



FREDERICK P. DROWNE, M. D.

WARREN, R. I.

August 21, 1928.

Dr. Robert C. Murphy,
New York City.

Dear Doctor Murphy,

I enclose the copy of the Kieta News containing the account of Hamlin's ascent of Balbi which I think you will find more complete and accurate than the newspaper clippings which you showed me. You may retain this if you wish. I also enclose a few newspaper clippings in regard to myself which I think will both interest and amuse you. After reading them I shall not need to tell you that they are largely the product of the brains of imaginative reporters. Under separate cover I am mailing two photos which you may care to file away. I was presented with a few of them by the photographer of the Artgravure section.

I find that I shall not be able to get down to New York this week after all. I expect to be there next week and can come any time so should be pleased to have you drop me a line as to what part of next week you expect to be at the Museum, and I shall plan to get there at that time. I am writing to Richards and hope I may see him on my next visit.

With best regards,

Most sincerely yours,

Frederick P. Drowne.

AMERICAN MUSEUM
OF NATURAL HISTORY

WHITNEY SOUTH SEA EXPEDITION

OF

THE AMERICAN MUSEUM OF NATURAL HISTORY

59.82(9)

Letters and Journal

of

Frederick P. Drowne, M.D.

Oct. 22, 1926 - Nov. 4, 1927

(vol p)

On Board S.S. Port Sydney,
Norfolk, Va.
Oct. 22, 1926.

Dear Dr. Murphy:

After various delays in connection with the rain and loading, we finally got started yesterday at about 4 p.m. We have put in here to take on coal after a very pleasant trip down. I have no knowledge of just how long it will take. I thought that you would be pleased to learn that the trip out is nicely launched with everything safe on board. Shortly after noon today, while about twenty miles off the Va. capes, some five small birds were picked up on the deck by the crew. The wind was from the South. They were in an extremely exhausted condition, two of them dying immediately. Not knowing of my interest in such things, they were thrown overboard, but judging from the description given me, I should think they were kinglets. They have promised to report anything else interesting that happens which might be of particular interest to me.

I find that we pass close to the north end of Albemarle of the Galapagos group, also to Pitcairn, and if it is possible to do it in daylight, Capt. Higgs is going to alter his course a little to permit me to see Rapa. He, together with fellow officers, has promised to try to teach me something of navigation and astronomy on the way out. We spent

a very interesting hour in the chart room this evening. 2
Seeing his interest, I presented him with a copy of
your article in the Geographic which pleased him
immensely.

I have a pleasant stateroom. There are
only four other passengers, but they congenial and
packed with information about New Zealand and the
vicinity and I already commence to feel much better.
I may write you again from Colon.

With kindest regards to you and
Dr. Chapman and Sanford.

Very sincerely yours,

Frederick P. Drowne

Dr. Robert C. Murphy,
New York City.

Dear Dr. Murphy:

I arrived here this morning on the 'Marsina' and found the 'France' waiting. I was soon transferred with baggage to the schooner. Correia had already left. Everyone on board is apparently well at the present time. It seems a long time since I left New York, almost three months in fact, and I am glad after all the steamships and hotels to be where I may commence to do some work. On the way up the 'Marsina' stopped at Lord Howe, Norfolk, Villa and Vanikoro Islands with an opportunity to go ashore for a short time. The officers and some of the crew of the 'Marsina' were well acquainted with the 'France', which makes it all the more remarkable that I was unable to find out anything about her from the Burns Philp agency in Sydney. It certainly seems strange that I was so long in obtaining any information. I believe Mr. Beck intends to make one or two stops near here and then make for the Solomons to be there doing the time when the hurricane season is on here.

I don't know as there is much more that I can write you at the present time. Mr. Beck will probably write to you from here before we sail. I hope to have some report to send you next time.

With best regards to Dr. Sanford and
Dr. Chapman, I remain

Very sincerely yours,
Frederick P. Drowne.

On Board the France,
At Sea, Feb. 9, 1927.

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Dear Dr. Murphy:

It is just four weeks today since I joined the France at Segund Channel and I feel that it is time to start a letter, although there is no immediate prospect of getting it in the mail.

Amid the clutter, cornmeal and cockroaches of the ship's hold I seemed to throw off a lot of years, although unfortunately at almost the very start I met with a mishap which has delayed my getting started at active field work. After some eight days aboard, and while anchored at Aoba Is., I tried to emulate the example of all others aboard by going barefooted while about the ship. As a result I got the tops of both feet badly sunburned. The next day I spent ashore collecting and in some manner got poisoned and have had a very trying time with both feet and legs ever since. They blistered badly and became very much swollen. The right one has healed and the left is much better, but not yet improved enough to permit my wearing any sort of shoe. I hope to be entirely better very soon. With this exception I have felt very well indeed, and glad to report no seasickness at all, though we have had some very trying weather.

Mr. Beek is still the same indefatigable worker. The years have not changed him much and the open air life with so little contact with cities has kept his

physique in wonderful condition. In the preparation of birds he is a marvel and I hope to finally acquire some of his skill. The usual programme while at a place where collecting is possible, is an early breakfast to permit shore party to get under way at an early hour; all day ashore and preparation of specimens immediately after return. This generally means working at night by benzine lights. It leaves little time for collection and preparation of other specimens except birds, although I shall try to do as much of this as possible.

While in Sydney I received letter from Mr. E.H. Bryan, Jr., of the Bishop Museum, relative to the collection of insects, and from Miss Mary Neal, assistant in Malacology at the same place, concerning the collection of land snails. Both sent by parcel post specimen containers which they offered to renew as occasion required. Both also had the opinion that any such material collected would be sent direct to Bishop Museum, part of it later to be diverted to the American Museum. I have written to them both acknowledging receipt of their letters and supplies and told them that my instructions from you were to the effect that all material collected must first be sent to the American Museum. If I am not right in this, you can correct me.

The mysterious Hicks, whose name appeared on so many labels of recent date, is the ship's engineer. He is a young Polynesian, intelligent, a good collector, and under Mr. Beck's tuition has learned to make very good skins.

At the risk of duplicating a previous letter I am going to give a resumé of my trip from the start to date, and then can continue on from my note book. I am trying to make a few sketches, some in color, of bird parts that fade, and will enclose these in letters from time to time. Could do more of this if material and opportunity occurred at the same time.

Oct. 21, 1926. After various delays, owing to rain and cargo, left Pier 26, Erie Basin, SS. Port Sydney, at 4.30 p.m.

Oct. 22. Heading in to Norfolk, Va., to take on coal. At 1.30 p.m. birds seen for first time; gulls and shearwaters quite plentiful. While some 20 miles off Virginia Capes, some small land birds were picked up on deck by crew in exhausted condition, two dying immediately. Were not seen for identification. Dropped anchor off Norfolk at about 5 p.m. Many ships in harbor waiting for coal.

Oct. 23. At anchor all day. Nearly 50 ships visible in one group, the trouble over coal in England forcing many ships to take on coal here. Several butterflies came aboard, although we are anchored some two miles off shore. Seems rather late in season for them.

Oct. 24, 25. Ship still at anchor, but had opportunity to go ashore. Found Norfolk much larger and very much improved since time of my last visit.

Oct. 26. Ship moved into coaling piers and took on nearly 3,000 tons. Stood out to sea in the early evening. En route now for Colon.

Oct. 27. Cloudy. In Gulf Stream at 10 a.m. Saw

considerable amounts of Sargassum weed, some clumps as large as 8 by 8 feet, perhaps more as they were a fair distance from the ship. A warbler came aboard and fluttered around deck evidently very tired and bewildered. At this time we are 80 to 90 miles off coast.

Oct. 29. Making good progress in southerly direction. Picked up Watling Is. at 4 p.m. Wreck of Port Kembla there which piled up about two months ago and shortly after had her back broken by a hurricane.

Oct. 30. Picked up coast of Cuba about 12.30 p.m. and remained in sight of it for several hours. At 10 p.m. while in Lat. 18 59 N., Long. 74 39 W. noticed quite a flight of butterflies of which I took some dozen specimens. Should estimate the number seen on deck at one time as at least 200. Weather calm.

Nov. 2. Took on a little coal at Colon and then passed through the Canal.

Nov. 3. Coast still visible in a.m. Good weather and quite an apparent difference in temperature, cooler than zone.

Nov. 4. Sloppy weather, heavy rain. Few birds in sight. 2nd officer brought me a fire fly which he found yesterday evening when we were about 300 miles from coast. Also received from the steward a large orthoptera which he found in a bunch of bananas taken on at zone.

Nov. 5. Very few birds. Saw land bird of oriole type, predominate color yellow, which may have been taken aboard near the zone. Wind was blowing hard from the S. and the birds was having a hard time of it to get back

to the ship. Saw a few small flying fish and three porpoises. Abingdon Is. of Galapagos group in sight at 4 p.m.

Nov. 14. Passed Henderson Isl at several miles distance at 8 a.m. Saw two frigate birds, first seen since leaving zone. Later in day when Henderson had faded into distance, saw several boobies and a few petrels and shearwaters. Pitcairn sighted at 2.30 p.m. and we were in close proximity at 5 p.m. when the ship stopped for an hour to permit the islanders to come aboard. Two boats came off with at least 40 men and 5 women. All show plainly their Caucasian descent and speak excellent English. They swarmed up the ship's ladders with baskets of fruit, pawpaws, oranges, bananas, coconuts and some pineapples. Also many souvenirs to sell, such as painted skeletonized leaves, baskets, canes, necklaces made of island seeds, painted coconut boxes. They were extremely pleasant to deal with. I mentioned the visit of the France three years previous and they said they were still on the lookout for a certain hawk's nest which Mr. Beck had spoken about at the time of his visit. The population at present is between 180-190. After an hour's stop, the islanders departed for shore, singing a hymn as they pulled their heavy boats through the rather rough seas. The captain informed me that it is the usual practice for ships in passing to heave to for a little while to permit the islanders to come aboard. It is also a custom of the islanders to bring aboard a "community" offering for the ship, and to receive in return something from the ship's

stores. I was interested to find out just what this was and made a note of what was done in our case.

Community offering	Given by Port Sydney
20 bunches bananas	112 lbs. rice
12 baskets assorted fruit	112 lbs. split peas
1 chicken	120 lbs. sugar
	100 lbs. beans
	10 lbs. tea
	40 tins milk
	7 lbs. macaroni
	20 lbs. raisins
	6 tins salmon
	6 tins sardines
	140 lbs. flour

The Pitcairn Islanders are Seventh Day Adventists, quite religious, so much so that they refused to sell a thing to the several hundred passengers on the S.S. Arowa which had stopped at Pitcairn the day previous to our visit, it being their Sunday.

Nov. 20. Albatross seen for first time, about a dozen following in the wake of the ship. Noon position Lat. 34.44 S, Long. 160.11 W.

Nov. 22. School of 30 to 40 whales seen spouting in distance.

Nov. 24. Crossed date line.

Nov. 25. Anchored outside Auckland at 6 p.m. Customs and doctor came aboard.

Nov. 26. Entered Auckland and docked at 7 a.m. S.S. Maunganui at other side of pier due to sail at 11 a.m. Had just time to arrange for baggage transfer, visit the company's offices for ticket, and make the Maunganui. Sailed at 11 a.m. Sea rough.

Nov. 27-30. En route Auckland to Sydney. Rough seas and very little evidence of any animal life.

Nov. 30. Arrived at Sydney early a.m. and docked 10
at about 8.30. Through customs and to Hotel Sydney. As
soon as possible reported at Burns, Philp & Co. Received
several letters, but found they knew practically nothing
about the Whitney Expedition or the Schooner France.

Dec. 1-30. Spent in Sydney. I made almost daily
trips to Burns, Philp, who did their best to assist me in
trying to locate the France. I also visited the American
consul several times, but he also knew nothing about the
France. He informed me on one visit that he had some
mail for the France and figured that possibly the schooner
was intending to pay a visit to Sydney. I finally cabled
Burns, Philp agencies at New Hebrides and Caledonia and
after several days received advice that the France was at
Santo. At this I cabled to Mr. Beck that I would try to
join him there.

NOTE. From what I now know after entering the islands
I am rather surprised that it was so difficult to get in-
formation from Burns, Philp. The island steamers of that
line are always more or less in touch with the France, i.e.
they meet with her occasionally in different ports and
know the personnel of the Expedition. Also Mr. Beck has
used Burns, Philp for agents in Sydney several times, both
in a financial way and for delivering freight. I talked
with the financial department there on several occasions,
but was unable to get any information. I also was in the
island department many times and got no date there. Of
course, the agency in Sydney is very large and a very
busy place, and in the great mass of other detail it is

quite possible that the matter of the France was forgotten.^{1 1}
I am rather pleased to report that I bothered them so much with my frequent visits that they assured me they would always have the Whitney-Sanford Expedition and the Schooner France in mind in the future. In any event I could not have left Sydney any sooner, as I found no earlier boat made the stop at Santo.

Dec. 30. Left Sydney at 11.30 a.m. on S.S. Marsina.

Jan. 1, 1927. Arrived at Lord Howe Is. about noon and remained several hours discharging cargo.

Jan. 3. Came to anchor at Norfolk Is. about 3.30 p.m.

Jan. 4. Made a trip across Norfolk from our anchorage at Cascade Bay to Kingston on the other side, the round trip being about ten miles, mostly climbing grade. Land birds appeared to be quite numerous. Was informed that quail and pheasants were very numerous. Left Norfolk at 3 p.m.

Jan. 6-8. Stopped at Villa on Vate Is. for two days. On way here passed within a short distance of the France which was anchored at Aoba Is., but of course could not get off.

Jan. 10. Anchored at Vanikoro in early a.m. and spent day there unloading supplies for the island and taking on load of logs. This is the place of operation of a branch of a large lumber company who ship their logs to Sydney. Conditions at present rather unhealthy here, most of the white operators being subject to malaria.

Jan. 11. Left Vanikoro at daybreak, passing through the Torres Islands on way to Segund Channel.

Jan. 12. Arrived at Segund Channel in early a.m. 12
Found the France awaiting me there, anchored close by, and
was soon aboard, trunks and all. The Marsina made a very
short stop, just to pass the doctor and was soon on her
way again. I was extremely glad to have at last reached
my destination, and to change from ordinary clothes into
a flannel shirt and dungarees. On board I found Mr. & Mrs.
Beck, Capt. Lang and wife, and a crew of seven island boys.
Mr. Beck reported all reasonably well, except that prac-
tically everyone aboard was subject to irregular chills
and fever, undoubtedly a form of malaria contracted by
the several months stop in the Hebrides. In the p.m. I
made a trip ashore with Beck, crossing two or three miles
of shore to reach a French store where various purchases
were made. Evidently most if not all of the white popu-
lation here is French. There are two large stores well
stocked. I understand there are some 20 plantations here.
Coconuts, coffee and cocoa are grown and the coconut
groves extend from shore well inland. Considerable rain
and quite warm. Collected a few land snails.

Jan. 13. Mr. Beck wished to get to Aoba, which is
visible in the distance, but the barometer was low and it
rained almost constantly. Worked aboard schooner in the
a.m. and in the evening visited the store again, and
later went ashore and into the bush for about a mile.
Passed through a very nice looking garden, probably be-
longing to the manager of the store near by. Several
bushmen down from the hills. Collected a few of the
commoner birds, not getting in far enough to obtain the

rarer ones. A very large number of crabs in the bush. They had very numerous holes which Mr. Beck said they occupied, but most of them were scuttling about on the ground or seeking shelter in holes under tree trunks. They were very active, waving their claws about in a menacing fashion. Got a few insects, but found it difficult to collect them without a net. Birds seemed fairly numerous, a large and small swift, doves, paroquets, and three or four varieties of smaller sorts.

Jan. 14. My birthday. Weather looked rather dubious in the a.m., but as barometer was better, we took an early start for Aoba. Later in the a.m. it cleared and with a moderate breeze we stood out for Aoba on an E by N course. Sea birds did not appear to be numerous. In two hours on deck I only saw one shearwater. Reached Aoba after a few hours sail and went ashore soon after arrival. Two small villages (few houses) of natives, one close to beach. Our anchorage was at S. end of the island at "red cliffs". Two reefs run out here to the N. of anchorage. At another point, close to anchorage, there were a few more thatched houses, but no one home at time of our arrival. Several piles of pearl shell lying about and mosquito nets over beds in one of the houses indicated, however, that they were occupied. I did not get a bird on this trip, but did encounter and try to penetrate some of the dense and tangled bush where there were no trails. This I found to be impossible without a knife, and Mr. Beck informed me later that it was very often impossible with a knife, at least to get

in to any distance. Had quite a talk with some of the natives in pigeon English, of course, and therefore not particularly satisfying, regarding a lake which is situated on top of the island. Their ideas about it were rather indefinite and evidently it was not often visited in recent years. This island in common with so many others has suffered a large decrease in population in recent years due to epidemics of sickness. There were several well laid out coconut groves near this anchorage, but not being worked at present. Plenty of bananas in various spots and the natives do a little gardening, but very little. Birds did not appear to be numerous near the shore. Mosquitoes were. Toward the end of the day I found that the owners of the pearl shell and mosquito nets were a couple of Japs up here from Villa after shell.

Jan. 15. Mr. Beck took Hicks with him and one or two natives and started to make the ascent to the lake. Altitude of island about 4000 ft. I did not feel equal to this climb as yet, and taking a native started on a less strenuous journey. Found land snails quite plentiful after 100 ft. altitude, and collected a good many, mostly from the under surfaces of large leaves. One white or cream colored snail occurred on the trunk of trees. Collected a few beetles and some cicadas, the latter being very plentiful. Saw plenty of butterflies and moths, but had no net. Also quite a lot of dragon flies. In crossing a fresh water stream at about 300 ft. altitude found a snail in abundance clinging to the rocks. Birds were not very numerous. Collected two kingfishers and some

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smaller birds, also one dove. My guide was very expert in preparing the coconut for a drink. Holding the green nut in one hand, three cuts with his machete made a sizable and well ordered opening to drink from. Quite a distance from shore we came upon a church, a rather commodious affair, with tree limbs arranged in regular order for seats, a pulpit, and a young native apparently in charge. He told me that the church would seat 100. When coming upon any dwelling in the bush my guide would hold his machete across his breast and walk rapidly along, his body bent forward and half crouched as if ready to spring. It made me think that this must be a trait handed down from his more savage ancestors. We were accompanied all the way by his son, a bright youngster of about ten years. At the commencement of our journey his wife and daughters were also along. They left at the first stream and I judged were out to do the family washing, no great affair. After working inland for about two hours I signified my desire to come alongside ship again. At this time my guide disappeared into the bush for a moment to reappear with a large bunch of bananas which he proceeded to divide into three parts with a few expert strokes from his machete. One of these he handed to the boy who carried it out on his shoulder. To the other two parts he attached handles made from green creeping vine and swung them to the ends of a pole, carrying them out in this fashion. The whole operation took him less time than it takes to write it. Little lizards were very numerous indeed, both on the ground and climbing about

the trees and bushes. Skinned birds in the p.m. Beck and Hicks returned just before 6 p.m. They got up 2800 ft. but had to cut a lot of trail. They brought back two paroquets, a flycatcher, two species of honeysucker, some dozen or more birds in all. Skinned birds until well in the evening and put up snails and insects. Found that my feet which had been quite badly sunburned yesterday, were very much swollen, the swelling extending half way to my knees. They were also quite painful on attempts to walk.

Jan. 16. Sunday. Did some experimenting with the tank developer. Film came out fair. Emulsion did not run although temperature of the water was 82 and it was left in one wash water for 25 minutes.

Jan. 17. Beck and Hicks started again for top of island. Returned with some birds after reaching about 3000 ft. Did not find lake. Constant showers of rain, real tropical downpours. Small and large honeysuckers, midgets, yellow bellies, paroquets and doves reported fairly common in upper altitudes. Many natives off to visit France, bring offerings of sweet potatoes, taro, bananas, coconuts and squash to barter.

Jan. 18. Feet much swollen and painful. Skinned some birds left over from yesterday and prepared some miscellaneous specimens. Beck and Hicks tried for the lake again without success.

Jan. 19. Beck reached top of island, 4000 ft., but did not find the lake. Skinned some birds and prepared other specimens. Hicks and David went ashore to

spend the night and get an early start for the lake in the a.m.

Jan. 20. Received quite an extensive collection made by natives. One addition was two woven baskets filled with dead shells of land snails. After sorting them over, I saved about a quart. In addition, there were three jars. One contained a good many live land snails, another some fresh water prawns, and the third two lizards and a varied assortment of spiders, wasps, cicadas, etc. Some of the latter were past preserving, but I put the best of them in alcohol. Beck went ashore and returned with quite a few birds which we put up in the evening. Hicks and David still out.

Jan. 21. Skinned birds in a.m. and put up some miscellaneous material. Feet still much swollen and painful.

General notes on Aoba (Oba, Omba). 21 miles in length, by 8 or 10 in width at greatest width. Population estimated in 1921 at about 4000. Said to have two lakes. Natives own most of the coconuts which are scattered all over the island. A white planter (Mr. Collett) has an extensive coconut plantation at S. end, but it is not being worked at present. This was very near our anchorage, and the three thatched houses were being occupied by two Japs and their natives, they being engaged in getting pearl shell and possible trading for copra. At another point very near us was a village of some five houses, and farther inland still more houses and a native church said to be capable of seating 100, a rectangular

affair of thatched construction, with quite an elaborate 18
pulpit, occupied for the most part probably by native
teachers, and limbs of trees arranged in regular rows
about 15 inches from the ground, for seats. It had a
dirt floor, but all was very neat. The site was very
pretty, the weather stained thatch offering a decided
contrast to the dense, green vegetation in which it nest-
led, while close by was a large banyan tree and the ever
present banana and coconut palms. Oba, an emerald isle
in a sapphire setting, its 4000 ft. shrouded for the last
1000 ft. in dense clouds. Ridge after ridge all leading
skywards, all clothed with dense green in which a profuse
sprinkling of tree ferns and coconut palms stand out
sharply defined even from the anchorage of the France.
Two reefs stand out well from shore, both in our immediate
neighborhood at this anchorage at the south end, and
the swell breaks over them in never ending monotony. The
water is clear and several large fish were caught here,
it being possible to see them take the hook. Several
large "sea mullet", 30 to 40 lbs., were caught with
banana, an unusual bait in my experience. Natives appear
to be for the most part quite intelligent and seem very
friendly. They are not badly featured and most of them
wore singlets of some sort as well as the lava-lava.
They handle their catamarans well even in rough weather.
My guide on the one real trip I made ashore was real
expert with his machete. Three strokes was enough for
him to make a neat triangular hole in a coconut for
drinking purposes. Two more strokes split it neatly in

half, which he always did before throwing it away. He 19
also took a bunch of bananas apart very quickly with his
machete, severing the stem in two places, thus dividing
the bunch in three pieces. One of these he handed to
his small son to carry, while he cut green vine for handles
for the other two and then a pole, slinging the load over
his left shoulder. It really took less time for him to
make these arrangements than it does me to write it. The
few women I saw wore dresses of brightly colored calico.
Natives average for size and vary from brown to black in
color. In addition to vegetables which I have mentioned,
I noticed beans, yams, sugar cane, and limited amount of
limes and oranges, pawpaws and breadfruit. Houses and
natives generally clean.

Lizards very plentiful both on ground and in
small trees and bushes. Land snails not too plentiful
and mostly on under surfaces of large leaves and ferns,
though a few were found on trunks of trees. These were
all of one species, creamy white in color. Stripped
quite a number of banana trees, also dead bark from trees
without finding any. Insects very plentiful, hemiptera,
coleoptera, butterflies and moths, but on account of the
condition of my feet I was not able to get ashore after
the first two days and had no chance to use net. Saw
several species of wasps and dragon flies. Natives were
very helpful to me in finding snails, native name for
them being "toto". Natives know apparently very little
about the lakes and evidently at present time they are
seldom visited, though trails in that direction still
exist.

Pine apples of good quality were obtained, and here also I made the acquaintance of the rose apple, an ovoid shaped fruit of pleasing taste with a single pit or stone. Several chickens were obtained from the natives and a very few eggs. It seemed quite á la New England to have a rooster crow lustily and at frequent intervals on the main deck.

Hicks and David returned about four p.m. They found the lake and reported it as large in size. Some half dozen young natives accompanied them to the lake which was a long ways distant from the anchorage. They brought back one duckling, several fire-tailed finches, and long-tailed doves. Left anchorage before dark, heading for Maewo or Aurora.

Jan. 22. Anchored on S.W. end of Aurora at about 8 a.m. Several streams of fresh water visible and one very pretty waterfall opposite anchorage. Small patches of coconuts visible and soon after anchoring two canoes with natives came alongside. Plenty of rain.

Maewo is the N.E. island of the New Hebrides. It is 30 miles long N. and S. and about 2000 ft. high. N. end nearly two miles wide E. and W. Mr. Beck went ashore and found that a little village of three houses was located about two miles from anchorage. He found a cave filled with nests of white swift and brought a few nests aboard. The specimen which he brought, one of hundreds seen in the cave, was an apartment affair, i.e., the nests were built one against the other, of moss and

lichen stuck together. There were present eggs, (two 21
in clutch seen ovoid, white), newly hatched young with
their toes firmly hooked in nests, half grown birds and
some nearly ready to fly. There were two in each nest
so two must be the ordinary clutch.

No more natives came aboard. The crew gave the
two who did appear each a couple of hard ships biscuit.
Evidently they wished to keep these to take back, and
it was quite amusing to see them around the main deck in
the many drenching showers, holding tightly to the
biscuits which would become quite sodden with the wet
before they had a chance to either show or eat them.

Jan. 23. Sunday. My left foot is considerably
better, but the other is still much swollen and sore.
Heard a wandering tattler on beach last night. Several
kingfishers audible today, and saw some smaller birds
near shore, also some butterflies. Put up some insects
and fresh water shells. In the evening the volcano on
Ambrin was plainly visible, a red glow on the horizon
some 30 miles distant.

Jan. 24. Beck and Hicks went ashore. Found
travelling difficult, no trail. Remains of several
native houses which had fallen down and traces of garden
overgrown with jungle. No natives at this point.
Skinned birds in the evening. Saw a fruit bat or flying
fox sailing slowly and majestically along above the top
of the island, its form silhouetted sharply against the
sky.

Jan. 25. The mate, George, who claims to be a descendant of the Tongan chiefs, prepared some Kava for me to try. It is prepared by pounding up a few small pieces of kava root to a powder, mixing with cold water and straining through cloth. 3 or 4 small pieces of root are enough to make 3 pints. It has a clean, but peculiar taste, slightly aromatic. It is much used by both natives and whites in certain sections to keep away fever, and as a kidney and general tonic. Its exhibition on ceremonial occasions by the natives has been frowned upon by the missionaries, and is no longer practiced extensively. Beck and Hicks got in to about 2000 ft., but both had attacks of fever and had to rest before turning back, so they got few birds. We moved anchorage this a.m. several miles up the island (N.). Small village here and another a short distance up slope. More remains of overgrown gardens and fallen down houses and a ruined native church. Very few natives. There is an abundance of fresh water of good quality on Aurora.

Halobates? seen for the first time. Plentiful around schooner at second anchorage, about two hundred miles off shore. They were seen darting rapidly and erratically about, occasionally touching on another or more often pausing for a moment at some tiny bit of flotsam. Body color grayish white; legs black. I succeeded in getting a few with the butterfly net.

Jan. 26. At same anchorage. Mr. Beck started for the top again with three of the crew. Several natives (perhaps 10) moved to a vantage point opposite the

anchorage of the France, carrying some vegetables for the schooner and remained there all day, lacking a canoe to make the trip out. The ladies went ashore to do some washing and on the event of a shower, they were presented with banana leaves by the natives as protection from the rain. One of the native women had an umbrella, but when it commenced to rain, this was promptly taken from her by a dominant male, probably her loyal spouse and protector. The shore party returned a little after 5 p.m. having reached the top and found birds scarce. Only three of the natives came out. They brought several bunches of bananas, 100 or more lbs. of taro, 3 chickens, some 30 pawpaws, 4 or 5 pineapples and several bundles of green done up in leaves. For this Mr. Beck gave them 5 fathoms of calico, 15 sticks of tobacco and 4 boxes of matches. As soon as everything was aboard, sail was set, anchor raised and the France stood off for Anuda or Cherry Is. some 240 miles distant. The natives seemed rather disappointed at having to make such an early departure. One old man, with whiskers arranged in a double point, spoke fairly good English, and in fact had quite an aristocratic bearing. He had spent some time in Queensland, Australia working on a sugar plantation.

