afternoon, Beck and Hunter starting up the mountain, leaving Nelson in charge of the boat. King and I reached the tortoise we had tied up late in the afternoon and made camp for the night. Fine weather with light variable winds.

April 3: Party still collecting on Narborough. Hunter returned to the coast at 3:00 o'clock this afternoon and found Nelson collecting some flightless cormorants and lizards. Beck kept on towards the top of the mountain and found a tortoise in an isolated patch of green brush. He skinned this tortoise out and packed it down to the coast on the return trip. Reaching the top of the crater, he found the rim covered with high grass and ferns. On the floor of the crater two small lakes were visible. Beck estimated the crater to be about 1,500 feet deep. King and I started skinning our tortoise out after breakfast, finishing the job about noon. We started down for the landing place shortly after lunch, reaching it about 5:00 o'clock. Williams attended to watering the schooner in Nelson's absence and took aboard 50 gallons. Fine, clear weather with calms and light airs.

April 4: Boat party to Narborough still working that island, Hunter and Nelson about the beach and Beck up the mountain. King and I went around the north side of Tagus Cove Mountain to try and locate a tortoise Beck had tied up.

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but could not find it. We had a fine view of Cape Berkeley, a high, steep promontory to the northward. The entire north slope of Tagus Cove Mountain appeared to be fresh lava. We had to give up our search for the tortoise about the middle of the afternoon, so as to reach the coast before dark. Fine breeze from the northeast this afternoon, followed by calms towards evening.

April 5: King and I went to the base of the mountain hunting for land iguanas and found two. They are very scarce on Albemarle, having been killed off by the wild dogs. Williams and Stewart went inland prepared to camp overnight. They made camp at our regular camp tree and were so bothered by mosquitoes they were unable to sleep. Williams spent the night collecting about the camp fire. Beck returned to the landing place on Narborough at 5:00 P. M. and found Hunter and Nelson awaiting him. After supper, the boat was loaded and at 7:00 P. M. the return journey to the vessel was begun. Light winds and calms made progress slow and they did not reach the vessel till the following afternoon.

April 6: Stayed on board all day and worked on tortoises and iguanas. Williams and Stewart arrived on board early this afternoon, having been up most of the night collecting. At 5:00 o'clock this afternoon the party from Narborough returned, having taken nearly 24 hours to make the journey across the channel. Beck reported land iguanas to be quite common and found them clear up on top of the mountain. The tortoise was the only one seen by any of the party. Light breezes and calms throughout the day.

April 7: Went inland with Beck and King to get the tortoise we were hunting for the other day. We found it a long way from the place where we were looking, according to the directions given by Beck. Skinning out this tortoise, we packed it back to the landing place. This makes the fourteenth tortoise from Tagus Cove. Some of the party mending shoes and making preparations for a trip to Banks Bay, north Albemarle. Light, unsteady winds during the day, falling calm towards sundown.

April 8: All hands keeping the Sabbath after a week of tortoise packing. Fishing and mending clothes and shoes

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indulged in. Light, unsteady winds and calms during the day.

April 9: All hands up for early breakfast in order to prepare for the trip to Banks Bay. Nelson and I broke out provisions from the hold and loaded the sailboat, stowing two water breakers and provisions for a week in her. We covered the cargo with a tarpaulin, just leaving room for the two of us in the cockpit. We shoved off from the schooner at 2:00 P. M. under a light head wind and beat up the coast towards Banks Bay. At 10:00 P. M. it was dead calm and a heavy fog closed in on us. We were too heavily loaded to make good use of the oars, so we both kept a sharp lookout during the night in order not to be carried ashore by the current. The rest of the party, with the exception of Stewart and Parker, who were left aboard to look after the vessel, preparing to shove off in the skiff early in the morning.

April 10: All hands aboard the schooner up at 2:00 A. M. The boat party shoved off in the skiff with all the collecting gear and camp equipment. They pulled up the coast, taking turns at the steering oar, and passed through the fog bank that Nelson and I got caught in. Towards day-break, the fog lifting, we got a bearing of Banks Bay Mountain. At 9:00 o'clock we sighted the skiff coming up the coast. She soon overhauled us and took us in tow. At 10:00 o'clock we pulled into a quiet, shallow bight, and anchored the sailboat about a hundred yards off a beach of black sand on which were five small sea-turtles, many pelicans, boobies, sea iguanas, and a few flightless cormorants close to the landing place. We unloaded the sailboat and established camp on the beach back of the high tide line, putting up a tent for the bird skinners. At 12:30 the cook announced lunch was ready. After our breakfast of one hardtack and a drink of water, we needed no second invitation. On finishing a good, big meal, consisting of beans, hardtack and canned fruit, Nelson, Beck, King and myself started off for the mountain, loaded down with water and provisions. At 5:30 we pitched camp close by a small crater, from which a recent lava flow had come. While hunting around before dark, we found one tortoise close at hand and tied it up to a tree. Weather somewhat

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hazy during the day, with fog settling down on us towards evening.

April 11: Beck started out after breakfast to hunt for more tortoises, while I skinned the one found yesterday. Nelson and King returned to the beach after more water and provisions. They arrived back at camp towards evening, bringing Williams with them. Beck also returned towards evening, bringing in a small female tortoise. Weather fairly clear during the day with heavy fog settling down during the night.

April 12: Hunter, Ochsner and Gifford came in to our camp this morning to pack out the tortoise skinned yesterday. They also took the small female tortoise out alive. Beck, King, Nelson and I went out hunting for more. Two were found today, one of which we skinned and packed back to camp. We have tortoise liver every night and send some out to the boys on the beach every time a tortoise goes out. Fog still settles down on our camp early each evening, the days being quite pleasant.

April 13: Nelson, King and myself broke camp and packed two tortoises down to the beach, Beck going off in another direction to hunt for more. We met Williams on the way inland to help pack out some more. As there were no more found up to the time we left camp, he returned to the beach with us and prepared for a two-days' journey inland. Beck returned to the beach camp at 5:30 and reported having found two more tortoises, besides the one he brought in. Williams, Ochsner and Gifford went inland and camped at our regular camping place in order to get an early start in the morning. Weather still pleasant during the day, the fog settling down towards evening.

April 14: Beck, Nelson, King and myself started inland to skin out the remaining two tortoises and pack them out to the beach. The party camped inland, turned out early and started up the mountain, following an old lava flow in order to avoid the thick undergrowth. At 11:30, after reaching an altitude of 2,300 feet, a halt was made for lunch. Owing to lack of water, it was decided not to try another night out, so the party returned to the inland camp early in the afternoon.

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Here they found Hunter cooking supper. After a hearty camp meal, they set out for the beach, arriving there just before sundown. Our party, packing out the two tortoises, arrived just ahead of them. Weather continues as usual.

April 15: Today being Sunday, all hands took a rest and enjoyed a swim. This morning the sailboat broke away from its moorings and we had to launch the skiff and go to the rescue. We reached it just as it was about to hit on a reef and fortunately saved it from being damaged. Weather about as usual.

April 16: Beck and I started off towards a small hill, between the main mountain and Cape Berkeley, to look over the country for tortoises. After spending some time without finding signs of any, we headed back towards the main camp. During the forenoon, the rest of the party broke camp, loading supplies, camp gear, all the tortoises and three turtles in the sailboat. Nelson and White started off in it at 1:00 P. M., heading towards Tagus Cove, but made little progress on account of the light breeze. Beck and I reached camp early in the afternoon and got the remaining gear loaded into the skiff. We left the beach at 4:30 P. M. and started pulling down the coast towards Tagus Cove. We pulled one oar to a man, each taking a turn at the steering oar. Just about a mile below the cove we made our camp in, we picked up the sailboat and took it in tow. Taking half-hour turns at the oars, we reached the schooner at midnight, after a passage through a perfectly calm sea. We roused out Stewart and Parker, who prepared a midnight supper of stew, pie and cookies. All hands then turned in after a well-earned rest. Fine, calm weather with no fog this evening.

April 17: Turned out late this morning for 9:00 o'clock breakfast. All hands, with the exception of Hunter, White and Parker preparing for a trip to Narborough in the sailboat. Shoes had to be mended and provisions broke out for a two-days' trip. Leaving the schooner at 1:30 P. M., we made Mangrove Bay at 5:00 P. M. As we found no landing place to the northward, Beck decided to camp here for the night. We landed on a coarse sand beach in a well protected little cove and anchored our boat a few yards off, the last man

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swimming ashore. Williams and I found a turtle on the beach and killed it, cutting off some turtle steaks for supper. A light drizzle started after we landed and kept on well into the night. As Williams and I were asleep under a tarpaulin, a rat got underneath it and started to run over us. We both woke up to see what all the fuss was about and Williams caught the rat in his butterfly net, thus adding another specimen to the collection. When the rain ceased, we spent a more comfortable night.

April 18: All hands up for early breakfast. As there was no sailing breeze in evidence, we started to pull up towards the north end of the island. We made a landing on a rough, rocky coast, where the vegetation came down to the seashore, Nelson standing by with the boat while the landing party worked on shore. We have not seen such a desolate place since arriving in the Galapagos. Land iguanas seem to be plentiful and we collected about 20 specimens, besides a snake and some lizards. We left this spot about 3:00 o'clock and started to pull back towards our camp, stopping on the way at a low, rocky point, to get some flightless cormorants. We collected a number of these, putting them in sacks with holes cut in, so that they could stick their heads out. On arrival at camp at 5:00 o'clock, King and Williams killed another turtle, cutting off some steaks for supper. Building a fire on the beach, we turned in for the night. Quite foggy, but no rain. Beck intended leaving this afternoon for Tagus Cove, but the fog made this impracticable.

April 19: All hands turned out early. Beck and Gifford went after more cormorants, while the rest of us stowed all the gear and specimens in the sailboat preparatory to our trip across the channel to Tagus Cove. We got under way at 8:00 o'clock with a very light breeze and turned to on the oars in order to keep warm, as well as make a little headway. The fog was quite heavy and we steered by compass alone. Towards 10:00 o'clock the fog lifted and we got a bearing of Tagus Cove Mountain, finding we were on the right course. Later in the morning, a little breeze springing up, we made some headway and reached the schooner at 11:15, finding all

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well on board. At 1:45 P. M. we weighed anchor and set sail for Vilamil, south Albemarle, with a fine breeze from the north, which soon shifted ahead and died down towards sunset, when it turned calm. At midnight the mountain peak of Narborough bore W. by N. $\frac{1}{2}$ N.

April 20: Opened with light unsteady winds and heavy fog, which cleared about 9:00 A. M. Wind freshened from the SW. later on in the morning, and at 6:00 P. M. Point Christopher bore by compass SE., distant two miles. The fog shut down on us again towards evening and, with a good sailing breeze, we stood off the land on the port tack.

April 21: Fog cleared off early and we got a bearing of Essex Point bearing by compass N.NE., distant about 22 miles. The schooner was put on the starboard tack and at 6:00 P. M. the point bore N., distant about 15 miles. Weather cloudy and threatening, but no rain.

April 22: Opened with light variable winds and fog. It fell calm during the afternoon and we made but little headway, the current setting us back towards evening. Many shearwaters circling about the schooner most of the day. At nightfall we were in a dead calm. King and I keep busy all day skinning tortoises, when not standing our watch at the wheel.

April 23: Opened with calm and clear weather. This morning the skiff was put out and Beck went shooting birds. A light breeze sprang up about 11:00 o'clock, but it soon fell calm again. Great numbers of shearwaters circling about the schooner most of the day and an immense school of tuna and a smaller one of porpoises crossed our bow as we lay becalmed. At midnight we were about eight miles S. of Essex Point.

April 24: Dead calm up till 7:00 A. M., when a light breeze set in from the westward and continued throughout the day. Beck went out in the skiff this morning and shot a number of birds. Towards evening, we made up to the Albemarle coast and at 6:15 let go anchor in seven fathoms of water about nine miles to the westward of Vilamil, the wind having died out. Cape Rose bore by compass SW. by W.

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$\frac{1}{2}$ W. and an unchartered rock some miles off shore E.S.E. Heavy swells make the anchorage somewhat uncomfortable.

April 25: All hands, except Parker and White, ashore to collect and get some fresh beef. Beck, King and myself went hunting for tortoises and Nelson and Hunter went after beef. They saw several cattle they could not get a shot at, but managed to bring down a young bull close to the landing place. They carried several loads of meat down to the skiff and we brought it on board to see what could be done in the way of salting it. Some distance inland Beck ran across a tortoise, which King and I skinned and packed out. We saw several dogs, which were not particularly wild and which we could easily have killed had we the rifle with us. We left the landing at 6:15 P. M., encountering heavy swells well off the beach. The skiff had a narrow escape, just getting over the crest of one as it broke. We got back to the schooner at 7:05 with one tortoise and a load of meat. Full of mosquitoes on shore about the ruins of the Old Cobos Settlement. We found the wreck of an old stone tortoise pen and several thatched houses just back of the beach. Partly cloudy with light southerly breezes, followed by calm towards evening.

April 26: All hands ashore again at 7:00 o'clock. We landed at the same place as yesterday, Nelson and Hunter going after beef. King and I skinned and packed out another tortoise. We returned to the schooner at 6:00 P. M. with the tortoise and a load of cow meat for salting down. Fine day with light southerly winds.

April 27: Opened with dead calm. At 10:00 A. M. we hove short and hoisted the fore and main sails to await a breeze. At 1:00 P. M. we got under way with a very light breeze and shaped our course for Vilamil. After making about four miles to the eastward, the breeze died down and, at 5:00 P. M., we let go anchor in seven fathoms of water about three-quarters of a mile off shore.

April 28: Opened calm with cloudy sky. Beck and Gifford went out in the skiff shooting birds. About noon a very light southerly breeze sprang up and we hoisted anchor, again shaping our course for Vilamil. We could make no headway,

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so at 1:00 o'clock we let go the anchor again so as not to get too close inshore. At 3:00 P. M. we weighed anchor again for another try, but in ten minutes let it go again, not being able to make any headway. At 6:00 P. M. we lowered the sails and secured the vessel for the night.

April 29: Opened with dead calm. A very light breeze which came up towards noon died down shortly afterwards and the schooner lay with the chain up and down. Along the stretch of fine sand beach we were anchored opposite, we saw several cows with calves following them along, but the surf was too high to attempt a landing, so we lost a good chance to get some beef.

April 30: Opened with cloudy sky and light southeast wind. At 7:30 A. M. we weighed anchor and again set course for Vilamil. Weather cleared and wind freshened towards noon. We made the anchorage at Vilamil at 2:30 P. M., letting go anchor in four fathoms of water. When the schooner swung to her moorings she was too close to the reef, so we got out the kedge and hauled her off a little. The Ecuadorian gunboat *Cotapaxi* was at anchor, and from her we got a Guayaquil paper announcing the fact that there had been a terrific earthquake in San Francisco and that the soldiers had been ordered out on the streets. This was the first and all the news of the great disaster that we had for some time. The *Cotapaxi* sailed at 3:30 P. M. for Guayaquil via Chatham Island. One of her crew died of yellow fever today and was buried ashore.

May 1: Nelson and King watering ship today. Rest of party ashore collecting, Williams and I going up the trail leading to Santo Tomas. Hunter brought in two flamingos he shot on a lagoon to the westward of the settlement. Fine, warm day with E.S.E. winds.

May 2: Nelson and King watering ship all day. Williams and I went to a small grove of banana trees about a mile inland and spent the day collecting. This afternoon we took on 15 bunches of bananas and some chocolate Beck purchased from Don Antonio Gil. Fine weather with E.S.E. winds.

May 3: Finished watering ship this morning and took on several sacks of atoyas, some coffee and some sulphur for fu-

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migrating, the latter coming from the sulphur deposit in the crater of Vilamil Mountain. We exchanged tins of flour for these stores. A fine easterly breeze springing up, we made haste to get under way and at 1:00 P. M. weighed anchor, shaping our course for Chatham Island. The wind fell light during the afternoon and at 9:00 P. M. hauled to the northeast. At midnight Brattle Island bore N., distant 6 miles.

May 4: Opened with very light and variable winds, becoming calm towards noon, when we were practically becalmed. At 8:00 o'clock this morning Charles Island bore by compass E.NE. and Essex Point, Albemarle Island, W.NW. A slight current is setting us to the westward. Great numbers of tuna, the largest schools we have so far seen, keep passing by at intervals. Nelson tried fishing from the flying-jib boom and succeeded in hooking a large one, which carried away the line and got away. King tried to harpoon one, but the shaft of the harpoon bent and he also lost his fish. Beck and Gifford went out in the skiff shooting birds. Still calm at nightfall.

May 5: Opened with a faint breeze from the eastward. Hauled the schooner on the wind, steering full and by. Big schools of tuna about the schooner most of the day. Nelson tried hooking one from the flying-jib boom and finally succeeded in getting hold of a big fellow. He slacked up the line till we got the fish alongside amidships, when we got a running bowline around it and hauled it on board. It measured five feet four inches in length. On opening up the stomach, it was found to contain the remains of small crabs. The cook cut some steaks off for supper and they proved to be excellent eating. The flesh was a little dry, but solid, and quite tasty. Williams tried harpooning one from the martingale stay, but he had the same experience as King, the shaft of the harpoon bending when it struck the fish. After supper this evening, Nelson hooked two more tuna, but they straightened out the hooks and got away. Our stock of bananas is all starting to ripen at once, so we are feasting on them for the time being. Had the skiff out again this morning shooting birds and Beck brought in a number of shearwaters. Lat. $1^{\circ} 56' S.$, Long. $90^{\circ} 46' W.$ at meridian.

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May 6: Opened with very light unsteady breezes from the southeast. A light fog during the night. Schooner making little headway. Tuna still about the vessel, but in greatly reduced numbers. Tried fishing off the flying-jib boom again, but with no success. Weather quite cool. Lat. $2^{\circ} 35' S.$, Long. $90^{\circ} 32'$ at meridian.

May 7: Opened with very light easterly breeze followed by calms. At 8:00 A. M. the wind hauled to E. by S. and we tacked ship. Wind continued light throughout the day and at 8:00 P. M. hauled around to N.NW. It remained light throughout the night and we had considerable southeast swell. Lat. $2^{\circ} 52' S.$, Long. $90^{\circ} 22' W.$ at meridian.

May 8: Opened with light unsteady winds and heavy swell from the southeast. Had a light rain during the morning. Nelson caught two fine tuna from the flying-jib boom. We watched the tuna chasing flyingfish. They would jump clear out of the water, catching their prey just as the fish would hit the water on the downward plunge. Beck and Gifford out in the skiff this morning shooting birds. Lat. $2^{\circ} 29' S.$, Long. $90^{\circ} 4' W.$ at meridian.

May 9: Opened with light winds, cloudy weather and a heavy swell from the southeast. At 11:00 A. M. the main boom-tackle carried away and we lowered all sails, except the foresail, to prevent wear. Beck and Gifford out in the skiff this morning to collect birds. Nelson and I rove off a new boom-tackle and repaired a rip in the mainsail. We set all sails again at 6:00 P. M., when a light breeze from the southeast sprang up. At 9:00 P. M. it hauled to the northward. The sky cleared this afternoon and we had sun a good part of the time. Schools of tuna still with us. Our bananas are ripening faster than we can eat them, so the cook made banana pie for supper. Lat. $2^{\circ} 23' S.$, Long. $90^{\circ} 08' W.$ at meridian.

May 10: Opened with light breeze and calms, continuing the same throughout the day. Beck had the skiff out this morning collecting birds. Tuna and bonitas in great numbers about the schooner. Williams tried fishing from the flying-jib boom and caught a fine bonita. King tried his luck with the harpoon and this time struck a fine tuna, the harpoon

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going clean through the fish. At 6:00 P. M. the wind hauled to the eastward, the heavy swell from the southeast still continuing. Lat. $2^{\circ} 08' S.$, Long. $89^{\circ} 49' W.$ at meridian.

May 11: Opened with fine weather, light and unsteady winds. The southeast swell seems to be moderating some. Beck went out in the skiff this morning collecting birds. Williams and King tried their luck at fishing again, but met with no success. Fresh fish is always welcome on the mess table. As Chatham Island is still a long way off and there are no immediate prospects of getting there, Beck decided to try and make Hood Island. Lat. $1^{\circ} 51' S.$, Long. $89^{\circ} 40' W.$ at meridian.

May 12: Opened with light airs and calms. At 10:00 A. M. Hood Island was sighted and at noon it bore by compass NE. by E. $\frac{1}{2}$ E., distant 17 miles. A check on our chronometer showed it to be 50'' slow since April 22nd. At 6:00 P. M. Hood Island bore E. by N. $\frac{1}{2}$ N., distant ten miles. The large school of tuna which had been passing the schooner disappeared this morning, but we sighted it again this afternoon. Calm weather most all the day. Lat. $1^{\circ} 32' S.$, Long $89^{\circ} 50' W.$ at meridian.

May 13: Opened with dead calm. A heavy fog which had been hanging over us during the night cleared a little towards noon and at 12:30 P. M. we sighted Gardner Island (near Charles), bearing by compass E. $\frac{1}{4}$ S. Lat. $1^{\circ} 21' S.$, Long. $90^{\circ} 8' 30'' W.$ at meridian. At nightfall it was still calm and the fog shut down on us again.

May 14: Still calm. The fog cleared at 6:00 A. M. and we sighted Caldwell Island, bearing by compass S., and Enderby Island bearing NW. A light breeze springing up brought us abeam of Enderby Island, and, after breakfast, a shore party landed, while the schooner laid off and on. We found nothing much on the island but boobies and countless numbers of frigate-birds. After spending an hour or so ashore, we all hurried back on board the schooner to take advantage of a good southerly breeze which sprang up and set course for Black Beach Roads, where we arrived at 1:15 P. M., letting go anchor in seven fathoms of water. Here we found the brigantine *Nellie* at anchor and was informed by

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her captain he had been 67 days out trying to make Guayaquil. Bad luck seemed to follow the vessel and they struck long periods of calms and head winds. The *Nellie* was equipped with a small wood-burning engine, but fuel gave out and she drifted far to the south of the islands. Water and provisions also gave out and it became necessary to condense water, and fish and catch turtles when possible to supply the passengers and crew with food. Yesterday morning they were becalmed off Charles Island with sails torn and ruined. The cattle they were trying to carry to Guayaquil had long since died and were thrown overboard and for the past week all hands had been living on molasses, not having been able to catch either fish or turtles. Besides the crew there are 19 passengers, one of whom is a woman. This morning they reached Charles Island and started gathering firewood for the boiler. The engineer was ashore with three dogs, a couple of sailors and a young man named Cruz, who was born on Charles Island some 20 years ago. Cruz guided them up to the spring, where the engineer, who had a long knife lashed onto a boathook, was going to try and stick a pig. After securing the schooner, Nelson, Ochsner, Hunter and myself started inland for the spring prepared to stop over night and bring out some fresh beef. We met the hunting party from the *Nellie*, who up to the present had no luck in their quest for a "porker." We shot a bull for them, which they carved up, and, with all the meat they could pack, the party made tracks for the beach.

May 15: In camp with Nelson and party at the spring. Last night we shot a pig and two cows. A shore party from the schooner brought the meat down this afternoon. Nelson, Ochsner and myself are going to stop over another night. The captain of the *Nellie* shifted his anchorage this morning and moved closer inshore. Some of his passengers landed to gather oranges and lemons for the voyage back to Vilamil. Beck provided the vessel with some provisions from our own stores and she sailed at midnight. At 5:00 o'clock this afternoon, while we were taking an observation from our lookout above the spring, we sighted a barque bound to the westward.

May 16: Nelson, Ochsner and myself still in camp. We were up at daybreak and shot a large boar from our lookout



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station above the spring. We also killed a cow last night and the shore party from the schooner helped to pack down the meat. Everybody aboard the schooner for supper this evening. If we have any wind in the morning Beck intends to move down the coast towards Cormorant Bay.

May 17: All hands up for early breakfast. At 7:00 A. M. we weighed anchor and set sail for Cormorant Bay. We made the anchorage at 9:00 o'clock and all hands landed for general collecting, Williams and I going to a small, rocky islet in the bay to get some cactus for the live tortoises we have on board. Everybody returned at 11:30 and we weighed anchor again, setting sail for Chatham Island. The wind fell light during the afternoon and at 6:00 P. M. Charles Island bore by compass SW. by S. $\frac{1}{2}$ S. and Gardner Island S. At 11:00 P. M. we were becalmed.

May 18: Opened with light airs and calms. Weather partly hazy. Went out in the skiff with Beck this morning to shoot birds. The current is setting us to the westward and at 8:00 A. M. Barrington Island bore by compass NE. by E. and Charles Island SW. by S. Unsteady breezes and spells of calm during the afternoon and evening.

May 19: Opened with light airs and calms. Current is setting us W.NW. Went out in the skiff again this morning shooting birds. Williams and King breaking out coal for the galley. When we left San Francisco, our supply of coal for the galley was stowed in sacks underneath the cabin floor, and these having long since rotted away, left it in bulk, which made it necessary to get down under the cabin floor on hands and knees and dig it out, passing it up in buckets through a small hatch. We all take a turn at this. The wind died out towards evening and at nightfall we lay becalmed. At midnight Nameless Island bore by compass N.NW., distant eight miles.

May 20: Becalmed with somewhat hazy weather. All hands keeping the Sabbath. Our position scarcely changed, and at midnight Nameless Island bore by compass N., distant 5 miles.

May 21: Still becalmed with a few catspaws from different directions during the day. Went out in the skiff with Beck

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shooting birds. Williams tried harpooning some sharks which were swimming about the schooner, but they were too deep down and he failed to land one. One albatross sighted this morning. At 9:00 P. M. we got a slight breeze from the eastward and stood S.S.E. on the port tack.

May 22: Opened with light easterly winds and hazy weather. At 6:00 A. M. Nameless Island bore by compass N. by W., distant 12 miles. Towards evening the wind hauled north and at midnight we were about five miles off of Charles Island, the main peak bearing by compass S.E. by E.

May 23: Opened with light variable winds and calms. Weather slightly hazy. During the morning we worked up towards Black Beach Anchorage and got in close to shore, about one mile to the westward, when we had to let go the kedge, as the wind died out and we were drifting too close in. We hung on with the kedge till 11:30 A. M., when, under a slight breeze, we weighed anchor and worked up to Black Beach, letting go anchor in 7 fathoms of water at 1:15 P. M. After securing the vessel, Nelson, King and Ochsner went up to the spring to camp for the night. Rest of the party collecting about the lower levels. Beautiful sunset this evening, the sun going down directly over Iguana Cove Mountain.

May 24: All hands aboard the schooner up for early breakfast. Beck, Stewart, Williams, Gifford and myself started up for the spring. We met Nelson, and later Ochsner, neither of them having secured any fresh meat. Later on in the morning, Nelson shot a cow, and he, Williams and myself, loaded with meat and oranges, went down to the landing, arriving there at 2:00 P. M. Nelson and I loaded up with provisions and started back for the spring, again prepared to stop over night. Hunter shot a calf this afternoon and Stewart and Gifford brought the meat down to the schooner, where Parker tried his hand at salting it down. Dead calm during the 24 hours.

May 25: Slight northerly breeze this morning, followed by calms this afternoon. All hands ashore collecting, returning to the schooner for supper.

May 26: Went up to the spring with Williams and King; the latter, taking the rifle, went hunting and killed two bulls.

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After a lunch of oranges and water at the spring, Williams and I worked over towards the main peak, returning to the schooner at 5:30 P. M. Rest of party worked on board the schooner all day, scrubbing off the sides and preparing to fumigate the holds and cabin over night, as the bedbugs, cockroaches, flies and dermestes were getting too thick for comfort. After supper, the pans of sulphur were lighted, the hatches battened down, and the companion ladder doors closed and caulked. All hands turned in on deck.

May 27: Opened up the hatches at 8:00 A. M. this morning and found that the sulphur had not all burned out, and that, although there were many dead cockroaches and flies scattered about, the bedbugs were as good as new. We had breakfast at 10:00 A. M. in the sulphur-scented cabin. At 4:30 P. M. Nelson, Ochsner and myself started up for the spring prepared to stop over night. While in camp this evening, a huge meteorite, making a bright bluish light, passed through the heavens, illuminating the whole sky for a few seconds. The dead calm still continues.

May 28: Nelson, Ochsner and myself still in camp. King joined us this afternoon and brought us in some supplies. The four of us stayed up all night waiting to get a shot at a pig and were rewarded by killing a large boar which came to the spring to get a drink. Towards midnight, while Ochsner and I were sitting under an orange tree close by the spring, we heard an animal approaching, and, as it came nearer, we could hear it sniffing our trail and knew that it suspected all was not right. Suddenly a huge boar came into view close to the end of a rock wall by the water. Ochsner raised his rifle and put a bullet through both its hind legs. Despite the fact that the boar was completely broken down behind, it managed to drag itself 50 or 60 yards into the heavy brush. We followed in a little way, but were afraid to get too close, fearing it might charge. However, when our eyes became accustomed to the darkness we could see the outline of the boar sitting on his haunches and advance close enough to hear him gnash his teeth. Another shot from a small carbine I carried finished him. As we had no lights, except our camp candles, we waited till morning to examine our prize. It proved to be the largest

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boar we had so far killed. The rest of the party collecting about the lower levels. The calm still continues and we are all hoping for a wind so we can move on.

May 29: All hands but Beck ashore for half a day's collecting. We returned to the schooner at 1:00 P. M. for dinner and at 2:30, taking advantage of a fresh breeze from the S.S.E., weighed anchor and set sail for Chatham Island, with the intention of going around the west end of Charles. It fell calm at 4:00 P. M. and the kedge was let go in 26 fathoms of water, saddle point on Charles Island bearing by compass SE.

May 30: Calm all through the night, with light fog between 6:30 and 9:00 P. M. About 6:00 A. M. a light breeze from the southward sprang up and we hoisted the kedge. However, it soon turned calm again and we drifted back to Black Beach Roads, letting go anchor at 4:00 P. M. in 7 fathoms of water. Had early supper, and Beck, Nelson, Ochsner, King and myself went up to the spring to camp over night.

May 31: A light breeze sprang up after sunrise and Williams and I went up to the top of the highest peak to have a look around. There was a good breeze on the summit and some breeze on the ocean to the eastward, but everywhere else it was a dead calm. Williams returned to the schooner, while I went back to the camp for another night. Nelson had shot a cow and the shore party took fresh meat back to the schooner.

June 1: Light airs and calms at the anchorage. Williams went up to the top of the highest peak again to have a look around and found the ocean calm all about the island. I returned to the schooner at noon and then went back up the trail to help Nelson pack down a load of meat. All hands, with the exception of King and Hunter, who went up to camp over night, on board for supper.

June 2: Foggy and calm this morning. After breakfast at 6:15, Ochsner and I started up for the top of the high peak. Some of the party working on board today, Gifford taking a turn at filling the coal box. Williams and King left

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for the spring this afternoon to go on a pig hunt. They saw several pigs during the course of the evening and killed one. On reaching the plateau near the divide between the main peak and the spring, they saw a large band of wild burros, which stampeded on their approach. Leaving the spring at 9:15 P. M., they made their way down the main trail and headed for the beach, arriving there at 11:30 P. M. Gifford shot a couple of owls on the way down. Nelson and White left for the spring this afternoon to stay over Sunday and do some hunting. King and Williams slept on the beach tonight.

June 3: Light variable winds and calms. At 8:00 o'clock I went in with the skiff and picked up Williams and King. Beck and Hunter doing the cooking while White is ashore. About noon, the sloop *Tomasita*, of Albemarle, dropped anchor alongside of us. She was eleven days out from Guayaquil. Her captain reported that it took him three days to get out of the Gulf of Guayaquil on account of the light winds. He had nothing else to report except that he sighted the brigantine *Nellie* yesterday headed for Albemarle Island. The crew of the sloop went ashore to gather oranges and lemons soon after the anchor was down. Nelson and White still up country.

June 4: White returned from the interior this morning and reported killing one pig, while Nelson killed a couple of bulls. The *Tomasita* left at 10:00 o'clock this morning, bound for Vilamil. The *Nellie* was in sight to the north of Charles this afternoon. All hands aboard this afternoon, and at 2:30 P. M., under a fresh southeast breeze, we weighed anchor and set sail for Hood Island. At 6:00 P. M. the breeze died down and by sundown it was dead calm. At nightfall Saddle Point bore by compass NE. by E., distant 5 miles.

June 5: Opened with dead calm. Later in the morning a light breeze sprang up and the schooner was headed east. At 8:00 o'clock the center of Charles Island bore E. by N. $\frac{1}{2}$ N., distant 30 miles. At noon it bore E. by N., distant 25 miles. The current is setting us to the westward at the rate of about one mile per hour. Considerable swell running from the south. During the afternoon a light southeast breeze brought us to within twelve miles of Charles, the center of the island bear-

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ing E. by N. At 6:30 P. M. the schooner was put on the starboard tack. It remained calm all night, the schooner's head being between S. and SW. without steerage-way. Lat. $1^{\circ} 21' S.$, Long. $91^{\circ} 01' W.$ at meridian.

June 6: Opened with calm and light unsteady breezes. A heavy swell from the S.SE. makes it hard on the sails and running rigging. A few tuna seen today, but we failed to catch any. At 6:00 P. M. the wind hauled to the eastward and the schooner was put on the port tack. Beck had the skiff out this morning and shot a number of birds. Lat. $1^{\circ} 44' S.$, Long. $91^{\circ} 21' W.$ at meridian.

June 7: Opened with light unsteady winds and cloudy weather. Heavy swell from the southeast still continues. Went out with Beck in the skiff and got some more birds. A small shower passed over us this evening. We are unable to make any headway and are drifting further and further away from Hood Island. Lat. $2^{\circ} 31' S.$, Long. $92^{\circ} W.$ at meridian.

June 8: A fresh southeast breeze sprang up this morning, but died out towards noon. Heavy southeast swell playing havoc with the sails and running rigging, as there is not enough breeze to keep the sails full. At 6:30 P. M. we lowered the mainsail for repairs, hoisting same at 8:30. A strong current is setting us to the westward. Lat. $3^{\circ} 36' S.$, Long. $92^{\circ} 59' W.$ at meridian.

June 9: Opened with light breeze from the E.SE. Sky partly cloudy. This morning we sighted what we took to be a large killer whale. At 1:00 P. M. we tacked ship, and again at 4:00 P. M. Lat. $3^{\circ} 28' S.$, Long. $92^{\circ} 45' W.$ at meridian.

June 10: Opened with light unsteady breezes, turning to calm at sunrise and remaining so for the rest of the day. Williams caught several bonitas while fishing off the flying-jib boom. Sighted a huge whale this morning. Heavy swell keeps up all the time and makes life on board anything but pleasant. Our sails and running rigging are in a bad way. Lat. $4^{\circ} 23' S.$, Long. $93^{\circ} 12' W.$ at meridian.

June 11: Opened with light variable breezes which freshened towards evening. Went out in the skiff this morning with Beck shooting birds. Quite a number of shearwaters

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and petrels about. Williams went fishing off the flying-jib boom and caught several fine bonitas. We find them quite a help to our bill of fare. Lat. $3^{\circ} 42' S.$, Long. $92^{\circ} 22' W.$ at meridian. A little northerly made during the last 24 hours.