Note. Natives hunt shearwaters with dogs over all the islands, digging them out and using them for food.

Jan. 27. Clear skies but little wind. Moving lazily along on N.E. course. Several shearwaters seen at considerable distance, only for a few seconds at a

time, their swift flight carrying them out of sight rapidly.

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Jan. 28. Practically becalmed 30 miles E. of Manelav Is. of Banks Group. Beck was out in skiff both a.m. and p.m. and secured about 30 shearwaters of four different species, longirostris, cervicollis, obscurans and wedge tailed. Two or three showed signs of nesting and it is possible that they nest on neighboring islands. In fact Mr. Beck secured one specimen of shearwater from Manelav where the natives hunt them out in their burrows.

Jan. 29. In a.m. lying in practically same position under same conditions. Beck went out again in the dinghy and secured some ten more shearwaters and a sooty tern. Noddy tern, tropic bird (red tailed), and frigate bird also seen. Yesterday a six foot shark hung around the dinghy while Beck was collecting and took a bird body thrown overboard and also siezed a dead bird. It did not turn over when taking them. Although shot at several times and struck with an oar it remained in the vicinity of the dinghy. In the p.m. a breeze sprang up and we headed on a N. by E. course for Cherry. Some rain and moderate seas.

Jan. 30. Sunday. Heavy seas from N.W. Fore and main sails reefed most of the time. Rack on table and it is still a difficult proposition to eat without spilling food. Birds in sight most of the time, and Mitre Is. visible, but ship is going to leeward of island all the time.

Jan. 31. Same weather conditions prevailing.

Little France much tossed about by heavy seas. Squalls 25
frequent and often accompanied with regular cloudbursts
of rain. Noddies and common boobies numerous.

Feb. 1. Same weather conditions. Under double
reefs most of the time. Necessary to lower the mainsail
entirely in order to jibe over. Birds still numerous
and toward dark some of the noddy terns tried to alight
in the rigging. A five foot shark caught in p.m. Upper
color a greenish drab, abdomen and throat cream white,
tips of tail and pectoral fins white.

Feb. 2. Sea more moderate. Sun out string and
but little wind. Caught another shark of same species
in a.m. Later on a red tailed tropic bird flew around
the ship and was shot. It had hardly reached the water
before it was being nosed by a shark which remained in
its immediate vicinity for several minutes but did not
take it. A boat was put over and the bird retrieved
while this shark was also caught. It was rather small,
about 3 1/2 feet, had several small remora or suckers
attached to its abdomen, ventral and lateral fins. None
of these were over six inches in length. A pilot fish
swam about in a bewildered manner as the shark was lifted
from the water. Fataka or Mitre Is. visible to S. late
in the evening.

I think I had better close here for this time
as we are nearing Vanikoro rapidly and I shall probably
be too busy there to do any typing. I have quite ex-
tensive notes on Fataka, Anuda and Tukopeia Islands,

which will follow in the next letter.

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I enclose a few photos of albatross, probably black-brow, taken on the way out and two or three color sketches. Have some more of the latter, but they properly belong with the next letter. My left foot is practically O.K. again and the other is getting much better. I hope I can send a more interesting letter next time.

Please give my best regards to Dr. Sanford and Dr. Chapman.

Very sincerely yours,

Frederick P. Drowne.

P.S. I hope that the list of the ethnological collection belonging to the Black estate arrived O.K. If it does not prove of interest, please be sure that it is returned, as I pledged my word that it would be safe. The more I see of conditions in the islands today, the more I am convinced that the collection is a bargain and cannot be duplicated.

Dear Dr. Murphy:

An opportunity presents itself to get a letter to Tulagi probably in time to connect with the mail steamer, and while I do not feel like entrusting my notes to this recruiter, I thought a few lines might prove interesting to break the long silence. I am starting on a few days' rest period to see if I can make some decided improvement in the condition of my left leg, and have it elevated on another chair,-hence the pencil.

My legs have given me trouble ever since I got the tops of both feet badly sunburnt at Aoba. At first it was both of them, but the right foot was not burned as badly and with the long periods of rest which it got at sea, it finally healed. The right foot did not heal until after our stops at Santa Cruz, but I commenced to go ashore there and tramped about considerably. It seemed quite a little better at Tinakula and I went ashore on both occasions and climbed about extensively, although there were no trails and the walking was bad. I hit the right leg there on a piece of lava and while under ordinary conditions it would have resulted merely in a severe bruise, in this climate and with the leg in its irritated condition, it has acted like a slow healing ulcer, and has caused the leg to swell again. However, I continued to go about and also spent many hours a day at preparing skins. At Santa Anna, the

white resident who has been fifteen years in the islands 28
told me that he had often seen the same condition,
particularly in newcomers, and that the only thing that
would help it was rest. So I am going to try resting
it for a few days and see what happens. I sincerely
hope that I get a satisfactory result as it has tried
my patience sorely, and I do wish to be able to get about
as I please. Here birds are comparatively easy to get,
and most of them are new to the collections, so my
disability has not affected the work of the expedition
as it might have under other conditions, but I, of
course, feel desirous of being fully capable. In other
respects I feel O.K., not having as yet contracted the
fever from which practically all on board suffer at
times.

We secured quite a lot of birds at Santa
Anna, our entrance into the Solomon group. They were
practically all new to the collections, and it looks as
though the birds obtained here should prove very in-
teresting. Practically every day something new is
obtained and as the anchorage here is good it looks
advisable to remain here until a fair series of birds
met with is gotten. Some of the later anchorages will
probably not be very satisfactory.

I feel that I have made considerable pro-
gress in preparation of skins, making better skins and
increasing speed all the time. I made the statement
to you in the Museum that I hoped I could get in satis-
factory shape in two months. Had it not been for the

unfortunate mishap to my legs I feel that by now I could 29
do my share of climbing. Under existing conditions it
is going to take longer, but I have managed during the
past two months to acquire a lot of information about the
birds of the islands and a miscellaneous mass of data
concerning other fauna, the natives and the islands them-
selves. In this respect I have really made more progress
than I hoped for in so short a time.

I have my notes typed for you almost up to
the time of our entrance into the Solomon group, but as
I said in the first part of this letter, I prefer to
wait until we reach Tulagi to put them in the mail. If
I dwell in my notes too much on things other than birds,
please correct me and I can eliminate whatever seems of
no interest to you. Later as I do more work in climbing,
I may be able to increase the amount of bird notes, but
when collecting is active there is scant time for writing,
as we generally are up at six a.m. and not through
preparation of skins until nine p.m. No one else uses
a cabin light and I am afraid that if I tried any writing
at night it would make me rather unpopular with the
sleepers, as the cabin is very tiny and the staterooms
open directly off from it.

Please extend my best regards to Dr. Sanford
and Dr. Chapman. I hope by the time I reach Tulagi that
I shall be able to report myself physically fit. In
the meantime I am doing my best.

Trusting that this finds you all enjoying
good health, I remain with best wishes,

Sincerely yours, Frederick P. Drowne.

Dear Dr. Murphy:

I regret very much that I am parted from my typewriter, but such being the case I can only hope that you will be able to decipher my very poor script. You will hear from Beck by this mail and know that we put in here nearly two weeks ago. Some necessary repairs were made to the France, stores put on board, and yesterday she put out for a nearby point on Guadalcanal to work there a week and then return to pick me up again.

I dislike to commence my letter with a story of trouble, but do not feel quite so badly about it since I have found out that practically every white man who enters the group has had the same or possibly a worse experience. You will note in my journal that I got both feet badly sunburned at Aoba Island in the Hebrides. This caused me no end of pain and trouble, and I believe was the commencement of my later misfortune. Probably I should have kept off my feet entirely, but suffice it to say I did not do so. At Tinakula I made a couple of very rough shore trips when it would have been far better to have stayed in a hammock. And so at other points where we touched. Even on ship I could get up in the morning with my legs looking quite decent after several hours in a prone position. Very soon they would commence to swell

and give pain. After hours at the workbench in the hold they would resemble an advanced case of elephantiasis. The ulcers on my feet finally healed, but I developed others on my legs and after getting to Santa Cruz I found out that I had the common Solomon Island ailment "island sores" or tropical ulcers. However, I did not stop working until I reached here, when upon the advice of the doctor in charge I entered the hospital. His prognosis was that if I could get them healed in three weeks, it would be a splendid result, and I guess I am going to make it in that time. Nothing is definitely known about the etiology of the trouble, but it is supposed to be due to a specific germ, carried by flies or possibly one species of fly. It is very common here and much dreaded by those who reside here. Local treatment alone does not seem to be much good in the majority of cases. Lately it has been found that intravenous injections of antimony produce a good result, and I have already taken some eight of those, plus complete rest. The sores have healed a lot, and I expect will be completely healed in another week. About every resident whom I have met has shown me scars from island sores and told me a story of long trouble experienced in healing them. As this included many young and very healthy men, I cannot feel that I have been especially picked upon, although I do feel, of course, that I have been unfortunate. I have gone into this much explanation because I hope to impress upon you that I accumulated

this trouble through no fault of my own. So far I have escaped malaria, though everyone else on board has it. I have tried to impress upon them all the importance of a small daily dose of quinine as a prophylactic, and I think I succeeded in so far as Mr. and Mrs. Beck are concerned. He especially had quite a few acute attacks and I believe might have had real trouble without the quinine. I expect I have used up enough space for a discussion of this matter, and I do hope very soon to be entirely well and remain so.

I cannot say that my inability to do more shore work has made much difference in the collections. Material here has been plentiful and the extra hours which I have put in at the work bench have allowed the shore parties more freedom in collecting. We have had good weather so far in the Solomons. Trails have been better and more plentiful and it would have been hardly possible for our party to save more material than we have. I think I have made some progress in making skins, both as to speed and quality, and hope to do better work still as time goes on. The Beck method was partly new to me, but I believe I have learned all the technique and more time will do the rest.

I have felt the need of going ashore very much in trying to keep a journal which would satisfy me and you. In this respect I feel that I have missed a lot, though I have done the best I could under the circumstances. Neither Beck or Hicks have proved very

communicative, and I have not been able to get much information out of either one, though I have reason to believe that Beck does not keep much in the way of notes, and Hicks keeps none at all. I should like to make more color sketches, but of course such work takes time, a good light, and must be done when material is available. It has not been possible to do more than what I am sending with this letter. I apologize for the crudeness of the work, but hope it may be of some value. The colors of iris, bill and feet are quite accurate. The color of feathers is simply worked in to help you in placing identity of specimen. I thought the few sketches and notes on tatooing of natives at Anuda and Tukopeia might interest someone at the Museum, since these islands are seldom visited.

Taking it all together I am not satisfied with what I have been able to accomplish so far, and I hope to do much better. As far as the 'roughing it' and the work is concerned, it is no worse than I expected, and in some respects not so much so. As regards our relations on board, I am free to admit that it has turned out considerably different from what I expected. I do not care to devote a lot of time to writing useless criticism or tales of personal matters. We have had recently two or three little talks and I hope our future associations are going to be more pleasant for all concerned. At one time, just before our arrival here, Mr. and Mrs. Beck proposed to stay ashore awhile and asked if I would assume charge of the activities of

the France. This I was willing to do if given a free hand. It is rather doubtful if any two people would approach such a problem in the same way, and naturally if I assumed the responsibility, I wished to employ my own ideas on organization. I am frankly glad that they both reconsidered and are going to carry on for awhile longer,- I hope for the balance of the trip. As I told Beck, it was one of your ideas that if I did not succeed in anything else, I might keep him on the job until it was finished.

There is a wealth of material here. We have been able to devote very little time to anything but birds, although it does seem too bad not to get representative collections in other lines while on the spot. I presume anything collected will be appreciated by someone at the Museum, so I do what I can.

At his last call upon me here Beck spoke of receiving a somewhat belated letter from you, in which you said that I could be paid either by the Museum or here. He seems to prefer the former course and it makes no difference to me so long as I draw what little I need as an advance from him. Therefore you can hold whatever is coming to me as a credit, subject to an order from me when I need it. I trust that this will be satisfactory.

Photos are not turning out very well here. I have only taken a comparative few and most of them have not been much good. The high temperature and humidity spoils the film rapidly when once exposed,

and we have not done much with developing aboard ship. I think hereafter I shall develop mine soon after exposure rather than take a chance on holding it. Beck has taken quite a number with different cameras and I believe is having a similar experience.

This letter should reach you quite promptly, as the mail steamer 'Metaram' will call the latter part of next week and reach Sydney six days later. I would appreciate it very much if you would criticize my notes to date, making some allowance for my disability, and tell me frankly what additional material I should include to make them of more value to you. Any other instructions you care to send will be much appreciated.

With the exception of the legs, which I trust will be entirely better in the immediate future, I feel quite fit. Tell Dr. Dwight the first copy of the 'Auk' reached me OK, and proved very interesting. Please convey to Dr. Chapman and Dr. Sanford my best regards. I hope that this finds you enjoying the best of health and that I may have the pleasure of receiving a longer letter from you in the near future.

With best wishes, I am

Sincerely yours,

Frederick P. Drowne.

P.S. Notes as typed run up to April 23d. I will continue from that date in my next letter.

Feb. 3, 1927. To the S. of Mitre Is. again and no wind. The island is still visible, so the engine is started. One shearwater, several common boobies and quite a lot of terns in sight. As we approached the island, boobies in great numbers came out to meet us flying about the schooner low down and really casting curious glances in our direction. Several frigate birds were present in this reception committee, while at a further distance were numbers of sooty terns and a few shearwaters. A few red-footed boobies also put in an appearance. As we obtained a view at closer range, the island appeared quite green. The south end had one apparently deep cave with two or more smaller ones alongside. As the longboat of the France put off for shore the birds all followed it, circling above it in a regular cloud, and for the time being deserting the ship entirely. The boat was unable to make a landing on account of the heavy surf, but apparently there was a landing on E. side about midway or a little to the N., which could be made when the wind was in the south. No land birds were seen or heard. Sooty and noddy terns, one lesser noddy, common and red-footed boobies secured. Both large and small frigate birds, red-tailed and yellow-billed tropic birds and a small flock of sanderlings seen.

Estimated length of Mitre about one half mile; estimated greatest height about 300 feet. A few coconut trees were seen on the island, and for the most part it was covered with a dense vegetation. It is reported as being occasionally visited by natives and also said by

them to have water, although no sign of any was visible. 37

Feb. 4. Hard rain all day and very little wind. On course for Anuda or Cherry Island. What wind we get comes in squalls accompanied by rain. No land sighted. Some common boobies, a few shearwaters, and an occasional tern in sight. Skinned birds all day.

Feb. 5. Heavy seas from same direction with much wind. Tacked ship several times and under reefs or double reefed sails most of the time. Rained nearly all day. No land in sight.

Feb. 6. Rain most of day and about same conditions prevailing. Heavy seas and sails were under double reefs most of the time.

Feb. 7. Awoke to a pleasant day. The sun was out and Anuda Is. in sight some twenty miles distant. Reached the vicinity of the island in two tacks when it became a question of best method of approaching eastern exposure for an anchorage. A large rock was visible about three-fourths of a mile distant from shore on S.E. end, and a reef ran out some distance from S. end of island. A barrier reef extended along the whole eastern shore, over which the surf was breaking in great combers. A reef also extended a considerable distance from the N. end of the island. There was a sandy beach and evidently quiet water inside the barrier reef. The island was covered along its lower reaches with coconut trees, and at higher levels numerous patches of cultivated land were visible. As we approached more closely a white cloth was visible against the green background, evidently put there as an indication

of the way to approach. A few thatched huts were in sight just above the beach line, and many natives were running about the beach. It was rather an exciting few moments making the passage in to an anchorage, as there are no recorded soundings to use as a guide, and very little has been written about the island. As we stood in between the rock and the island, sail was dropped, the engine started for a few minutes, and we came to anchor in six fathoms, sandy bottom, about one-half mile from shore.

As the sails came down, and before the anchor chain finished rattling through the hawse hole, the natives commenced to swim out to the ship, it being too rough for them to attempt to launch canoes. Some swam boldly out, others used a log as a support, and in some cases there were several aboard a large log. They made surprisingly good time and were soon aboard, a pleasing looking people of all ages from boys of about thirteen to men perhaps sixty. Altogether some twenty made the trip out. They, or rather a few of them, had a very slight knowledge of English. They first asked for the captain and shook hands with him. Hardly were they aboard when they commenced to try to barter, having brought out some things with them even while swimming. These they would produce one at a time, asking for a lot of things which we did not have. Axes, hatchets, files, knives, pipes, and beads seemed particularly desired. Tobacco did not appeal, and we found that it was grown on the island. Fish hooks and calico were also in some demand, and of these we had a supply.

They seemed to demand a good deal in way of exchange, 39
far more than asked at some other islands. They were
extremely good natured, laughed often and freely and
did not seem to possess any timidity. All were dressed
in loin cloths of plain tapa cloth. Most of them seemed
to enjoy cigarettes.

Their hair was very long and matted. Most of them
had it bleached to a peroxide blonde color, which I am
told they accomplish with lime. A few had black hair,
and some showed black at the roots with the outer two-
thirds or three-quarters bleached. Many of the older
men wore flowing beards and moustaches. The hair was
fine and soft, very similar to that of Caucasians.
Practically all of them were tatooed on forehead and
cheeks. In addition some were tatooed on arms, across
the breast, and some had median stripes down the abdomen.
The tatooing was mostly in small designs placed at regu-
lar intervals. The most common design employed was a
good representation of a fish. All adults wore this
design under each eye, and it occurred in other patterns
and places. The heavy, flowing beards and moustaches
worn by some of the older men, together with their
pleasing, well shaped features, gave them a sort of
patriarchal appearance. They were extremely curious
and examined everything which came under their observa-
tion. I even noticed two of them trying to estimate the
length of the France by measuring the rail, one using
the span of his two arms for a measure, while the other
kept tally. Especially were they desirous of entering

the cabin, and one old fellow got in there on every possible occasion. Some ear ornaments, shells and rings of tortoise shell were worn, and several had rolled pieces of green leaf stuck through the ears. Some wore a necklace of green leaves. A shell was worn by some suspended from the neck as a medallion, and shell bracelets on wrists or arms were common. They carried no weapons, although later one brought aboard a lance of hard wood, some eight feet long and pointed at both ends, evidently a dangerous weapon as used by them, a demonstration being given by one of them for our benefit.

We came to anchor just before noon and our visitors stayed aboard all the afternoon, some of them making an extra trip ashore after something desired or forgotten on the first swim out. Several had their names as given them by missionaries, tattooed in one half inch letters on the forearm. I recall the names Alfred, Matthew and Robert. We took numerous pictures. Mr. Beck succeeded in getting a number of them to do a native song while he took some movie film. This they did with great gusto and accompanied it by a great waving about of hands. It was evidently hugely enjoyed by them and caused much laughter both among the performers and their friends.

A native mission worker from Tukopia, recently left here by the mission boat, Southern Cross, told me that there were 148 people on the island; that they had very little sickness and plenty to eat, yams, bananas, coconuts, taro. He also said that there were over 1000 people on Tukopia.

As the natives found that we wanted supplies of vegetables or fruits they, or some of them at least, swam back to the island. We sent a boat in to the edge of the reef and they got out to it with several bunches of bananas, a few coconuts, and quite a lot of taro. For this offering they received two fathoms of calico and twenty-four fish hooks. They seemed to want more, and Mr. Beck threw in a few sticks of tobacco, which they later exchanged for more fish hooks.

One old fellow, the same who desired to frequent the cabin so much, noticing me in the act of shaving, made motions to me indicating that he would like to have his beard trimmed and got out a word which I finally understood to be scissors. So I got my scissors and trimmed his rather flowing beard to a Vandyke, with which he seemed to be immensely pleased. Later he evinced a desire to be clean shaven, but I compromised by giving him two safety razor blades.

I noticed two young chaps coiled up near each other in much the same manner as two monkeys. One was pawing through the other's tangled hair in real Simian fashion looking for lice, which he killed between his thumb nails. Before I could get a picture of this interesting domestic scene, the performance stopped.

Many of the natives were able to count a little in English, and they seemed to take great delight in telling how many fish hooks or fathoms of calico they desired in exchange by counting on their fingers, one, two, three, four, five. Even for a little shell they would generally count up to four, repeating the

performance over and over, although probably well aware that they were asking something impossible.

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One native produced a model of a canoe, rather nicely done, but lacking the outrigger. Mr. Beck explained that he did not want it with the outrigger, and later on the same young fellow came back with it, having made an outrigger while aboard. But he had used some pieces of pine box for cross stays, and while the work was neatly done and showed the native handicraft, Mr. Beck again explained that it was not desirable with American wood in it. On this he got quite a laugh from several of his fellows, and a little later threw the canoe overboard and let it drift out to sea.

The old patriarch finally wheedled a pipe from me, and to make it good measure I filled it with tobacco and lit it for him. He took the greatest satisfaction in it, and it was passed around from old to young. The teeth of most of the older men were stained from chewing betel nut, although I did not observe this in any of the younger set. The average height of these natives I should judge to be about 70 inches, and all were well built, solid, with quite broad shoulders and narrower waists. It rained frequently during the day, and it was rather surprising to find that these people, so much at home in the water, sought shelter under any bit of canvas available. Shells offered for barter were mainly Nautilus, Murex or Cowries. Our mate, George, himself a Tongan, says that their language is something between Samoan and Tongan. The natives tell him that their for-

bears came originally from that region, having been blown to the spot by bad weather while out in a canoe. They had knowledge of the first two chiefs of the tribe, and knew their names, which George said were well known names in Tonga.

No women came aboard, but one of our crew who swam ashore reported that they wore grass mats for dress extending from knees to just below breasts. One mat brought aboard was nicely woven and fairly heavy. It was without decoration except on the ends where there was a simple design in red.

As it grew late in the day many of the natives swam ashore, some went as far as the reef in our boat, and after five o'clock the last contingent started for shore in our boat amid outbursts of laughter, catcalls, etc., like a bunch of college students on a lark. As they got some distance from the schooner they started a song which was quite pleasing to the ear, and kept it up until well in to the reef. Near the boat and following it in was a middle aged individual astride a small log. He managed to keep up with the boat most of the way; a striking illustration of the old and primitive compared with the new.

Feb. 8. Dawned rather a hazy and doubtful day. At about eight in the morning one old man, dubbed by the ladies "the pest" on account of his desire to remain in the cabin, could be seen approaching the reef from the shore alone, wading out carefully and finally taking his plunge through the surf into the deeper water outside.

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whence he swam out to the ship without any supporting log. This seems rather a striking example of what the condition of these people must have been before their contact with civilization, when a man of sixty years could and would take a half mile swim through rough water in which sharks were said to be common, and emerge at the end with no sign of having undergone any exertion. A short time later he was followed by many others, until we had all the crowd of yesterday aboard as well as some new faces. They brought more curios with them for barter, and still showed a great desire to obtain carpenter tools, which of course we could not supply. Their offerings consisted of fans, models of outrigger canoes, paddles, wooden spear heads, shells, sennet, medallions such as worn suspended around the neck or on the wrist. All of them were in their loin cloths of tapa, of which I desired to obtain a sample. It required quite a lot of pidgin English and pantomime before I could make them understand what I desired, but once they comprehended that tapa cloth could be exchanged for calico, three of them plunged overboard in a mad race for shore. Later as the news spread two or three more decided to make the trip. The tapa cloth here is not painted in designs the same as that from some other parts of Polynesia, but is of a cream white color. Cloth and other articles apt to be damaged by wet were carefully wrapped in strips of palm leaf and tied to the end of a short stick, the swimmer holding the bundle above the water all the way out. In employing a log to help them in the water as many did, they used their arms and legs as little as possible for locomotion,

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taking things easy and depending on the wind and tide to carry them along. Toward the middle of the afternoon the tide was setting toward the open sea so strong that we lowered the ship's boat, loaning it to a few of the natives to permit their rescuing a couple of their friends who were drifting out to sea. Evidently this boat's crew was far more accustomed to a canoe and paddles than to a surf boat, for they had quite a time managing it under the conditions, and were a long time in getting back to the France. Still later a youth swimming out with a bundle of tapa cloth on the end of a pole was seen to be drifting out in the same predicament, but in his case we were able to reach him by floating out the log line, the end attached to a bit of cork, and pulling him in by that. He appeared very unconcerned once aboard, and showed no effects of his battle with the current in any way. It was quite characteristic of all of these swimmers that on coming aboard they were not at all short of breath, and seemed to take the half mile swim in about the same manner as our city dwellers would the posting of a letter in the corner mail box.

I got a few of the natives to pose for me so that I could copy some of the tatoo designs. One mark seemed to be a tribal affair, all adults having a fish tatooed under each eye. In several cases I noticed two fishes, one underneath the other. On inquiry I found that every boy had this design tatooed after reaching a certain age, which I should place at about fifteen. Fish were prevalent in designs on other parts of the

body. There was a great variation in the amount of individual tatooing, some having very little, while others were quite profusely decorated. In addition to the fish there were some with additional designs on the cheeks. Most of the older men had more or less tatooing on chest and abdomen. Many had elaborate designs on the arms. A few had linear designs on their backs, but the legs seemed unmarked except in a few instances where the sign of the fish appeared. It was a common practice among the younger men to have their name tatooed on the forearm in one half inch letters, probably the name given them by missionaries, such as Stephen, Matthew, Mark, Alfred, Robert. In the case of Alfred, who spoke a little English and seemed very intelligent, I called his attention to the fact that the spelling of his name was incomplete, lacking the final D. To this he immediately replied "Me savvy", so I presumed he was quite well aware of the fact already.

One native brought a few of the feathers of the yellow billed tropic bird aboard, encased in a section of bamboo. They have evidently found these feathers of value in barter as this was the second time I saw them brought aboard. They do not kill the bird to obtain them, but pull them from the nesting or sitting bird, causing the bird no inconvenience at all.

Scissors were much desired in trade. The captain's wife had a small pair which she was willing for them to have, but they proved to be "too small" to suit, although one old chap clipped his moustache with them before handing them back. Later on Mrs. Beck

presented one of them with a small looking glass, and 47
Mr. Beck tendered a pair of shears large enough to cause
favorable comment and doubtless much envy unless their
use became a communal affair.

I shot a frigate bird from the after deck of the
France, and for several moments there was an excited buzz
of conversation, while one of the natives jumped over-
board and retrieved the specimen. My old friend, "the
pest", clambered to the poop and begged in pantomime to
be allowed to handle the "Musket", as he dubbed the 20
gauge. This I allowed him to do after removing the re-
maining cartridge, a necessary precaution as he immedi-
ately sighted the gun at his fellow swimming alongside
the France.

Our mate, George, who could converse with them
a little since he found their language similar in many
respects to Tongan and Samoan, with both of which he was
familiar, undertook to have them put on a dance. They
were rather backward about this, although one among them
who possessed a most wonderful and perpetual smile,
seemed willing enough to start things. Finally a musician
appeared in the person of a middle aged individual who
equipped himself with an empty benzine tin and a couple
of sticks and commenced to play tomtom on it as it is
played all over the world. This did start things, and
for a few minutes we were treated to a dance resembling
somewhat that of our American Indian, with some steps
not unlike parts of the highland fling. The dance was
accompanied by a chant in which all the natives joined,

a chant of very pleasing sound and rhythm. After a few 48 minutes they all stopped except our smiling friend upon whom it evolved to give us a solo dance in which he apparently took the keenest enjoyment. This consisted of much stamping and jumping in the air, with well timed clapping of his hands or slapping both buttocks with the hands while in the air. The slower movements were balancing on one foot while giving a series of kicks with the other leg.

To illustrate that he desired fish hooks one old fellow made all the pantomime of pulling in a fish and then put his finger in the corner of his mouth, pulling out his cheek to show just what happened to the fish. In attempting to explain what some wooden spear heads were for, another who spoke a little English, made this comment. "Suppose one man him walk too much. So! So! (lunges with imaginary spear). Him lie down quick."

All women are light colored, good looking, and wear grass skirts from knees to breasts. They have their hair cut close to the scalp in contradistinction to the men, who wear theirs long. About thirty children were seen.