June 12: Opened with light breeze from the southeast and then turned calm. Williams caught some more bonitas this morning. Members of the expedition variously employed mending shoes, clothes, etc. At 5:00 P. M. we lowered the mainsail for repairs, also hauled down the head sails and clewed up the gaff topsail. Lat. $3^{\circ} 07' S.$, by observation, Long. $91^{\circ} 29' W.$ by dead reckoning at meridian.

June 13: Opened with light southeast winds, increasing towards evening. Swell moderating to some extent. Nelson busy painting the skiff and Hunter and I made a new piece of pipe for the galley smokestack. Fresh bonita for dinner is the only good thing which comes to us in these days of calms. Lat. $2^{\circ} 39' S.$, by observation, Long. $90^{\circ} 58' W.$ by dead reckoning at meridian.

June 14: Opened with light southeast winds and moderate swell from the E. SE. This morning sighted a frigate-bird, a booby, and an albatross. At 10:00 A. M. the schooner was put on the port tack and we made about E. by N. Nelson and Ochsner busy repairing and painting the skiff. Beck and I went out in the ship's boat shooting birds. Towards evening, the sky clouded up and we had a few drizzles. At sundown it turned calm and remained so throughout the night. We are now over a hundred miles south of Hood Island. Lat. $2^{\circ} 22' S.$, Long. $90^{\circ} 46' W.$ at meridian.

June 15: Opened with light breezes and calms. Williams caught another bonita this morning. At 5:00 P. M. we lowered the mainstail for repairs, hauled down the head sails and clewed up the gaff-topsail. All hands, except Nelson and myself, turned in, as the schooner was becalmed and had no steerageway. We turned to and repaired the mainsail, finishing up the job at 10:00 P. M. We turned all hands out at 4:00 A. M. to make sail. Still calm at daybreak with the current setting us to the westward. Lat. $2^{\circ} 10' S.$, Long. $90^{\circ} 43' W.$ at meridian.

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June 16: Opened with dead calm. At 10:30 A. M. a fine southeast breeze sprang up and sent us along at 5 knots, making about E. The wind died down in the afternoon and at 6:30 we were making E. by N. under a light breeze. Sky overcast and light showers during the evening. Some fine, large bonitas sighted this afternoon, but we failed to catch any. Lat. $2^{\circ} 11' S.$, Long. $90^{\circ} 53' W.$ at meridian.

June 17: Opened with light easterly winds and calms. Tacked ship this morning, going on the port tack and making little better than S. $\frac{1}{2}$ E. Sky overcast and threatening, but no rain. No birds or fish sighted today. The sails and running rigging are being badly worn by the long calm and heavy swells. Lat. $2^{\circ} 41' S.$, Long. $91^{\circ} 26' W.$ at meridian.

June 18: Opened with dead calm and overcast sky. Heavy southeast swell running. At 11:30 lowered the mainsail and hauled down head sails. Went out this morning in the ship's boat with Beck shooting birds, returning to the schooner at noon with some petrels and shearwaters. This afternoon helped Nelson repair the mainsail and gaff-topsail, the latter being badly torn. Hoisted the mainsail at 5:00 P. M. in a dead calm. Current setting us southwest about one mile an hour. Lat. $3^{\circ} 10' S.$, Long. $91^{\circ} 56' W.$ at meridian.

June 19: Opened with light breeze and overcast sky. Making a little better than E. by N. Sighted a big school of dolphins just before daybreak. Nelson caught a bonita this morning, the first in a couple of days. At sunset the schooner was becalmed. We tacked ship twice during the day in order to take advantage of the catspaws, but we are not able to make any northing. Lat. $3^{\circ} 04' S.$, Long. $91^{\circ} 37' W.$ at meridian.

June 20: Opened with light unsteady winds and occasional rain squalls. A southeast wind, increasing towards noon, sent us along at 5 knots, making about E. by N. Williams caught a fine, large bonita, which we had for supper. At 5:00 P. M. the schooner was logging seven knots. Lat. $2^{\circ} 28' S.$, Long. $90^{\circ} 58' W.$ at meridian.

June 21: Opened clear and cool with light southeast winds. Heavy swells from the southeast make the schooner roll considerably and damage our already worn out sails. Schooner

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making about four knots E. by N. We keep tacking the schooner to take advantage of the breeze. Lat. $2^{\circ} 03' S.$, Long. $90^{\circ} 31' W.$ at meridian.

June 22: Opened clear and cool with fair sailing breeze. Schooner logging about four knots and making E. by N. At 6:00 A. M. Hood Island was sighted, bearing by compass NE. by N. The breeze continued during the afternoon and raised our hopes of getting back to the island. At 5:45 P. M. we lowered the mainsail to repair a slight rip. Breeze still holding good at nightfall.

June 23: Opened with fine sailing breeze and at 7:30 we were about eight miles off Hood Island. Great numbers of albatrosses, shearwaters, gulls and frigate-birds flew about the schooner as we skirted the south shore of the island. At 2:00 P. M. we rounded the northeast end and let go anchor in Gardner Bay. We had been 19 days at sea and were glad to get back where we could get to hunting on shore again. King and Williams helped Nelson unbend the mainsail and break out an old foresail to repair it. The rest of the party went ashore collecting, Ochsner going after some goats. Shore party returned at 5:45, bringing a goat and a number of birds. Being Saturday night, the ornithologists skinned birds till late in the evening. Everybody glad to get a run ashore and get some fresh meat after our long sojourn south of the islands. Sky overcast and weather cool this evening. Most of us wearing coats or sweaters.

June 24: Late breakfast, today being Sunday. Most of the party taking a run ashore. Ochsner and myself went after fresh meat and brought back two goats and 49 doves. Gifford and Williams went trapping birds, bringing back several mockingbirds. All hands aboard for supper at 6:30. Sky overcast and weather warmer today.

June 25: Nelson and Parker busy repairing the mainsail. Rest of party went down to the albatross colony. Great numbers of albatrosses, many with young, were about the colony at this date. Early in the afternoon we started back for the schooner loaded down with albatrosses, frigate-birds, tropic-birds and boobies. Ornithologists making up for lost time

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and skinning birds far into the evening. Goat soup and dove pie for dinner. Weather partly cloudy with southeast winds. Occasional showers during the evening.

June 26: Beck, Hunter, King and Gifford on board skinning birds. Rest of party ashore collecting, Williams bringing in three snakes and an owl. King and Hunter went ashore this afternoon and killed a couple of sea-lions for the hides. While Ochsner and I were chasing a goat we had wounded, we ran right over a small tortoise, the first living one found on Hood Island for many years, so we were quite elated over our find. We took turns at packing it out alive, as it was only a small one. Nelson and Parker still working repairing the mainsail. Warm and drizzly weather today.

June 27: Beck, King, Ochsner and myself ashore in search of tortoises. Stewart and Williams went over to Gardner Island. Hunter on board, cleaning seal hides and skulls. King was the only successful tortoise hunter. He found a small female, which he packed down to the beach alive. The bird bodies thrown overboard by the ornithologists attracted a lot of sharks about the schooner and Williams harpooned one, but it got loose from the harpoon and escaped. Sky overcast and weather somewhat sultry.

June 28: One year out from San Francisco today!! All hands, except Parker and Nelson, who are still working on the mainsail, ashore collecting. Ochsner visiting Gardner Island. Ornithologists made another visit to the albatross colony, bringing back about 20 albatrosses as well as some frigate-birds, boobies and tropic-birds. One goat brought aboard for fresh meat. Warm and sultry weather with southeast winds throughout the day.

June 29: Ornithologists busy skinning albatrosses. King and I went inland after tortoises, but did not locate any. We had better luck with snakes, securing several. Ochsner killed three large sea-lions and he and Williams spent the day trying out the fat. They managed to get about five gallons of oil. We find it good for oiling shoes and anything we have in the way of leather. The daily goat for the mess was brought on board by the shore party. Late supper this evening in order

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to give the ornithologists a chance to finish up the birds. Cloudy weather with southerly winds.

June 30: Ochsner and Stewart, trying out seal fat, got about five more gallons of oil. Williams, King and myself inland after tortoises, but did not find any. We killed about 30 doves and brought them back for the mess. Beck found a few remnants of tortoise bones near the top of the island, but saw no signs of living tortoises. Nelson and Parker working on the mainsail. Cloudy weather with southerly winds and some light rains during the early part of the evening.

July 1: Late breakfast, today being Sunday. In the afternoon went ashore with Ochsner, King and Gifford to get some doves for the mess. We returned to the beach at 6:00 o'clock, Ochsner and I with 25 doves and a goat and Gifford and King with 20 doves between them. Williams put a live mockingbird in the fore hold and the bird at once made itself at home and began to clean up some of the dermestes which infest the vessel. Late supper of doves, goat and pumpkin pie this evening. Occasional showers today.

July 2: All hands ashore for another day's work on Hood before we sail. Beck ashore photographing and hunting for tortoises and a party visiting the albatross colony again. Nelson and Parker finished up their work and bent the mainsail this morning. While King and I were ashore getting a supply of cactus for the tortoises on board, we met Beck returning to the landing with a small, live tortoise, the third we have found on Hood. This afternoon a big tiger shark came up alongside the schooner and grabbed a goat hide which had been thrown overboard. Before turning in this evening, Williams bent a sharp hook, baited with a bird body, on to the end of a boat fall and let it stay overboard all night in hopes that the shark would come back and pay us another visit. A rather disagreeable day today, drizzly and windy.

July 3: All hands up early and we prepared to get under way. We found that a big shark had gotten hooked on the boat fall and, from the way it was twisted and turned, it looked as if the big fish had been struggling most of the night to free itself. Being too large to handle readily, a line was

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made fast around its tail and we hoisted it on board with the winch. It measured 13 feet in length and its stomach was found to contain several bird bodies thrown overboard by the ornithologists. After cutting off the tail and taking the jaws out to dry, we heaved the remains overboard and got under way for Chatham Island with a fine sailing breeze from the southeast. At 3:30 P. M. we made up to the anchorage in Wreck Bay, letting go anchor in five fathoms of water. Beck, Williams and Ochsner went ashore to take some turtle and goat meat to the plantation manager. At 7:30, Hunter and Stewart returned with a load of letters and papers and we learned for the first time some of the details of the San Francisco fire and earthquake. Letters from home told us of our families being safe and everybody read papers till late in the evening. Cloudy weather and fresh southerly breeze throughout the day.

July 4: Hoisted our colors at eight bells in honor of Independence Day. Received visitors and read papers most of the day. We learned from Captain Levic, of the Chatham sloop, that some meat which Beck had ordered to be sent from San Francisco via Guayaquil had not arrived and that we could get nothing but dried meat at the latter port. This will make us short of meat on the homeward voyage. Our visitors left the schooner late in the afternoon. Cloudy weather with fresh southerly breeze.

July 5: Ochsner went up to the hacienda to attend a wounded man who had accidentally been shot when one of the peons was trying to force a cartridge into a revolver. We learned later that some of the peons had stolen a revolver off of a visiting ship and had planned to kill the Governor. They had a few odd cartridges and it was while trying to find one that would fit the gun that the accident happened. The Governor and the plantation owner never go about unarmed. Williams, Stewart and Hunter went up to the hacienda with equipment and supplies to camp overnight in the interior. They secured the services of a negro guide and started off to explore some of the small crater lakes on the plateau near the summit of the island. The party had a rather wet and miserable time of it and did not secure much in the way of

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specimens. Bird life seems to be rare at the higher elevations and there are no reptiles at all. Nelson sent down the maintopsail and worked on same all day. Cloudy weather most of the day with light southeast winds and a few showers.

July 6: Went up to the hacienda and found Ochsner with his patient, who had a slight flesh wound, progressing satisfactorily. Party from the interior arrived at the hacienda about 5:00 P. M. Some of the Jamaican negroes brought us a lot of fine bananas, the first fresh fruit we have had for a long time. All hands made for the beach about 6:00 o'clock and arrived on board the schooner for late supper. Nelson finished working on the maintopsail today. Cloudy weather with fresh southeast winds and some showers.

July 7: All hands ashore collecting. A new pipe for the galley stove, made by the blacksmith at the hacienda, was brought on board and fitted today. The Governor paid us a visit this afternoon and some of the peons brought us down oranges and bananas. After supper, Williams and I went ashore collecting with a light and secured some lizards and insects. Nelson bent the maintopsail, cleaned off the waterline, and got the vessel ready for sea. Cloudy weather with southeasterly winds.

July 8: Late breakfast, today being Sunday. Many visitors on board and extra shoes and clothing from our personal belongings were sold to some of the men from the hacienda. They are most anxious to get shoes and overalls. Captain Levic, of the Chatham sloop, presented us with five live chickens. A mockingbird, which we had on board, got into the lazaret, where it got mixed up in a pan of dough and sunk to the bottom in its struggles for freedom. Beck took our letters for home on shore after supper, as we hope to get under way early in the morning. At 10:00 o'clock this evening the sloop *Josephine Cobos* entered the bay and dropped anchor. Cloudy all day with fresh southerly breezes.

July 9: All hands turned out at 4:15 and, after coffee, we weighed anchor and set sail for Barrington Island, getting under way at 5:00 A. M. We had a light but fair breeze and made up to the anchorage off Barrington at 10:45,

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letting go anchor in 15 fathoms of water. Our anchorage is off a nice, sandy beach with a great number of sea-lions scattered along it. Collecting parties landed at once, Hunter going after some goats for fresh meat. Beck found some fragments of tortoise bones and Nelson a couple of old eggs buried in the earth. The iguana colony has evidently suffered from a visit made by the fishing sloop from Chatham, as the iguanas are quite scarce compared with the numbers found on our former visit. We are only able to secure a few this trip. All hands got back late this evening for 7:00 o'clock supper. Had the chickens Captain Levic gave us for supper, the first we had tasted since leaving San Francisco. Weather cloudy with fresh S.S.E. wind. A strong current sweeping around the end of the island keeps the schooner riding to a taut chain.

July 10: Brigantine *Nellie* sighted to the northward, probably bound for Vilamil. All hands ashore doing general collecting. Ochsner and King shot three goats, which are much poorer looking than those of Hood Island. We tried some land iguana for supper this evening, but it was not considered a great success. All hands aboard for supper at 6:00 o'clock. Fresh winds from S.S.E. and cloudy weather with showers during the morning. A somewhat heavy swell today and the schooner rolls considerably.

July 11: All hands up for early breakfast. At 7:15 we weighed anchor and set sail for Academy Bay, Indefatigable Island. Had a fair breeze and made up to the island at 11:30 A. M. In working up to the anchorage under a very light breeze, we got in a little too close and touched on the sandy bottom. The kedge was put out and we hauled the schooner out a little, letting go anchor in $2\frac{1}{2}$ fathoms of water. After lunch, Gifford started up for the green zone prepared to camp over night. Rest of the party collecting about the waterhole, washing clothes and doing odd jobs about the vessel. Took on one barrel of water this afternoon. Mosquitoes are somewhat troublesome this evening. Partly cloudy with light southerly winds.

July 12: Went up to the higher levels with Beck and King to look for tortoises. We found one good-sized male and

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started skinning operations at once. Rest of the party, with the exception of Gifford and Williams, who went up towards the green zone, collecting about the beach. King and I got the tortoise skinned out about noon and, with the help of Beck, started packing it down to the coast. On the way down, we met Gifford and Williams, the latter helping us with the tortoise. We reached the landing at 6:00 P. M. Nelson took three barrels of water on board today. A few mosquitoes aboard this evening. Fine weather with light southeast winds.

July 13: After breakfast, shore party landed to gather up washing and shoot a few birds, returning to the schooner at 9:00 o'clock. We then hove short and hoisted the sails waiting for a chance to get to sea, as the wind was very light. A little later the anchor was hoisted, but, as the breeze was too light to give steerage way and the schooner was drifting dangerously close to a reef, it was let go again. Put out the kedge and hauled the schooner away from the reef, letting go anchor again. We then lowered the ship's boat and hove up anchor. With six men in the boat, we tried to swing the schooner's head and tow her out towards the entrance of the bay, but could make no headway, so let go anchor again. After lunch we made two hauls with the kedge, but, as there was not enough wind for steerageway, the anchor was let go, the schooner being about $\frac{1}{4}$ of a mile from the anchorage. No wind up till sundown, so after supper we lowered the sails and made them fast. Everybody taking a rest after a day with the anchor and kedge. Dead calm at nightfall.

July 14: All hands turned out early. Dead calm with sky overcast. Beck and Williams went ashore for a couple of hours, King holding the skiff for them. Another party landed after lunch, keeping close to the beach in case a breeze came up. At nightfall it was still dead calm. A little warbler that flew on board this morning is still with us and has taken up its abode in the cabin.

July 15: Still calm. The little warbler that came aboard yesterday is making itself quite at home and flying about the cabin. During meal times it hops about the table gathering up the crumbs of bread. Beck and Gifford went ashore this

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morning for a short time. Calm and partly cloudy at nightfall.

July 16: Dead calm and clear, warm day. Beck, Nelson and myself put off in the skiff and visited a large lagoon at the head of the bay to get some turtles. With our patent turtle hook, we managed to get eleven fine, large ones. Later in the afternoon Nelson and Ochsner went in at a good low tide and got a lot of crayfish, which the cook made into salad for supper. In the evening, Hunter, Williams and myself landed at the waterhole to hunt. We got several owls and rats, the rats going into a baited trap as we stood with a light shining on it. We returned to the schooner at 10:00 P. M. and found Nelson in the galley cooking his third installment of crayfish.

July 17: Landing party went over to the lagoon we visited yesterday and returned about 5:00 o'clock. After supper, Hunter went ashore to stay for the night and collect rats and owls. Still waiting for a breeze.