Hicks spent all morning ashore, reaching there by swimming in, and covered the island quite thoroughly, but saw or heard no land birds with the exception of one Pacific pigeon which he shot. Sea birds noted about the island were yellow-billed tropic, noddy, lesser noddy, and fairy terns, common booby and frigate. Specimens of these were secured.

Rats were reported very common on the island, but Hicks 49
did not collect any. We left the island in early afternoon, sending all natives as far as the edge of the reef in the ship's boat. Start made for Tukopia with fair wind. Temp. about 90 in cabin, but cooler on deck.

Head lice were very common among the natives of Anuda, and a skin condition seemed to be quite prevalent, circinate spots often covering the entire body, accompanied by itching, and in old cases quite scaly. Probably some variety of Tinea.

Feb. 9. Day cloudy. Head wind again and no land visible. Such conditions with frequent rains prevailed all day.

Feb. 10. Conditions similar. Sea somewhat quieter. Shearwaters, noddy terns and common boobies seen. Tukopia showed up toward evening, looking in outline very much like Anuda. Unable to make island before dark, but a moon and fairly clear night made it possible to hang on in the immediate vicinity.

Feb. 11. Came to anchor on S.E. side of Tukopia in early morning. Natives very similar in appearance to those of Cherry Island. They came aboard immediately in canoes of quite elaborate pattern. All were clad in loin cloth of tapa, the same as at Cherry Island.

The tatooing was very similar in pattern to that of Cherry I., the fish under each eye being worn by practically all. More of these men were tatooed on the back, the general design being about the same. I saw several large Maltese crosses, and one man had a lizard tatooed on his arm. The ears were pierced with large

holes. Some wore earrings of shell or tortoise shell, 50
others the rolls of fresh leaf, and the ears were also
employed as holders for pipes, fish hooks, etc.

Nearly all had something to trade, and they
seemed to demand more in exchange than the Cherry Is-
landers. Shells of various kinds were freely offered,
fans, throwing spears, some mats, bowls, and other
utensils carved from wood, clubs, coconuts, bananas,
and some yams. Tobacco did not seem to be desired. A
good many natives smoked short clay pipes, and pipes
were very much in demand. So were knives, hatchets and
other carpenter's tools, belts and singlets. Fish hooks
and calico were were our only offerings, and after
constant explanation that they were the only things we
had, were finally accepted. At the moment of our leav-
ing, bargain day set in, and it would have been possible
to do some brisk trading with fish hooks, calico and
even our tobacco.. Matches also were greatly desired.
That the native is not without a keen bargaining instinct
can be seen from the following. Some brought two coco-
nuts, some three, and some as many as six. Mr. Beck was
making an offer of one fish hook for three nuts. Some
only had two nuts to offer and he gave them a fish hook
for these. Those who had six nuts, for which he offered
two hooks, when they saw some of their fellows receiving
one hook for two nuts, divided their six into three sets
of two each and passed them on to friends to hand down
the companionway. This went on several minutes before
being discovered. They were insistent in demands for
knives, pipes, etc., even when told over and over that

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we had none. They seemed to take it as a refusal on our part to try to accomodate them. Over and over again that same refrain, "You, plenty stop alongside you. Catchum one pipe." Or for variety, "Something you have plenty stop alongside you (or ship). Me something stop alongside me. All right, me give you." Which did not mean "give", but rather the commencement of some hard trading.

Canoes seemed to be plentiful, were strongly made and most of them somewhat ornamented, as can be seen from photos. They were skilful paddlers. The larger canoes would accomodate seven or eight natives. Several very small boys were out in small canoes, some without outriggers, which they handled in an expert manner. One very small and good looking youth was out and all around the ship in a canoe which had quite a piece missing from one side just above the water line. A boy swam from shore and tried to enter a canoe paddled by another boy near the ship; but the paddler refused accomodation and turned his canoe away, even striking at the boy in the water with his paddle, making him seek sanctuary aboard the France.

The men were about the same size and general appearance as the Cherry Islanders. If anything, as a lot they did not appear as clean or robust, although they were a good looking lot. Hair and beards the same as at Cherry. Most of them seemed full of fun, and they had great times aboard the France and found much to laugh at. Several of them found our manner of dining a great source of amusement. They have three native missionary workers

on this island. There are also three or four chiefs, none of whom came aboard. Population of the island as given me by one native missionary, was 1,080. None of the women came aboard, but there were plenty of women and children on the island, which is settled on both sides and really overpopulated. Women here wear loin cloths of tapa the same as the men. Women are tatooed extensively on forehead and cheeks.

The houses made of thatched leaves of palm are low, the entrance so small that it is necessary to crawl in on hands and knees. The floor inside is covered with mats. Roof one pitch, sloping down practically to the ground. No dogs were seen on this island. Natives had some fowls, but no pigs or goats. All the natives use betel nut freely.

Tukopia is about four miles long by one and one half wide. Estimated altitude about 1000 feet. It has two large and quite perpendicular abutments or tablelands, the larger on the N.W. end. There is a lake on the higher lands, and natives speak of a river, although our party saw none. There is a large lagoon near landing on the S.E. end. At a distance the outline of the southern exposure of Tukopia is very similar to that of Cherry, but the resemblance ceases on closer approach. Coconut trees are plentiful, and many cultivated patches of taro and some manioc. Yams probably grown at higher levels. Abundance of papaya trees, fruit small at this time of year. Bananas of several kinds and melons of good quality were brought aboard. The island is covered by many good trails.

A dish sent down as a present from one of the chiefs to show us a sample of chief's "kai-kai" was baked in halves of coconut shells and appeared to be made from coconut milk, finely grated coconut and pumpkin or squash. It had rather a pleasant taste. The coconut milk is obtained by squeezing finely grated coconut.

Being unable to go ashore I engaged the services of a very intelligent young native named Veramotu (tattooed on arm), and made him understand by a few sketches that I wished to obtain some butterflies, dragon flies and beetles. He spoke a little English and was eager to assist, spurred on by the fact that I offered to give him "pipe stop alongside me" if he succeeded. He did excellent collecting for a native both this day and the next, and brought out 150 or more specimens of four or five species of butterflies, three species of dragon flies, one bee, several moths, several grasshoppers, one katydid, and a few beetles. Somehow he failed to get the idea of the coleoptera, and neither could he understand land snails, although I showed him some. I should judge insects to be fairly plentiful on this island from what he brought in. He sublet his contract, I believe, to lesser fry, one of our party seeing him marching along collecting bottle in hand, while one of the younger set carried the net which I loaned him, and several others were in escort. He failed to employ the cyanide bottle to kill grasshoppers, bringing them alive in a tin box, and as a result there were many

casualties among the specimens. On the whole though, he did very well, and was much pleased with the pipe and a singlet which I gave him. In the course of the work he asked for a package of cigarettes and some matches, to stimulate his co-workers, he said. On one occasion he brought me two coconuts, and on another three nuts and a fan, little presents for me, as he put it. Also he inquired what a pigeon, which I was skinning, would be worth in New York, which showed, I think, that he possessed the commercial instinct.

The natives gathered around the open hatch when I commenced to skin birds. I started with some ducks which had been sent aboard and skinned out the bodies of several hurriedly so as to get them to the cook. I am under the impression that the natives considered it the "palangi" way of dressing ducks and it afforded them great amusement. Later when they saw the ducks made up it caused an equal amount of astonishment, and there was never an audience lacking when bird skinning was in progress.

Head lice and the skin disease (Tinea) were very common here. Some of the natives on board picked the lice out and threw them on deck, while others picked them out and ate them, a practice which Mrs. Beck said she had observed at other islands. I saw several bad scars on the bodies of some of the natives, all of which appeared to have healed without any skilled assistance. One man said he had fever and asked for quinine. I judged from what I could understand that he had recurrent

chills and fever, so very likely it was malaria. They have very little sickness on the island.

Natives were aboard the France continually, and in such numbers that they were often very much in the way. They were curious of everything, seemed quick to understand, and quite ready to assist in any of the ship's chores, such as manning the pump, washing down decks, raising or lowering boats, etc. A few stayed on board overnight. They did not seem to like rain, and as many as could sought shelter under the deck awning, which was lying loose on deck, during the rather frequent downpours. In fact on one occasion they asked to have the main-sail loosened so they could use it for shelter.

Even the most savage looking male would break into a smile if you smiled at him, and they seemed to take delight in touching our clothes. I presented one fellow with a U.S. army web belt, and in exchange received a small carved wooden bowl. He was quite overcome with his new possession. I offered another man a razor for a large, plain bowl. He wanted a knife, couldn't use the razor, and also informed me that his back got very tired while he was making the bowl, and that it took a long time.

There was a tomtom dance and "sing-sing" at night which lasted practically the whole night. Our mate attended it and reported that the "sing-sing" was very much the same as Tongan, a song made up of historic and legendary events. This is the manner in which a lot of records are preserved, being handed down in this manner from one generation to another. There are four chiefs on the island, representing four different tribes of which

the island population is made up, a mixture of Samoan, Tongan, Wallace Is. and Futuna. A cutter landed there two weeks ago, having been blown to sea from Figi. There were six men aboard, who were taken back to their home on the Southern Cross. Limes and coconuts were served at the "sing-sing", the use of kava having been abandoned since the advent of the missionary. These natives say that they learned to use betel nut from inhabitants who were present on the island when their ancestors first landed.

Beck and Hicks were ashore and collected a good many birds, of which the most interesting was a small cormorant. Other birds secured here were duck, yellow eye, small honey sucker, kingfisher, paroquet, Pacific pigeon, noddy, fairy tern, curlew, godwit, gallinule, ring plover and reef heron. Spent night at anchor. Coral bottom, not very good holding ground.

Feb. 12. Natives were aboard early to stay all day. Same weather conditions prevailed. Mr. Beck and Hicks were ashore again and secured quite a lot more birds. A number of ducks from here are minus a foot or a toe. Natives say this is due to the fact that there are some big fish in the lake which bite them off. Mrs. Beck and Mrs. Lang went ashore and said that they could hardly see the scenery on account of the large number of natives who followed them about everywhere, touching their clothes and almost crushing them in their efforts to keep in close proximity. I skinned birds all day; also made a water color sketch of the bill and feet of the shag.

Anchor was raised while we were at supper.

There were still some natives on deck, but we judged they⁵⁷ had canoes alongside to take them off. On coming on deck as the France got underway we found some twenty natives on board and no canoes. Most of the natives did not want to leave, my friend Veramotu among them. He said he wished to go to Vanikoro, our next port of call, and that he would trust to the mission boat, Southern Cross, to bring him back again. We launched the two ships boats to get them ashore, but very few wanted to get in, showing a decided reluctance to leaving the France. Finally the surf boat put off with some ten aboard and started for the shore. The dinghy tried to leave with three more, but tide and wind were such that it could make no headway and had to be taken in tow by us. It became necessary to lower sails again and start the motor in order to keep in touch with the landing beach, and as darkness came on this became more and more of a problem. It was about six o'clock when anchor was raised, and it was after ten when our surf boat came back to the Schooner, after its second trip to shore. In the meantime a severe electrical storm was in progress, rain fell in torrents, and just as the boat reached the side of the France, the last bit of island was blotted out by darkness and rain.

It was reported by our boat's crew that the excitement among the natives on shore during this time was intense. Old men were raging up and down the beach, and women, some of them wives of our passengers, were crying. Really it was a most troublesome and trying affair all around, and it was with a great feeling of relief that the surf boat was taken aboard, sail put on

again, and the France headed on her course for Vanikoro.

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Feb. 13. On course for Vanikoro. Heavy squalls and little wind, with plenty of rain in the morning, but more pleasant in the p.m. An island rooster, shut up in a box side of the galley, crowed at frequent intervals during the day, lending quite a barnyard effect, if one could lose the sea setting. Shearwaters quite numerous, flying about in the vicinity of a school of bonitas. In fact shearwaters of three or four species, but principally the wedge-tailed, appear often, following the schools of fish, to disappear as quickly as they came.

Feb. 14. The first real pleasant day in a long time. Noon position about 80 miles S.E. of Vanikoro. Rather heavy swells. Shearwaters in about same numbers as yesterday, a few terns and occasional frigate bird. There was a little too much wind to permit of lowering the boat and collecting. In the evening a very beautiful sunset with most marvellous colors which were constantly changing. Such unusual colors as lavender, orange-gold, purple and vermillion were common and arranged in ever changing patterns. It seemed most unusual to see a deep blue sky with occasional splashes of vermillion.

Feb. 15. Another pleasant day. Vanikoro visible in distance in early morning. Wind light, with rain squalls in early morning. Owing to lack of wind engine was started about one o'clock and Vanikoro anchorage was made at 6.30 p.m. Dr. Deland and Capt. Middenway and wife came out to the France.

Preparations made for making some necessary repairs to the schooner and to secure some stores. In the afternoon we went ashore and had tea with the Government agent, Capt. Middenway. He showed us quite a collection of curios, principally obtained in the Solomons. Among other things a strip of money, estimated value \$150, made in a continuous rope about two and one half inches wide and one half inch thick, the back of some pleated grass, the front made from the red feathers of the small honey-sucker. Mr. Beck estimated that it took six birds to furnish the feathers to make one inch, and the strip was about twenty feet long. He also showed us other styles of native money, strings of highly polished and drilled bits of colored shell in strings like beads; woven patterns of grass and beads with teeth of flying fox and opossum arranged in regular rows. All represented different values according to material and length. He showed us some intricate fret work patterns of tortoise shell, inlay work of wood and pearl shell, and a finely executed statuette of a native woman and child carved from one piece of heavy wood by a native of New Georgia. I looked over one of the native carpenters who had been poisoned the week before from the sap of a tree, called here the "wild man tree". He said that it caused most severe pain and swelling. The barely healed scars were still plainly seen on his arm and chest.

Feb. 17. Another pleasant day. My left foot and leg was considerably swollen and painful after yesterday's use of it. The Marsina, from Sydney, anchored

near us early in the morning. She is to unload over 200 tons of rail and machinery, and take on a cargo of fifty to sixty kaori logs, averaging 1000 feet to the log. 60

Feb. 18. A very pleasant and warm day. Collected some insects in the afternoon. Most of the butterflies, some five or six species, were in worn condition. They seemed quite plentiful, but often flew too high for net. Saw one clear winged variety of moth, which was too high for securing. Coleoptera did not appear to be numerous. Snakes of some four to six varieties, mostly constrictors and arboreal, were reported to be rather common. One smaller variety, a ground snake, sluggish in disposition, was said to possess fangs. Lizards of several species also reported numerous. There were two small species quite common along edges of paths, but they disappeared rapidly on approach, and lacking a gun, I was unable to obtain any. Capt. Middenway mentioned that an iguana, arboreal in habits and attaining a length of four feet, occurred through the New Hebrides and on Vanikoro, but I could find no one who had seen this.

Feb. 19. Another pleasant day. Spent the latter part of the afternoon with Capt. Middenway. He has had a long residence in Polynesia, and related many tales of the islands, both of individuals and animals. He said that the native population of Vanikoro was once, not so very long ago, about 1300. Present population is 80. Malaria and influenza have been the chief causes of death. He told of natives planting sticks in their yards on which fruit bats could roost, the natives feeding them with taro, banana, etc. Their idea was to have them handy

so that when they desired to eat one, it was readily obtained by knocking it over the head with a stick. Fruit bats are very numerous on Vanikoro, and in the evening their screeching was often heard. I saw six in flight today, flapping along like a very lazy crow, or perhaps more like a heron. Capt. Middenway also called attention to some young sago palms. He said that he had never seen real mushrooms in the islands except where a sago palm, when four or five years old and before it bore any ivory nuts, was cut down and some of it spread over the ground and allowed to rot. Soon afterward there would be in that vicinity a lot of large and good quality mushrooms. He said that once he threw away a sack in which a lot of ivory nuts had been kept for a long time, and that where the sack rotted, mushrooms came up.

Feb. 20. A pleasant day, but hot. Some little breeze about ten a.m., and Mr. Beck wanted to take advantage of it to get away, but had some trouble with the crew who seemed to think they had been overworked and so wished to rest over Sunday. Inasmuch as they were all ready to leave the ship in a body, there was nothing to do but wait. In the afternoon some men employed by the timber company came aboard, bringing with them a small crocodile which they had captured during the day. It was a little over two feet in length. They had captured it up the river where they were hunting for one with the assistance of some of the native boys. It had proved a lively specimen and given them considerable trouble in taking it. They presented it to us for the collection, after receiving a demon-

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stration of how to skin one, and it was put in formalin. There are many small fish of various species to be seen in the river, which empties at this anchorage, some of them as long as ten inches. The river extends into the island a long distance, is very variable in depth, low at present time because of several days of dry weather. It was at the mouth of this river that La Perouse had his camp after the loss of his ships, and many relics of the time of his landing have been found here.

Feb. 21. Left Vanikoro anchorage early in the a.m., using the engine to get out through the passage in the reef. Light winds outside and we made very little progress. An occasional shearwater seen toward evening.

Feb. 22. Wind very variable. Vanikoro still plainly visible in a.m., Utupua also visible, and toward noon the top of Santa Cruz appeared.

Feb. 23. Santa Cruz plainly visible and wind allowed standing in the direction of the island. We entered a little bay south of Cape Byron at about 3 p.m. Good anchorage in twelve fathoms of water. A fresh water stream entered the bay opposite anchorage. Coral shore with mangrove swamp extending nearly to water's edge. There were a very few coconut trees. A few natives appeared on the beach, accompanied by several dogs, and in the background could be seen a couple of canoes. Mr. Beck and Hicks went ashore to collect. The natives had a live pig tied up, which had been recently caught, weight about sixty pounds. Mr. Beck purchased it for twenty sticks of tobacco. On the evening of our arrival I watched through glasses a native shooting

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fish with bow and arrow. It was very interesting to see him, unembarassed by my presence, steal along the shore edge peering into the water. Now and then he would enter the water a short distance, fit an arrow to his bow, and draw it from a half crouched position, taking careful aim at his quarry. He was quite successful, and in about twenty minutes had shot four good sized fish, only missing two shots out of six.

Pigeons were very numerous, flying at this time of day from the woods along shore in a southerly direction, in line with Lord Howe Is., which lies a short distance off shore. The pigeons were flying generally by twos and threes, but sometimes single birds and as many as fifteen in a flock. They flew rather high and kept generally out of range of the schooner. Flying foxes were also very numerous indeed, as many as fifteen or twenty being visible over the tree tops at one time. Butterflies came out to visit us, and I saw a couple of dragon flies. I estimated that at least 200 pigeons passed from the woods toward Lord Howe in the time between 4 p.m. and dark. Beck and Hicks found birds quite plentiful, particularly the commoner thickheads and fantails. Also obtained several olive birds and Mr. Beck secured a couple of specimens of a species new to him, which he called straw-bills. Kingfishers were noisily calling in the woods near shore, and two species of reed heron and several plover were seen on shore.

Feb. 24. Beck and Hicks went ashore early. I spent the morning in skinning the birds of yesterday and some flying foxes, and went ashore after an early lunch.

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Spent several hours along the beach and in the mangrove swamp. The place fairly teemed with animal life. As I had both the gun and butterfly net, I engaged one of the native boys to carry the latter. There was quite a family group encamped on shore, including several women and some children. They seemed well supplied with food. They had shot or speared a lot of young shark and several of a large species of eel. Also had several dozen turtle eggs about one inch in diameter; two varieties of bananas, many coconuts, sweet yams, and a fruit which George said was called in Samoa, Vee, (phonetic spelling). There were many butterflies on the shore, apparently attracted by the bloom of a certain large tree which was not uncommon on the beach. A very brilliantly colored, clear-winged moth was also common, and many specimens were secured. Hermit crabs were in abundance, occupying shells of all kinds. Many were very tiny, and all sizes from these up to hermits several inches in length with very large claws. Then there were small crabs in legion, some hiding in piles of weed and coral on the beach, others scampering rapidly about on the sand. I had little chance to collect these, but secured several varieties. Larger crabs of many hued shells were also extremely abundant, especially in the mangrove swamp. There were many colors, red, vermillion, yellow, and black predominating. In fact the whole carpet of the swamp seemed alive with them, and in addition large hermits were carrying their houses in every direction. The ground was honeycombed with burrows. Most of the crabs beat a hasty retreat on being disturbed,

but now and then one would advance toward the intruder brandishing its two big claws in a threatening manner. A handsome moth seemed fairly common in the swamp, and several were collected. Lizards were very numerous. A black species seemed the most common, varying in size up to twelve inches. It was seen with equal frequency on the ground and in the trees. I collected several of various sizes. I got one small species under an old log and a long tailed small species from some mangrove roots. Also shot a bright olive green species some fifteen feet up a tree. I did not see any snakes on this trip, but Mr. Beck got a long slender species. With two other species of lizard secured by Mr. Beck this made six species noted on Santa Cruz, with specimens of all collected. Several species of flies were collected on the beach. In turning over the heaps of small pieces of coral I saw two specimens of a milliped, one of which I secured. Sand fleas were quite common. Pigeons were roosting in the trees and I shot several. They were very fat. From the crop of one I took 22 small fruits, about the size of an ordinary marble, probably wild fig. Fruit bats were very numerous, both flying and hanging in the tops of trees. Both the large black and gold and the smaller red species were present, and I collected some of each. Noticed them several times climbing actively about in the tree tops. One, although dead, remained hanging and could not be dislodged with other shots. Beck and Hicks returned with a good lot of birds of same species as yesterday, except that Mr. Beck had a thrush shrike of a kind he had not met with

Later in the day the natives came aboard with some coconuts and yams. They are rather a poor looking lot. Skin disease and elephantiasis are common ailments with them. They had very little tatooing, and what there was was crude in character. They had ears and noses pierced and wore rings made of tortoise shell or beads.

Feb. 25. Left this anchorage in the morning and rounded Cape Byron, passed Carlisle Bay to come to anchor in Byron Bay, a nice anchorage in twelve fathoms. The general character of the bay was much the same as last except that it had a larger river entering it. At Carlisle Bay is the memorial to Captain Goodenough of H.M.S. Pearl, who was murdered there by the natives. It also has a small wharf which is not in use at present. Byron Bay has a small village close by the mouth of the river, a few poor huts erected in a walled enclosure, made of blocks or lumps of coral. The natives said that these walls, which were some three to four feet high and quite extensive, had been there a very long time, longer than the memory of any of them, and that natives had lived here only quite recently. Much of the walls was overgrown by jungle. There are many coconuts at this place, but the trees are growing wild and neglected, and the nuts are small. Natives had some copra on strings, and were waiting for visit of Jones, the trader, whom they said allowed one stick of tobacco for a string weighing about four pounds. They come here from Carlisle Bay to get water. A fine, broad trail leads from here to Carlisle Bay.

Saw no lizards near the village and butterflies were not so plentiful as at last anchorage.

The natives had oranges, bananas and yams, but except for banana trees there was no fruit tree at the village. The natives did have quite a lot of dried bread-fruit, two baskets of which they presented to us. I saw several small baskets of quite a nice weave.

In the middle of the afternoon a crocodile about twelve feet long appeared on the top of the water mid-way between the ship and shore. I saw it several times and the natives said that it hung around this particular place most of the time. They also said that crocodiles were fairly plentiful here. Later in the afternoon a school of honitas appeared in the bay, chasing small fish. They were extremely active and presented a beautiful sight, some of the larger ones leaping out of the water to a height of twenty feet.

Swifts and an occasional swallow were seen near shore. Crabs not so much in evidence as at last anchorage, but still very common, especially the hermits. I did not see any lizards on my trip ashore in the afternoon. Beck and Hicks returned with quite a lot of birds, but no additions to list of species. Land snails did not seem to be so common at Santa Cruz, at least at places visited, although several species were secured. Three small bats, a rich cinnamon brown in color, were secured here. They were quite plentiful. A few terns were seen, but sea birds were absent at this and previous anchorage. A few sandpipers and one plover noted, and at least two species of heron.

Some twenty to thirty natives were seen on shore or visiting the ship, including several women. The larger number were diseased. Two or three had been away at times and spoke some English. They seemed to prefer money in exchange for anything they had to offer, but on not finding it forthcoming were quite contented with tobacco. They did not seem to care much for calico. They carry water in coconut calabashes with spout made out of green leaf. Nearly all of them had briar pipes and they smoked a considerable part of the time. They are very much addicted to the use of the betel nut, and practically every male adult had with him at all times a supply of the nut and a small gourd calabash containing powdered lime. After putting a piece of nut in his mouth he dips his finger in lime and licks it off, repeating this process several times.

Feb. 26. Weather pleasant with occasional heavy showers. In the afternoon I went ashore and took the broad and well kept trail to village at Carlisle Bay about two miles distant. Pigeons were very abundant, and their calls sounded through the woods on each side, while there were many thickheads, fantails and small honeysuckers to entertain along the trail. Several species of butterflies were quite plentiful, and I secured specimens of four species, but one big fellow, black with white spots on wings kept well out of range of my net. I found some wasps with their small nests built on the under side of large palm leaves, and collected one nest and several of the inhabitants. Noted six nests in one palm with four to eight wasps

about each nest. A spider with a bright red hard shell was fairly common in some spots. It spun a web much like that of our geometric spiders, some six to eight inches in diameter and suspended by guy threads at the corners. They were not particularly active, and made no struggle when caught, although I found the two small, sharp spines at each side of the body rather annoying. It was interesting to note that the hermit crabs climb trees. I saw very small ones and also some large ones up as far as fifteen feet on moist slippery trunks. When much disturbed they would back into their shells and drop to the ground. Lizards of several species were common both on the ground and in bushes and trees. They were not particularly alarmed on approach, and it was a pleasing sight to watch them scamper about in the bush. With the exception of butterflies insects did not appear to be very numerous. In several hours spent along the two miles of trail I found only a few coleoptera, although I made a diligent search amongst shrubbery, under bark, in dead trees, under coral blocks and trees, etc. I collected a few grasshoppers, ants and flies. I saw one fairly large (body about two inches) clear winged moth hovering about a bit of bloom, but was unable to secure it. The natives say that snakes are plentiful, both "big fellow and little fellow", but I did not see any in all this walk.

The village at Carlisle Bay consists of some eight or ten houses neat in appearance. The entrance to the village from the bush is bordered on both sides with plants with variegated leaves (Crotons?), while in front

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of the houses facing the water was quite an ornamental patch of flowers. There is also a wharf here, the part at shore edge built of coral blocks and the extension into the water being a platform of bamboo poles laid on tree uprights. It evidently has not been used for some time, as the bamboo platform was quite rotten. A small schooner could easily lay alongside at any tide. Across the inlet is the memorial to Capt. Goodenough, just discernible in the bush. There are some small bananas and yam patches close to the village and they must have oranges, as some of fair quality were brought aboard. One old native had a polished shell disc at least six inches in diameter, with a design in tortoise shell upon it, worn suspended from his neck. Evidently he valued it highly, for at first he said he would take ten pounds for it, but later did not wish to discuss parting with it at all and even removed it before coming aboard the France. Some of the natives wear large earrings made of a narrow, flat piece of tortoise shell about four inches long, with bead pendants hanging from it. They use colored beads in arm bands and even woven into their belts.

I found a few land snails on the way back, although they were scarce. Dead shells of three or four species were not uncommon on the trail, and perhaps live specimens would be more common in wet weather.

Feb. 27. Another pleasant day. A native brought out a small snake different from ones seen before. It was still very much alive and he had it securely lashed to the end of a pole, so it would appear that they have

a proper respect for snakes. It was non-venemous. 71
Another brought out several varieties of very prettily
marked small fish which were put in the formalin tank.
The remains of walls constructed of coral blocks I
noticed in several places along the trail to Carlisle
Bay, probably all that remains of villages which once
flourished here.

Feb. 28. I went ashore in the morning with both
gun and net. Hoped to get some new butterflies and more
insects, but insects of all kinds were very scarce.
Lizards were rather plentiful and I got some ten of
three species, including one gecko. The black lizards
were on both ground and the trunks of trees, while the
little green fellows climbed actively about in the bushes
and small trees. I found one snake of what seems to be
the common species here. It was coiled around a small
limb about fifteen feet from the ground. The gecko was
on the bark of a large tree. I put some honey diluted
with water in several spots, hoping to attract some
insects to it, particularly the big black butterfly which
flies so high. I had no sooner planted my lures than a
very severe rain came on and put an end to all collecting.
It was a regular downpour and lasted all day with a few
slight intermissions. It ended field work, and after
spending an hour trying to find some tree large enough to
afford shelter and getting decidedly wetter all the time,
I returned to the ship. Later Beck and Hicks returned
from the hills, not having found the ground dove or
shrike, the rain having put an end to their work also.