July 18: Sky overcast and very light breeze. Party went ashore in ship's boat to help Hunter launch the skiff, it being a very low tide. At 8:00 A. M. hoisted sails and weighed anchor. We tried to beat out of the bay, but the breeze died down and the anchor was let go. At 10:00 A. M. we tried once more with a very light breeze, but could make no headway. The schooner drifted too close inshore for safety, so we hauled off with the kedge, letting go anchor at 12:15 in nine fathoms of water. Made sails fast during the afternoon. Beck and Nelson went out in the skiff to shoot birds, and King and I skinned turtles. Sky cloudy with occasional light airs.

July 19: Fine, clear morning. A shore party which landed at the lagoon to forage for the mess returned at noon with a turtle, two fish and a few doves. In the afternoon another party went ashore after doves and got about 35, making 67 all together. At 2:00 P. M. all hands were recalled on board, sails hoisted and anchor weighed in another attempt to get to sea. The breeze was too light for steerage way and at 3:00 P. M. anchor was let go and sails made fast. Weather calm and clear at nightfall.

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July 20: All hands up for early breakfast. At 7:00 A. M. hoisted sails and weighed anchor. Made several tacks to get outside where we could pick up the breeze. It took an hour or more to get clear of the bay, and, with a moderate south-east breeze, we sailed westward along the coast of Indefatigable. Nelson and I now prepared to leave the schooner in the ship's boat and make a trip to Vilamil for the purpose of purchasing some atoyas, our stock of which was running low. We rigged up a box of sand for making a fire to heat coffee, and, with provisions, bedding and water, left the schooner at the southerly point of the island and watched her disappear to the northward as she sailed wing and wing before a fine, fresh breeze. The schooner anchored in a small cove before reaching Conway Bay, a cove described to us by Captain Levic and said to be the one from which the trail to the old settlement in the interior started. With a good sailing breeze, Nelson and I, in the ship's boat, set our course for Vilamil, south Albemarle. We stood watch and watch at the tiller, making fine time towards our destination. We reached the Albemarle coast at 7:00 P. M. just as it was turning dusk and a little too late to find the small boat entrance through the reef. We anchored just outside the breaker line and spent a rather watchful night, as we were not sure of our exact position.

July 21: At daybreak we sailed through a narrow passage in the reef and up to the settlement, being greeted by Don Antonio Gil, who was much surprised at our arrival, nobody having sighted our boat. We found out that we had to wait till the following day, as there were not enough atoyas at the settlement to supply our demands. A messenger was immediately despatched to Santo Tomas with an order to bring some down. Don Antonio was much elated over our arrival and informed us that we were just in time to attend the christening of a baby whom Herr Brugermann, the German bookkeeper for Don Antonio, was chosen to be the godfather of. From Don Antonio we understood that the event was to be quite an affair with a banquet and dance to follow. Nelson and I visited our various friends about the settlement and early in the evening Don Antonio notified us that the

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great event was about to take place. We were ushered into a room where about fifteen guests were seated about a table and partook of a dinner of beef, rice, wine and bread, baked especially for the occasion. Music was furnished by one of the natives playing on a guitar made by the local blacksmith out of discarded oil tins. After dinner, the floor was cleared and the infant brought in to be baptized. Herr Brugermann performed the ceremony with much gusto and one of the guests yelled: "Viva la Padrino," which meant that the said godfather was to pass around some wine. The baby was rushed out of the way and the wine passed around while the dancing began. This order of ceremonies was continued till late in the evening, the orders for wine coming so thick and fast the supply gave out. When the fiesta ended, Nelson and I retired to the boat and turned in. While we were on our voyage to Albemarle, the party aboard the schooner made a trip inland, carrying water, provisions and camp gear to last two or three days. Leaving the schooner on the morning of the 21st, they found the old trail leading up to the former settlement, as described by Captain Levic, and made camp the same evening on the edge of the green zone. Conditions here were found to be quite different from those on the south side of the island, there being no nettles and morning-glory vines, but many large trees. While the party was spending its first night in camp, many shearwaters were heard passing over and giving their peculiar cackling cry as they flew to and fro from their burrows on the mountain side.

July 22: Nelson and I turned out bright and early to await the arrival of the peon with the atoyas. He arrived about noon time and, after loading our boat and bidding adieu to Don Antonio, we started on our return journey to the schooner. Making a safe exit through the boat passage in the reef, we found a strong current against us, so that we were not able to make our course. We therefore tacked out to Brattle Island and at 11:00 P. M. anchored close to the shore under the lee of it. Making a fire in the sand box, we heated some coffee, which, with some beans and hardtack, constituted our supper. Rolling up in our blankets, we went to sleep awaiting the morning breeze. The shore party on Inde-

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fatigable was spending its second night in the interior, camped high up in the green zone. Early in the morning they continued their journey upward, having some difficulty keeping the trail. It became indistinct as they went upward and was often lost. At times it was found again only with the greatest difficulty and after much searching. The remains of an old camp were found, as well as some broken bottles and old tortoise bones. A shower of rain passed over the island early in the morning and soaked everybody to the skin. At noon, a halt was made by a lemon tree alongside the trail and well loaded down with fruit. By chopping into an old tree, enough dry wood was secured to build a fire and cook a meal. At this elevation there are many fine, large trees and an atoya plant was discovered, which led the party to believe they were not far from the site of the old settlement. Williams climbed up a tree to take an observation and saw in the distance a patch of banana trees and what looked to be a small grove of orange trees between two small peaks covered with a growth of agave. There also appeared to be a small crater which might have enclosed the lake Captain Levic spoke of as being on the island. At the highest point reached, Beck found a shearwater's burrow containing a bird and one egg. As further progress was impossible on account of the shortage of provisions, the party started down again, making for their former camp, which was reached at 4:00 o'clock in the afternoon. A drizzle kept up most of the night to make things more interesting.

July 23: Shore party turned out early and started for the coast, the drizzle still continuing and wetting everybody through to the skin. When the lower levels were reached, the doves became abundant and many were secured for food. About fifty were killed and fried in skillets brought along in hopes the party would get some chickens, which were reported to be about the site of the old settlement. After lunch, the downward journey was continued and doves picked up along the way for fresh meat for the mess on board the schooner. By the time the shore was reached, the party had about 100 doves, Hunter and Beck killing most of them with sticks. White, Ochsner and King were found on the beach picking

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doves, they having killed another hundred or so. The shore party turned in early this evening, being well tired out from their journey inland. At daybreak Nelson awoke half frozen and, arousing me, informed me that I had pulled all the blankets off of him during the night. After a 7:00 o'clock breakfast of hardtack and coffee, we got under way for Indefatigable Island. We had a light breeze from the S.S.E., which increased some during the day, and we shaped our course to the southward of Nameless Island. Nelson and I took turns at the tiller throughout the day and at 7:30 P. M. we passed Nameless Island, making the coast of Indefatigable an hour later. We then sailed northward, keeping a lookout for the anchor light of the schooner. We sighted it about three miles to the southward of Eden Island and came up to her at 10:00 P. M., finding all well on board. After relating our experiences, we turned in to a more comfortable bunk than we had in the crowded quarters of our 17-foot boat.

July 24: All hands turned out early and most of us went ashore for more doves, returning at 8:30 with about 200. We then weighed anchor and set sail for Daphne Island. Passing Eden Island, we hove the schooner to, and Nelson, Gifford and myself pulled in with the skiff and took six turtles off of the beach. Continuing on our journey, we passed Guy Fawkes Island and Conway Bay. The wind failed shortly afterwards and, being unable to make Daphne, we set our course for the north coast of Indefatigable, anchoring at 6:00 P. M. in 5 fathoms of water, with Daphne Island bearing by compass NW. by N. Doves every meal now, the cook making a big pie of them and baking it in the dishpan. Partly cloudy during the day with fresh, southerly winds during the morning, turning to calm in the afternoon.

July 25: Fine, bright morning with fair breeze. Beck, Gifford and Nelson went to Daphne Island in the ship's boat, returning at noon with an assortment of land birds. Rest of party collecting about the vicinity of the anchorage. At 3:00 P. M. we weighed anchor and shaped our course for South Seymour Island, where we arrived at 4:45 P. M., letting go anchor in four fathoms of water off a long sand beach. Nelson, Ochsner, Gifford and myself went ashore to get some goats

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for the mess. We returned to the schooner at 6:00 o'clock, having killed and skinned four, which we turned over to the cook. Partly cloudy with light variable winds.

July 26: Landing party ashore for general collecting. King and I collected a number of land iguanas, which are quite common here. Nelson and Ochsner shot two more goats for the mess and captured two alive, Beck intending to take them over to James Island and turn them loose. All hands aboard for 6:00 o'clock supper. Slightly cloudy with light variable winds and calms.

July 27: All hands up for early breakfast. At 7:00 A. M. we weighed anchor and set sail for the north side of James Island. By 8:00 o'clock the wind died down and the schooner lay becalmed. Towards noon a light breeze sprang up and at 1:30 P. M. we passed Sullivan Bay, heaving to off Bartholomew Island. A landing party spent a short time here and we got under way again. At 6:35 P. M. we let go anchor in four fathoms of water just to the southward of Sullivan Bay, Daphne Island bearing SE. by E. from the anchorage. The two goats we had on board both died from eating cotton and arsenic.

July 28: Beck, King and myself in after tortoises, the rest of the party collecting about the coast. King and I found some old bones and Beck some recent signs, but no living tortoises. Just to the northeastward of our anchorage, a fine lagoon extends inland for some distance. Several flamingos and some ducks were discovered on it and promptly gathered in. One flamingo was captured alive and brought on board. Cloudy weather with fresh southeast winds.

July 29: Late breakfast, today being Sunday. All hands preparing for work ashore, mending clothes, shoes, etc. Dinner at 3:30 P. M. consisting of duck, curry and rice, roast flamingo and pumpkin pie. Ochsner entertained us this evening by giving us several musical numbers on his flute. Overcast sky with fresh southeast winds throughout the day.

July 30: All hands turned out early. Started inland with Beck and King on a tortoise hunt. The country here is the roughest we have yet encountered. The lava flows are com-

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paratively recent and some devoid of any vegetation whatever. Having found fresh tortoise signs, Beck and King continued inland to camp for the night, while I returned to the coast. Gifford and Nelson visited Bartholomew Island, the rest of the party collecting about the vicinity of the anchorage. Hunter and Williams made a night trip to a nearby lagoon, but met with poor success. Only one rat was taken and no owls nor bats were seen. Practically no insects came to light. Partly cloudy with fresh S.S.E. winds.

July 31: All hands turned out early this morning. At 5:00 o'clock we set sails and weighed anchor to shift the schooner's berth to the lee of a small reef so as to escape some of the swell. We dropped anchor again at 6:30 in five fathoms of water. The schooner now rides more easily and the anchorage is much better. I started inland right after breakfast to pick up Beck and King and see what they had found. Locating the camp about five miles from the coast, I found King cooking breakfast and he informed me that Beck had found two large male tortoises a little further up the hill. King had one partly skinned out, so I helped him finish it and pack it back to camp. Beck was off towards the main mountain hunting for more. Nelson took the ship's boat and cruised along the coast to the westward, making landings at several places. He failed to find any signs of tortoises. Partly cloudy with fresh south-east winds throughout the day.

August 1: After breakfast, a shore party started inland to help pack out tortoises. King and I started for the coast with a large male tortoise, expecting to meet the shore party and get help from them. Owing to a misunderstanding in regard to directions, they passed us on the way without ever seeing us. They reached our camp early in the afternoon and, seeing no signs of us, started back for the coast. In the meanwhile, King and I were making the best of a heavy load over rough country and our shoulders were getting so sore, packing became difficult. We kept going as best we could till about 5:00 o'clock in the afternoon, when our shoulders were becoming blistered and raw so that we could not hold the tortoise pole on them any longer. As it was getting late, we left the tortoise on the trail and made for the beach so as to reach it



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before dark. The shore party, following our trail back, came across the tortoise and packed it the rest of the way out, getting down to the beach just before it got too dark to travel in safety. Being very low tide, our skiff was left high and dry up a lagoon in which we landed, so Nelson came in with the ship's boat and picked us up. During the day Beck found a couple of more tortoises and returned to camp. King and I plastered up our shoulders with cocoa butter and bandages to help get them in trim for the next tortoise to be packed out. We find the tortoises of James Island very fat and with very thick shells. Fine weather with fresh S.S.E. winds.

August 2: With Hunter, Ochsner and King started inland for our camp. We reached there about noon and met Beck, who informed us he had found two more tortoises. He guided us to these two and we skinned them both out and packed them back to camp. Nelson and Gifford made another visit to Bartholomew Island in the ship's boat. Partly cloudy with fresh S.S.E. winds.

August 3: In camp with Hunter, Ochsner, King and Beck. We turned out early this morning to skin the tortoises already found and get them back to camp. Stewart and Williams came to camp to help pack down to the coast. We got two tortoises back to camp this evening, and King, who acted as camp cook, prepared a dinner of atoyas and tortoise liver. Having arranged with the schooner to signal them at a certain time after dark so those on board could locate our camp, we climbed a small hill and set fire to the spines of a few cacti. They flared up quickly as the fire climbed towards the tops and the schooner immediately answered us with the turpentine torch. All hands turned in early so as to get rested up for tomorrow's pack. Fresh S.S.E. winds during the morning, hauling to the westward in the afternoon.

August 4: After a breakfast of hardtack, tortoise liver and atoyas, we started for the coast, packing our tortoises and camp equipment. We took the trip in easy stages, relaying each other on the heaviest tortoise. Arriving at the beach at 6:00 o'clock, we met Nelson, who came in with the ship's boat to pick us up. All hands aboard for supper this evening. Most of us slept on deck, as Nelson had fumigated the cabin.

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Fine weather with light S.S.E. winds, hauling to NW. in the afternoon.

August 5: All hands up for late breakfast, today being Sunday. At 9:00 A. M. Nelson opened up the hatches and found quite an assortment of dead flies, cockroaches and dermestids. Everybody resting after the hard grind of yesterday. Fresh S.S.E. winds during the day.

August 6: All hands up for early breakfast and at 7:00 A. M. we weighed anchor, shaping our course for James Bay. Had light, unsteady southeast winds during the forenoon till 11:00 o'clock, when we got from under the lee of the island. We then got a fresh S.S.E. breeze and made three tacks to work into James Bay. We made up to the anchorage at 2:30 P. M. and let go anchor in six fathoms of water. The island appears to be very dry compared to our first visit and most of the trees are leafless. Beck went up country to camp overnight and Nelson went ashore after pigs. He returned late in the afternoon, not having found any. Fine weather and clear sky throughout the day.

August 7: All hands up for 5:30 breakfast so that those of the shore party who are going inland can get an early start. Hunter, Ochsner, Stewart, King and Nelson started for the interior, Nelson leaving the party about the edge of the green zone, to go on a pig hunt. Williams and I went part way up the mountain, returning to the schooner for supper. As we were nearing the coast on the return journey, we met Beck on the way back from his over-night camp, and also Nelson, who was carrying the hind quarters of a pig he had killed. Gifford collected several flamingos today and we had them fried for supper. Very little surf on the beach this time and we have no difficulty landing and getting off like we did on our first visit here. Cloudy and drizzly most of the day with S.S.E. winds.

August 8: Early breakfast again this morning. Top of the island obscured in the mist. Williams and I worked about the vicinity of the bay. Doves being quite plentiful, we brought a frying pan ashore so we could have some for lunch. We killed a couple of dozen and, with a can of fruit, had a

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luscious meal. At 6:00 o'clock the campers arrived from above, reporting that they heard numbers of shearwaters during the night and saw many wild burros and pigs. Nelson shot another pig today. All hands aboard for supper. Cloudy weather with a light rain during the early morning. Fresh S.S.E. winds.

August 9: All hands up for early breakfast. Beck, Hunter, Gifford and Williams went ashore for half an hour. At 7:45 we hove short and set sails. Got under way at 8:00 o'clock, shaping our course for Cowley Mountain. We made three tacks under the lee of James, the wind being rather light up to 9:30, when it set in fresh from the S.S.E. and the schooner was hauled close to the wind. This morning we shifted bow anchors to opposite sides, the starboard chain having several bad links in it and the port anchor being too heavy for ordinary use. We arrived off the coast of Albemarle about 1:45 P. M. and took in the gaff-topsail and flying-jib. As we neared the vicinity of the anchorage, the schooner made considerable leeway, and Nelson, who was standing by the anchor, called to the navigator that we were getting dangerously close to a reef. Looking to leeward, the navigator saw we were almost upon it and gave the order to put the helm hard down. In his excitement, he neglected to use the cross-tackle to haul the main boom to windward and the schooner missed stays, drifting closer on to the reef. Finding the schooner would not come about, the anchor was let go just as she struck the rocks and worked herself on to a rocky ledge. The sails were immediately lowered, and, as the sea was quite choppy, she pounded some. The chain being short, she did not hold well and the boat was at once lowered and the kedge run out with a hawser through the stern chock. By heaving on the hawser and paying out on the anchor chain, the schooner cleared with the rising tide and we saw pieces of the shoe on the keel floating away. Heaving short on the hawser, we got both boats to work and picked up the anchor and hove in the chain. Hauling out to the kedge, we let go anchor again. In trying to break out the kedge, the hawser parted and we lost it. The sails were then hoisted and, weighing anchor, we got under way again, making short tacks to get

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off shore. Standing in again, we let go anchor in three fathoms of water. The schooner was immediately examined for leaks, but the loss of part of the shoe on the keel and the kedge was the worst that happened. Cowley Island bears NE. $\frac{1}{2}$ E. magnetic from our anchorage. The reef we struck is about one-half a mile to the N.NW.

August 10: All hands up bright and early, and, after much discussion over yesterday's affair, Beck suspended the navigator from further duty and appointed Nelson to take his place. Being short a man to take the deck, I am to stand watch and watch with Nelson. The charts, chronometer, etc., were removed from the possession of the navigator and he is now super-cargo. This morning, the ship's boat was put out and Nelson made a search for the kedge, but was unable to locate it. Soundings taking around the schooner show only two fathoms of water and the anchorage is none too safe. Beck, King and myself started up the mountain prepared to camp over night and make a search for tortoises. On landing opposite our anchorage, we found a layer of pumice topping a small cliff and later found the pumice to extend 2,000 feet up the mountain. The ascent is very gradual for three miles or so and then becomes fairly steep. The lower levels are very barren and sparsely spotted with cacti. When the 2,000-foot level is reached, lichen-covered trees are met with and much dried grass is in evidence. This grass is over one's head and forms a cap about the crater, making it most difficult to reach, as the sharp edges of the grass cut like a razor. Finding our way blocked by this heavy growth of grass, we turned back and camped at the lower edge of it for the night. Partly cloudy today with light S.S.E. winds.

August 11: The three of us turned out early and, after a camp breakfast, started out in search of tortoises. Beck worked around the south side of the crater and found an old camp where about 70 tortoise skeletons were scattered about. King and I worked around to the northward, but found no recent signs of tortoises till we were on the way back to the beach. We were well below the grass belt when we ran on to a fresh sign and worked back and forth trying to pick up the tortoise, but could not locate it. We found out afterwards

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that we were just below it, for, when Beck came down, he found a small tortoise a short distance from where we passed. Roughly skinning it out, he packed it down to the beach, King and I reaching the landing a short time ahead of him. Hunter spent last night ashore and got two rats and a couple of owls. Weather continues the same.

August 12: Late breakfast, today being Sunday. King and I finished skinning out the tortoise found yesterday. Members of the party variously employed in mending shoes, etc., and preparing to land on Cowley Island in the morning. Misty and cloudy with S.S.E. winds.

August 13: All hands up for coffee at 5:30 A. M. At 6:00 o'clock we set sails and weighed anchor, shaping our course for Cowley Island. At 7:00 o'clock Beck, Hunter, King and myself put off in the ship's boat while the schooner beat to windward of the island. King held the boat while the rest of us landed. Cowley Island is a broken-down crater similar to Brattle, but much smaller. As it was early in the morning, there was nothing much about and only a few birds and lizards were collected. We got off the island at 9:15, the schooner running down before the wind to pick us up. The course was then shaped for Duncan Island with a S.S.E. wind. We tacked ship at 11:30 A. M. close to the south coast of James and tacked again at 2:45 P. M. off the coast of Albemarle. At 6:00 P. M. Jervis Island bore by compass W. $\frac{1}{2}$ S. and Duncan SW. by S. $\frac{1}{2}$ S. We made several tacks during the first watch, the wind being unsteady and light. At midnight Jervis bore by compass W. $\frac{3}{4}$ N. and Duncan S. by W. $\frac{1}{2}$ W.

August 14: Tacked ship twice in the middle watch. At 6:00 A. M. Duncan Island bore by compass SW. by S., distant six miles. At 9:25 we made the anchorage at Duncan, letting go anchor in $9\frac{1}{2}$ fathoms of water. Landing party went ashore at once, Beck and Hunter going in to camp over night. I went around to the northeast slope of the crater and collected a lot of lizards and a snake, the first one found on the island. Nelson caught five large barcalau and we had fresh fish for supper. Fine weather with fresh S.S.E. winds.

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August 15: Beck still ashore hunting for tortoises. King and I went down to the bottom of the crater and collected lizards most of the day. Beck found seven tortoises and, on the way back to the landing, King and I packed out three, one alive and two dead. All hands aboard by 7:00 o'clock for late supper. Cool and cloudy with fresh S.S.E. winds.

August 16: All hands turned out at 5:00 A. M. We got under way at 6:00 o'clock with strong breeze from S. by E. At 7:30 we were close to the shore of Indefatigable and tacked ship, the wind hauling to S.S.E. Weather foggy up till 10:00 o'clock, when it partly cleared. We made several short tacks off the coast of Indefatigable and at 10:30 A. M. weathered Nameless Island and stood away on the port tack. The wind fell light during the afternoon and set us back towards Duncan. Tacked ship again at 4:30 P. M. At 6:00 o'clock Cape Woodford bore by compass SW. $\frac{1}{4}$ W. and East Crossman Island S. by W. $\frac{1}{4}$ W. Tacked ship twice during the first watch. Weather set in hazy with light winds from S.S.E. At midnight Nameless Island bore E. by compass, distant four miles.

August 17: Opened with light, unsteady winds and hazy weather. Made several tacks during the morning, but could make no progress against the current, which set us back on our loosing tack. At 12:20 P. M. we passed close under the lee of Nameless Island and stood in towards the coast of Indefatigable. During the afternoon, we made short tacks close to the Indefatigable coast and made about six miles to windward. At 6:00 P. M. East Crossman Island bore by compass SW. $\frac{1}{2}$ W., distant 15 miles. Weather continues cloudy with fresh S.S.E. winds, getting light and unsteady towards evening.

August 18: Opened with foggy and misty weather with unsteady winds from S.S.E. Moderate southerly swell. At 6:00 A. M. East Crossman Island bore by compass SW. by W. and Nameless Island N. by E. Tacked ship about six times this morning to take advantage of the shift of wind. The fog lifted a little during the afternoon, but closed down again towards evening. At 6:00 P. M. Nameless Island bore by compass N. $\frac{1}{4}$ W. and East Crossman Island W. by S. $\frac{1}{2}$ S.

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August 19: Wind and weather unchanged during the night. The schooner was kept on the wind and at 6:00 A. M. East Crossman Island bore by compass SW. by W., distant eight miles. At 9:00 o'clock we made up to the island, when the wind failed us and we drifted off with the current. A fresh afternoon breeze coming up from the southeast, enabled us to make some headway, and at 3:00 P. M. we weathered the East Crossman, arriving at Vilamil at 7:00 P. M., too late to anchor back of the reef, so let go the anchor outside in nine fathoms of water.

August 20: All hands up for early breakfast and at 7:00 o'clock we weighed anchor and made up to the anchorage, letting go anchor at 7:45 in three and one-half fathoms of water. Beck went ashore with landing party to arrange for getting some mules to make a pack train trip to the interior. After lunch, went out in the skiff with Nelson to take soundings, intending to move the schooner further in so as to get smooth water for cleaning sides and painting the waterline. Having found good, clear bottom with 14 feet of water at dead low tide, we hauled in a little further and dropped anchor. All those remaining on board the schooner turned to with brooms and scrapers, cleaning off the waterline and counter. Parker left the schooner this afternoon to stay ashore temporarily. Don Antonio is getting the pack animals mustered to take our trip to the interior. We intend to visit the northern slopes of the mountain in search of some of the larger tortoises.

August 21: All hands turned out for early breakfast, the party for the interior going ashore with equipment ready to start up the mountain. Don Antonio informed us that the mules had not arrived as yet, so we waited about the settlement to see what the prospects of getting started were. Nelson and Gifford cleaned off the waterline on the starboard side of the schooner. As no mules came down from Santo Tomas, all hands and Herr Brugermann, the German bookkeeper, went on board the schooner for supper. Cloudy and misty most of the day.

August 22: The pack animals arrived last night and all hands, except White, Gifford and Nelson, went ashore imme-

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diately after breakfast and attended to getting equipment packed on the mules. We used our blankets to put over the home-made riding saddles, but even with a double thickness of blankets, we found out afterwards that walking was a pleasure. A rawhide rope took the place of a bridle. We got off about 8:00 o'clock, Beck following shortly afterwards with the Indian in charge of the pack animals. The ascent was very gradual as we passed over the barren lava fields of the lowlands. About seven miles from the coast the green zone commenced and we entered a belt of fine, green trees covered with a heavy growth of lichens. Higher up, the trail opened up onto a good earth road, the forest became denser and a heavy fog shut down on us. We passed through some clearings where timber had been cut for making fences and buildings and through several small fields of sugar cane. As we neared Santa Tomas, the forest thinned out and we came onto open grass land and within sight of the settlement, which is just above the last of the trees. Santo Tomas consists of a few thatched huts and a couple of corrugated iron buildings. We were met by Señor Puga, the head man of the village, and escorted to the larger of the buildings, which was to be our headquarters while we worked about the mountain. We were then invited to a meal at Señor Puga's house and arrived there just in time to see his wife chasing a pig from under the dining table. After a repast of beef, tortillas, syrup and rice, we returned to our headquarters to meet the pack train and get the animals unloaded. Nelson aboard the schooner cleaning and painting, while Gifford is working about the lowlands.

August 23: All hands turned out for early breakfast at Señor Puga's house. Coffee, chocolate, beef, rice, tortillas and syrup were served. After our repast, Beck, King and I got the pack train loaded and, with two Indians, started off for the top of the mountain, the rest of the party working about Santo Tomas. The natives have gathered quite a few tortoises for us and are packing them down to the coast by degrees. The pig pen adjoining our house has a number in it now awaiting transportation. As we left the settlement on our way up the mountain, we passed through a great grassy area which runs clear to the rim of the crater, 3,150 feet above sea

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level. We saw many medium-sized tortoises along the trail, but left them there, as we were after some of the larger ones. Hundreds of skeletons were scattered about, mostly due to the work of the oil hunters, the wild dogs being responsible for some. These can be readily distinguished by the carapace and plastron being intact. The natives cut the shell open with an ax, leaving it in small pieces. About noon we reached the top of the mountain in beautifully clear weather and had a magnificent view of the crater, some six or eight miles in diameter. The bottom has some small, brushy areas in it, but is mostly rough, black lava. A sulphur deposit at the northwest part of the rim is the only sign of activity, a small column of steam being visible. Passing over to the northwest side of the mountain, we descended onto a flat at its base and pitched camp on the site of an old one used by the oil hunters. We killed an ordinary-sized tortoise near our camp and cut out the liver for supper. Many wild cattle and dogs about our camp, the latter coming very close to our tent and showing no signs of fear. On going back to skin out the tortoise we had removed the liver from, we found that one of our guides had cut a leg off of it for his supper, so we saved the skull only. While cooking supper this evening, we saw a pack of about 20 dogs bring down a big bull. The dogs surrounded the animal, running about in a circle as they closed in on him, and, when close enough up, some of the pack bit at his heels, while others went for his nose. Finally winding the bull, one or two of the dogs made a leap for his throat, when the bull went down, with them all piling on top of him. We heard dogs barking about our camp all through the night and found that they had picked the bones of the tortoise we had killed, and even eaten some of the shell.

August 24: Turned out early this morning and started off on a tortoise hunt, our guides taking us about a large flat where the oil hunters had killed off many large ones. We found several moderate-sized ones, but none of the real big fellows we were anxious to get. King and I skinned tortoises most of the day, while Beck and the guides searched for more. The rest of the party still working about Santo Tomas.

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August 25: Still in camp skinning tortoises, while Beck and the guides are exploring the surrounding country. We now have about eight moderate-sized tortoises ready to pack out. Beck returned to camp this evening with the information that they were unable to find any very large tortoises and so had decided to break camp and return to Santo Tomas.

August 26: Turned out early and, after a breakfast of tortoise liver, hardtack and coffee, the guides packed the eight tortoises and camp equipment on the mules and we headed for Santo Tomas. About half way to the hacienda, King found a fairly large-sized tortoise, about as large as any we had found on the mountain, so we pushed on to the hacienda, planning on coming back on the morrow to skin it. We reached Santo Tomas late in the afternoon and found that the rest of the party had left for the coast.

August 27: Started out early this morning with the two guides to skin and pack out the tortoise King discovered yesterday. We had it skinned out shortly after noon and one of the Indians lashed it on the pack mule, when we made tracks for Santo Tomas, reaching it about 6:30 and finding that Beck had left for the coast. Ochsner, Stewart, Hunter, Gifford and Williams have just arrived from below.

August 28: With one of the Indians for a guide, we all started up for the summit to have a last look at the crater. Nobody but the botanist found much in the way of specimens. We saw a few small tortoises, but did not take them. Wild cattle seem to be all about the grassy areas and the bark of the wild dogs is frequently heard as they gather in packs to hunt them. We returned to the hacienda for supper and all hands turned in early.

August 29: Most of the party collecting about the hacienda. King and Ochsner returned to the rim of the crater to examine some ditches they had discovered yesterday. There was so much fog covering the mountain top that they could not locate the spot, so returned to the hacienda. This evening a few cockfights were held for our amusement. Don Antonio, Herr Brugermann and all our party occupy the same room in our corrugated iron mansion. The former has a bed, Herr

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Brugermann a hammock, and the rest of us occupy the floor. Plenty of rats running about the rafters in the night. No matter where we camp ashore, we have a plentiful supply of them.

August 30: Broke camp this morning and all hands, except Hunter and Williams, rode down to the coast. We arrived early in the afternoon and found all well on board the schooner.

August 31: King and I spent the day skinning tortoises brought down by the natives. Rest of the party on board giving Nelson a hand to shift stores over to starboard in order to paint the waterline. Nelson about finished painting the port side today. Fine weather with S.S.E. winds.

September 1: King and I skinned tortoises all day. Rest of party stowing stores and taking on water. Williams and Hunter returned from Santo Tomas this afternoon. The brigantine *Golèta* and the sloop *Ballandra*, both from Guayaquil, arrived today. The *Goleta* brought Don Antonio's father, who, on account of political troubles, had left Ecuador for the time being. Weather clouding up some this evening.

September 2: All hands keeping the Sabbath today. Don Antonio, his father and Herr Brugermann came on board for dinner at noon. They invited us all to a supper and a dance this evening, it being a farewell party, as we do not expect to return to Vilamil after leaving this time. All hands except the cook and myself went ashore to attend the festivities. A six or seven-course dinner was given, with chicken, whiskey and wine included. Numerous toasts were drunk, and, after dinner, the floor was cleared, violins and guitars broke out, and the ladies of the settlement appeared for the dance. Hunter and Ochsner performed a cake walk, much to the amusement of those present. The party lasted till 2:00 A. M. and all hands returned on board. Cloudy weather with occasional light showers during the day.

September 3: King and I skinned tortoises all day. Took on board some more water today and dumped overboard some we had already received a couple of days ago, it being too salty and tasting of sulphur. The natives are bringing it in

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on burros, but have to be watched closely, as they are inclined to get it from a waterhole close to the beach where it is salty and dirty instead of getting it further inland where they get the water for the settlement. Cloudy weather with occasional light showers.

September 4: Today we took on board 35 live tortoises, several sacks of atoyas and some more water. Some of the party ashore doing their last collecting at Vilamil, as we expect to sail tomorrow. Cloudy weather, but no rain.

September 5: Took on more water and provisions today. A total of 1,600 gallons of water taken on for the homeward voyage. Parker, our former navigator, was offered his passage back to San Francisco, but refused all aid and removed his effects from the vessel. By 3:00 P. M. we were ready for sea, and, bidding farewell to Don Antonio and all our friends ashore, we weighed anchor and stood out of the harbor on the port tack, dipping our colors as we passed out from behind the reef and shaped our course for Chatham Island. At 5:30 we tacked ship and at 9:00 P. M. passed about one mile to the leeward of Brattle Island. Light southerly winds with partly cloudy weather.

September 6: Opened with light southerly winds and partly cloudy sky. The schooner stood on the starboard tack throughout the night, making E.S.E. The wind freshened early in the morning and at 7:00 A. M. the northwest point of Charles Island bore by compass S.S.W., distant nine miles. Took several cross bearings during the day and found the schooner making good her course. At 7:00 P. M. we picked up the Chatham light bearing E.N.E. Course was then set NE. until the light bore SE. and we picked up Dalrymple Rock and tacked ship. We stood into Wreck Bay and at 9:30 P. M. we let go anchor in six fathoms about 600 yards off the wharf. Made sails fast and all hands turned in.

September 7: All hands turned out early. Hunter, Beck, Ochsner and Williams went up to the hacienda for mail. They brought back plenty of papers, but only four letters. Landing party ashore doing general collecting. Nelson and I rigged up preventers on the jibstay, forestay and bobstay, the same

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being partly rotten. All hands on board for supper, Williams returning on shore to do some night collecting. Partly cloudy with moderate southerly breeze.

September 8: Stewart and Williams emptied out a tank of Albemarle water, Beck having decided to take on some here, as it is excellent drinking water. We took on some small stores and a keg of beef, sent by the American Consul at Guayaquil. King and I skinned tortoises all day. Nelson fumigated the cabin this evening and all hands slept on deck. Cloudy weather with fresh southerly winds.

September 9: Opened up the cabin at 7:00 A. M. and found that the sulphur had done its work well, killing numberless flies, bedbugs and cockroaches. As soon as the cabin was aired out sufficiently, the cook prepared breakfast. Many visitors aboard today looking over the schooner and our specimens. Fresh southerly breeze and somewhat misty this afternoon. We found our chronometer to be 39' 44" slow on G. M. T. at 4:00 P. M.

September 10: Took on board 400 gallons of water, hauled down by ox team from the hacienda. Beck had the vessel cleared for the return journey to San Francisco. The Governor requested Beck to take him and a party of three to Vilamil to interview Señor Gil Sr. It appears that he was exiled from Ecuador and was ordered to report to the Governor at Chatham before going to Vilamil. This he failed to do and the Governor wanted to go over and see why. At 4:00 o'clock he arrived on board the schooner with a West Indian negro as interpreter, his secretary, and a soldier with a gun of the vintage of 1870. Some baggage and a saddle came on board later. At 4:30 we set sails and weighed anchor. Clearing the reef at the entrance of the bay, we set course SW. by W. with fresh southerly breeze. The soldier proceeded to get sick at once, but His Excellency the Governor was not effected in any way and at dinner time he stowed away enough food for a regiment. At midnight, Barrington Island bore by compass N.E., distant eight miles.