Natives brought aboard two more snakes of the

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same species as yesterday, in each case the specimen being alive and cleverly lashed to the end of a pole with vines. Two canoes with one young and one old man in each stopped alongside in the early morning. Both canoes were heavily laden. They told us that they came from the Swallow or Reef Islands and were starting on the return trip. It seemed a long and perilous journey for small, frail outrigger canoes, but perhaps the old man had the necessary experience, and the younger ones the brawn. These islanders have long been noted as fearless navigators, and this instance proves that going to sea in small canoes is not a lost art with them.

One young jungle cock secured by Hicks today, but was not in condition to warrant preservation. No rats seen at either anchorage at Santa Cruz. Two house cats seen at last anchorage.

The natives here weave some baskets, rather a fine weave, but with little attempt at ornamentation. I saw a few well made arrows with some decoration in colors near butts. The arrows used in hunting pigeons or fish are strongly made, as well as the bows, but are not at all ornamental. Mats were plain and rather coarse weave. There seems to be a tendency here for beads to take the place of purely native material in the making of ornaments for nose, ears, arms, wrists, and ankles.

March 1. Raised anchor at 6 a.m. and started for the little volcanic island of Tinakula. Weather pleasant, but wind very light. Tinakula in sight and at noon it looked as though we might make it, but wind

became so light that we were practically becalmed when 73
some ten miles off the island. Smoke issued at very
frequent intervals from top of Tinakula and at night
a dull red glow showed in the same place. The island
is green around bottom slopes and for about two-thirds
of the way to top. Some noddy terns seen in the after-
noon, but sea bird life scanty. A very large school of
porpoises played around the ship for quite awhile in
the afternoon.

March 2. Position of ship within a few miles of
Tinakula, but no wind. Engine started and soon made
the eastern exposure where there was a beach. Lighter
green patches seen in some profusion proved to be coconuts.
The oaken ribs of some unfortunate vessel decorated the
beach, being half buried in the sand. The boat was put
over and soundings taken for anchorage, but no bottom was
found except close in shore. So the France stood off
and on while Mr. Beck and I were landed on the beach.
The surf was quite high and I had some misgivings about
being able to make it with all my gear, since this was
my first attempt at this sort of thing in some years.
The surf itself rather saved me the trouble of deciding
the question, as the boat was caught well on the beach
and was threatened with being swamped with the incoming
rollers, so it was a case of jump out or be thrown out,
and naturally I chose the former. The boys just did
succeed in getting off again with the boat.

The island is well covered with vegetation, pan-
danus near beach intermixed with coconuts, and a dense

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growth of ferns everywhere, in which arise several varieties of trees, larger ferns and palms. There are also plenty of vines to complete the tangle. Coconuts, while for the most part fairly near the shore, are also present in lesser quantities well up the slope. There were large numbers of coconuts on the ground, and it seems that they can receive but little attention, although in a few places there was evidence that some attention is given to the gathering of nuts.

Long-tailed doves, pigeons and yellow eyes were very common. Small paroquets were also common, seen mostly in tops of coconut trees. I saw several small red honeysuckers and kingfishers. I found it difficult to retrieve birds which I shot. Even when carefully marked down I failed to find over one half of them.

It was necessary to continually cross canyons, often deep, and this being my first real attempt at climbing since the trouble with my legs, I had quite a strenuous time of it. I met Beck at a small beach at the other end of the island soon after four p.m. A little piece of trail near this beach was the only evidence of trail which I saw, most of the walking being bad. On the last end of the journey, as I mounted a little prominence which gave me some view of the ocean, I was very much surprised to see four heavily laden canoes, each containing two natives; evidently proceeding in my own direction. As I came up to the beach, they were engaged in conversation with the boys in the boat which was waiting to take us off. They were from one of the Reef Islands, and on their way to Santa Cruz.

The bow paddler in each canoe wore a large, plain, circular clam shell disc which none of them would part with, although they offered some other things in trade, following us out to the ship and remaining in the vicinity about an hour. Then they started off for Santa Cruz, some twenty miles away, although it was six p.m. 75

Mr. Beck secured several small black rails, three ground pigeons and a cuckoo, in addition to some of the birds already noted. He also mentioned seeing some black lizards of the kind collected at Santa Cruz. Of insects I notes some small butterflies of three or four species, one hemiptera and two species of ants. Also saw two species of spiders. Sharks plentiful in vicinity of the island.

March. 3 A heavy rain came on in the night and the island was not visible at all after five a.m., although we are in close proximity. The heavy rain continued most of the day, although later the island was visible most of the time. In the afternoon we were able to proceed on the west side and found vegetation here quite thick, though not so much as on east side, and fewer coconut trees. Bare lava extended from top to water's edge in one spot. Very few birds seen.

March 4. Few squalls in the distance, but no rain in our immediate vicinity. The current had carried us off a considerable distance from Tinakula during the night, and we were in sight of two of the Reef Islands as well as Santa Cruz and Tinakula. The wind ceased entirely by the middle of the morning, and as it seemed

important to get to Tinakula and on our way again without losing more time, the motor was started. Reached the island at one p.m. Mr. & Mrs. Beck and I went ashore in the boat, landing on the beach at S.E. end where the surf was least rough. We collected all the afternoon. The rain of previous day had washed out all the ravines, carrying out quantities of soil, old debris and some trees, so that the landscape showed quite a change from our previous visit when seen at close range. We had remarked a large amount of debris floating out from the island on our approach. I climbed to several hundred feet and went in a northerly direction, while Mr. & Mrs. Beck went to the south end. I did not find birds as plentiful as on previous visit, but this may have been because I was above the line of coconuts, and also I was not able to go as far on Wednesday on account of lack of time. It takes some experience to hunt birds in this sort of bush and also to find birds when once shot. I had not met with the little black rail at any previous time and did not know they were on the island until I saw the ones shot by Beck. After getting some data on their habits, note, etc, I did get glimpses of a couple on my second trip. A kingfisher which I shot today I let stay where it fell for several minutes, as I was watching another bird. On finally picking it up I was much surprised to find a tiny gecko still tightly held in its beak and very much alive. This represented the only specimen of its kind secured at this island, although Beck saw some of the black lizards like those obtained at Santa Cruz. He succeeded in securing some

more ground doves, the bird most desired, and also
reported seeing a wild pig. 177

By five p.m. when ready to leave, the surf was rough and it was necessary to get out in the water quite a ways to meet the boat. Even then the combers came so fast and heavy that the boat was half filled with water and nearly capsized. It probably would have done so with loss of all gear had not the mate, who was in charge, jumped overboard to lighten the load. By good luck there was a large petrol tin for a bailer, and by diligent use of this and my stetson hat we got rid of most of the water, retrieved the mate, and got out to the waiting France very wet but contented that it was no worse.

After skinning birds, I sat on deck and watched the crater on Tinakula pour lava or hot rocks down the N.W. side to the water's edge, a pretty sight which kept me up until 11 p.m. There must have been tons of material moving, for the red glow was plainly visible at ten or twelve miles distance, often extending in one red line all the way from the rim of the crater to the ocean. Ashes, very fine, reached our deck even at this distance. It seems rather strange to think of a volcanic island, some two miles in extent and somewhat over 2000 feet in height, all seething and boiling inside, and covered with luxuriant vegetation, with abundant bird life over two-thirds of its surface on all but the N.W. side.

March 5. Tinakula visible all day. Weather pleasant but very little wind. Practically no sea birds seen. I received a couple of rather severe bruises on

my left leg at Tinakula from falls on volcanic rock, and the leg is quite swollen and sore again today. It seems too bad as the sore on the foot had only just scabbed over and I was hoping that at last I was once more the possessor of two serviceable legs.

March 6. Weather very pleasant, wind light but favorable, and we were able to stay on due west course all day. Very few birds were seen. A very beautiful sunset. The most beautiful and yet rather weird combinations of color occur in these sunsets, and the colors are constantly changing. Splashes of rose will occur without any apparent reason in a blue sky. Deep to light orange tints occur particularly in the neighborhood of the setting sun. From very light blue or faint purple at horizon to deeper blues and jade green higher up in the vault, with here and there variable patches of white clouds, sepia edged, or dark sepia clouds like smoke. Even patches of vermillion occur, and sometimes rainbow like bands tucked away on the bosom of some fleecy cloud. The patterns are so odd and change so rapidly, and the colors so rarely beautiful and delicate, that it would be difficult for the artist to try to portray any of it. Should one succeed in doing so, it is probable that critics would believe the work the product of some imaginative brain and not a reproduction of one of the most magnificent offerings of the infinite.

March 7. A very pleasant day and a fair wind, which while variable in quantity kept us going in the direction of the Solomons. Heavy showers in the evening,

and it rained steadily through the night. Only a few 79
birds seen.

March 8. Cloudy with a little rain. Wind still favorable. Two common boobies seen in early morning. Land in sight at 11 a.m., but wind died down to a considerable extent, and as it grew late in the day it was apparent that we could not make the island before dark without using the engine. So the engine was started and just before dark we entered the harbor, Port Mary, on the west side of Owa-Raha or Santa Ana. The entrance has reefs extending out on each side, and a blinding rain together with the darkness made the entrance difficult to negotiate. Soon after anchor was dropped a light showed on shore, and later a canoe came out to inquire if we wished to go ashore. As it was late and everyone wet and tired, this offer was declined with thanks.

March 9. The next morning was pleasant and we got an early start at collecting. We stopped first at the house of Mr. Henry Kuper, who is the only white man living here, but found him away at San Cristóbal. His head boy, however, said that it would be all right to hunt "pigeons" on the island and we started out. Birds were plentiful, judging from their songs, but on the first trail which I followed they were difficult to see, keeping to the tops of very tall trees. This trail led to a lake, of which there are two on the island. I saw two cormorants there similar to the species secured at Tukopeia. Rather heavy rains occurred in the early part of the morning, which interfered with collecting, but later it cleared. At the edge of the lake Hicks

called my attention to some "worms" which he had seen, 80
but said he had no can to put them in. I investigated
and found some very large, dark gray colored millipeds
on the bark of an old tree. By poking around in the leaves
and débris I found enough to fill a small tobacco tin.
I had been picking them up and transferring them to the
tin with my bare hands and was quite interested when Hicks
later told me that the same sort of thing was rather
common in Samoa and much detested by the natives since
they exuded a juice causing great burning pain and ulcer-
ation, and that this fluid would even penetrate leather.
I presume it is not exuded unless the millipeds are much
irritated, as I experienced no bad effects.

On the way back along this trail I secured some
small honeysuckers and fantails from the tops of coconut
trees. They were plentiful. The honeysuckers, the same
size as the species met with in the Hebrides, were entirely
black, and the fantails seemed to have much more chestnut
coloring. Some of the honeysuckers had larger bills,
yellow in color, but these are probably young birds. I
found kingfishers common with no marked difference. The
common pigeon was very numerous and different from those
previously encountered. I secured a bronzed species of
ground pigeon from the W. end of the island, said by a
native hunter to be uncommon here, although later more
were secured. An entirely black bird, about the size of
English sparrow, with blue bill was quite common in cer-
tain spots. The thick-head could be very much heard,
but I did not see an adult male and none came to my
calling. I got two females which did not differ

materially, although they had some buff color on shoulders and underneath parts. I secured two megapodes, and judge⁸¹ them to be fairly common here. Shore birds were quite plentiful, sandpipers, plover, curlew and herons. Hicks secured a different ground pigeon and so did Mr. Beck; also some small black and white birds, a beautifully colored fruit pigeon and a rather large, highly colored bird, the exact family of which we were unable to decide. It was taken on the edge of a village, and the crop was full of beetles of a bright green color. Altogether the bird life was most interesting, especially since it differed so from any previously encountered. It seems likely that we shall add many species to the list at this island, our introduction to the Solomon Group.

Insects were common, but I did not see any large butterflies and had no opportunity to collect any. Saw some very large spiders, one with a spread of four to five inches, and a few small lizards.

The island is not high, perhaps 500 feet, and is about two and one half miles long by two miles wide. It has two lakes and three villages. The village at Port Mary is very neat in appearance, the houses are large and well constructed, and there are neat, flower-bordered walks and a playground. The natives at this village all wear the lava-lava. The other two villages, situated at the other side of the island, are in very much their primitive condition as far as native dress and custom is concerned, but the houses are equally good.

Canoes are common here, made of four pieces of plank fastened together and the seams coated with a

black substance obtained from a nut to make them water-proof. They are wide and permit the occupants to sit inside. They use no outrigger.

I noticed several dogs and one cat. Pigs were very numerous and roamed at large.

Toward evening Mr. Kuper, the trader and plantation owner who lives here, returned in his launch from San Cristobal where he has an extensive coconut plantation at Star Harbor. He sent out a note inviting us ashore for the evening, but this social duty devolved upon Capt. Lang and his wife, as we had some seventy-five birds to put up. They went ashore and spent a very pleasant evening at Mr. Kuper's home. He is German and has been in the Solomons for the last fifteen years.

March 10. A Rainy day. Went ashore early and met Mr. Kuper, a very intelligent man with a long experience in this group. He has a very nice home and a fairly large collection of native curios, particularly weapons, amulets and totems, the history of some of these being most interesting. He also had a short sword, a relic of the La Perouse expedition, which he dug up at Vanikoro together with a few coins and some bullets on the site where the sawmill now stands. He told us considerable about the islands and the natives, conditions of anchorages, etc. farther on in the group.

Mr. Kuper has studied the native habits and old customs in a diligent manner, and both by long residence and close association has had rather unusual opportunities for securing valuable information, some of which he has used in papers published in Australia. He is

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strongly in favor of permitting the natives to retain many of their original customs and beliefs in order to give them something to fill in their time and occupy their minds. He said that many of the missionaries in their fervor and without thoroughly understanding the natives, gave them the idea that God was simply another great "devil-devil", always ready to punish, and therefore greatly to be feared. Many of the dances which had been abolished were the native expression of historical legends which were perpetuated only in this way. It was interesting to have him tell us that he had interviewed some of the old men that day and asked them what they thought of us. They replied that at first they thought we shot the "pigeons" to eat, but finding that we did not eat them, they were inclined to think that we were all a little mad. An entomologist, a Dr. Mann from America, who had spent some time here previously, they had classified as entirely mad. Mr. Kuper has entertained some well known people on his island, among others Mr. & Mrs. Martin Johnson and Dr. Lambert of the Rockfeller Institute.

He said that he had seen the small red honey-sucker in the islands and also mentioned another pigeon which we had not seen, its native name being "puta-puta-c'h'r'o". He spoke of still another bird which he said the natives claimed to have seen, but which had never been able to see in spite of frequent attempts when he heard its note, which was often, especially in the evening. Its note was something like the meow of a cat,

repeated several times, and heard in all directions from 84
the ground. Natives said the bird had hair in place of
feathers.

After this talk with Mr. Kuper, I started out
to collect. It rained constantly and very hard, and
consequently the work was very disagreeable and birds
scarce. I flushed one ground pigeon, but could not get
a shot. Only new bird I secured was an osprey. Beck
and Hicks returned with the same story. Hicks had found
a couple of eggs of the megapode, large as a duck egg
and light brown in color. I got an iguana, small of
body, but having a very long tail, which I shot as it cli
climbed a tree trunk. Mr. Kuper said that the iguanas
took the eggs laid by his domestic fowls.

In the evening I took dinner with Mr. Kuper.
It seemed rather odd on this island where it was so easy
to forget that there was such a thing as civilization,
to have a splendid course dinner, wonderfully served by
native boys. There were salted nygnali nuts, much the
size and taste of almonds, for an entrée. Then soup,
fish caught that very morning on the reef, the most
tender of roast duck with greens, boiled pawpaw and
roasted taro for vegetables, followed by mixed fruits
with coconut cream, and coffee. There was snowy linen
on the table and the number of knives, forks, spoons,
etc. that one always associates with the upper strata
of society. Through it all Mr. Kuper told stories of
personal experiences both with natives and whites in
the Solomons, illustrative both of conditions years ago
and at the present time.

March 11. Up early but my leftleg did not permit my going ashore. Yesterday it swelled to almost twice the size of the other and was very painful in the strenuous walking through tangled brush. It seemed as though every vine which caught it would land on the open sore received from fall on lava at Tinakula. Last evening I had to attend the dinner wearing a pair of bath slippers, not being able to get on any shoe.

It rained in showers practically all morning. Hicks returned about 10:30 a.m., both wet and ill. He had a temperature and muscular soreness, both probably due to severe wettings of last two days. Beck also returned early and we were able to finish the birds in time to attend a native dance arranged for our benefit by Mr. Kuper. Since it had been raining all day and the weather still threatening, he had the dance staged in his commodious living room, one of the alcoves of which held our chairs. The first dance was that of the young girls, and there were some 25 of them took part in it of all ages from six years up to eighteen. They were dressed in short skirts made from coconut leaves, with shoulder pieces and head bands of the same material. A few men squatted on the floor at one side to sing chants, and one to blow a large conch shell at the right moments. Some of the married women sat on the floor in another alcove and numbers of natives were grouped outside. At about 8:30 the dance commenced, the little girls entering in first ranks, while the others were grouped in ranks which followed according to size and age. The "orchestra" sang a chant, largely

nasal and guttural, while the dancers themselves made their own accompaniment by accenting their muscular exertions with a continuous "zee! zee! zee! huh!" repeated over and over. At frequent intervals they clapped their hands three times in time with the dance. Apparently they took great delight in the dance, and it was quite amusing to see how great an activity some of the very small girls displayed. The dance called for the use of most of the muscles and also required good lungs. Mr. Kuper had said that we might find the dance somewhat suggestive, but I did not see that there was anything about it which could offend anyone. At times some of the dancers had to stop a moment to pick parts of their costumes from the floor, as the activity displayed and the close contact of the dancers had a tendency to disarrange them. After repeating this dance two or three times they sat on the floor and sang a canoe song, the three or four male musicians doing most of the singing or chanting, while the girls went through motions of paddling, all in time with the chant and accompanied by the same rather explosive breath sounds. At certain intervals in this song one of the males blew an enormous conch shell, making a sound which might compare favorably with the steam whistle on our smaller steamers. Our crew also gave a performance of the Samoan hula with mandolin and guitar accompaniment and some singing which was much admired by the natives. Lime juice was passed around and it was late when we finally bade them goodnight.

March 12. Out collecting soon after 6 a.m. The island lends itself nicely to collecting, having one broad

trail directly across and many smaller trails, while collecting also proved to be good along the shores and even on the outlying reefs. There were many shore birds, curlew, herons, plover and sandpipers of various kinds, and on stepping into the bush the land birds were immediately encountered. Mr. Kuper corrected his remark about the red honeysucker being present on this island. Made up skins afternoon and evening.

March 13. Attended church at 10 a.m., there being about fifty natives present of both sexes. The preacher was a native missionary worker from Malaita, over fifty years old, with hair closely cropped and wearing a well worn palm beach suit. His pulpit looked as though it might be a medium sized dry goods box covered with a red cloth. The women sat on one side of the church, men and boys on the other, while we occupied a sort of "bleachers" in the rear of the preacher. There was a small black-board with the numbers of the hymns to be sung, and the bible references chalked on it. We were presented with hymn books and a couple of bibles and the services opened with a hymn, which was rather well sung in English. It was followed by another hymn, after which the preacher offered a prayer, including in it all present, the government, the kind, Mr. & Mrs. Kuper, and the white visitors who had come so far in the schooner France. Then followed a short sermon, the text being from John, tenth chapter, twenty-eighth verse, "And I shall give them eternal life and they shall never perish." The preacher dwelt upon the fact that while flesh was perishable, the eternal life was there for both colored

and white people alike. The sermon was given in English 88
and while at times it lapsed more or less into the bêche-
de-mer variety, it was very well done indeed and reminded
me much of some of our exhorters in the States. There
followed another couple of hymns, "God Save the King",
and church was finished. Mr. Kuper told us that this
missionary worker, who had been associated with the mission
for many years, had in his youth been quite some savage
and an eater of human flesh. He certainly was very
civilized at the present time, even to a set of artificial
teeth. After church, as the weather had cleared, Mr.
Kuper proposed a walk across the island to the other two
villages. This we did and had a very interesting time.
The trail is well kept, bordered with plants part of the
way, and is very pretty indeed. It takes about forty
minutes to cross it and reach the opposite shore where
the first village is encountered after passing through a
grove of coconut trees. This village is arranged on the
same plan as the one at anchorage, the houses being
placed around a central rectangle. They were at this
time tearing down one row of houses and building another
row on a parallel line only farther back to permit of
a larger playground. We stopped at this village only a
few minutes as Mr. Kuper was particularly anxious to
have us see the third and largest village, which was
some ten minutes walk farther on. We followed a path
which paralleled the shore, and it was a very beautiful
walk, the coconut palms on one side and on the other
the sand beach with surf breaking on the outlying reefs.

At one point we entered the bush a little way to see a native cemetery. Only the chiefs have a cairn of coral blocks built over their graves. Mr. Kuper said the natives did not care to enter the cemetery or keep it cleared up, having a superstition that if they did so it meant another burial soon. 89

The third village is the largest, and while resembling the others in construction of houses and house arrangement, the people still cling to their old customs and beliefs. The men wear a scanty loin cloth, resembling somewhat an Army and Navy suspensory, while the married women wear a small girdle from which is suspended in front a very small bit of woven string, not over four by six inches in size. The single girls and children wear nothing at all. At the time of our visit many of the women did not appear at all, as well as some of the older girls, and a few donned lava-lavas on account of the visitors. Some photos were taken, and I entered a few houses with Mr. Kuper to see some sick patients. The principal malady here seems to be yaws in some stage. It has many characteristics similar to syphilis. The most interesting place seen in the village was the canoe house, or rather houses, as there are two of them close together and facing each other. They are taboo for women, and even Mrs. Beck was granted only the great favor of being allowed to walk past one of them for a fleeting glance. They contain several large and highly ornamental canoes, used chiefly for bonita fishing. The main designs used on them are

bonita and the frigate bird. Much of the ornamentation consists of designs in color, but there is also a great deal of carving and inlay work with pearl shell. Each canoe is capable of holding twenty men. After a new one is completed the launching is a matter of some ceremony. In the old days it was a cause for human sacrifice, the canoe being rolled out over the body of the victim. Now a pig is used in place of the human. The occasion also calls for a big feast and much dancing. When the canoes are taken out at a certain time of year for the bonita fishing, the boys of the village are put in one of the canoe houses and kept there for a year, i.e., they are not allowed from the immediate vicinity. This is to render the fishing successful for one reason, and according to Mr. Kuper also serves other purposes, e.g., it restricts them at an age when sexual proclivities might be strong, and it affords the old men a chance to teach them many of the things in native handicraft, history and custom which it is necessary for them to know. The canoe houses contain the skulls and bones of defunct chiefs, each set wrapped up in a bundle of reeds. The bodies are put in a canoe coffin until reduced to a skeleton, when the bones are wrapped in this fashion. We probably saw some twenty or more such bundles, and in some, where the wrapping had also suffered from decay, one could see the skulls and some of the bones. There were many interesting carved wooden bowls, both large and small. The large ones, some as much as three to four feet long by one to

two feet high, are used for preparing food, while the smaller ones are for individual use, each man having his own bowl. All were black, very ornamental in design, and most of them had considerable inlay work in pearl shell. There were also a few carved figures. The bowls belonging to defunct members were in one corner in a pile, no care apparently being taken of them, and some were already much affected by rot. It did seem too bad to permit such things, which would fill any ethnologist with delight, to go to pieces in this manner, but it is forbidden to remove anything from the canoe house. We spent most of our time in the canoe houses and taking some pictures around the village. Also drank the milk from some green coconuts which was most refreshing.

After the walk back we had lunch with Mr. Kuper, and in the afternoon he staged for us a most interesting pageant in which natives from all three villages took part. There is a legend here which Mr. Kuper thinks is historical in origin, that the original people were a rather light-colored simple folk who lived in trees. One day while their women were holding a dance, out of the sea came a lot of black men all armed with spears. The poor tree men had only one bow and arrow, obtained from where I do not remember, but they came down from the trees and for greater security in walking carried branches of trees with them as supports. They were finally set upon by the black men and many were killed with spears.

Chairs were placed for us on one side of the large playground, and we were treated to a sight of native

acting and dancing which can be seldom seen by any white
at the present day. 92

From one end of the rectangle came a long procession of women and girls, singing their rhythmic chant, arrayed as on the evening before in costumes of coconut leaves. They proceeded along slowly, dancing all the time. Then from another side of the area appeared the tree men, two scouts in advance, each with a bow and one arrow, (why the two bows I don't know, except they were both good actors), and a great gathering in the rear all grasping for support good sized green branches covered with leaves. They crouched, shook with fear, and made it appear that walking on the ground was a most difficult matter. Then from another side came the cause of their excitement. The women dancers screamed and turned to flee, and the men shook even worse, as a crowd of fierce black men appeared on the scene, all armed with long barbed spears. The blacks approached cautiously and the yellow men retreated bit by bit. Finally the blacks charged, brandishing their long spears, and the yellow men and women fled. Later some of the blacks reappeared, dragging some captives on the ground or carrying them by arms and legs.

The thing was very well done and had to be repeated over to permit the cameras registering some of it. All appeared to take a great interest in the performance, and some of the chief actors were quite wonderful in their parts.

Mr. Kuper had planned a male dance for us, but it rained in the evening so it had to be postponed until the next evening. After enjoying another of Mr. Kuper's

I should mention that in the pageant the yellow men were covered with a yellow clay and the black men with some vegetable coloring which made them inky black.

March 14. Out early in the morning and made a trip around an end of the island which had not been visited before. Pigeons were said to be very plentiful here and it was also reported to be an abiding place of the "puta-puta-chro". I found that this was the native name for the curlew which was quite plentiful here. Small birds of the common varieties were common in the bush along the shore, but travelling was practically impossible in it except where some trail entered it a ways. All sorts of shore birds were very numerous on the beach and the outlying reefs. I secured a specimen of the white-headed fish hawk, a young one in brown plumage. I saw also a couple of adults, but they kept well out of range. Herons both in white and blue plumage were very common. At one point there was a series of bluffs overhanging the shore, twenty to forty feet in height, with some deep caves in them. Swallows were fairly common here, and I saw three specimens of a new and larger kingfisher, but was not able to secure any. They generally flew out from the pandanus which surmounted the bluff and lit on the outlying reef. I did not see them in any other place except along this particular stretch of bluff. They were twice the size of the small kingfisher and had a white head and neck. I went as far along the shore as the first village and came back overland following the regular trail. I stopped

on the way to secure a few more of the starlings or weaver birds, which have communal nests in a large tree not far from Mr. Kuper's village. They are very noisy and apparently all on this island are congregated in this one tree, for we saw them no where else. Beck and Hicks returned earlier, and we succeeded in clearing up the birds by early evening, when we went ashore to Mr. Kuper's to see the male dance.

There was a large gathering of dancers, and they performed several times for us. They used leaves from coconuts for girdles and head bands. Their dances were more active than the dances of the women, calling for much turning about and stamping with the feet. The four or five who sang chants for them stayed to one side of the grounds. In some dances there was a response at certain intervals from the dancers. Mr. Kuper says that there is no translation for the words of many of these chants. They have been handed down from one generation to another, and the meaning of the words has been lost. The dancers were apparently tireless and kept the thing up until a late hour. It was rather a weird sight, watching these frenzied dancers turn, twist and chant under the rather dim light of a half moon, supplemented by a few lanterns. Between dances there was often a scramble to nearby coconut trees to replace costumes lost or damaged in their strenuous movements.

March 15. My leg considerably swollen and painful after long walk of yesterday, but I decided to take it again with hopes of getting the kingfisher. It was about all the leg could stand, but I saw two more of the

birds in the same spot and secured one of them. The natives said it was not common here, occurred only at these bluffs, at another set of similar bluffs on the opposite shore, and a few at the lake. Mr. Beck visited the other bluffs in the course of the day, and secured three of them. We put up birds until late in the evening. In six days at this island we have procured over two hundred birds, many of them being new so far as our collections are concerned.

General Remarks. Birds very numerous and a considerable number of species. Rather remarkable that the pigeons and doves should be so numerous, as there are plenty of hawks on the island. The little black honey-sucker is very common, climbing about the tops of coconut palms, or pawpaw trees, or sometimes in bushes. The little black-headed flycatcher, female cinnamon color, was probably common but difficult to get, as it frequented the tops of tall trees and did not come easily to calling. Doves quite plentiful and the large pigeon very plentiful indeed. The little kingfisher abundant all along the shores. Mr. Kuper says that it bothers the little chickens a great deal. The rail probably not uncommon but seldom seen. The bird credited with making the peculiar noise was not seen at all. Crow seen but not secured. Frigate birds often seen and some terns, but other sea birds not noted. Thickheads common, the male with a very loud note. The male seemed rather difficult of approach, but the female was easily secured. The little black and white bird was common in spots, and the bluebill was also common,

particularly in bushes near to shore.

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Rats. None seen. Mr. Kuper spoke of a rat seen in vicinity of storehouses as being common, but do not know whether this would be Pacific rat.

Lizards. Very common, especially the smaller varieties. Secured one iguana and two or three specimens of a pale green lizard with black spots, some three feet long. A small specimen of this species which I disturbed near shore dropped a large piece of crab which it had been eating.

Crabs. Not anything like so common as at Santa Cruz. On one occasion I shot a small bird and went to the spot to pick it up as soon as I had replaced the charge in the gun. Much to my surprise a crab had already pounced upon it and had it half way down his burrow, from which I retrieved with some difficulty, as he was loath to let it go.

Snakes. Natives spoke of them as fairly common, but only saw one which had been killed by natives. As it was different from any seen so far, I put it in the formalin tank, although it would have been an easy matter to have trailed me the two miles or more that I carried it.

Spiders. Saw one of the red "hard shelled" variety so common at Santa Cruz. Also saw some very large ones in travelling through the bush, but had no opportunity to save any.

Insects. Butterflies numerous of several species, also moths, but saw none of very large size. Dragonflies of several species seen, but they did not appear to be particularly common. Did not see many coleoptera. Large ants plentiful. Small fireflies seen occasionally

in the evening.

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Land Snails. Dead shells very plentiful and saw a few live snails, but did not have the opportunity to make any search for them as the bird work here was of the intensive variety. Some of the land snails were very large.

March 16. Under way with engine at early hour and after two and one half hours made anchorage at Star Harbor on San Cristoval or Bauro Island. Had quite a few birds left over from yesterday, so skinned birds all morning. In the afternoon Beck and Hicks went ashore to try out the country, there being no village in sight from anchorage. I decided to rest my leg for the day, although the bird calls from the woods, mostly new ones to us, sounded very tempting. The party returned later on with a few birds nearly all new to the collections, including two species of parrots.

March 17-18-19. Weather fairly pleasant with occasional showers. Temperature ranges between 80 and 90. Mosquitoes abundant. Birds plentiful and continually we meet with something new to the collection. Have already taken several species of parrots and pigeons. One small bat is plentiful. Two specimens were taken and several more seen of a very large swift.

There is a little island close to our anchorage which belongs to Mr. Kuper and is used by him when business calls him to this neighborhood. He has several small houses here and some coconuts, also a few goats, although the island crocodiles have taken most of the latter. I went around this island, and while it is

small, there were quite a lot of birds. I saw two large parrots, heard paroquets, two species of pigeons, one of them a fruit pigeon new to the collection. Kingfishers were abundant and several pairs of "white-brows" kept up a continual calling which lasted well into the night. Perhaps the fact they were disturbed at night was due to Mr. Kuper's presence, he having arrived and taken up residence on the island late on the 18th. There are several villages comparatively near here, all connected by good trails, and it is possible to cross from one side of the island to the other at this point in fairly short time. The shore edge is lined with dense mangroves and it is practically impossible to penetrate at any place except where trails have been established.

Natives came aboard only one day when they brought a few curios to sell and quite a lot of taro, bananas, and pawpaw. Most of them smoke pipes and the mouths of many of them were stained from chewing betel.

Later in the afternoon the two masted schooner 'Mendana', about 30 tons, came into the harbor and anchored alongside. She is a recruiter, and soon after anchoring fired the recruiting gun, which is done night and morning as a signal to the native villages about. Captain Palmer was in charge, and a Mr. Adams, a marine engineer was making the trip with him.

March 20. Sunday. Wrote letters all day as there was a chance of getting them to Tulagi by the 'Mendana'. In the evening went to Mr. Kuper's little rest house on the island and saw a dance given by five members of the crew of the 'Mendana'. It was the Bogota

war dance and very well executed, a series of dances, some very short, in which various manouvres evidently connected with club and spear warfare were carried out in rhythmic pantomime.

March 21. Stayed aboard all day to try the effect of rest on my leg. Spent the day in making water color sketches of eyes and perishable colors of various pigeons and parrots. Beck and Hicks returned in the afternoon with several birds new to the collection. Skinned birds in the evening.

March 22-23. Put in a good deal of the time in making water color sketches of birds' bills, eyes and feet to make a record of the fresh colors. Skinned some birds, all that I could until my leg commenced to get too swollen and painful. Beck and Hicks out each day and daily find at least one bird new to the collection. Hicks got another pigmy parrot today and also brought in two nestling parrots alive, which he took from a hole in an old stump. They were quite noisy and frightened at first, but by the next morning had apparently become reconciled to their predicament and remained sitting quietly on the edge of a box, taking nourishment often, principally banana, which had to be put in their mouths.

Many natives around the France today. Some came aboard with provisions to sell, while others were content to paddle around the France, apparently making an intensive study of the size and general makeup of the ship, the "family washing", and the ways of the white man. Many canoes also visited Mr. Kuper, carry-

ing copra to sell. The canoes here are wide enough of 100
beam to permit the occupants to sit inside on the bottom
and they employ no outrigger. Most of the canoes have
some ornamentation, some much more than others. Generally
there is a curved elongation of the bow and stern. These
elongated ends are often carved and inlaid with shell.

A large percentage of the natives here wear only
a scanty loin cloth, and tobacco seems to be more in
demand than calico. Most of them use betel nut. They are
quite black, well formed, and seem to be for the most
part free from skin disease. There is but very little
tattooing, which would hardly show much against their
dark skins. The hair is worn in various ways, from very
fuzzy heads to "pineapple cuts." Quite a lot of stone
chisels were offered for trade, made of a heavy, hard,
and very black rock.

Mr. Kuper took Capt. Lang and his wife for a
short fishing excursion along the reefs. It is consider-
ed the worst of luck by natives to permit a woman in the
vicinity of fishing craft, and none are allowed to enter
fishing canoes or houses. On one occasion when the two
ladies approached a spot where many canoes were engaged
in fishing, all the fishermen immediately quit and pad-
dled their craft away, one of the natives at least,
turning toward them a countenance filled with resentment
and disgust. On this trip in Mr. Kuper's cutter only
one fish was caught, which may strengthen the native
belief. A large dugong was seen by the party.

March 24-29. At the same place and under

the same conditions. Have remained aboard practically all the time trying to institute some real improvement in my leg. Weather has been unusually pleasant and the shore party has been out every day, averaging at least one bird a day new to the collection. Snakes must be quite common here as the natives have brought in quite a number of at least three species, none of them venomous. The largest was about the size of a full grown black snake, of a light cinnamon brown color. How the natives catch them I have not been able to find out, but they bring them all alive and apparently undamaged. Generally they are brought in a woven basket with flat sides, carefully sewed together at the top. The natives seem much afraid of them when the snakes are released on deck. On the 26th Mr. Kuper shot a crocodile measuring just over ten feet in length. He brought it in to the beach close by for us to see. It was still alive, although shot through the vertebra of neck and much pounded on the skull with an axe. I took a photo of it.

Mr. Beck yesterday (28th) reported a peculiar incident. He found in an open trail a snake about three feet in length but rather slender, about like our garter snake, which a gecko some seven inches in length, was holding with a grip about six inches behind the head. What the gecko was doing in open trail and why it should have a tenacious hold on a snake this size rather mystified us.

The "Mendana" left us late in the morning. She has been scraped and painted while here and the France has also received a coat of paint. Weather quite

warm. Clouds threaten often, but lack of rain is rather surprising. Often at night the natives may be seen along the shore or well out on the reefs fishing, their flaming torches standing out brilliantly in the dark night. They spear the fish. Even in daytime fishing they seem to employ the spear to the exclusion of the bow and arrow. Turtles, both the green and shell, are reported as rather common here and we saw several. Mr. Kuper has taken several of the former, large specimens, in a single afternoon. Cray fish are fairly common on the reefs and oysters occur; large shells, but meats no larger than our "four year olds", rather bitter in taste but edible. The name of the small island near our anchorage at Star Harbor (Mr. Kuper's) is Na-oni, meaning "white sand".

March 30-31. Conditions about the same. Weather continues pleasant and collecting goes on daily. List of species collected in the Solomons so far numbers over fifty including some dozen pigeons and doves and five species of parrots. The natives continue to bring out live snakes and lizards, taking ships biscuit in trade, the tariff being generally one biscuit for a small snake, two or three for a larger one or a big lizard.

In talks with Mr. Kuper about native customs I found that girls are considered of marriageable age when fifteen, boys at eighteen years or more. There are three kinds of marriage in the Solomons at present. Marriage by the government which calls for the payment of a shilling and three months notice of intention; marriage by authorized representative of any church;

marriage by native custom. Divorce is common and easily obtained under the last form of marriage. There are rigid native customs about certain clans or tribes in the matter of marriage, some can mix, while other may not. Rather free intercourse exists between young of the two sexes from the time of puberty until marriage, when on the part of the female at least all laxity ceases. Pregnancy is no bar to marriage, in fact often a help.

The natives certainly exhibit great cleverness and ingenuity in making conveyances for the snakes and lizards which they bring aboard. They are invariably transported very much alive, in spite of the fact that the natives seem afraid of them. I imagine that they must catch them with forked sticks, as there is never any sign of injury on the specimens, but how they get them in some of the containers, when they have such fear of them is still a mystery to me. The most common method of portage is to have one or more in a coarse woven basket with the top sewed together. The basket is often tied to the end of a pole. Lizards are generally lashed to the end of a pole and their legs are always securely tied. One native brought five snakes, mostly small ones, enclosed in a section of bamboo some three inches in diameter, the end of the bamboo being corked with leaves. The most unique package, however, was as follows: a piece of cane some four feet long was split near one end into four parts. These were used to hold a coconut shell in which was a three foot snake. The round hole in one end of the shell was plugged with leaves. The shell was held firmly by the four ends of the cane which were

fastened together above. For greater security an extra lashing extended from above to below the shell to prevent its slipping. None of the snakes have proved to be venomous.

April 1-2-3. Still at anchor in Star Harbor. On April 1st the 'Mendana' returned and anchored near us, and on the afternoon of the 2nd the island steamer, 'Malanta', for which we have been waiting, arrived. She carries a good supply of stores and some petrol of which we are much in need. Went aboard and met Captain Peterson and the other officers.

Hicks has been bothered with some sores on his legs for several days, and on the 2nd our collecting staff consisted of Frazer and David, who secured quite a variety of birds, but no species new to the collection. Mr. Beck had fever both Friday and Saturday. Island sore certainly occupy a prominent place among the physical ailments of the Solomons and are spoken of with the greatest respect by those who live here. As one of them put it "were it not for island sores and malaria the Solomons wouldn't be a bad place to live." I purchased some of the well known Iodex ointment from the store of the 'Malanta', and also a British ointment called Grasshopper salve which was highly recommended. My inquiries in regard to the treatment of island sores have brought a varied lot of answers, but one or two things seem to govern any method of treatment, i.e. to keep them moist with some antiseptic solution, rest, and the employment of more or less application of some ointment. Corrosive sublimate seems to be a favorite

antiseptic, but in the matter of ointment there is a wide variance of opinion. It seems that the legs are generally the site of sores and that the condition of blood or factor of age does not enter into the matter particularly. It is considered imperative by those who live here to treat any scratch or bruise however slight at the earliest possible moment by application of spirits, weak iodine, even kerosene, and keep it covered, particularly if on the legs. Most of the men I have met in the Solomons have scars from island sores and tell of the terrible times they experienced with them. Many have been hospitalized for a time. This includes young men, men apparently athletic and in very good condition.

There seems to be a vast difference of opinion in regard to the use of quinine in malaria both as to dosage and whether it is well to use it at all. I think the preponderance of opinion amongst the laity is that it should be used regularly but not in too large doses, five to ten grains a day being considered ample. It is rather remarkable how some of the whites here escape malaria even without the employment of any quinine as a prophylactic. The 'Malanta' was out of gauze and bandages, but I was able to get some adhesive plaster, of which my personal supply was exhausted. One of the officers on finding that I was almost out of gauze very kindly gave me a roll of boracic lint and a few bandages from the medicine chest of the ship, as well as some waterproof cambric which I badly needed in dressing my legs.

April 4. Left Star Harbor at 8.30 a.m. The

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Malanta, Mendana and Mr. Kuper's cutter due to leave the same day. Practically no wind and heavy rains. Arrived at Wanoni Bay at 6.30 p.m., having made the whole trip, some 37 miles, by engine. Nearly dark when we arrived, but we could make out several buildings on the shore, and cast anchor in six fathoms opposite the French mission. There were several lights and later a native came out with a note from Father Barbineau, asking who we were and if we were going to come ashore. It cleared up for the evening, cool and no mosquitoes. Native tom-toms kept up quite a racket for a long time, the sound coming from points farther in the bay.

April 5. Dawned bright and sunny. Shore party, Mr. Beck, Frazer and David landed early. Hicks still invalided with sores. At both Santa Ana and Star Harbor anchorages bird life was much in evidence, their calls being constantly heard from the woods along shore. Here the place seems silent, only occasional calls coming from the forests, though we are anchored close to shore. There are several villages scattered about and trails are numerous. Shore party returned late with many birds, but only one, a small parrot, new to the collection. The red honeysucker occurs here and the white-headed kingfisher is quite common, three being seen from the deck of the France.

April 6. The same program repeated. A small honeysucker secured today was nearly black with a little red sprinkled in, which made me wonder if the black and red forms ever mix. This specimen was a male

Father Barbineau, in charge of the catholic mission, came aboard for a little visit in the afternnon. He has been in the islands for twenty-three years, eighteen years of which have been spent at this station. He shows the effects of his long residence. He said that he had had many attacks of fever, island sores and yaws, and had only been to Sydney once in the whole time, and then to be treated by injections for yaws. There is another priest at this mission and four Sisters. He said they had about a thousand converts. They teach the natives to read and write in their own language, and do whatever they can in ministering to their physical ailments, as it is practically never that a doctor stops here. There is a branch of the South Sea Evangelical Mission close by, their mission station being visible from our anchorage. This afternoon a ketch rigged ship came in and anchored further up the harbor, probably the 'Evangle', operated by the S.S. mission.

Children of both sexes, as young as seven years, smoke pipes in this section. They wear lava lavas. Those who came aboard seemed quite bright, had very little tatooing and did not wear much in the way of ornaments except occasional "ear dilators". Many of them showed skin disease, probaby some stage of yaws. The natives here did not seem particularly interested in getting snakes or lizards, though they caught a few snakes, which they sent aboard dead, and a couple of geckos. A few land snails were secured here and a

very few insects, including one longicorn and several wood beetles. Butterflies reported quite plentiful, but none secured. David brought back a small ground snake, evidently of the blind order, and Mr. Beck secured three small scorpions. No rats have been seen by any of the shore party, though the whites whom we have met in the Solomons report small rats numerous around trading stations.

Father Barbineau was of the opinion that it was difficult to improve the native. He thought the introduction of intramuscular injections to clear up cases of yaws would be a great thing. He said that he had procured a supply of carbon tetrachloride from Dr. Lambert to use in cases of hookworm, but had been able to give it to only a few natives, as they objected to the taste and preferred to have the hookworm. This does not tally with reports elsewhere, since always before I have heard that most of them took it in spite of the objectionable taste.

Very little fruit was obtained here and no vegetables. The mission presented us with some of the largest mandarins that I have ever seen, as large as a good size grape fruit.

April 7. Anchor raised early and we spent until three p.m. in getting across the few miles which make the entrance to Wanoni Bay, there being practically no wind. At three p.m. the engine was started and in almost an hour we dropped anchor at Kira Kira, the government station. Mr. Lilly, District Officer in charge at present, came aboard immediately after and remained to supper. He had been in the islands about three years but only

some two weeks at this station. He talked a good deal of the islands and the inhabitants, especially those islands at this end of the group, he being most familiar with San Cristoval, Malaita, Guadalcanal and Isabel. He was of the opinion that the natives were not nearly as good physically or morally since the advent of the whites, and thought the most intelligent natives he had seen were those of northern Malaita. He had only a very general acquaintance with island natural history, but spoke of several varieties of parrots which we would meet with farther on, as well as the large and small hornbill. He had not seen any crocodiles over ten feet in length and only knew of one case where a human had been taken by them. He spoke of the difficulties of the D.O. in trying cases in court, owing to the involved nature of many of them. As an illustration he cited the joint ownership of a pig by many natives often far removed in consanguinity and location, with their small interest in the porker perhaps disposed of to another party, a difficult matter to adjust when some of the owners claimed to have been unjustly treated. On San Cristoval the descent of land property is through the maternal end of the family to the female children. On Malaita it is through the paternal side to the males. Male natives here pay a head tax of five shillings a year, commencing at eighteen years of age. There is exception in case of married men with a certain number of children and after a certain age. When the time comes to collect the tax the government agents call at certain tax stations established along

shore, notice of their due arrival having been sent ahead several days and spread through the bush. When natives do not come in to pay police are sent in to get them. There is also a dog tax here of two and one half crowns. The head man of a village is allowed two dogs tax free. This has done away with a great many useless and diseased dogs. Mr. Lilly said that he found the natives at this place rather an uninteresting lot. He said that in one village close by the government station there was not a man who could make a canoe. They had very little in their gardens, no pigs, fished only along the shore with spears, and he did not see what they had to eat except coconuts and a very few vegetables. The native of course does depend a great deal upon the coconut. It is the prime food and drink. From the leaves he can make his house and the tree furnishes him with firewood and wood for other purposes. The empty nuts are converted into convenient utensils. The husk is employed in various ways and the leaves are also used for clothes and mats.

Mr. Lilly exhibited the scars of several island sores and the wholesome respect which he entertained for them was corroborative of what I have heard all along the line. His first introduction was similar to mine, following a sunburn received twelve days after entering the group. He was laid up a long time and hospitalized for over a month.

He said the iguana, or "guano", was generally used in the group to apply to all lizards of any size, and spoke of their fondness for hens' eggs. He knew

little about snakes, but did refer to one bright green 111
tree snake which was said to be venemous.

The government station here is quite extensive. There is a commodious government house, painted white with red iron roof, situated near the shore behind a huge banyan tree. A considerable area of cleared ground surrounds it, and there are numerous smaller buildings, including a boat house on the shore which maintains a light at night. Cases are brought here from the surrounding country for trial and there are always a good many prisoners here working out sentences under six months. Cases where sentence is for more than that period are sent to Tulagi. As we were en route here we gave tow to a whaleboat containing a native policeman, prisoner and witnesses bound for Kira-Kira from Santa Ana, a distance of about forty miles.

April 8-9. Mr. Beck and Hicks went ashore to collect and secured quite a lot of birds, mainly the same species as met with at Star Harbor and Wanoni. Shrikes appear to be common here. Two of the large swifts were taken as well as several specimens of a small bird new to the collection, resembling the "white-eye" of the Hebrides, only the eye in this bird is brown.

Hicks returned on his first day with a female opossum, the first one seen, and a large frog. The frog was about twelve inches long from jaw to end of hind feet and weighed in the neighborhood of a pound. The opossum had been caught by a native. No large butterflies seen here but smaller species common, though none were taken. Hicks secured several "grasshoppers" with

very large antennæ. I secured three species of beetles on the ship, which were evidently attracted aboard by the lights. 112

April 10. Sunday. Lay at anchor all day. Very hot and scarcely any wind. Several large turtles appeared in the vicinity of the ship during the day to bask lazily on the surface of the water for a few minutes, raising their heads occasionally for a peek around, then diving to be seen no more. Fish appear at times, but not so much as other anchorages, and none have been caught here. Natives came aboard with quite a supply of vegetables and fruit.

April 11. Anchor raised and stood out of Kira-Kira about 6.30 a.m. under sail. There was but little breeze, and after a couple of hours there was none at all and the France was being carried in a southerly direction back at our anchorage opposite the government house. The government cutter came in this a.m., a trim looking craft of perhaps fifteen tons. Beck and Hicks went ashore after lunch and collected some birds which we put up after supper. We got underway again as soon as they returned and stood out of Kira-Kira hoping for wind enough to help us on our way in the direction of Tulagi.

April 12. Wind had died down in the night and the France was drifting with the currents, which are very strong in this locality. When I went on deck I found the schooner surrounded by islands, Ugi ahead, the Three Sisters astern, and San Cristoval to the south. Since we were drifting in the wrong direction the engine was started and we made anchorage in Selwyn Bay, Ugi

This island is well fringed with coco palms and there are several houses in evidence. A bishop of the Church of England has residence here and charge of a class of some seventy boys who are given a two years' training here and then sent back to their own people. Some of them who came aboard were very bright and healthy looking. Nearly all were clad in lava lavas of blue material and quite a few wore singlets.

The water in the bay is quite clear with sandy bottom, and it was possible to see the bottom, although we are anchored in some twelve fathoms. There were many fish of several kinds. Beck and Hicks went ashore after lunch and collected some birds, finding them practically the same as on San Cristoval. Beck got a parrot, which I believe to be new to the collection. Both the red-bellied and "blue bill" flycatchers occur. The red honey-sucker was taken and the fantail. The black band on the breast of the latter extended way up to base of lower mandible on specimen collected, different from any before seen. Black cap parrots common. According to an assistant to the bishop, a young Englishman resident here for six months, there are no snakes on Ugi. Vessels do not often call here. A reef extending out from 200 to 1000 yards fringes the whole island except for the entrance to Selwyn Bay. This was the hottest day I have experienced so far in the Solomons. The temperature in shaded part of the cabin reached 96 in the afternoon.

April 13. Still no wind, so Beck and Hicks went ashore again and returned with a good series of birds,

particularly of the fantail and "black head", both of which are different from those on San Cristoval. Hicks 114
disproved the statement of the bishop's assistant by getting a slender green snake some three feet in length. Also reported seeing the large lizard, green with black spots, of which we obtained several specimens on San Cristoval. We got underway as soon as they returned. Wind light.

April 14. Pleasant but little wind. Ugi and Bio still visible and we are but little farther up the coast of San Cristoval. Late in the morning the engine was started and we dropped anchor in ten fathoms of water off the little village of Henereu. No whites here, but quite a few natives, some of whom came aboard. They had some curios to sell and coconuts. They were a good looking lot, dressed in lava lavas. The shore was well planted with coconuts in this section of the island. One of the natives saw me skinning the red parrot secured at Ugi and said it was common on San Cristoval, though it was not met with by our party. Beck and Hicks were ashore for a few hours and returned with some birds, but nothing new to the collection. Hicks reported seeing a very large black butterfly, larger than any previously encountered, with three white spots on each posterior wing. He shot at it but did not secure it. Quite a wind came up from N.NE and we got underway about 3.30 p.m. San Cristoval, Guadalcanal and Malaita all visible. One common booby circled the ship several times in the late evening.

April 15. Not much wind. Some three islands

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visible and ship had worked up to a position some 15 miles from Guadalcanal during the night. Engine started about 8 a.m. and headed W. by N. for Guadalcanal. I noticed a few shearwaters through my port early in the morning, but saw none later after going on deck, though later on in the morning when still some ten miles distant from east end of Guadalcanal both shearwaters and large numbers of terns were observed fishing. We passed through a group of some ten or twelve small islets just off shore and came to anchor in Moreau Sound off Graham Point at 12 m. Caught two good fish on the way in. Moreau Sound is well fringed with reefs and shoals plus all the little islands. We came in from the East, though there is a N. and S. entrance marked on the chart. We anchored in 11 fathoms not far from shore. A landing pier and several houses not far from anchorage.

Beck and Hicks returned late in the afternoon with some birds new to the collection, two species of honeysucker, a kingfisher, midget, and a large shrike. Reported seeing several specimens of the white cockatoo. The red parrot taken at Ugi is common here.

Soon after dinner I noticed a petrel flying about the schooner, at times resting on the water, and apparently not at all disturbed by the presence of the boat. I shot it from the deck and it proved to be a Wilson's petrel. It was the only one observed and it seemed odd to find a petrel so near shore when none were seen at sea.

Later in the morning two young white men connected with the branch of the Malaita company located here, visited the France. They reported snakes and lizards

of various kinds common here. Also they spoke of a rat¹¹⁶ which did considerable damage to their coconuts, climbing trees to gnaw holes in nuts and thereby spoiling them.

The latest island tragedy where eight police boys were murdered occurred near here. At present a punitive expedition is out after the offenders and has succeeded in capturing all but the ringleader and one accessory. These with probably some associates are "treed" in some caves perhaps twenty miles inland where the only approach is a very narrow path. The defenders are provided with food and some ammunition and have balanced stones over the edge of the bank, held by lashing which are cut and stones allowed to roll down on any attempt to approach their stronghold. The ringleader was for five years connected with the police force of Figi, so evidently he has turned renegade.

April 16. Many natives aboard with various curios for sale for which they ask prohibitive prices. Nearness to Tulagi and tourist traffic accounts for this. Most of the natives wear only the loin cloth, though some have lava lavas and belts. A few sport old felt hats. They are for the most part a good looking lot, talk a good deal among themselves and with our crew, and often laugh freely. They are quite dark in color and show little tatooing.

Several new birds were secured for the collection, the most striking ones being the white cockatoo and a large bird, black in body with whitish head and neck, looking much like a giant road-runner. Its leg muscles are highly developed and its legs long and stoutly built.

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Wings apparently a secondary matter in its habits, though it flies readily and noisily. (Later conversation with Hicks leads me to the conclusion that this bird does not fly readily, but climbs into trees by employing bill and feet to grip vines. Hicks has never seen them fly. Beck says he has seen them fly from tree to ground, or at least he thinks he has.) The stomach of the specimen which I skinned contained insect matter with many legs of grasshoppers. It appears to be common here as well as the cockatoo and the red parrot. The two species of honeysucker are noted as common, the black-headed form occurring on higher levels.

April 17. Easter Sunday. A very beautiful day with some breeze to offset the heat. Spent the day mostly in alternate periods of favoring my legs, by keeping in prone position, and typing some notes. Frazer went ashore in the afternoon and returned with several specimens of mina bird.

April 18-19. Lying at same anchorage and new and interesting birds taken daily. The white cockatoo and red parrot both very common here. Small birds do not appear plentiful and not so many secured, though an interesting series. Two snakes, both of same species, taken here, a different species from any of those secured on San Cristoval. The Mendana came in about noon of the 19th and stayed a few hours, sailing for Tulagi at 5 p.m. with hopes of getting there in early morning of the next day.

April 20. Some collecting done in the morning and at three p.m. we left this place to anchor at Malapa

Island, a small island some two and one half miles long, 118
several miles to the west. No party ashore as we arrived
late and there were many birds to put up.

April 21. Shore party covered the island and
returned by middle of the afternoon. Found no birds
different from last anchorage. Perhaps the most interest-
ing specimen secured was a "tube nozed" bat, shot by
Beck, the nostrils apparently being specialized into two
tube-like processes extending about three eighths of an
inch from the face. The eyes were much larger than in
the ordinary bat and the skull longer, giving a gorilla-
like expression to the face. The body was stout, five
and one half inches long, while wing spread was twenty-
one and one half inches. White cockatoos and pigeons
were common and a good series was taken of red-bellied
flycatcher which was abundant here. Midget and honey-
sucker, yellow, irridescent form, were same as at last
anchorage.

It rained heavily in the evening, first heavy
rain in a long time. Late in the evening a peculiar
phosphorescence was observed in the water of the Sound,
it being lit up at intervals then becoming black again.
At times the phosphorescence appeared only in small areas,
in serpentine forms, circles, etc., and apparently moving.