September 11: Opened with light winds and hazy weather, clearing about nine o'clock. At noon we hove to off the boat

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entrance through the reef opposite Vilamil; and Beck, Ochsner and King took the Governor and party ashore. As our guests had made such inroads on a box of oranges we had, forgetting that they had a sack full of their own, we "forgot" to put it into the boat with the rest of the baggage. While awaiting the return of the boat, we beat to windward of the reef, keeping a sharp lookout for it. At 4:00 o'clock the boat was sighted coming through the reef, so we ran down before the wind and picked it up. Our course was then shaped for Tower Island, taking our departure from a rock to the northward of Brattle Island with the intention of passing to the southward of Indefatigable. Had a fair breeze up to 11:00 P. M., when it fell calm with misty weather. At midnight the Crossman Islands bore by compass NW. by W., distant eight miles.

September 12: Opened with light airs and hazy weather. Schooner heading E. The wind freshened towards noon and weather cleared somewhat. Great numbers of phalaropes seen swimming about and many shearwaters and albatrosses circling about the schooner. At 6:00 P. M. Barrington Island bore by compass E. by N., distant eight miles. The fog shut down on us at 9:00 o'clock and made navigating rather dangerous.

September 13: Weather foggy. At 12:30 A. M. Barrington Island loomed through the haze dead ahead, the current setting us to the southward instead of to the northward as indicated on the chart. According to our reckoning, when I relieved Nelson at midnight we should have been past Barrington. On seeing it get so black ahead, I ran forward to take a look around and thought I could hear the sound of the surf. Shouting to Ochsner to throw the helm hard up, I ran aft to slack off the main sheet and put the schooner before the wind. Nelson was called, and, just as he reached the deck, the fog thinned somewhat and we could see Barrington Island close on our starboard beam. At 3:00 A. M. set course NE. by E. and at 4:00 A. M. the east end of Barrington bore by compass S. SE., distant four miles. At 8:00 o'clock set course for Tower Island and winged out the foresail. Schooner going before a stiff breeze and making fine time.

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Tower Island was sighted at 3:00 P. M. and at 5:00 P. M. the schooner was put on the starboard tack, as we were not able to make the anchorage by daylight. At 6:00 P. M. the island bore by compass NW. by N. $\frac{1}{4}$ N., distant 14 miles. Hauled down the flying-jib and made it fast. Strong southerly winds throughout the night and the schooner was kept close hauled, making a course E.S.E. magnetic.

September 14: Opened with fresh southerly winds and heavy sea. Tacked ship at 1:00 A. M. At 6:00 A. M. shaped course for Tower Island, sighting it at 8:30 bearing N.NW. We made up to the south coast, passing by Darwin Bay ("discovered by Beebe"),⁶ as we had no desire to anchor on the weather side of the island, having had enough experience in getting away from some of our other anchorages, when trying to beat against the wind. Sailing around to the northeast side, we lowered the ship's boat and went in to take soundings and buoy an anchorage. Finding bottom at ten fathoms, the spot was buoyed and at 12:15 we let go anchor. All hands, except King and myself, ashore for general collecting, returning at 5:30 P. M. Weather partly cloudy with light southerly breeze at sundown.

September 15: All hands ashore immediately after breakfast. Beck went over to the south side of the island and killed a fur seal, bringing back the skull and skin. Ochsner and I made a trip inland to the crater lake ("discovered by Dwight Franklin")⁷ and found Stewart collecting about the rim of it. After making a search for lizards and snakes and finding none, I left Ochsner and Stewart to explore the lake and returned to the coast to help King collect some sea iguanas, the only reptiles found on the island. Plenty of fine fish along the shores and Nelson caught several big barcalau. Light S.S.E. winds and cloudy sky throughout the day.

September 16: Sunday morning and late breakfast. At 10:00 A. M. we set sails and weighed anchor, shaping our course for Bindloe Island. We made up to the island at 4:00 P. M. and lowered the boat to sound for an anchorage. Finding

⁶ Galapagos: World's End, p. 311. Beck spent some time in this bay on board the schooner *Mary Sachs* in 1902.

⁷ The Arcturus Adventure, fig. 67.

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none on the east side, we circled around to the northward and let go anchor off the north side in $7\frac{1}{2}$ fathoms of water with rocky bottom. Abingdon Island bears by compass NW. $\frac{1}{2}$ W.

September 17: Shore party landed immediately after breakfast, pulling down the coast about a mile and a half from the anchorage where some soil reached down to the water's edge. Collected with Williams most of the day and secured quite a lot of lizards. Beck went to the summit of the island and found a few small steam holes in action. Bindloe and Tower islands are quite uninteresting compared to some of the southern ones. Cowley, Tagus Cove, Banks Bay Mountain and the top of James Island in sight from our anchorage. Fine, clear evening with light southerly winds.

September 18: Beck, Stewart and Williams went ashore to collect about the anchorage and returned at 9:00 o'clock. Set sails and weighed anchor, shaping our course for Abingdon Island, plainly visible from the anchorage. At 12:40 P. M. we made up to the south coast of the island and let go anchor in seven fathoms of water, Cape Ibbetson bearing E. $\frac{1}{2}$ S., distant about 800 yards. Landing party went ashore at once. We found fairly open country and good walking about the lower levels. Above, we could see a brown and a green zone, reminding us of Indefatigable, only on a smaller scale. Cloudy weather with light southerly winds. We had to anchor on the weather side of the island, so have plenty of chain out. However, the wind and sea are both light and the schooner is riding easily.

September 19: All hands turned out early so some of the landing party could get started for the top of the island. Ochsner, King, Williams and I started up for the green zone on a tortoise hunt. We just got to the edge of the green belt when we discovered fresh signs and, following up the trail, came upon a tortoise drinking water from a hole in the top of a large, flat rock. King and I stopped and skinned out this tortoise, while Ochsner and Williams continued up the mountain, locating another tortoise just above us. They reached fairly near the top, finding a heavy growth of tree ferns, but no large trees. As visibility was poor on account of the fog, they had no view. On the northeast side of the summit, at

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the base of two small cones, vapour was seen rising from a hole in the lava and the ground about it was quite warm. Eating their lunch at this point, they came back down the trail and helped King and me pack out the tortoise we had skinned. We met Beck at the beach and he informed us he had found another tortoise just below the spot we had skinned out ours. Hunter camped near the green zone for the night to hunt owls and bats. Williams and I went ashore after supper to collect with his lantern till about 8:00 o'clock. Cloudy weather during the day with very light southerly winds.

September 20: Ashore with King to skin and pack out the tortoise Ochsner and Williams found yesterday. Beck went back to the green zone to look for a tortoise he found the trail of yesterday. King and I had our tortoise skinned and down to the beach at 6:00 P. M. Nelson overhauled some of the rigging and set up the bobstay. Cloudy weather with light southerly winds.

September 21: King and I went up the mountain to skin and pack out another tortoise found by Beck. We located it on the southern slope of the mountain a mile or so from the edge of the green zone. Beck found one more tortoise today, but said it was too far away to pack out, so left it. He brought out one skeleton which he found in a cave. King and I got our tortoise down to the beach at 5:30. Cloudy weather with light rains in the morning.

September 22: All hands ashore after breakfast. King and I gathered a lot of cactus for the live tortoises on board. The deck is crowded with them and we are skinning them as fast as possible. Foggy and rainy about the summit of the island today. Williams caught a good-sized barcalau while coming in with the boat to pick up the landing party. All hands on board for 6:00 o'clock supper.

September 23: Breakfast at 7:00 o'clock. Beck went ashore to take some photographs and King and I went after more cactus for the tortoises. During the morning we had light southerly winds, which freshened towards 10:00 o'clock, and at 11:00 o'clock we hoisted sails and weighed anchor. Made short tacks to the eastward till we cleared the shore.

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The schooner was now put on the port tack and course set to the westward, towards Cape Chalmers, which we passed at 1:00 P. M., shaping our course for Wenman Island. Cleared up decks as much as possible to make ready for sea. Unbent anchor chains and secured anchors. Fresh southerly breeze and the schooner is logging about eight knots. At 11:00 P. M. sighted Wenman Island bearing NW., distant about six miles. Hauled the schooner on the wind so as to beat to windward of the island during the night.

September 24: At 7:00 A. M. ran down before the wind and at 9:00 A. M. hove to under the lee of Wenman Island. All hands, except White and Nelson, landed on the north slope in a small, sheltered cove. The island is a huge flat-topped rock covered with a dense growth of low-growing *Opuntia*. The cactus made traveling somewhat difficult and most of our efforts were confined to collecting about the edges of the plateau, where there are a few clear spaces. Despite the fact that Wenman is merely an isolated rock, we found the little Galapagos dove quite plentiful, as well as some of the smaller land birds. The landing party was called off at 1:00 P. M. Quite a sea was running about the north point of the island and when we got clear from the shelter of the landing place we shipped green water into the boat. During the afternoon we kept the schooner hove to on the port tack so as to run down to Culpepper Island in the morning. King and I skinned tortoises for the rest of the day.

September 25: At 3:00 A. M. shaped course for Culpepper Island, heaving to under the lee of it at 10:00 A. M. We found Culpepper a most uninviting spot, being merely a flat-topped rock, considerably smaller than Wenman. There were numberless seabirds flying over the top of it. Put off in the skiff with Beck, Ochsner, Hunter and Williams to make a landing. This proved somewhat difficult owing to a choppy sea and the huge boulders which bordered a ledge we had to land on. We succeeded in making a landing at the base of a cliff which towered some 500 feet above us. A few sea iguanas seemed to be the only inhabitants about this spot, the birds all being about the top of the rock. Several large sharks were seen close to the precipitous cliff near the ledge

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we landed on. Finding the summit quite inaccessible, we gathered a few sea iguanas and shoved off for the schooner. This was our last landing on the Enchanted Isles. At 1:45 P. M. we shaped our course for Clarion Island, taking departure from Culpepper bearing SE. magnetic, distant about one-half a mile. With a fresh S.SE. wind, we streamed the log, winged out the foresail and ran before the wind, bidding good-bye to the Galapagos on the first day of the passage back to San Francisco and the 455th day of the voyage. Weather cloudy with some fog and rain squalls towards evening.

September 26: Opened with strong breeze from S.SW. At 10:00 A. M. we hauled in the foresail owing to the shift of wind. Heavy southerly swell running and the schooner is logging nine knots. King and I, with some assistance, busy skinning tortoises in order to clear up the decks before getting too far north. Lat. $5^{\circ} 34'$ N., Long. $95^{\circ} 27'$ W. at meridian.

September 27: Opened with fresh S.SW. winds and light rain squalls during the forenoon. Last night we had a shift of wind to the westward, accompanied by heavy rains. At 7:00 A. M. it hauled back to the SW. Heavy southerly swell continues. During the midwatch the main lift strop carried away and was replaced this morning. Still busy skinning tortoises. The temperature and water are getting much warmer now and numbers of shearwaters are circling about the schooner. Lat. $7^{\circ} 24'$ N., Long. $97^{\circ} 48'$ W. at meridian.

September 28: Opened with strong breeze from the SW. accompanied by heavy rain squalls. Heavy southerly swell continues with occasional cross swell from the NW. We are rapidly approaching the doldrums. At 5:00 o'clock this morning the forestaysail halyards and the gaff-topsail tack carried away. Same were repaired and sails set again by 6:30. Our noon observation showed a strong current setting us to the eastward. Tortoise skinning going on as usual and we are making some inroads on them. Lat. $9^{\circ} 22'$ N., Long. $98^{\circ} 25'$ W. by dead reckoning at meridian.

September 29: Opened with strong southerly winds and heavy rain squalls. Schooner pitching heavily and shipping some green water. A school of grampus passed close by our

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weather side and many flyingfish about. The heavy squalls continuing at 4:00 o'clock, we took in the flying-jib and gaff-topsail. Tortoise skinning discontinued today on account of bad weather. Lat. $9^{\circ} 59' N.$, Long. $100^{\circ} 25' W.$ at meridian.

September 30: Opened with strong wind and heavy seas and squalls from the S.S.W. At 1:00 P. M. took one reef in the fore and mainsails. Schooner logging nine knots at times. Sighted several turtles during the day. Sea quite choppy and no work done on the tortoises. Lat. $11^{\circ} 05' 30'' N.$, Long. $102^{\circ} 09' W.$ at meridian.

October 1: Wind moderated during the night and at 7:00 A. M. shook the reef out of the foresail. Heavy swell from the S.S.W. still continues. Sky overcast, but no rain. Started skinning tortoises again. Nelson rove new main throat-halyards this morning. Our long cruise and wear on the running rigging during the calms we went through amongst the islands, is beginning to be felt when we make any heavy weather. Lat. $12^{\circ} 19' N.$, Long. $104^{\circ} 03' W.$ at meridian.

October 2: Opened with strong winds and heavy sea from the S.S.W., the wind hauling to the SW. during the morning. Took in the flying-jib at 6:00 A. M. and the foresail at 9:00. Took one reef in the mainsail and carried it the rest of the day with the forestaysail. Main lift strop carried away during the midwatch and was replaced this morning. Lat. $14^{\circ} 24' N.$, Long. $106^{\circ} 42' W.$ at meridian.

October 3: Opened with heavy winds and squalls. At 5:00 P. M. put a double reef in the foresail and set same. Sea appears to be increasing and wind not quite so steady. Early this morning the schooner listed heavily to leeward, spilling a jug of molasses and a crate of onions over the cabin floor, together with some of Stewart's plants and what mess gear there was on the table. Lots of dishes broke. No attempt made to skin tortoises today, but all hands turned to and cleaned up the mess in the cabin. Pumped out considerable bilge water this evening. Lat. $14^{\circ} 24' N.$, Long. $107^{\circ} 05' W.$ at meridian.

October 4: Wind and sea went down during the night and this morning opened with light winds and calms. At 6:00

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A. M. shook out the reefs in the fore and mainsails. At 12:30 P. M. the leech on the mainsail carried away and the sail was lowered for repairs. Lowered head sails also and let the schooner go with the foresail alone. Fine afternoon, but rather sultry. Beck and Gifford went out in the skiff shooting birds. King working on tortoises, while I am helping Nelson repair the mainsail. Lat. $14^{\circ} 48' N.$, Long. $107^{\circ} 02' W.$ at meridian.

October 5: Opened with light winds and calms. At 10:00 o'clock repairs on the mainsail were finished and all sails were set. The wind having hauled to the NW., we tacked ship and headed W. by N. on the starboard tack. Beck out in the boat again shooting birds. King and I still on the tortoises, when not taking a turn at the wheel or taking the deck. Lat. $14^{\circ} 45' N.$, Long. $108^{\circ} 30' W.$ at meridian.

October 6: Opened with light winds from the N.NW., falling to dead calm at 6:00 P. M. Lowered the foresail for repairs and set same at 10:00 P. M. All hands skinning tortoises when not otherwise occupied. Rather warm today and some of us sleeping on deck. Lat. $14^{\circ} 38' N.$, Long. $109^{\circ} 12' W.$ at meridian.

October 7: Opened with light breeze from the NW., calming down towards evening. Moderate swell from the S. with small counter swell from the N.NE. Only a few birds seen about today. Lat. $14^{\circ} 40' N.$, Long. $109^{\circ} 26' W.$ at meridian.

October 8: Opened with light airs and calms, the schooner, at times, not having steerage-way. Considerable swell from the NW. Beck went out shooting birds this morning. Everybody, when not otherwise engaged, busy skinning tortoises. Lat. $14^{\circ} 11' N.$, Long. $109^{\circ} 38' W.$ at meridian.

October 9: No change in weather. We are taking advantage of the opportunity to get the decks cleared of tortoises and all hands keep busy with the skinning knives. The current set us back about five miles to the southward during the last 24 hours. Lat. $14^{\circ} 26' N.$, Long. $109^{\circ} 26' W.$ at meridian.

October 10: Opened with light winds and clear weather, the schooner having some steerage-way. Considerable swell

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from the NW. continues. Beck out in the boat shooting birds, while the rest of the party, who can be spared, are skinning tortoises. Nelson rigged a preventer on the forestay, the chain plates having pulled out. Williams sighted a couple of bonitas under the bow, but met with no success at fishing. Lat. $14^{\circ} 36' 30''$ N., Long. $109^{\circ} 42'$ W. at meridian.

October 11: Opened with light unsteady winds and fine weather, a couple of light rain squalls passing over us during the morning watch. While Williams was fishing off the flying-jib boom, a booby lit on the spar within a couple of feet of him and was promptly grabbed by the neck and turned over to the ornithologists. Light winds most of the day, the schooner making about W. by N. Lat. $15^{\circ} 16'$ N., Long. $110^{\circ} 01'$ W. at meridian.

October 12: Opened with light airs and calms and moderate NW. swell. Skinning tortoises as fast as possible while the fine weather holds out. Six were skinned today. Some of us taking advantage of the spells of dead calm to go over the side for a swim. Water fine and warm. Lat. $15^{\circ} 36'$ N., Long. $110^{\circ} 12'$ W. at meridian.

October 13: Opened with light airs and calms, the breeze freshening towards nightfall. Beck out in the boat this morning shooting birds. The last tortoise was skinned this morning. As soon as they soak for a couple of days we shall be able to knock down the pickle tubs and stow them away so we can have a clear deck. Lat. $15^{\circ} 31'$ N., Long. $110^{\circ} 43'$ W. at meridian.

October 14: Opened with fair breeze and moderate sea. Schooner logging about four knots. Today, being Sunday, nothing but the running of the vessel attended to. We are not able to catch any fish at present and our diet of canned salmon and beans is getting a little irksome to some of the party. Boobies, shearwaters and tropic-birds observed today. Lat. $15^{\circ} 54'$ N., Long. $112^{\circ} 08'$ W. at meridian.

October 15: Opened with fresh breeze and moderate swell. Schooner making about NW. and logging five to six knots. According to our observations, a strong westerly current is running. King and Hunter knocked down the pickle tubs and

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stowed them below. We now have a clear deck for running into the heavy NW. winds we might expect off the California coast at this time of year. Lat. $16^{\circ} 25' N.$, Long. $113^{\circ} 40' W.$ at meridian.