April 22. Left anchorage at 6 a.m. and wind
being unfavorable for progress toward Tulagi we stood
across the Sound and anchored at another small island,
Beagle. As the anchor was dropped white cockatoos and
pigeons in quantity took to flight, disturbed from their
feeding by the unusual noise.

Beagle Island is about the same size as Malapa, some 2-3 miles long and about 700 feet at the highest elevation. It is densely wooded with numerous coconuts along the shore levels, and probably rocky, as most of the trees appeared rather scrubby, although large trees stood out at some points.

Collecting party returned in the afternoon with some birds, two of which were new to the collection, a "thick-head" and a bittern. The bittern's stomach contained lizards.

In the evening there was a little rain and the water showed a phosphorescence similar to the evening before only not such a brilliant display. Moved anchorage a short distance on account of proximity to reef.

April 23. Rather cool in the morning. On going on deck we witnessed a sight which no one remembered having seen before. Some bonita were chasing a school of small fish and evidently killed a good many of them. Then a school of sharks appeared, and for half an hour the sharks fairly churned the water in the vicinity of the fish, encircling it and dashing madly through it, their dorsal fins showing above the water, which was in a constant turmoil. Toward the latter part of it several terns appeared on the scene and picked their bits daintily from the midst of this maelstrom. There must have been a dozen sharks engaged in the fray, but most of them probably not over four feet long.

We are now close to Beagle and in near

proximity to several other islands. The unusual specimens secured today were a hornbill and a female opossum with young, the latter being bought alive from a native for a shilling. Both came from Komanchu. The opossum was larger than the one previously obtained by several inches and had a heavier, darker fur. Its young was still using the pouch, was about the size of a large rat and still feeble in its movements. When taken from the pouch it speedily returned. There were two elongated nipples in the pouch, perhaps an inch and a half long. The mammary gland was about the size of a silver dollar and three-fourths of an inch thick in the centre. The hornbill was consorting with a specimen of the large bird previously obtained ("long-tail"), which has some features similar to the hornbill, but lacks the excessive development of bill.

April 24. Sunday. Spent practically the whole day prone, my right leg giving me quite a lot of pain.

April 25. Left anchorage at Beagle Is. at about 6 a.m. and steered a westerly course through and out of Moreau Sound, and came to anchor at Kau-Kau at 8.45 a.m.

There are several extensive buildings here and a large coconut plantation, part of it fenced. Cattle are kept here and several ox carts drawn by two yokes of bullocks were in evidence. Back of the plantation the land rises to some height and Guadalcanal is wide at this point. The plantation, one of Lever's, is in charge of Mr. Charlie Quintall, who resides here with his wife.

day spent at Kau-Kau were productive of birds new to the collection, new additions being obtained each day. The hornbill is common here, and Hicks, who located a tree where they were feeding, secured several. They were feeding on a large fruit, and the stomach of one contained a nutmeg.

April 28. Left Kau-Kau for Tulagi. Wind at first favorable but light. Large flocks of terns were fishing near the small islets adjacent to the coast of Guadalcanal. Wind lighter and less favorable in the evening, and at a late hour the engine was started. We dropped anchor at Tulagi after midnight.

April 29. At anchor in Tulagi harbor. Several small ships were in the harbor. Tulagi Is. is small, rather pretty, and dotted all over with government buildings. The present white population is about forty, and there are also quite a number of Chinese. One end of the island is occupied by the stores and quarters of the latter and is known as Chinatown. Many prisoners are kept busy here at government work, practically all whose sentences are more than six months being sent here to serve their terms.

Soon after our arrival I visited Dr. Hetherington, senior medical officer in charge of the Tulagi hospital, and consulted him about the condition of my legs. He at once advised my entering the hospital as the only way to affect a cure, and I took up residence there the next day. I remained there until May 27th, being confined to bed all the time and receiving some

sixteen intravenous injections of Tartar Emetic, the first doses one-half grain each, later doses being of one grain. The leg was dressed once a day with a simple boracic-bismuth ointment, and it commenced to heal rapidly with the rest and injections, the sores leaving ugly, purplish scars. On the 24th, just as I was congratulating myself on the fact that the legs were nearly healed, I had an attack of fever, which proved to be Dengue. On the 27th, as the fever subsided, I broke out with the typical dengue rash. However, the France came in that day, and I decided to go aboard, feeling that I could easily take care of the fever myself should it return, as it often does after the rash. I did not develop a relapse, but for a week was very ill and weak, and could not accomplish much of anything. The France left Xulagi May 28th, proceeding under sail to Domma on Guadalcanal, where we came to anchor the afternoon of the same day. A Mr. Shroeder has a plantation here. He has been resident in the group some ten years and has done some collecting, principally for the museum at Brisbane. He spoke of having seen several species of opossum, white, black, fawn-colored, brown, gray, and perhaps others.

The country at Domma is different from the S.E. end of Guadalcanal. The shore is fringed with coconuts, immediately back of which are extensive grass-covered hills or plateaus with the mountains in the background. There are not many natives at this point, but trails are numerous and good. There is a small quail in the grass country. Hornbills common and the "long-tails" also occur. Several parrots and the white cockatoo are

plentiful. The natives had a tame hornbill which mingled with the domestic fowl, progressing by a series of hops. Rainfall here is light.

During the time I was in Tulagi Hospital the France carried out the following itinerary. April 29-May 12 in Tulagi harbor refitting and taking on stores. May 12 left Tulagi at 12 a.m., arriving at Aola, a government station on Guadalcanal on May 13. May 18 left Aola in early morning and stood west up the coast of Guadalcanal to Berande, arriving same day. On May 20 left Berande and arrived at Tulagi harbor again on May 21. On May 23 left Tulagi in afternoon and anchored in Port Purvis the same night. May 27 left Port Purvis in early morning, stopped at Gavutu for less than an hour and arrived at Tulagi harbor same day, when I rejoined her.

While I was in the hospital I had some interesting talks with a Mr. Frank Keeble of Tulagi, who has been in the group for the last twenty-three years. He had observed hornbills at Guadalcanal, Gala, Isabel, Malaita and Choiseul Islands. Both the hornbills and pigeons are fond of the nygnali nut. The trees which bear these nuts are conserved by the natives on account of the nuts, and are a favorite feeding ground for hornbills and pigeons, which swallow the nuts whole, digesting the outer green covering. Often the ground under the trees is covered with nuts after the birds have had a day's feeding. The nuts resemble somewhat the Brazil nut, have a very hard shell and a kernel resembling both in shape and taste the almond. It is

very nice fried in butter and salted. It is almost impossible to crack the nuts except by a heavy blow delivered while the nut is held on end.

Hornbills are considered very palatable and are often eaten by whites when pigeons are not obtainable. Both hornbills and pigeons are also fond of a red berry, about the size of a cherry, which grows on a good sized bush. Mr. Keeble had noted that the hornbills seemed fond of anything which was sought after by pigeons. Hornbills are easy to tame but make rather destructive pets, as they seem to take a delight in tearing up backs of books, whoes, tapestry, etc. They can take a whole banana at one bite.

The red parrots so common here make good talkers. One belonging to a neighbor of Mr. Keeble would call the fowls, imitating its mistress's chick-chick-chick, and when they were all together would laugh long and loudly. It developed a habit of killing small ducklings and laughing over the matter, which caused its confinement in a cage, where it sulked into an early death.

Reef herons, both blue and white phase, are sometimes kept as pets by natives in shore villages. In some cases they have been trained to bring occasional fish to their owners. One which Mr. Keeble semi-domesticated was caught in the act of attacking some of his young ducks, and when killed for the offence, three ducklings were found in its stomach.

The large iguanas and monitor lizards, locally called "guanos", not only eat hens eggs, but will seize and devour young chickens.

far off their course by storms, and it is doubtless in this way that much has occurred in these island groups in the way of settlement and transplanting of plant and animal fauna. Mr. Keeble relates that about twelve months ago a large canoe with sail was sighted off the coast of Gizo by natives who, not seeing anyone aboard, pulled out to overhaul it. On getting close and still seeing no one they became afraid and called out lustily. Finally a head appeared above the gunwale, and as it was a black man, they gained more courage and paddled alongside, finding that the canoe contained natives from an island near New Guinea who had been blown off their course by storms and had no idea where they were. Naturally they were fearful that they might be in danger of being killed and eaten. Two had died in the passage and their bodies thrown overboard. The rest were in an exhausted condition and fearful of being put ashore on account of dread of head hunters. Finally the district officer at Gizo put out with his launch and took them and their craft in to shore, where he had them nursed back to health and word of their predicament passed on to proper authorities. An almost parallel instance was related to me by Mr. Kuper, of Santa Anna, whose boys sighted and overhauled a large canoe off the coast of that island. In this case all the occupants, some ten to twenty, were found dead from starvation and exhaustion in their canoe.

June 2. Left anchorage at Domma and proceeded under sail to Savo Is., arriving the afternoon of the

same day. We collected on Savo June 3rd and 4th.

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Birds were plentiful including the blue broadbill, gray pigeon, white-cap and long-tailed doves, yellow honey-sucker, red-bellied flycatcher, shrike, kingfisher, (two species), starling and megapode. This is one of the places, probably the largest in the Solomons, where the megapodes are "farmed" by the natives. A sandy spot near the beach, several acres in extent, heated by the sun and perhaps by subterranean hot springs, was surveyed by the government some seven or eight years ago, and apportioned off to different native owners. Here the megapodes deposit their eggs in large numbers, burrowing through the loose sandy soil to the firmer sand underneath. The natives dig out the eggs, scooping the loose sand with boards to a depth of two or three feet, and when in the vicinity of the eggs in the firmer soil, employing their bare hands. The eggs, ovoid in shape, of practically uniform size, about three and one quarter inches in length, by two inches in diameter, vary in color from a dark brown to a very light brown or dirty cream color. Some show white, irregular spots, perhaps where the outer color has been nicked off. They are chalky to touch and the shells are thin and rather fragile. The young birds are extremely active almost as soon as hatched, have well developed legs and fly well. Young birds are often dug up by the natives, and several were secured from this source as specimens. The megapodes are tame, and it is a common sight to see a bird digging in while nearby a native is equally busy in digging out eggs. The eggs are bartered with natives from other islands.

The exchange demanded of us was one stick of tobacco for two eggs. We found them very good for cooking and quite palatable when fried. There are similar preserves on Guadalcanal but not nearly as extensive. Apparently the birds lay the whole year round.

Stomachs of some dozen or more broadbills which I examined, all contained beetles, mostly of an iridescent green species which I believe is common on the coconut palms.

There is no white resident on Savo at present. It is well populated by natives, who seem to be in a flourishing condition. They grow considerable garden truck and have a surplus of bananas, pawpaws, squash, yams and limes for barter.

June 4. Left Savo in the early afternoon to proceed to Tulagi again for repairs to engine.

June 5. Sunday. We were under sail all day, wind very light. Temperature in cabin in the afternoon 90 and scorching hot on deck. We made very slow progress. Both the cook and our healthiest sailor have been sick the last few days, the cook with a tropical myositis, and the sailor with a double tertian malaria, the worst attack I have seen since coming aboard. Both are now convalescing. Extracted two molar teeth for the Captain's wife, who has been bothered considerably of late with toothache. The sore on my right leg, which healed over in the hospital, broke out again today, but the area involved is not extensive and so far the pain is slight, although there is some surrounding oedema.

June 6. Near the entrance to Tulagi harbor at daylight. The engine was started but ran only on two of its three cylinders. At about 7 a.m. ran on a coral reef at harbor entrance opposite the government prison. A very shallow bar covered with growing coral. By moving stores from after hold to forward and using kedge, it was possible to pill off the reef into deeper water again. As far as could be ascertained by diving, no serious damage was done. We came to anchor a little later.

I had another consultation with Dr. Hetherington soon after arrival, and upon his advice entered the hospital again for further treatment. I was at the hospital from this date until June 27th. During the latter part of my stay there I acted as locum tenens during the absence of Dr. Hetherington.

June 27. I came aboard the France, which was still waiting on engine repairs.

June 28. Developed fourteen rolls of film by tank method with varying results. Hard to time development on account of temperature of water being above 80.

June 29-30. Ashore each day, spending a considerable part of time at the hospital.

July 1-6. In Tulagi harbor waiting on repairs to engine. Visited the neighboring small islands of Makambo, where Burns, Philp have their store and warehouses, and Gavutu, where Lever Bros. have an extensive plant.

July 7. Undertook to leave Tulagi at 12.30 pm., but the engine quit when halfway out of harbor and we

drifted back to our anchorage with the wind which was blowing quite strong from S.E. Came to anchor again off Carpenter's wharf for further repairs to engine. 129

July 8. Started at early hour for Guadalcanal and engine did quite well in taking us out of harbor, when we were able to proceed under sail, there being a strong S.E. wind with fairly heavy seas. Passed Savo in late morning and came to anchor off Lavoro plantation about 2 p.m., where Beck, Hicks and I went ashore to collect. The plantation here is extensive, divided into three parts and covering a long reach of shore, as well as extending quite a distance back in some places. There are over twelve hundred acres planted with nuts. Back of the coconuts are large numbers of ivory nuts. The place has at present about 700 head of cattle. There is a small river which makes its exit to the sea midway in the plantation, and by continually crossing it one can follow a track to a considerable distance into the interior. The place is in charge of a Mr. Clarence Edward Hart, who has lived at this place for the last seven years. He is very much interested in natural history, has quite an extensive library on natural science, and has done considerable collecting for the museum in Sydney. He was very much interested in the visit of the France, and before our departure presented me with a small collection of land and fresh water shells and some insects, all the material which he had on hand at the time.

The blue-headed paroquets and red parrots kept up an incessant din in the tops of the coconuts. They

were so plentiful that it was possible to get several with one shot from the 20 gauge. They stay above the fronds of the coconuts and while the noise of their continued screaming was so great as to be at times almost unpleasant, yet the birds themselves were often concealed from view except when flying from point to point. Both the black-headed and yellow honeysuckers were plentiful in the coconuts, but they were still more difficult to see except when in flight. I saw several wagtails and a few kingfishers, although neither appeared to be particularly numerous. Ducks were quite common in a swamp just to the rear of the plantation, and I noticed several reef herons, both blue and white phase, along the shore. In the rear of the planted area I noticed several "broadbills" and could hear the calls of red-knob pigeons. The yellow honeysucker has a trilling song somewhat resembling that of a house wren.

In the swampy area where the ivory nuts grew, monitor lizards were quite numerous, sometimes moving rapidly through the undergrowth when approached and on other occasions taking to the trees. Small lizards were legion everywhere, several being noted in Mr. Hart's house.

We returned aboard about 5 p.m. with enough birds to keep us occupied through the evening. This was the first day's collecting for me in some time, and I soon found that the enforced rest in the hospital had interfered a lot with my general strength as well as with the legs. Just before reaching the boat I was

unlucky enough to receive a knock, which removed part of the scar on my left leg, which had been healed for some five weeks.

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July 9. Ashore early and collected until the middle of the afternoon, when I was too tired to travel any more. I noticed that the paroquets and parrots were not nearly so numerous in the coconut grove today, so I imagine they gather there in the late afternoon. I followed up the course of the river and in some spots found small birds quite numerous, although difficult to see and often not very responsive to calling. The black starling (vermillion eye) was very common. I collected several each of the black-headed and yellow honeysuckers. A yellow honeysucker, without the black throat, sent to Sydney by Mr. Hart, he said was considered a different species, but I got two or three such which were probably young females of the common form. I secured one long-tailed dove and a couple of the thrush-like birds referred to in our list as "gray-birds". These are not common and I have not heard them give any note. I saw both a male and female black-headed flycatcher, but was unable to get a shot or to call them within range. I secured one midget and do not believe it can be common here. The honeysuckers were quite common and easier to see in trees other than the coconuts. They keep in almost constant motion, moving rapidly from branch to branch and from tree to tree. I secured two red-knob pigeons. "Broadbills" were very common but constantly on the move and rather wary. They like to choose a perch

in some outstanding position such as the top of a dead tree or the end of a dead branch, generally well up in the air, from which they command a good view. I heard several but only got a close view of one, which I was unable to secure. Beck got well up one spur and reported hearing a few ground doves but did not secure any. He got a shag of the species encountered at other places in the group.

There are a few native villages scattered about, all small, and the natives, of whom I saw several, are an indolent looking type. All whom I saw were chewing betel. According to Mr. Hart they work but little. Practically all labor employed on the plantation is recruited from Malaita. Mr. Hart had been successful in developing the "task" system instead of so many hours a day. In other words, after estimating about how much work of a certain kind a given number of natives would accomplish in their nine hour day, he would assign a little more work to the same number of boys as a task, with the understanding that as soon as it was finished they could have the balance of the day for their own pleasure. By this method he believes he has greatly increased the efficiency of his labor and his boys are very well pleased also. In fact he is quite convinced that they feel that they are putting something over on the "massa" since they are able to quit work while the sun is still in the sky.

The average boy is quite full of importance as to the extent of his duties and his time off. While I

was in the hospital the ward orderly would never touch a tray from the kitchen except perhaps to move it out of his way. Such things had nothing to do with his work. At Mr. Hart's on one occasion when Mrs. Beck went ashore with some borrowed magazines which she wished to return, she met the house boy outside and asked him to put them in the house. He paid no attention to her request except to reply, "I walk about now." Evidently it was his time off and he refused to perform even so slight a service.

July 10. Sunday. Went ashore in the afternoon to exercise the legs and collect a few insects. On the two previous days when I did not have the net, butterflies were very numerous, but today I did not see many, and only succeeded in taking a few. I followed up the stream for about a mile, stopping at a little garden on the way. I secured a good many coleoptera, two species of mantis, several grasshoppers, one or two leaf insects, and a few others. I also got a small scorpion and some of the large millipeds which are common through the group, although they may be different on different islands. I obtained several of the "hard-shelled" spiders, all these having a greenish blue body with red centre and longer spines. Those which I have taken at other islands had red bodies. They spin a beautiful web of geometric design, generally placed at an elevation of from three to six feet. I have seen webs from four to ten inches in diameter. I secured one small tree frog, the first I have taken.

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The natives were to try to secure specimens of the large frog here, but did not bring in any. So far we have only seen one of these frogs and no white person I have met seems to have much acquaintance with them.

A native, whom I interviewed with regard to a string of opossum teeth which he wore around his neck, told me there were three kinds of opossum at this place, white, brown and black. I have heard several times of different species of opossum and believe there must be quite a number in the group, although we are seldom in a place long enough to obtain any.

I saw no snakes here, although Mr. Hart reports them as fairly common. No one saw any rats. Land snails are common, according to Mr. Hart, and from him I secured a small collection, which together with some insects, he wished to donate to the Museum. The only live specimens seen were a few, representing some four species, which I secured on yesterday's walk. The previous weather had been dry at this point, which may account for their scarcity at the present time.

July 11. The engine was started at 6 a.m. and we headed for Wanderer Bay. Wind light in the morning, but increased after lunch, and as seas were too heavy to permit of engine accomplishing much, it was decided to try the sail. The wind increased considerably and the seas became heavy. About 2 p.m. the mainsail, an old one, was carried away, and it was necessary to bend on a new sail.

Very few sea birds were noticed, although as

Wanderer Bay was approached, I saw a large number of terns fishing, composed of the small white (Sumatra) tern, sootys, noddy, and a few Bergi. We anchored at Wanderer Bay about 5.30 p.m., good anchorage in this weather. It is rather a pretty bay, enclosed by hills with reefs extending out on both sides of the entrance to help break the seas. A few houses were visible on the beach, but few natives came in sight and no canoes came out to the ship. About the time of anchorage we heard several blasts on a conch shell, answered a few minutes later from the hills in the interior. I thought at first that this might be an announcement of the arrival of a ship, but a longer stay proved that it seemed to be a regular morning and evening ceremony.

July 12. Went ashore early and found a very neat little native settlement, which had been screened from view from the ship by trees planted between it and the beach. There were several natives who spoke fair English, and they said it was possible to get up into the interior, but that the trails were not much good. Mr. Beck went ahead with two or three native and Hicks and I followed their track for awhile. The entrance to the trail was bad, necessitating crossing a muddy stream more than knee deep several times. I did a lot of thinking as I waded it, as I had been particularly cautioned by the doctors at Tulagi to keep my legs out of both salt and fresh water for a considerable time. However, the deed was done and I could not get any wetter so I kept on. The track, a narrow but fairly good one, kept on up the

valley, continually crossing and recrossing the river, but higher up this was a matter of small moment as the stream became smaller until finally it was a dry stream bed. The larger birds were quite numerous. Hornbills were very much in evidence, their noisy flight often being heard. In flight their wings beat the air at a speed of about twice to the second, making a sound comparable to air being expelled from a large bellows. I think I have mentioned previously in these notes some discussion as to whether the "long-tailed white bird" could fly. They are common here and can fly very well indeed in spite of the rather undeveloped character of the wings as compared to the legs. They have wonderful vocal powers, one of their offerings, a common one, being something akin to a dog fight mixed up with the squealing of pigs. Both they and the hornbills are generally in flocks of from two to eight or ten.

Of small birds which were heard fairly often but very difficult to see, the starlings were most numerous. Honeysuckers, the black-headed species, appeared to be common, and I got one midget. I heard several kingfishers. The broadbill and wagtail were quite numerous near the village. The red-knob pigeon was much in evidence and I heard several ground doves on the side hills and a very few long-tailed doves. The red parrot and black-cap parrot were seen, and the white cockatoo was very common. The crow was also much in evidence, coming readily to calling, circling about above the green screen overhead. They would be

easy to obtain if they could be seen more readily, but the trees in the forest here are often 150 feet high, and frequently attain a height of 250 feet, and their tops furnish wonderful protection for the feathered kind. The trail I followed took me in about three miles but to no great height. I passed one unoccupied native house and several gardens, but did not meet any natives. At one place where several very tall, dead trees were standing in the midst of a small cultivated patch of bananas and yams, I saw three or four of the large swifts. They would fly about at a height of 150 to 250 feet, making long, graceful curves, and then perch for a few minutes in the tops of the dead trees. I tried several shots, but they kept just out of range. I returned in the late afternoon and skinned birds all evening. Beck did not succeed in reaching any height which seemed to justify a long stay here.

Some natives came aboard in the evening and we obtained a small lot of yams, bananas, and a few pawpaws. The natives are medium dark and rather good looking. They all chew betel nut, and use a great deal of lime. Often they chew up and swallow several green leaves of a kind which they find in the forest, following this with several dips from the lime carrier. They assured me that the leaves were good kai-kai-good for stomach and "make you strong."

July 13. Went ashore early and took a different trail from yesterday, avoiding the water but getting some climbing. After a very considerable struggle on my part

I got to the top of a ridge, some 1500 feet, but it gave my legs a bad time and I could not attempt any further climb. The bird life on the ridge did not seem as plentiful as on the trail through the valley which I followed yesterday. Those seen were of the same species. The descent on the other side of the ridge was also a difficult proposition for me, as the track was very steep and slippery, and two months on my back in the hospital had not improved my muscles. Once in the valley, a different one from that of yesterday, the going was easier, but there were several heavy showers and birds were not plentiful. Thickheads were occasionally heard, and now and then a glimpse caught of some tiny bird in the tree tops high overhead. All of these were out of reach of the aux and did not respond to calling. A couple shot with the 20 gauge proved to be honeysuckers. Snakes do not seem to be common here. I shot one yesterday, the only one seen at this point.

Natives came aboard in larger numbers and I saw considerable of them in the village, including several from bush villages. They seemed quite intelligent and very friendly. The women here wear grass skirts. One native, who spent most of the day with me, spoke very fair English. He had spent several years in Samoa and Fiji, as well as many years on different islands in this group, and for a native was quite well informed on a variety of subjects. He said that he wished to go to Samoa again sometime. He discussed the recent killing of the native constabulary on Guadalcanal quite freely, but did not make any attempt

to put the blame on either side. He said that the man whose marital relations caused the trouble "had four Marys". I understood him that the man was willing to part with three of them if it was necessary in order to obey English law, but that he wished to be reimbursed for the expense which he had incurred in buying them. He also knew the chief offender, "Billy Veeta", whom he referred to as a "bush lawyer".

July 14. We left Wanderer Bay at 5 a.m., and after a short trip, some twelve miles with engine, came to anchor in a small bay, just to the north of Hunters Bay on the S.W. side of the island (Guadalcanal). We were able to anchor close in shore and it was fairly smooth in this weather. A small river, the Beneggi, enters the sea at this point, and there is a native village of some twenty houses near the shore as well as smaller villages scattered back in the bush. The village is well kept and there is a good government road, or trail, which leads to Wanderer Bay as well as numerous other bush trails. Beck and Hicks went ashore and returned late in the afternoon with some birds, including a few fantails and one longtailed pigeon. Beck decided on this place for a try to get into some higher country. My legs were very much swollen and painful, so much so that I did not try to get ashore.

Natives came out in the afternoon with yams and bananas for barter. They seem to have a good supply of yams.

July 15. I intended to get ashore after

preparing some of the birds left over from yesterday, but just before noon when I left the skinning table, my legs were so swollen that I could not get any shoes on, so I did not attempt it. I skinned birds in the evening.

July 16. Saturday. Beck decided to stay on the ship and get ready for the camping trip into the interior. I got on shoes early before the feet had a chance to swell, and went ashore, intending to stay but a few hours. I found the track very good and went in about three miles. Birds were quite numerous. It is rather annoying to be aware of the presence of so much bird life and yet be able to see so little of it. The dense foliage forms a veritable blanket overhead, above which birds seem to spend a large part of their time. It is also a continual surprise the distance one can travel in this sort of forest and yet get comparatively small numbers of birds when choice is a consideration. There are nearly always many of the smaller birds in the immediate vicinity of the villages. In the forest honeysuckers are apt to keep high up in the tall trees, where they are practically invisible. Near the villages they are busy about the tops of the coconuts and often flit about the smaller trees, lime, orange, pawpaw, etc., so they are much more easily observed and collected there. The same applies to the midget, so small that it is entirely lost sight of in the tall trees, although occasionally obtained there in response to calling. Starlings frequent the vicinity of villages, often in flocks of ten to thirty.

There seems to be a tendency for the young and adult birds to keep in separate flocks, although this is not always the case. The eye in the young starling is rather a deep orange, turning to a bright vermillion in the adult. The white cockatoo also seems to like the vicinity of the village, often being so tame as to make one suspicious that that they are the property of the natives. In fact the natives do tame many of them, but on several occasions when I have hesitated to shoot one, thinking it perhaps a pet, the natives have urged me to collect it. It is a generally understood fact that kindness towards animals is not considered a part of the make up of the Solomon Island native. Rather any show of tenderness or concern over suffering is thought a sign of weakness. Broadbills and the large green parrot are also among those which are often seen near the village, at least in this section. We have been told that the large green parrot (in our list "yellow-bill") is the male and the "blue-belly" parrot the female of the same species. This seems to be the case, as all those so far collected by us have showed this sex difference, with the exception of one specimen collected some time ago and put up by me, in which case there may have been an error. I have seen the "blue-belly" several times entering or leaving the nest, a hole in a hollow limb often fifty to seventy-five feet from the ground, although I saw one nest only twenty feet up, but so situated that I could not get a native to climb to it. At the present shore village crows often come to the trees in the village site, the first time I have noticed this.

Kingfishers are often seen about the village, and as I think I have remarked before, they are credited with annoying and even killing young chickens. The red-knob pigeon is rather common in the vicinity of this village also, which is rather exceptional. I have seen broad-bills at several villages. Farther in the interior I have found the flycatchers and red-bellied flycatchers, particularly the former, not uncommon near villages or gardens. Fruit pigeons are not uncommon, but as they move very quietly about in the tops of the tall trees, they most often escape detection. On several occasions I disturbed long-tailed doves, getting a glimpse of them as they flew into the bush. They do not seem to be at all common here. Hornbills and the "long-tails" are very common, but the former keep well up in the tall trees. The "long-tails" are apt to be met with anywhere, on the ground, climbing about in bushes or small trees, or high up in the large trees. They climb rapidly, are generally in flocks of three to seven or eight, and are often noisy. They can run very rapidly and fly well. Fantails are scarce here, as well as the "black-head", and do not respond readily to calling. The same may be said of the thick-head, which is often heard but not too often seen, the female especially generally escaping detection.

Snakes of several species are common here, more being seen by us than at any other place so far visited. The natives have only brought in a few, most of those obtained being personally collected. Small lizards are numerous, but it is rather remarkable that

the large lizard-monitor, so common on the other side of the island only a comparatively few miles distant, has not been seen here nor any iguanas. There are plenty of swampy spots here, seemingly an ideal place for them.

Butterflies are numerous of many species, but nearly all of comparatively small size. Land snails do not seem at all common, but we are having a good deal of dry weather, which may account for their absence. I have secured several species of small frogs here.

I stayed in the forest until late in the afternoon, returning with enough birds to keep us busy in the evening.

July 17. Aboard all day attending to various week-end chores. I had a discussion with Beck relative to my future as far as the expedition is concerned. For nearly six months now I have had a great deal of trouble with my legs, there never in all these months being a time when I have not had to bandage one or both of them daily. They still continue to swell and the sores, although much smaller, are often painful, and it seems doubtful whether I shall be able to do much, if any real climbing, as this constant trouble and the confinement often necessary has sapped a lot of my general strength. Beck feels that this particular climate does not agree with me, and that if I am due to have continued trouble with the legs, it will be best for me to get out. The cabin boy, David, is learning to prepare skins and would probably do quite well as a collector also. It was practically decided as a result of the talk that I should get off at some point farther on where it would be convenient for me to meet one of the inter-island boats

and get back to Tulagi. Naturally of late I have been 144
quite disturbed over my condition, and more or less
despondent as a result of brooding over it, and the fact
that it has been impossible for me to do so many things
I wish. I am afraid that even my notes have suffered a
good deal in consequence, as I wished to accomplish so
much and then met with all this trouble, which seems
incurable under present conditions.

July 18. Up very early. The final preparations
were made for the camping trip, and Beck, David and Hicks
made up the party to go inland, three of the crew going
with them for half a day's journey to carry supplies.
Weather fine and got a start from shore about 7 a.m. I
collected ashore until late in the day and returned with
enough birds to occupy me through the evening and part
of the next day. The black-cap parrot is quite common
in the forest, generally met with in flocks feeding in
tree-tops and calling to one another with their short,
clear whistle. The minas and large blackbirds are met
with every trip into the forest, although neither one
could be called common, as only a few are seen on any trip.

July 19. Skinned birds in the early morning,
and later paid a visit to a rock close by anchorage,
where a considerable number of terns congregate. This
rock is perhaps thirty feet high, as broad at the base,
terminating in rather a pinnacle top. It has numerous
indentations of its surface, and towards its top a couple
of rather narrow shelves. Its sole vegetation is limited
to a few, stunted green bushes, growing in the shelves

near the top. The terns are about it at practically all times, although the larger number leave for their fishing grounds before daylight and do not return as a body until late in the afternoon. Yet at all times of day some are about the rock and, until they perhaps felt our presence undesirable, they were rather common there during the day, either flying about in the immediate vicinity or resting on the shelves or indentations in the rock. Numerous swallows circle about the rock, and I am sure that some of them nest there. The few bushes, scanty as they are, furnish an attraction for other birds. I have seen starlings there at various times, all adult birds, sometimes as many as twenty perched on one little bush. On one occasion, I saw four gray pigeons perched in this same bush, and close by two black-headed honeysuckers. The white-headed kingfisher, of which a few frequent this rocky coast, use this particular bush as a resting place in their flights back and forth along the shore line, and could be seen there at various times of day. The terns often objected to their presence and would cut circles close to them as though trying to frighten them away. Reef herons in both white and blue phase also seemed to like to stop on the topmost shelf of the rock, from which the terns would try to dislodge them so long as they were visible. When they would conceal themselves in the few bushes on the shelf, the terns would cease to annoy them. The rock is probably not more than 75 feet from the edge of shore, a shoal extending out to it over which the surf

would break in great combers. None of these bird visitors could obtain anything in the way of food there, and it seemed strange to find the little rock so much visited, especially by the land birds. There is a possibility that the herons had a nest on top, and perhaps some of the terns may have nested there. One tern which I shot had an egg ready to lay, and in all specimens breeding organs were much enlarged. I collected a series of terns, a few swallows and one white-headed kingfisher, which kept me busy for the rest of the day.

July 20. I went ashore collecting and did not get back until late afternoon. I prepared birds in the evening, with some of the larger ones left until next day.

July 21. I put up skins in the morning and paid another visit to the rock. The heavy surf prevented me from getting close to it, but I secured a few more terns and a heron.

July 22. Mrs. Beck was much worried at not receiving a note from her husband and started off in the early morning with Frazer to go to his camp. I spent the day ashore collecting and did not return until late. Did not see any new birds with the exception of a cuckoo. A pair of these flew into a dense thicket which I was investigating, and I got one with the aux before they could get out. I spent some time in the vicinity endeavoring to entice the other by calling, but without success.

Two bearers came from Beck's camp late in the afternoon, bringing a note reporting success in locating new birds and wanting more supplies for a longer stay.

They also brought a few birds and a flying fox shot the ¹⁴⁷ day before. There were two yellow-bibbed doves differing from those previously secured in being larger, larger bills and feet, and a lavender patch over each eye instead of the whole forehead being colored. I worked until late at night in putting up birds.

July 23. Spent nearly all day putting up birds collected the day previous. Late in the afternoon Hicks came down from the hill camp with a tin of skins and a few freshly killed birds, which I put up after supper. There were three pigmy parrots, beautiful little chaps and highly colored, their belly being a bright red. All were males including one other prepared skin in the lot which Hicks brought down. According to Hicks they are found in flocks, but are not often seen. He said he also shot at a green one but did not get it. There were several new birds in the lot brought down, but after re-wrapping them I left them to Beck's disposal on his return. Just before sunset Frazer returned reporting Mrs. Beck's safe arrival at the camp on the afternoon of the previous day.

July 24. Sunday. The day was spent in writing, washing clothes, etc. The native name for this anchorage is Matassa. Natives here all seem very friendly, although they do not visit the ship as much as in many other places. They have brought out a good supply of yams and some sweet potatoes, pawpaws and bananas in barter. They possess only a few canoes which are kept in a canoe house well up on the beach and only launched upon occasion. They appear to me to be rather more indolent than common. Very few of them have taken the trouble to get any snakes

although they know that they can barter them for tobacco a stick for each snake. We often meet the women on the trails going to or coming from their gardens. Once in a while they will risk passing us on the trail, but as a rule they make a detour through the bush on discovering a white men in the trail. The little villages scattered through the bush all appear to be friendly and interested also, although the natives differ a great deal in their attitude toward the white visitor, probably due to a natural timidity which most of them possess. We are seldom at one place long enough to get really acquainted. Where we have stayed for a week or more, long enough for them to become accustomed to us, they become more communicative. We are always encountering, even in out of the way places, natives who have travelled considerably, Queensland, Samoa, Fiji, etc., and most of these speak English quite well and are well informed on many subjects of which the home-stayer is ignorant. They get the idea of our work quickly and I have found them rather useful in getting to spots where the most birds are and in retrieving those shot.

So far I have not seen here the small red parrot or the blue-headed paroquet, both of which were so plentiful at Lavoro Plantation just on the other side of the island. Perhaps there are not enough coconuts here to attract them, although one would think that some would find their way here. The mountain range, of course, divides the island, which may account for such local differences in fauna. Among the skins sent down

yesterday by Beck were some of the small green parakeet, 149
which evidently occurs in flock at the higher altitude.
So far none have been seen here on the lower levels.

I have been much interested of late in watching spiders catch cockroaches. Of the latter we have hordes and have been unable to make much reduction in their numbers. Consequently anything which preys upon roaches is welcome aboard ship. On my return to the ship from the hospital, I found that several spiders were using the walls about my bunk for a hunting ground, and being well disposed toward spiders, I let them stay. There is one large chap, covering perhaps two and one-half inches, and having a large body and strong legs. There are some three or four smaller ones of the same general build, but only half as large. And then there are several of the long, slender-legged, small body type which at home we call "daddy long-legs". Much to my delight I found that they all catch roaches. The larger spiders dart upon an approaching roach with lightning rapidity and generally run off with the victim to some little shelf, there to devour their prey in privacy and at leisure. The "daddy long-legs" also pounces upon the roach, but in a slower fashion and then its long legs work back and forth like shuttles on a loom, weaving a silky fabric around the struggling roach until it is completely enmeshed and quiet. I figure that these spiders must catch a good many roaches a day and since I have learned this much about their diet they are doubly welcome.

Weather conditions at this anchorage have been

very good. There has been but little rain and nights have been very cool. One morning when everyone commented on feeling the cold the thermometer registered 76 degrees. Lack of rain keeps us from replenishing our water supply. Water from the river near the village is not fit for drinking, and from the next available stream it would require a long portage over the shingle with which the shore is covered, a very arduous undertaking. Also the surf is generally high making it difficult, often dangerous, to be at the beach with a loaded boat.

July 25. Ashore early collecting and made the longest trip which I have yet accomplished. The weather was fine and I found birds fairly plentiful in the morning and late afternoon. I secured four long-tailed doves and noticed a decided difference in coloration of feet and eyes in different specimens which must be a matter of age. In two specimens of same size and appearance as to plumage, one had red feet and yellow iris, while the other had brown feet and brown iris. The feet in other two specimens which were somewhat smaller, were also brown and iris brown. This dove does not seem to be common here, although it is so quiet in its habits it may easily escape detection. Toward the middle of the morning, in more or less swampy land near the river, I encountered the green pigmy parrot for the first time. They were in a flock, feeding in tops of trees some 50 to 70 feet high. Although that close to me I was only able to observe two, both of which I got. They were in the vicinity for nearly half an hour and during that time I watched the trees, in which they appeared to be

feeding, very closely but could distinguish no others. 151
They utter a sharp little note, something like the tseete-
tseete of a finch. In all those which I have skinned
the crop has been full of small seeds. The "long-tails"
were very much in evidence, but I got a shot at only one
which I failed to secure. One of their notes sounds
like the hoarse bark of a dog, and I noticed today for
the first time that they make a peculiar drumming sound
which I expect is also a vocal effort. At one time
when near the river, I heard the quack-quack of a duck.
The native who was with me turned to me and said, "Pigeon
stop along river, he sing out." There were two of them,
one of which I secured as they flew up at my approach.
Crows were very plentiful and I secured four during the
day. Their stomachs contained some sort of fruit with
a seed about the size of a shelled peanut. They swallow
this fruit whole and digest the outer pulp. While in
some thick bush trying to call "black-heads" and fan-
tails, one of the smaller hawks responded to my calling
and lit in a bush within a few feet of me. I had to get
him there as he would have been invisible had he gone
further, and the skin was somewhat damaged, but not beyond
repair. Hawk with blue back and brown underparts, one
of a species of which we have only a few specimens. The
stomach contained a few insects and a whole lizard about
four inches in length. I got two of the gray birds of
which the male has a black throat and belly and gray ^{hale} ~~back~~
back, while the female is all gray. Skinning these is
something like handling wet blotting paper, the skin

is so tender. They are difficult to distinguish at any 152
distance from the other small black birds, and the
correct diagnosis is generally made post mortem. I
secured two of the larger blackbirds. About so many are
encountered each trip into the forest, often more heard
then seen. They have a short call of rich tone, very
pretty, which they utter while perched in tops of trees.
Of smaller birds I secured two "black-heads", one of the
larger fantails, some red-bellied flycatchers, and the
black-headed honey-sucker. The fantails and "black-
heads" prefer the tangled bush, especially in the vici-
nity of water, i.e., I have only found them in such places
at this point. The larger red-bellied flycatchers are
apt to be met with most anywhere, but perhaps more often
in thickets and in the vicinity of gardens. The honey-
suckers are ever on the move. They are common both in
high trees and in low ground in coconuts and smaller
trees and shrubs. But wherever they are, they always
seem to be in motion. I saw only one midget to recognize
it, although there were doubtless many of them in the
trees. Their call is a feeble little psit-psit. I
got one female thick-head on the way home. The males
are more easily found because they attract attention by
their loud and very beautiful song, reminding me of
that of our Baltimore oriole. A large green parrot
completed the day's collecting. It was in a small dead
tree on the edge of the village, very near a house and
without receiving advance information from the natives
I should have hesitated to shoot it. I think that here

we have seen considerably more of the female of this species of parrot. I covered a good many miles in the course of the day and was very tired when I reached the shore after 5 p.m. I worked on birds until very late in the evening.

July 26. Skinned birds all morning and part of the afternoon. I sent Frazer out in the late morning and he returned late with a few more birds for me to put up. The weather continues very pleasant, which is fine for the camping party.

July 27. Went ashore early but did not find birds as plentiful as on last day's collecting. Encountered the black-cap parrot several times, feeding in small flocks, four to six. Those secured were adults in fine plumage. When I have noticed them in larger flocks, there have been many young birds. I secured one of the large fantails. Both species, this and the smaller chestnut-backed, occur here, but I have only seen the smaller species once when two came to prolonged calling. I shot a mina from the top of a tall tree, quite a range for the 20 gauge. It flew into an adjoining tree, where it could not be located. Some ten minutes later, when search had been abandoned but I was still in the vicinity, it fell from this tree dead. The same thing happened today with a parrot which I shot, and I dare say that many of the birds which are apparently missed, receive fatal wounds from the small shot, and are only able to travel a short distance before they succumb. In the thick forest, however, they are hard to find unless dropped from the tree in which they are

first located. Calling today did not produce much result. On several occasions I could hear black-heads and fantails, but was unable to attract them. I thought several times that I heard the pigmy parrots, but was unable to see any, although I spent some time in the locality where I found them feeding on previous trip. I saw only two long-tailed doves. Crows are very numerous. I heard the little black-headed flycatchers several times. They have a variety of notes and usually respond readily to calling, but were very shy today. The males are much more frequently seen than the females. Thickheads were quite numerous today and I got a couple of males. I also got a male gray-bird. At a distance, when seen from below, this species much resembles the adult starling. (In our list several distinct species of birds are called by the one term "gray-birds", and I have referred to them under this term several times in my notes. As a matter of fact some of them have very little if any gray plumage.)

The "long-tails" were very plentiful. One which I shot fell as if really dead and hit the ground with a distinct thud, but was immediately on its feet and, in the glimpse or two which I caught of it, ran with the speed of a deer. The report of the gun did not disturb another one which I killed in a tree close by where it was climbing about in the smaller branches. They climb with considerable rapidity apparently employing both bill and feet in the process. Both black-headed and yellow honeysuckers are plentiful in the coconuts and small trees about the village and the midget is not uncommon. The midget will stay quiet on its perch for a

little while, but the honeyuckers are seldom still, either moving about in quick, nervous fashion, in the young nuts or darting from one tree to another. I got back to the shore late in the afternoon very tired and the legs quite sore, particularly the right one on which the ulcer seems to be getting larger again. I prepared all the smaller birds in the evening.

July 28. Sent Fraser ashore this morning, since my legs were quite lame and I had several of the larger birds from yesterday to put up. Another very pleasant day.

The terns seem to have practically deserted the rock, although they have only been disturbed on two occasions. If our presence is sufficient to drive them away, it is easy to understand how the introduction of a considerable foreign population can rapidly change the bird life on some of these islands.

In the latter part of the afternoon the camping party returned with more skins and some birds to put up. They reported a very successful trip and additions of some eight species to the list of birds from Guadalcanal; a large kingfisher about the size of the white-headed, a thickhead, white-eye, a different yellow-bibbed dove, the "yellow-spot", resembling the kekow of Makeira Is., the highly colored pigmy parrot, white-headed pigeon and a blackbird. I spent the evening in putting up birds. We got underway about supper time and stood out under sail for the Russell Group. The wind was very light and the current against us.

July 29. Still under sail but wind very light. Saw a mixed flock of sea birds feeding in the morning,

and Beck went out in the dinghy. The flock was made up 156
of sooty terns with a few frigate birds, common booby and
shearwaters. They did not remain long in the vicinity
and those taken were several sooty terns, two boobies, a
wedge tail shearwater and one Wilson's petrel. Re-labelled
some of the birds obtained on the camping trip and put up
the few seabirds. Spent the night hanging on in close
proximity to some of the smaller outlying islands of the
Russells.

July 30. We picked up Moie, a small island
of the Russel group, about eight in the morning. There
was no anchorage, so the France lay off and on while
Beck and I landed and collected for more than an hour.

The island is flat, quite heavily wooded with
many tall trees. The bronzed, white-tailed pigeon
(nikobar pigeon) is very abundant here, often flushed in
flocks of 3 or 4 to as many as 8, feeding on the ground,
whence they would take to the trees. The gray pigeon
is also common. Of the smaller birds, the yellow honey-
sucker was taken while the thickhead and red-bellied
flycatcher were very common indeed, especially the
latter, which responded readily to calling. Beck in-
clined to believe that the thickhead is larger and the
red flycatcher smaller than those already taken. There
is a pronounced yellow tint to bill and a darker yellow
to plumage of the female and young thickheads. Red
parrots very abundant, feeding in tops of tall trees.
One white-headed kingfisher was taken, the only place so
far where I have seen it except in the immediate
vicinity of high, rocky bluffs. One megapode was taken.

We collected for a little more than an hour and then boarded the France to stand over to the next island, Kiomie.

We found no anchorage at Kiomie altho we were so close to the reefs that it would have been easy to hit them with a stone. The small Sumatra tern was very much in evidence here, and nesting. After finding no anchorage, Beck and I landed on a coral reef, covered in places with thick scrub, and in other spots with a deep, sticky silt which made walking extremely bad. Ospreys were present, both at this place and Moie, and here we saw several of the peculiar large plover, first encountered at Santa Anna, one of which was taken. White-headed kingfishers were here also and I got one small kingfisher. The birds were about the same as at Moie, but the Nikobar pigeon was not nearly so plentiful. In fact, birds in general did not seem to be nearly as abundant on this island. The red parrots were common and several white cockatoos were heard. Of small birds the only ones taken were the yellow honeysucker, thickhead and red flycatcher, altho I believe I heard the Mina and more time might have given further results. The island is much the same in general appearance as Moie, flat but slightly higher in the center, with many tall trees and some coconuts near the shore.

Left Kiomie about 12:30 p. m. to board the France and stood over to Banika for anchorage. There are large plantations on Banika owned by the Malaita Company and Lever Bros. We stopped at one of these, supposedly the

larger one, over 100 acres in one place, called Lifola by the present manager but given as Sephola in references which I have seen. We tried to anchor near the plantation but without success and came very near a reef. The acting manager, Mr. Humphries, came aboard and advised that we anchor in lee of small island near by. This we did, and found a little later, when it was nearly dark, that we had dragged off. The engine was started, anchor raised, and after more than an hour we got back to the anchorage and dropped again in about fifteen fathoms, this time putting a kedge on the reef for greater security. Mr. Humphries and the manager of a neighboring plantation were unable to land on account of darkness and heavy surf, so were obliged to spend the night aboard.

Banika is an island of considerable size, well planted with coconuts all around the shores, and there are a great many cattle here. There are very few natives (original inhabitants) on the whole island, all the present native population being recruited labor.

July 31. Sunday. As the ulcer on my right leg was not looking good, I decided to experiment by painting the center of it with formalin, a procedure which I have seen produce good results in the phagadenic ulcers of the natives.

Spent the day in writing and attending such chores as washing clothes, etc.

Porpoises play occasionally about the ship and turtles are fairly numerous.

There are very few natives of the original stock in the Russell Group, none I believe on this island of Banika and scarcely any on the other large island, Pavuvu.

August 1. Ashore early. Beck and Hicks went to Banika, while I went on a small island, less than one-fourth mile in diameter, not named on the chart but lying opposite the Lifola plantation of the Malaita Company, in an east southeast direction.

This small island is heavily covered with scrub, pandanus near the shore and tall trees both near shore and inland. The bush is so dense that the sun's rays only penetrated it in spots.

About the shores there were several white-headed kingfishers and an occasional hawk. I also saw the reef heron. Thickheads and red-bellied flycatchers were very numerous and I collected a series of both. The thickheads showed interesting plumages, and bills on all except breeding males were yellow, those on the males being jet black. The red flycatcher does seem to be smaller and darker, in fact some showed a considerable amount of black on underparts, and one obtained from Banika today was almost entirely black underneath. The flycatcher has a very pretty trilling note in addition to its ordinary short call.

A flock of blue-headed paroquets was feeding in tops of trees and I saw several red parrots and white cockatoos, and secured some of each. I heard a few red-knob pigeons and also the mina, but did not catch a glimpse of either. I was on the island about three hours and secured some seventeen birds, but did not see any other

species than those mentioned.

A black lizard similar to the one so common at Santa Anna and Santa Cruz was very common. We have not seen this lizard much in the Solomons.

On Banika, in addition to birds which I saw on the islet, they found the megapode common. They secured the mina which we have taken at many places, and also another one similarly colored but much larger. The introduced Indian mina is common here. The green pigmy parrot was taken and several yellow honeysuckers.

The temperature in the cabin today was 90° but the evenings are cool. No rain again today, altho there has been rain several times in close proximity.

I dressed the hand of a boy from the plantation today and gave instructions for further treatment. Several days ago he was playing with a detonator cap when it exploded in his hand, taking the distal joint of his index finger with it and badly lacerating his thumb and middle finger. At the time Dr. Humphries amputated the end of the index finger at first joint by putting the finger on a block and using a knife and mallet, but he was rather at a loss as to whether he had secured a proper result and as to further treatment. Rough and ready surgery is common occurrence out here and some of the stories I have heard are quite wonderful.

August 2 - 6. After considerable difficulty we raised anchor in early morning of August 2d and took a look at a small sand cay lying near Banika which was tenanted by three species of terns, sooty-noddy-Sumatra,

and fairly large numbers of the common booby. Some of them may nest there. The small terns often fly in compact formation, close to the water, in a fashion very much resembling the flight of plover.

Later in the morning we came to anchor in Hooper Bay at Pavuvu Island, close to the buildings on the Somato Plantation of Lever Bros., managed by a Mr. Wamsley. The plantation is extensive, comprising about 100 acres. On the opposite side of the bay (E) is another extensive plantation. (West Bay Co.?) To the south are the two high hills of Pavuvu and the forest. To the north of the entrance to the bay is a small flat island, perhaps 150 feet above high water, called Money Island.

We stopped at Pavuvu for the rest of the week and did intensive collecting all the time, weather being most of the time very pleasant. This is the first smooth anchorage we have had since leaving Tulagi, altho our first night here a sudden squall came up and nearly drove the France into a wharf which extends out to the end of a reef. Fortunately the squall was of brief duration and no damage was done.

It was necessary to travel more than a mile through the coconuts, on either side of the bay, before reaching the forest. The imported Indian mina and the red parrot were both very numerous in the coconuts, as well as the yellow honeysucker and kingfishers of two species. On the shore the white-headed kingfisher was also common. Megapodes are very common on this island and on three

occasions I flushed a pair in the coconuts, at least a quarter of a mile from the forest. Several species of hawks were seen and Mr. Wamsley says that quite often he hears the screeching of owls. The large black and green monitor lizard is quite common altho by no means abundant. They occur both in the coconuts and to a much lesser extent in the forest. They scramble over the ground or climb coconut palms with wonderful agility. Snakes did not appear to be at all common. The gray-back shrike occurs both in the coconuts and in the forest.

The forest is extensive and quite dense. Trees are often very tall, some of them over 250 feet. The gray pigeon is very abundant and the forest resounds with their calls. They generally choose very tall trees for a resting place but often come into smaller trees to feed. The white-tailed pigeon occurs but is not common. I flushed it several times where it was feeding on the ground. The megapode is very common in the forest, heard on every side and often flushed. When alarmed they either run rapidly or fly to the lower branches of the trees. They have a variety of calls, the most common being a loud "malau", or often "me-ow", and still another which resembles the early efforts of a rooster at crowing.

Thickheads were very plentiful and the red fly-catcher not uncommon. Neither species paid much attention to calling. The green pigmy parrot was common and a few were obtained. The ground dove occurs but is not plentiful and both yellow bibbed and red-cap doves could be heard but located with difficulty. The long-tailed is probably

not uncommon. A few of all species were obtained. The call of the doves is rather difficult to locate with any certainty and even when one is sure of the tree from which it comes, the dove is often invisible in the mass of green, high overhead.

Some birds, common nearby, were absent from this island. The wagtail, midget, black-headed honey-sucker and crow were not seen at all. The absence of the wagtail was particularly surprising as it has been met with so far practically everywhere outside of the Russell Group.

The blue-headed paroquet occurs in the coconuts but is not particularly plentiful. The large green parrot, "yellow billed", occurs but apparently is uncommon. The mina, large size like that of Banika, is plentiful but not very easy to obtain. They seem to prefer tall trees and are often out of range. Single birds call to one another through the forest and occasionally several are seen in one tree. In the early morning flocks of minas could be heard in some large trees near the manager's house, but very soon after daylight they would disappear, probably scattering into the forest. Starlings are very common, generally in flocks, confining their activities to certain trees.

Twice I saw long-tailed doves and shot one, but it fell on a steep side hill densely covered with brush and I could find only some of the feathers.

The small swift is very common here, circling

about, in the coconut groves and in open spaces in the forest. Reef herons do not seem to be plentiful.

The imported Indian minas are very common here, being especially abundant near the manager's house and out-buildings, plentiful in the older coconut trees and practically disappearing as one gets into the young, non-bearing trees farther on. They are not seen at all in the forest. On the east side of the bay, in the coconuts where there were no buildings they did not seem to be nearly so plentiful. They have a variety of songs and calls, some very pretty, but when in large flocks and especially in the early morning and late afternoon, they make a terrible noise with their discordant screams.

The red parrots feed in flocks all through the forest as well as in the coconuts, and together with the white cockatoo furnish a large proportion of the forest music. The cockatoo seems to possess a very considerable curiosity - On many occasions, when I have stopped to listen for some particular sound or sat on a log for a rest, one or more would make several circles close to me, calling out all the time and perhaps repeating the performance after a minute or two if I still remained motionless. Species here is the same as that previously encountered. We have heard that there are some three species differing in the under color of the feathers of the crest and head.

Some interesting small lizards and frogs were taken here as well as two species of bats. Beck secured

a medium sized bat from a coral cave near our anchorage, and I got a tiny leaf bat in the forest. The latter have been seen on several islands. Their bodies are very small, two and one-half inches including the posterior extent of the membrane, while the spread of wings is eight and one-half inches. They occur generally three or four or more at one place, flying about in daytime in vicinity of plants with large leaves under which they rest at frequent intervals.

There were no natives here except the recruited labor on the plantation.

Red-bellied flycatchers obtained here do not show the black underparts of those taken at Banika and the outlying small islands.

August 7. Sunday. Appointed a day of rest as we are to sail tomorrow. Attended to washing and got caught up a little on writing. Opportunity also to get off a few letters as the Metaram will call here next mid-week to pick up copra on her return trip from Gizo.

Our next stop is to be at Murray Island.

"Murray Island (Buraku) is a volcanic island, 1000 feet above high water, lying about 18 miles westward of the Pavuvu islands, by the natives of which it is sometimes visited when on their trading voyages to New Georgia, and who report that there are no reefs on it. It is fringed with coral, and the only landing place is on a small beach on the northwest side. On the southwest side is a slight bend in the coast, off the points of which reefs extend nearly two hundred yards. When seen from the

northward the island resembles a truncated cone. It is uninhabited, but said to abound in pigs." (Pacific Island Pilot, Vol. 1. 1916.

August 8. Rained heavily all last night and continued through the morning. The start for Murray was postponed until tomorrow.

The rain ceased at noon and after lunch I went ashore on West Bay plantation and worked the whole of the peninsula which is flat, swampy, with many drains, all full of water today and practically the whole place covered with bearing coconuts.

This might well be called, an afternoon with the kingfishers, as while I originally planned to get two or three of the white headed species, I encountered all three species in the course of the afternoon. The white-headed generally stays on or very near the shore, but here I found them all over the peninsula which at this point is not much more than one-half mile in width. Also some of the drains and little lakes and pools contain small fish so the food question is much the same as along shore. In four hours work I got ten kingfishers of three species, the white-headed and both the large and small species which stay in the coconuts or in the woods.