October 16: Opened with fresh breeze, which grew lighter towards evening. Moderate swell from the NW. At 5:00 P. M. we put the schooner on the port tack, making about NE. by E. Our principal activities these days are running the schooner and shooting birds during periods of calms and light breezes. Lat. $16^{\circ} 45' N.$, Long. $113^{\circ} 09' W.$ at meridian.

October 17: Opened with light northerly winds and smooth sea. At midnight tacked ship again and are now heading about W.NW., logging from two to four knots. Boobies, frigate-birds and flyingfish quite numerous about the schooner. Lat. $16^{\circ} 55' N.$, Long. $112^{\circ} 55' W.$ at meridian.

October 18: Opened with light breeze and fine, clear weather. Some of us sleeping on deck at nights. Nelson and I greased down the masts today. Mosquitoes, hatching out from the tank of water we got at Chatham Island, getting somewhat troublesome. We are still unable to catch any fish and are going strong on the canned salmon and beans. Lat. $17^{\circ} 10' 30'' N.$, Long. $113^{\circ} 27' W.$ at meridian.

October 19: Opened with light unsteady winds and calms. Small swell from the NW. At 4:00 A. M. the wind fell to nearly calm and the schooner was put on the port tack until 8:00 A. M., when the wind hauled back to the northward. Williams finally caught a bonita this afternoon, so we will ease off on the salmon for supper. Weather quite warm today. Lat. $17^{\circ} 20' 30'' N.$, Long. $114^{\circ} 06' W.$ at meridian.

October 20: Opened with very light winds and fair weather. Swell from the NW. still continues. A few bonitas about the schooner today, but we failed to catch any. Clarion Island is not far off now, but as yet we have been unable to sight it. Nelson and I rove off a new mainsheet this afternoon. Schooner making about NW. and logging four knots. Lat. $17^{\circ} 44' N.$, Long. $114^{\circ} 58' W.$ at meridian.

October 21: Opened with light unsteady winds and cloudy weather. Tacked ship at 8:00 A. M. At 9:30 we sighted

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Clarion Island from the crosstrees, bearing by compass N. by E., distant about 25 miles. At noon it bore N. $\frac{1}{2}$ W. magnetic. The wind increased towards noon and a heavy swell set in. Beck decided not to try and make Clarion, the object in sighting it being to get a check on our chronometer. The schooner was now put on the starboard tack and, passing to the southwestward of Clarion, the course was set for San Francisco. Lat. $17^{\circ} 53'$ N., Long. $114^{\circ} 45' 30''$ W. at meridian.

October 22: Opened with fresh breeze and cloudy sky. We did not get a very good check on our chronometer, owing to hazy weather and uncertain latitude. Clarion was lost to view at 2:00 P. M. This morning we set up the port fore rigging and broke up the tortoise pen we had rigged abaft the foremast. This evening we sighted great numbers of boobies heading in the direction of Clarion. Lat. $18^{\circ} 16'$ N., Long. $115^{\circ} 46'$ W. at meridian.

October 23: Opened with light airs and calms, a fresh breeze setting in later in the morning. A heavy rain shower, lasting about ten minutes, passed over us as the breeze freshened up. Considerable swell from the NW. Set up the port main rigging this morning. One of the tortoises we have kept to bring back to San Francisco alive fell overboard and we had to put back to pick it up. Williams and I put off in the ship's boat to the rescue, but it leaked so badly we had to bail vigorously and make for the schooner. We took the boat in on deck for calking and sailed after the tortoise, picking it up with a boat hook. Current set us 16 miles SW. by W. true during the last 24 hours. Lat. 19° N., Long. $116^{\circ} 41'$ W. at meridian.

October 24: Opened with fresh breeze and cloudy weather, the wind getting lighter towards evening and the swell going down considerably. Many flyingfish about today. Schooner making about NW. and logging two to four knots. Ship's boat being overhauled, calked and painted. Lat. $19^{\circ} 53'$ N., Long. $118^{\circ} 01'$ W. at meridian.

October 25: Opened with light winds and smooth sea. All hands busy scrubbing paintwork and getting ready to do some

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painting about decks. Williams caught some bonitas this morning, much to the delight of Hunter, who has grown to hate the sight of a can of salmon, not to say anything of its contents. Lat. $20^{\circ} 20' N.$, Long. $118^{\circ} 44' W.$ at meridian.

October 26: Opened with fine, clear weather and smooth sea. Taking advantage of the fine weather to paint about decks. No fish sighted today and only one or two petrels seen. Schooner making about NW. by W. and logging two to three knots. Lat $20^{\circ} 37' N.$, Long. $119^{\circ} 17' W.$ at meridian.

October 27: Opened with fair breeze and clear weather. All hands busy painting. This evening we thought we sighted a sail to the westward, but could not make it out well enough to be certain. Lat. $21^{\circ} 45' N.$, Long. $120^{\circ} 32' 30'' W.$ at meridian.

October 28: Today, being Sunday, no work outside of standing watches being done. Fair breeze and smooth sea with sky somewhat overcast. Schooner making about N.NW. and logging from four to five knots. Lat. $23^{\circ} 02' 30'' N.$, Long. $121^{\circ} 45' W.$ at meridian.

October 29: Opened with fine sailing breeze. Weather slightly cloudy with smooth sea. All hands busy painting and chipping iron rust. Few birds seen today. Lat. $24^{\circ} 31' 30'' N.$, Long $122^{\circ} 52' W.$ at meridian.

October 30: Opened with fresh breeze and cloudy weather. Swell from the northward increasing. We are north of the Tropic of Cancer now and the weather is considerably cooler. At 6:00 o'clock this evening we passed a three-masted, full-rigged ship bound southward. Lat. $25^{\circ} 25' N.$, Long. $124^{\circ} 20' W.$ by dead reckoning at meridian.

October 31: Opened with fresh breeze and cloudy weather. A couple of light rain showers passed over us this morning. Heavy swell from the northward and all hands are commencing to feel the cold. We have about finished painting and have turned to oiling down the decks. This evening the wind is stronger and it looks as if we may be running into some bad weather. A piece of driftwood passed us this afternoon. Lat. $26^{\circ} 24' N.$, Long. $126^{\circ} 23' W.$ at meridian.

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November 1: Wind died down during the night, but cloudy weather and heavy N.NW. swell continue. At 10:00 o'clock last night the topsail sheet carried away and the topsail was made fast for the night. At 11:00 A. M. lowered the main-sail and rove off a new topsail sheet. Set all sails again just before noon. Several Black-footed Albatrosses sighted today. Everybody feeling cold and breaking out underwear to put on. At 8:00 P. M. a sail was sighted to windward of us; hull down. Lat. $26^{\circ} 50' N.$, Long. $126^{\circ} 50' W.$ at meridian.

November 2: Opened with dead calm. Two Black-footed Albatrosses sighted this morning and one of them was hooked by King while trolling a fish line astern. Finished oiling down the decks this morning. Weather cool and sweaters and overcoats are in vogue. Wonderful moon rise this evening and water full of phosphorescent jelly-fish. Lat. $26^{\circ} 51' N.$, Long. $126^{\circ} 49' W.$ at meridian.

November 3: Opened with dead calm and long NW. swell. Took advantage of the weather to lower and repair the main-sail. Also rove off new forepeak halyards and repaired the staysail. A big shark sighted this morning. Gifford shot an albatross this afternoon and we lowered the ship's boat to pick it up. This time the boat floated and did not require the services of a bailer. Calm moonlight night. Lat. $26^{\circ} 50' N.$, Long. $126^{\circ} 47' 30'' W.$ at meridian.

November 4: Opened with dead calm and heavy NW. swell running. At 8:00 A. M. a SE. breeze sprang up, hauling around to all points of the compass and finally settling in the N.NE. Sighted a sail to windward, but lost it again when a heavy rain storm passed over us. Took in the flying-jib for repairs. Williams hooked a fine, large dolphin from the flying-jib boom. Lat. $26^{\circ} 58' N.$, Long. $126^{\circ} 54' W.$ at meridian.

November 5: Opened calm. At 8:00 A. M. a squall passed over us, bringing with it a NE. wind. Heavy NW. swell running and the schooner is heading up well. Nelson and I busy repairing the flying-jib. Lat. $28^{\circ} 20' N.$, Long. $127^{\circ} 58' W.$ at meridian.

November 6: Opened with fresh breeze and partly cloudy weather, the wind getting lighter towards noon and the swell

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going down. At 6:00 A. M. a sail was sighted off the lee bow; hull down. Nelson and I still working on the flying-jib. Lat. $29^{\circ} 38' N.$, Long. $129^{\circ} 02' W.$ at meridian.

November 7: Opened with light unsteady winds and cloudy weather. Some tropic-birds and Black-footed Albatrosses sighted this morning, one of the latter being hooked with a fish line trailing astern. Nelson and I bent the flying-jib this morning. Lat. $30^{\circ} 23' N.$, Long. $130^{\circ} 13' W.$ at meridian.

November 8: Opened with light unsteady winds and cloudy sky. At 6:00 P. M. a large barque-rigged vessel passed across our bow standing NE. The breeze calmed down during the night and left us both becalmed within sight of each other. Lat. $30^{\circ} 33' N.$, Long. $130^{\circ} 58' W.$ at meridian.

November 9: 500 days out from San Francisco today!!! Opened calm. Daybreak found us within half a mile or so of the barque sighted last night and, at eight bells, we showed our colors and sent a boat aboard, Nelson wishing to get a check on our chronometer. She proved to be the French barque *L'Hermite* 125 days out from Dunkerque, France, bound for San Francisco with a load of cement. Nelson asked her captain to report us when he got in.⁸ At noon the *L'Hermite* was still in sight of us about four miles off. Lat. $30^{\circ} 48' N.$, Long. $131^{\circ} 09' W.$ at meridian.

November 10: Opened with light unsteady breezes, cloudy weather and some showers. Long swell from the W.NW. At 8:00 A. M. sighted another barque to the southeastward of us. At sundown the *L'Hermite* is still in sight of us to the W.NW. Keeping a sharp lookout at nights now, as we are directly in the sailing ship track. Lat. $31^{\circ} 33' N.$, Long. $131^{\circ} 44' W.$ at meridian.

November 11: Opened with light variable winds accompanied by mist and patches of fog. Sighted another square-rigged vessel to the SW. of us, making three vessels in sight this afternoon. During one of our calm spells, a fulmar lighted on the water almost under the counter and Williams

⁸ The *L'Hermite* got in two weeks ahead of us and reported having spoken us, giving our families the first news of us in some months.

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caught it with a dip net. Schooner making about NW. and logging from two to three knots. Lat. $31^{\circ} 54' N.$, Long. $132^{\circ} 11' W.$ at meridian.

November 12: Opened with damp, misty weather and heavy swell from the NW. Moderate breeze blowing. No vessels in sight this morning. Very few birds and no fish about us now. Weather keeps getting colder and colder. Lat. $32^{\circ} 38' N.$, Long. $133^{\circ} 30' W.$ at meridian.

November 13: Opened with misty weather and moderate breeze from the NE. Heavy swell from the NW. Sighted two square-rigged vessels this morning—a barque and a ship. Apparently both were bound for coast ports. At 10:00 A. M. lowered the mainsail for repairs. During a calm spell this afternoon Beck had the boat out and went shooting birds. Lat. $33^{\circ} 07' N.$, Long. $134^{\circ} 06' W.$ at meridian.

November 14: Opened with moderate breeze and cloudy weather. Sighted a light during the night and, when day broke, found a large three-masted ship close aboard with top-gallant, royals and skysails set. Lowered the mainsail again for repairs, setting same at 4:50 P. M. Lat. $33^{\circ} 47' N.$, Long. $133^{\circ} 21' W.$ at meridian.

November 15: Opened with moderate breeze and clear weather. Heavy swell from the NW. Tacked ship at 1:00 P. M. and again at 7:00 P. M., the schooner making about N.NE. and logging four to five knots. The cook parboiled and fried an albatross for supper this evening, some of the party wanting to get the taste of salmon out of their mouths, it being the 52nd day on a diet of salmon and beans. The bird did not prove a great success, having a dry, oily taste. Lat. $33^{\circ} 54' N.$, Long. $132^{\circ} 29' W.$ at meridian.

November 16: Opened with clear weather and unsteady winds from the N.NW. Heavy NW. swell running. A great many Black-footed Albatrosses about this morning. Schooner on port tack, making about N. by E. and logging two to four knots. Lat. $34^{\circ} 30' N.$, Long. $130^{\circ} 42' W.$ at meridian.

November 17: Opened with fine, clear weather, fresh northerly winds and choppy sea. The wind hauling to the NE., the schooner was put on the starboard tack at 1:00

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P. M. Nelson overhauled some of the equipment today and found that the rockets for distress signals were so damp that they would not light. The cold north winds make us put on all the clothes we own. Lat. $35^{\circ} 14' N.$, Long. $132^{\circ} 29' W.$ at meridian.

November 18: Opened with light breezes and calms. Beck went out this morning to shoot birds. A light breeze came up this afternoon and, as there were plenty of Black-footed Albatrosses about, we tried our luck at hooking them on a fish line. We caught 18 in all and the ornithologists will have plenty to do for a while. Schooner still on the starboard tack, making about NW. Lat. $35^{\circ} 40' N.$, Long. $133^{\circ} 14' W.$ at meridian.

November 19: Opened with calm weather and slightly cloudy sky. About 2:00 A. M. a light breeze sprang up from the N.NW. At 4:00 A. M. the weather became misty and the wind shifted two points to the northward. At noon the schooner was put on the port tack and made N. by E., logging three to four knots. Had a little sun to warm us up this afternoon. Lat. $36^{\circ} 03' N.$, Long. $131^{\circ} 59' W.$ at meridian.

November 20: Opened with moderate breeze from the NE. The wind freshened during the afternoon and kicked up a little sea. Sighted a whale this morning. Weather cold and overcoats and rubber boots are worn while standing watches. Lat. $36^{\circ} 49' N.$, Long. $133^{\circ} 41' W.$ at meridian.

November 21: Opened with moderate breeze from the NE. and slightly cloudy weather. Schooner making about NW. by N. and logging four to six knots. No birds about today. All hands anxious for a shift of wind so we can head in towards the coast. Owing to the changeable weather and being in the sailing ship track, we keep a full watch on deck at night. Lat. $37^{\circ} 45' N.$, Long. $134^{\circ} 50' W.$ at meridian.

November 22: Opened with fresh breeze and partly cloudy weather. Caught several more albatrosses today. The cook fried another for supper, but I am sticking to the salmon and beans. Ornithologists busy skinning the albatrosses we catch. Lat. $38^{\circ} 10' N.$, Long. $134^{\circ} 35' W.$ at meridian.

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November 23: Opened with fresh breeze, cloudy weather and heavy N.NE swell. At 1:45 A. M. the schooner was put on the port tack and is making about NE. 5:30 A. M. the leech of the mainsail carried away and the sail was lowered for repairs. Hauled down flying-jib and staysail to make the schooner head up. Set all sail again at 2:00 P. M. Weather turned squally towards evening and at midnight we made fast the flying-jib. Lat. $37^{\circ} 55' N.$, Long. $132^{\circ} 37' W.$ at meridian.

November 24: Opened with strong breeze from the NW. At 6:00 A. M. took in the gaff-topsail. A cross swell running, but not heavy enough to make the vessel labor. Schooner making NE. and logging about five knots. Lat. $37^{\circ} 22' N.$, Long. $130^{\circ} 46' W.$ at meridian.

November 25: Opened with heavy wind from the N.NE. and a heavy sea from the northward. At 7:00 A. M. the foresail ripped out of the bolt-ropes while we were trying to reef it. Made the sail fast till weather moderated. Schooner making heavy weather of it now and shipping green water over the bow. At 4:30 P. M. we took two reefs in the mainsail. Making about E.NE. Lat. $36^{\circ} 43' N.$, Long. $129^{\circ} 03' W.$ at meridian.

November 26: Wind and sea moderating and hauling gradually towards the NW. Nelson and I busy repairing the foresail. Sky overcast and it is trying hard to rain. No albatrosses sighted today. Lat. $36^{\circ} 22' N.$, Long. $127^{\circ} 51' W.$ at meridian.

November 27: Opened with moderate sea and NW. wind. Shook out two reefs in the mainsail and set the flying-jib. At 2:00 P. M. a big, four-masted schooner passed to windward of us. At 5:00 P. M. Nelson and I finished repairing the foresail and same was set with some difficulty, as the breeze was quite fresh. We have made considerable leeway during the past 24 hours on account of heavy seas and shortened sail. At 3:00 A. M. we were struck by a white squall from the NW., carrying away the martingale stay and flying-jib boom and tearing a hole in the mainsail. All hands were turned out to clear away the wreckage. The breeze continues fresh and

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the mainsail is holding out, but we are watching for a chance to lower it. The wind is moderating some as night approaches. Lat. $37^{\circ} 20' N.$, Long. $125^{\circ} 21' W.$ at meridian.

November 28: Opened with light breezes to almost calm. Took advantage of the calm spell to lower the mainsail and Nelson and I made a hasty job of patching it. At 8:30 this morning we all got a thrill when the South Farallon Light was sighted from the fore crossrees, distant about 18 miles. At noon the island bore N., distant $1\frac{1}{2}$ miles. The wind went down and at nightfall we were becalmed.

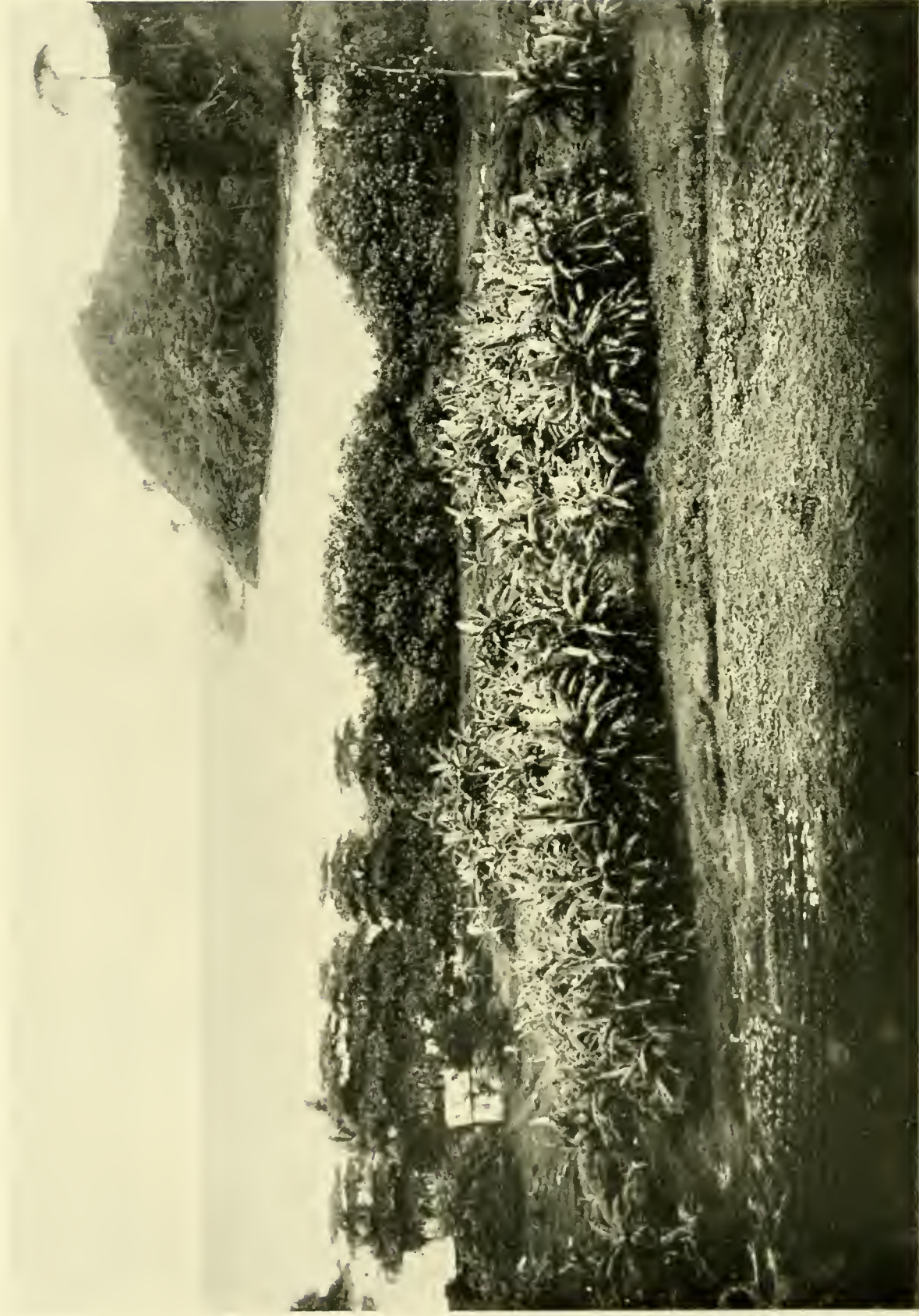
November 29: Opened with light breeze from the north. Everybody much elated over the prospects of getting in. Razors were broke out and we all took a shave, some for the first and some for the second time in 17 months. Old clothes are being thrown overboard so the Board of Health will not hold us up, and we are washing in fresh water. At noon we set our course for the lightship and made up to it at 3:00 P. M. Here we picked up our pilot, Captain George Kortz, famous to all mariners entering the port of San Francisco, and shaped our course for the Golden Gate. The wind dropped on us again and we lay becalmed. Being Thanksgiving Day, we could not get a tug, so, instead of the turkey we all longed for, we had our daily dish of Alaska salmon. With the help of light breezes and a strong incoming tide, we drifted through the Golden Gate and narrowly missed colliding with the pilot boat *Lady Mine*, which was in the same predicament as ourselves. By 9:00 P. M. we reached Lime Point and came so close to the rocks that we put out the ship's boat and tried to pull the schooner's head around. Not succeeding in this, we hailed a passing crab fisherman, in his fishing smack *Louisa*, and, for the sum of ten dollars, he agreed to tow us across to the quarantine station, where we arrived at 10:15 P. M., 65 days out from Culpepper Island and the 519th day of the voyage.



Fig. 1. When the tug *Relief* dropped us off the San Francisco lightship and the schooner's head was turned towards the south we did not see civilization again for seventeen long months.



Fig. 2. Schooner *Academy*.



It was at his little plantation on Cocos Island that Captain and Mrs. August Gissler gave us a royal welcome on the 4th of September, 1905.



Nelson, our Mate, was fond of hunting and more than one Cocos Island pig fell before his trusty shotgun and his homemade buckshot.



On Hood Island the wild goats come down to the beach and drink the ocean water.



At Black Beach Roads we met a party of natives from the settlement on Chatham Island,
who came over to hunt wild cattle and jerk the beef.



F. X. Williams, Entomologist of the expedition, is all ready for a run ashore.



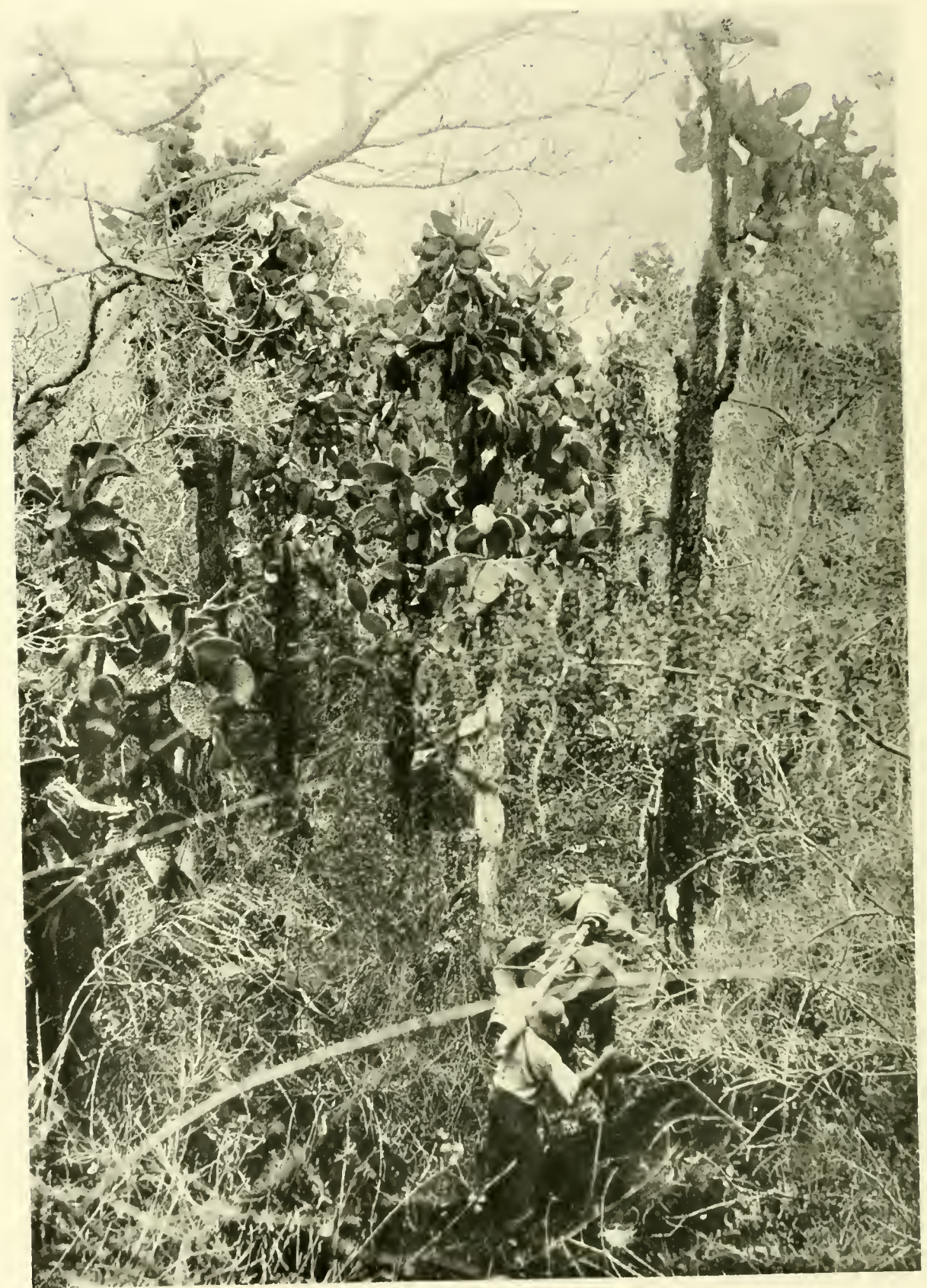
The lagoons on Indefatigable Island abounded with Green Turtles and real turtle soup was not a luxury.



Packing tortoises through the jungle of Indefatigable is no child's play.



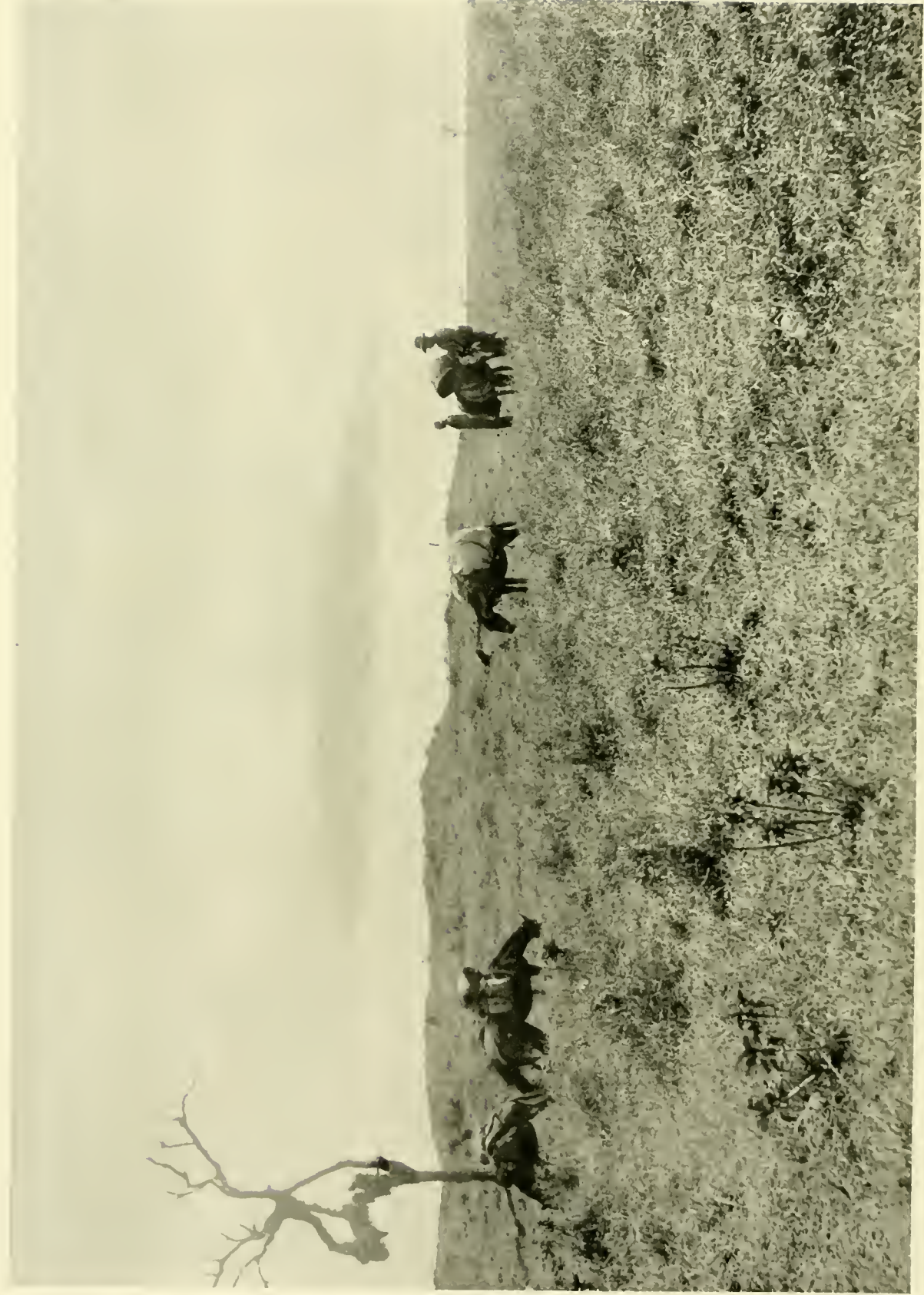
Coming down the cliffs a little extra assistance is necessary.



Going through the brushy country of the lower levels is not so bad after a trail is cut.



Nearing the beach the country becomes more open and, by packing in short relays, we made up for the time lost coming through the jungle.



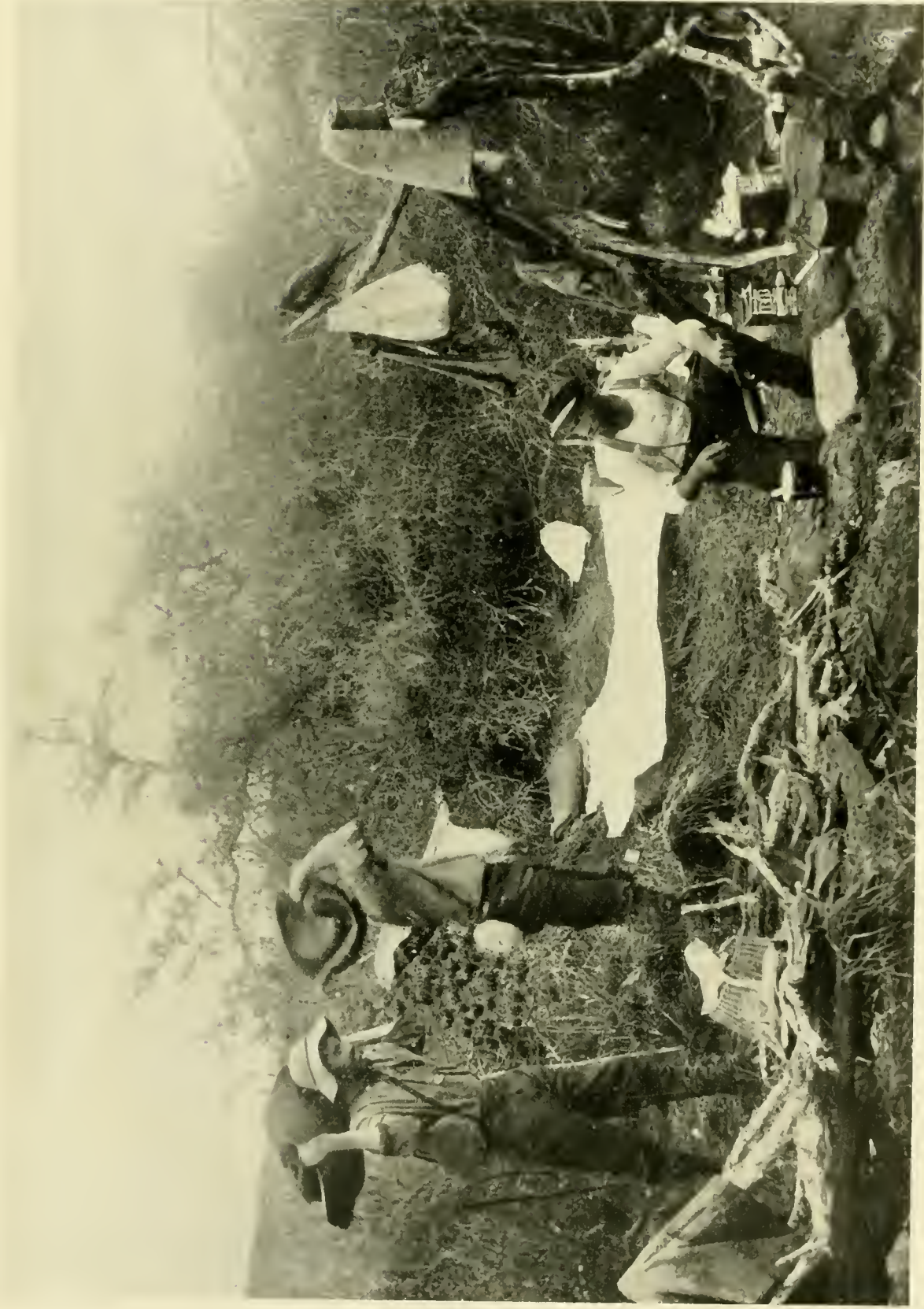
Our pack train on top of the south rim of the crater of Vilamit Mountain. In the distance can be seen the north rim of the crater with a bank of fog in between.



At the foot of a tree, on top of Vilamil Mountain, we found a large sized tortoise.



A giant tortoise as we found it in its native haunts at the base of Iguana Cove Mountain



We had a luxurrious camp on Duncan Island. The pet hawk, standing on the dead tree, was fed turtle meat every day and became quite tame.



Land iguanas are common on Narborough Island and we found them clear to the rim of the crater.

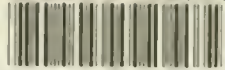
PACIFIC OCEAN

THE GALAPAGOS ISLANDS

SOUNDINGS IN FATHOMS
 HEIGHTS IN FEET
 Underlined figures in the water in parentheses indicate
 the height above the plane of high water of the adjacent
 island or rock
 By W.M. Giffen



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