The white-headed species is quite noisy, repeating the same call over again several times in rapid succession and at frequent intervals, cu-cu-cu----cu-cu-cu-cu (cu as in curious). The larger of the other species found here is also inclined to call frequently in much the

same manner except that its note is kai-kai-kai. The smaller species is much more quiet, its call being very like that of its larger counterpart, altho not so harsh.

All the kingfishers are fond of perching on stumps or dead branches of trees, altho they are very often seen on the coconut fronds and in the forest they use any available place. At some points visited they allow a fairly close approach. In others, as here, they are more wary. While far more numerous in the vicinity of the shore, especially where there are coconuts, kingfishers are encountered in the forest, often a considerable distance from water. This applies to all except the white-headed species which I have never seen far from salt water. Also the very small, brilliantly colored kingfisher, of which we have secured a few specimens, may occur only on or in the vicinity of rivers.

They often remain for long periods motionless and silent, watching from their perch on stump or coconut frond for prey.

The stomach of the white-headed kingfisher so far examined, contained small fish. The other kingfishers eat lizards and small geckos which they swallow whole. At Tulagi, I saw a white-headed kingfisher catch a fish some five inches long. Regaining its perch on the rock, it thumped the fish against the rock several times to stun it, each time seemingly slipping its hold a little nearer one end of the fish. It swallowed the fish whole after a very considerable effort.

The feathers on the back of the head of some

of the white-headed species show wear, probably from the birds going in and out of their nests. The bills on those taken here seemed somewhat longer when compared with a specimen taken further south, but wing and tail were apparently the same.

All species call both when at rest and flying.

I also secured two specimens of the gray-backed shrike which is found in the coconuts as well as in the forest. They are often silent. Their call is a sort of short, high-pitched scream. They are frequently in pairs and generally easily attracted by calling.

I saw several of the blue-headed paroquets today altho it is not nearly so common here as at some of the places visited.

In the late afternoon I discovered a swampy pool frequented by several species of sandpipers and plover, but it was too late to permit of any search as the birds were wary and the whole area was very boggy,- almost a quicksand.

I took a small lizard on the shore today; Specimen No. 27340. It crawls about in the coral and rocks at low tide.

August 9. Left Somata anchorage at daybreak. The weather was pleasant but wind very light. It improved later and at noon we were close to Murray Island. We could find no sign of a beach and no place to anchor, but it was possible to land almost anywhere on the northwest side on the coral. (It is perhaps possible to anchor, but very near shore of point on N. W.)

Dr. Robert C. Murphy,
New York City.

Dear Dr. Murphy:

I did not write by last steamer from Tulagi as I was just out of hospital, feeling quite weak and discouraged after the long confinement, and still not able to report myself as cured. During the latter part of my stay in hospital I acted as a sort of locum tenens for the resident physician who was absent from Tulagi for some time on special duty. I think this was considerably appreciated by the official residents of Tulagi and also the charge for my stay there was greatly reduced.

Since leaving Tulagi over a month ago we have made stops at several points on Guadalcanal and at various islands in the Russell group where we are now. I have been ashore practically every working day and think that I have been able to accomplish more each time. It does me no good though to get the legs soaked in salt water and then walk about all day, and after a particularly discouraging such day, some two or three weeks ago, when the legs showed the effect of strain and I was as quite done up by some 1500 feet of climbing, I had a talk with Beck relative to my future with the expedition and we both felt that if the legs were to continue bad I might as well get off. He thought that if I was unable to climb the higher hills I was not of much use to the

expedition, and after the two months confinement in hospital I am not as strong as I was when I left the States. So it was practically agreed that I should get off at some convenient point. Since then I have continued to go ashore and each day seem to be able to accomplish longer journeys. Yesterday I made quite a long trip, getting very tired but apparently not doing any damage to the legs.

So today we had another talk. I dislike to quit anything I have once started although I can frankly say that had I known all the conditions prevailing on this trip I should never^{have} embarked upon it. I seem to hold my own at present and I think gain a little all the time. The ulcer on my right leg which has given me so much trouble is still unhealed although much smaller, less painful and I am sure that the legs do not swell nearly as much as before. So I wish to try it awhile longer and stick it out if I possibly can. We are now on that basis. Beck thinks it proper to cut the amount of my salary in half which doesn't concern me much as money wouldn't have tempted me to join any expedition and if what service I can render is of value to the Museum I am satisfied. Unless I take a turn for the worse or something unusual happens I shall stay with the expedition. Should I at any time be forced off I may cable you for money, on my salary account, so if you should at any time receive such a cable you will understand what it means. I certainly hope to remain and eventually accomplish all I intended to do.

The France was not held at all in Tulagi on my account but engine trouble caused a long delay there and very little work was accomplished during the time I was in hospital. I commenced my notes again on rejoining the ship and have over 10,000 words already which I hope to have in shape to send by next steamer. The work is so intensive that it doesn't allow much time for note making except on Sundays. When islands are farther apart there is time during sailing periods, but recently work either ashore or at the preparation bench has been practically continuous from early morning until late in the evening.

I enclose a short article on The Megapodes of Savo which I wrote recently thinking you might like to use it in the Museum Journal of Natural History. Since I consulted Beck on a few points I thought it proper to make it a combined article as to authorship. The only print available here is with it. Beck thinks he sent all other Savo film to the Museum recently and you may see something there to further illustrate it if you care to use it.

I wish you would have a letter written to Mr. Clarence Edward Hart, Manager Lavoro Plantation, Guadalcanal Island, British Solomon Islands, thanking him for a small collection of land snails and insects which he presented to me for the Museum. They are already packed and will arrive probably in next shipment. He is very much interested in natural history and has done a lot of collecting for the Sydney Museum. He volunteered to

collect for the American Museum anything desired in way of land snails, insects, reptiles, etc., if containers and directions were sent him. Should any use be made of his services in this connection I think it would be nice to put him on free list of the Journal of Natural History which at present he takes through a London agency.

We are getting some very interesting material and expect there will be things new to the collection all the way along. Some of the island differentiation of species is particularly interesting. I shall not try to add more to this letter as it is already becoming rather lengthy and my notes, when they arrive, will contain an account of all the trip and some observations.

This letter will go in the Metaram which calls at this point this midweek on return trip to Sydney and it should reach you promptly. With best regards to Dr. Sanford and Dr. Chapman and hoping that this finds you all in best of health, I remain,

Sincerely yours,

Frederick P. Drowne

Beck and I landed on coral while the France lay off and on. We found a very steep slope and no trail, but I followed up an old water course for several hundred feet, finding it necessary to use the knife frequently to free myself from vines. Birds were very scarce and the only land birds which I saw during the whole trip up and down the slope were two flycatchers which I secured. This is a new species, the same size and general appearance as the red-bellied, but throat, back of head and whole back gray, I saw one small flying fox while on the slope but was unable to secure it. Got three species of millipeds and several species of land snails, also a couple of black lizards. The gray pigeon and red parrot were heard several times.

On returning to the bottom of the slope I made my way along the flat, the going being bad but possible. Birds were more numerous here than on the slope but by no means common. I secured a male and female yellow honeysucker and two more flycatchers, also a gray pigeon and a bittern. It is rather remarkable that neither Beck nor myself heard or saw a thickhead. Beck got no birds on the ridge but got five of the flycatchers after returning to the flat and a young green parrot.

We saw several herons, both blue and white phase, on approaching the island, several white-headed and one smaller hawk. I heard a kingfisher call on two occasions, but at a distance and place inaccessible.

Beck got one of the monitor lizards and saw two or three others. There was plenty of evidence of the

presence of pigs on the island, altho we saw none.

This island, about two and one-fourth miles long by one mile wide, is very seldom if ever visited. Vegetation is dense and there are many fine tall trees. The top of the island is perhaps 1000 feet above high water. The slopes are very steep and at some places precipitous. The island rises abruptly from the water. The lower area near shore is all coral,- often large slabs of the mushroom variety. Vegetation seems to flourish in the coral and extends nearly to the shore line. The slopes are rocky with coral jutting out everywhere. There were many very large boulders often so placed that it looked as though very little would suffice to dislodge them and send them crashing down the slopes. The native name for the island is Buraku.

Still near Murray Island at daybreak - The wind has been light with heavy rains and the current near the island is very strong. We headed last evening for Ysabel but have made no progress. The wind comes occasionally in little puffs which do not help any. The swells are very heavy and the France rolls terribly. As conditions did not improve at all we made for Pavuvu where we anchored for the night.

August 11. We collected for a couple of hours in the morning while water tanks were being filled from the tanks on Somata plantation and then stood out to sea again, headed once more for Ysabel. Moderate wind in the morning which got lighter toward afternoon. Prepared the few birds obtained in the morning and fixed up the formalin

tanks. Spent the afternoon in typing notes, in which I am considerably behind. The wind continued through the night with some heavy showers.

August 12. Making headway all the time toward Ysabel. Plenty of islands in sight - the Russells, Guadalcanal, Florida and Ysabel, - and early this morning we could get a glimpse of New Georgia. Some sea birds about, boobie terns and shearwaters but no large flocks.

The day was pleasant and progress was constant toward Ysabel, altho engine was started about four in the afternoon and used until nearly six, when we came to anchor in Thousand Ships Bay at the southwest end of Ysabel. I caught three large king fish as we neared the anchorage, a welcome addition to the larder.

There is a native village at the anchorage and several others in sight. On a little island close by is a mission station of the Church of England. The shore in front of the village is a sandy beach but extending from both ends of it the shore is very rocky. The hills rise quite abruptly from the shore but to no great height. Vegetation appears to be dense.

Many of the natives from the village came aboard in canoes as soon as we anchored and expressed surprise that we didn't come closer in. "How about mosquitoes?" I asked. "No mosquito stop here", was the reply, which certainly was gratifying news.

It was so late that none of our party went ashore. Our crew put on a gramophone concert which seemed to be greatly appreciated by the native visitors who re-

mained aboard until eight o'clock, when rain probably hastened their departure. In the haste of leaving, one of their canoes upset, throwing all the occupants into the water. They did not seem to regard it as anything unusual and soon had it righted again.

Frigate birds and terns appeared in some quantity near the ship as we were nearing the anchorage. The frigate birds as usual were endeavoring to steal fish caught by the terns. Heard several land birds. A white-headed kingfisher flew out to greet us soon after we anchored and later on an owl showed up for just a moment.

Anchored in eighteen fathoms. Water quiet and weather fairly cool with light showers in the evening.

August 13. - Ashore early. The village consists of some twenty houses with an extensive population for its size, including many children. The women and girls here wear short calico skirts. Men wear lava-lavas and several of them possessed shirts. Most of them speak more or less English and I found one very unusual character in a native of some twenty odd years who seemed to be a constant joker and laughed long and loudly at his own bits of humor, often slapping the subject of his mirth on the back. This is very much out of the ordinary, as while I have seen some natives who, particularly when well acquainted, would give way to mirth, most of them are not demonstrative, - on the contrary rather taciturn and grave featured.

There is a government road which follows the

shore and the natives said "it go around island".

There were no regular tracks leading back into the interior from this point although there is said to be one a little further to the north.

There are a large number of orange trees both in and back of the village, and several trails leading back to patches of garden. A river also enters the sea at the village and I followed it a considerable distance to the hills. No hills of any great height at this point. Vegetation was thick with many tall trees.

Birds were numerous. The wagtail was found in great abundance in the village and along the shore in both directions as far as I travelled. Along the shore they were often seen on the beach, generally in pairs. I did not hear them sing but very little.

I collected two species of kingfishers of which the smaller appeared to be quite common, especially near the village. The white-headed species occurs here also but does not seem to be at all plentiful.

Both the yellow and black-headed honeysuckers were present although not so common as at other points visited. There was not an abundance of coconuts here, which may partly account for it,- and perhaps they were more plentiful than one could appreciate in a few hours ashore. The black-headed species seems to be a new one, as there is a large patch of red on top and back of head. The legs and feet are an olive green.

The white-eye occurs but does not seem to be common. I heard one rendering a gay little song from the top of a medium sized tree. Eyes are a chestnut brown, with whitish ring around the edge of lid.

The red parrot is quite common, the large green species less so. All specimens of the latter taken were the "blue belly" females.

Both the little flycatcher and the red-bellied occur. I should judge the former to be the most common. I found them far more in evidence near the village.

Minas were calling both in the forest and near the village and several were taken. I only saw one shrike which I secured.

Gray pigeons were common and several times I heard ground doves in the distance. Starlings also were quite common, but I did not see or hear any of the larger blackbirds. Hornbills occasionally flew overhead and one of their favorite foods, the nygnali nut, seemed to be quite plentiful. I should not regard the hornbill as especially common at this point. Several white-headed hawks were seen and two of the small blue-backed hawks were taken. The white cockatoo is very common, but it did not seem to vary from the same species encountered on other islands. The crow was also very common; it has a hoarser caw than the crow on Guadalcanal, and seems a somewhat larger bird, the bill being considerably larger. Thickheads are not at all common. The midget was not uncommon - I saw several, both near the village and in

the forest.

Natives came aboard again in numbers. They had but little to offer for barter except oranges of good quality, of which they have a big surplus. They brought a very little taro and a few yams, all very small.

They use the canoe here, which seems to be almost regulation pattern in the Solomons from Santa Anna on, made from boards with cemented seams and elongated curved prow and having no outrigger.

Snakes were not in evidence although the natives said they were not uncommon. I saw at least three species of lizards, a large black one with brownish abdomen, a small very active, grass green variety, and a small species which darted in and out of piles of trash as I walked about. The last mentioned I think we have taken at many places and was the common form. Of the black species I saw very few and collected one. The green specimen secured was the only one seen.

I saw no land snails except a few dead shells in poor condition. Insects were quite plentiful but I did not have a chance to get but a few. I saw several very beautiful large butterflies, all flying high.

August 14th. - Sunday. Attended to chores; did some writing and developed some film. The latter is turning out better and the tank seems to give fair results with water at a temperature of over 80, if the film is developed for six minutes in ordinary strength developer.

A native brought out a small hawksbill turtle,

a live specimen about ten inches long, which he said he had kept for some time, feeding it on "shells", probably live salt water forms. The day was fairly pleasant with occasional rain squalls. The name of the village at this anchorage is Vulavu.

August 15th. - Left Vulavu at one in the morning, hoping to make a stop at a small low island some ten miles off Cape Prieto which probably is the nesting place of sea birds. Weather conditions were unfavorable and after many hours of rolling about in swells, with light unfavorable winds, made a course for Tunnibuli, rounding Cape Prieto and passing through numerous small islands, arriving at Tunnibuli about three in the afternoon. Frequent and heavy rain squalls in the afternoon, so did not go ashore to collect as it was late anyway.

Tunnibuli is the location of the District Officer, Capt. Hill, whose residence is on the top of a prominent hill. There is a small pier here. Numerous reefs project out into the entrance to the harbor which is narrow. There were heavy showers all through the night.

"Ysabel (Bugotu) Island, lying northward of the Russell Islands and of New Georgia, is about 125 miles in a northwesterly and southeasterly direction, with an average breadth of about 15 miles. A range of mountains extends its entire length, attaining an elevation of about 3900 Feet above high water in Mt. Marescott, about 20 miles from its southeastern extreme". (Pacific Island Pilot Vol. 1, 1916).

August 16. - We went ashore early and landed on the pier and then followed the government road along the shore closely, leaving it at times to climb around the edge of hills. The island for all of this distance, and farther in both directions, is flat and swampy near the shore. At a short distance from the pier there is a considerable village, probably the quarters of native police. Most of the houses here are small circular affairs, with a pitched roof radiating from a central point to all sides, a different type of construction from any so far encountered in the Solomons, and confined to this one spot. The village was very neat in appearance with croton bordered walks.

Farther on there are two native villages on the shore situated closely together. The natives are quite friendly and quite "missionized", many of them wearing shorts and a singlet, and the women wearing a calico skirt. Some of them were seen trying to struggle into a sort of blouse on my approach. I saw here for the first time a baby carried in a sort of sack behind the mother's back, Eskimo style. This woman was also pregnant about full term and as she was of small frame the effect was rather startling. The general color of the natives was light brown, although I saw a few jet black, probably migrants from other islands. One old man, clad in scantiest of loin clothes, was lazily clipping the hairs on his face with a clam shell.

There is a very neat church in one of the villages,

a rectangular affair, with very decent flat benches for seats and quite an elaborate altar. In one of the heavier cross beams of the ceiling the date 1921 was inlaid in mother of pearl and a pulpit highly ornamented in the same fashion, bore the date 1924. The church is illuminated by numerous kerozene lights placed overhead, and altogether was the most complete and ornate which I have yet seen. It is under the management of the Church of England.

There are many dogs, some of them trained to hunt the "guanos", which they must keep down in numbers as I saw none on a rather long trip through the swamps.

I saw many canoes, some of them large and highly ornamented. All of these were kept in canoe houses. They make canoes here and I saw one of the smaller ones being put together. I also saw several canoes equipped with small sails, one being schooner rigged with main and foresail and two jibs, all situated near the centre of the craft and so arranged that the occupant could easily raise and lower them.

Many gardens are located back in the hills, principally yam, sweet potato and taro. I saw some bananas,- very few in bearing, and a very few oranges, limes and pineapples. There were some coconuts to be seen scattered along the shore, but no extensive groves.

The long-tailed swifts are quite common here and several were taken. They are beautiful in flight, making long, rather slow, graceful curves, returning often to their perch in the top of some tall dead tree. Very often they keep at a height of 150 to 200 feet. The small swift was very common and along the shore the swallow was also quite plentiful.

The small kingfisher was much in evidence, particularly all through the swamps. Some also were seen and heard in the forest. The white-headed kingfisher also occurs here but is not at all common. I did not see any of the larger "land" species of kingfisher.

Both the gray and red-knob pigeon are here, but I could not call them at all abundant. Perhaps they have been considerably hunted in this vicinity.

We saw several white-head hawks and the small blue-backed species.

The white cockatoo is common and the crow is probably common also. I saw a few and heard it several times but probably food conditions do not suit it in the swampy districts near the shore and it keeps to the higher land farther in. Several hornbills were seen in the forest but they were always lone individuals flying noisily about. Sandpipers of two or three species were seen on the shore.

Lizards did not appear to be at all abundant. I saw several of the black species and more of the smaller kind which is common on many islands. In the forest I saw

one dull green species which I collected. Insects were not very abundant. Most of the butterflies seen were rather small.

I did not notice any snails in the forest, but in the swamp, at one place where I stopped for a little rest and also to figure on the possibility of travelling further through this sea of mud, I collected several species of small snails from the leaves of a shrub about three to five feet in height.

Natives came aboard in the late afternoon with a few vegetables and fowls for barter. They also had a few curios which they wished to sell, but for most of these they asked impossible prices, such as one pound for a small and not elaborate design in cut shell, and the same for a small shell amulet. Here, as in other places, when pressed to take a smaller price, they cleverly evade the issue by saying "Him no belong to me. Belong another fella. Bye and bye I look him and tell him. Maybe he say all right, you take him."

August 17. Anchor was raised early in the morning and we proceeded along the northwestern coast of Ysabel with Maringe Lagoon as a destination. Wind was very light. We passed several very extensive coconut plantations in the course of the day and also several native villages on the shores. Smoke arising from several points farther back in the bush indicated the presence of other small bush villages, although the Pacific Island

Pilot speaks of this island as sparsely inhabited, especially inland. Sea birds are not at all numerous here. Occasional sooty terns, wedge-tailed shearwaters and frigate birds were seen.

August 18. There was rain most of yesterday and through the night and this morning it is still very cloudy with rain squalls. With practically no wind and a strong adverse current we have drifted back some fifteen miles during the night.

The engine was started about 10 a. m. and in the early afternoon we came to anchor in Maringe Lagoon near a large village located close to the beach. We passed several small villages and some very picturesque little islands on the way in.

Maringe Lagoon is about six miles in length in a N.W. by W. and S. E. by E. direction and from one to two miles in width. It is formed between the mainland and a chain of five off-lying small islands. Mount Sasari, a conspicuous summit, 3,700 feet above high water, rises abruptly from the shore of the lagoon.

We went ashore immediately after anchoring and collected in the bush along the shore edge. The natives in this village are very much missionized and there is a wellbuilt mission under the Church of England. Many of the men here wear singlets and shorts and the women and girls wear calico skirts. Some of the women sported full dress, a blouse and long skirt of brightly colored calico.

Bird life here is much the same as at our stop on the other side. The wagtail is very common in the vicinity of the villages. The midget seemed quite common, both in the coconuts and in the bush. Neither the yellow or black-headed honeysuckers seemed at all plentiful, although I saw and heard both species. The gray-backed shrike is more common than at any other point so far visited and I also saw several graybirds.

It was a surprise to encounter here for the first time a species of gray-bird, an exact counterpart of the one which we have taken (lead gray all over) except that it is twice the size. This species did not seem to be uncommon, more seen in tall dead trees in the swamps than anywhere else. Several were taken.

Of small birds the blackhead and red-bellied flycatchers are both fairly common. The blackhead and chestnut-back fantail were also taken, but are not common. In the forest I heard both the thickhead and white-eye although I did not see either. The mina is common as is the starling. I saw some blackbirds but at a distance and none were taken.

The red parrot is quite abundant and the blue-headed paroquet occurs here although not in very large numbers. I saw several large green parrots, but did not see any females,- quite the reverse from observations elsewhere. Perhaps the females here are attending to household duties at the present time.

At the time of our arrival they were having a fiesta, the occasion being the completion of a new house which was to be occupied by the native preacher or mission worker. It was rather a large well constructed house, surrounded on all sides by a covered porch, and the floor was covered with a coarse-woven matting. There were frequent processions in which the whole village seemed to participate, many of them carrying freshly cut branches of trees, and later, as I was returning from collecting, villagers were bringing their offerings of cooked food, all done up in the leaves in which it had been baked, and piling the packages up on the porch. A large part of it seemed to be baked fish. I went over to inspect the bundles and a little later after I had left the scene, a native presented us with a small basketful of the food. Very soon after the tomtom sounded and all the villagers flocked to the house to partake of the refreshments. I judged from their actions that the ceremony opened with prayer and later they sang a hymn.

There are many canoes here, some of them large enough to hold fifteen or twenty men. An old native told me that the building of the large canoes was now a lost art with them and that there were very few who could build the small canoes, although they are still constructed both here and at Tunnibuli.

The natives appeared to be for the most part healthy, except for skin disease, fairly intelligent and well used to the visits of whites. They also seemed to me to be rather indolent which of course is a rather universal native attribute only more marked than others in some places.

Birds did not seem very plentiful in the vicinity of the village which in my experience is rather unusual. This too, although there is an abundance of small trees including coconuts, lime, orange, pawpaw and numerous small palms of various kinds.

We were unable to go far on account of the late start, but we secured some birds and put them up in the evening. Mr. McKenzie, who manages a coconut plantation for Mr. Clift on Fara Island on the opposite side of the lagoon, was aboard in the evening. He has been in the group for the last seventeen years. He spoke of the Ysabel islanders as always having been "lambs", and subject in the old days to frequent raids by parties from other islands of more warlike natives, especially from Rubiana. This resulted in the killing off of most of them. There are very few left now on the northern end of the island.

August 19-20. - We went ashore early both days and collected along a trail leading up to Mt. Sasari, - a very good trail which leads over the moun-

tains to the opposite shore. This trail enters the bush at a point about two miles north of the village. The birds here were only fairly plentiful and rather wary, very few paying any attention to calling. Of the smaller birds the white-eye seemed fairly common. The pigmy parrots are common and can be heard calling very often but are seldom seen. The red-bellied flycatchers were not uncommon but seemed very shy. I only saw two of the smaller flycatcher. Both the chestnut-back and larger fantails occur but are scarce. They seemed to be present at all levels from a short distance from the shore up into the mountains. Midgets were very common. Both the yellow and black-headed honey-suckers,- the former being quite common altho' not nearly so plentiful as at other stops. The thick-head could be heard calling at infrequent intervals but is not common. The gray-back shrike is quite common, especially among the coconuts and trees not far from shore. The brown-winged blackbird and two or three species of "gray" birds occur. Starlings are very abundant, found generally in certain trees which seem to be a rendezvous for flocks. The mina is common, their clear whistle and varied, peculiar notes being heard both along shore and high up in the forest. Crows were common well up the ridge but were scarce along the lower levels. The hornbill seems to be common but all

that I saw were alone, whereas in most places they are often in flocks of three or more. The red parrot is common and the large green parrot not uncommon. Also found the small yellow green parrot here. The long-tailed dove is the one taken so far, although several ground doves have been seen and at least two of the other doves are here.

Kingfishers are conspicuous by their comparative absence. I have heard the small kingfisher each day but so far have only seen one which I secured. I believe they are less plentiful than at any other place visited. I have not seen or heard the white-headed species although it occurs here. Both the gray and red-knob pigeon are here and fairly common. I have seen both the white-headed and small blue-back hawks. The wagtail is common both near the village and all along the shore. The small swifts are very common and the long-tailed swift occurs higher up. Swallows are quite plentiful here as was the case at Tunnibuli.

I shot a noddy tern which was perched on a coconut frond in a tree near the shore, the first time I have found one in a tree, although I understand it is not uncommon.

I have heard the black-head on several occasions but have not seen it. I have tried to entice it by calling, in which I have been successful at most other

places. The white-eye here seems to prefer tangled thickets, at least I secured most of my specimens by calling in the vicinity of such places.

Lizards: The small species is common. So far I have seen three species only and have taken one or more of each. Have not seen the black species and no large lizards or iguanas. No one has taken any snakes so far and I do not think they can be at all common here as we have covered a good deal of ground.

I have noticed a good many shells of land snails of larger species and in absence of finding live specimens I have collected a representative lot of shells all in good condition. I also found several species of snails in little fresh water pools some half mile or so in the forest and perhaps 300 to 400 feet elevation. Some were attached to small stones while others lay on the gravel bottom of the stream which fed the pools. I collected quite a series of these also.

Butterflies are not particularly abundant and are mostly small. Other insects do not appear to be very plentiful although perhaps in intensive bird work one does not see them. I saw one very odd looking ant today while eating my lunch well up in the forest, very long and slender, body chestnut-colored and black at both ends. In half hour I saw only four

of them which I collected.

I heard today for the first time that each ridge on beak of the hornbill means one year of age. I cannot vouch for the accuracy of this although informant has kept hornbills as pets and feels sure of his statement. He also said that the hornbills used to gobble up his tame ducklings.

Heavy rains late in the afternoon of both days and today (the 20th). The rain continued all night with some severe squalls of wind.

I noticed a black-cap parrot in the house of one of the natives, so this species may occur here also although it may of course have been brought from some other island.

I have been on lengthy trips the last two days and done a deal of climbing which of course has made me quite lame in the joints, but am pleased to find that I can do so much without apparently doing the leg any damage.

August 21st. Sunday. It rained all morning. I remained aboard all day; in fact I found the time too short to accomplish all I had planned, but I did some writing, developed film, a little work with water colors and also put up some miscellaneous material which has accumulated in the last few days.

In the evening Beck announced that Hicks and I are to go on a camping trip to Mt. Sasari in the

morning.

August 22d. Weather cloudy but made preparations for camping trip and started out in long boat for entrance to trail. When nearly there it commenced to rain and we landed to take shelter in a native copra curing-shed. The rain continued, getting heavier all the time and as it got late in the morning Beck decided the trip would have to be postponed and we put back to the ship. I walked back but it rained most of the time and I got very few birds. It was nearly low tide and I found an interesting lot of small shells clinging to the boulders along the shore and collected several hundred of them of apparently many different species. They were an interesting lot to me and I hope may be of some value to the conchologists at the Museum.

The large graybird occurs at this point but does not seem to be at all common. Today three more kingfishers were secured including one of the larger "land" species.

I have not had results from pictures taken with V. P. kodak for some time and I was attributing the failure to improper action in the tank, but today I discovered that the emulsion is spoiled although films are in tin and the expiration date is March, 1928. It is the only camera which I can carry with me on trips into the forest and it seems too bad to lose a lot of film

when it takes so long to replace it. It will probably be two or three months before I can get any more. The weather did not clear until mid-afternoon. The camping trip is on again tomorrow if weather conditions permit.

August 23-27. We went ashore early on the 23rd and started for the interior with some of the crew to help pack in supplies. Arrived at the bush village which is quite a distance in and about 2,000 feet up, before noon. The village occupies the top of a cleared knoll and consists of some dozen houses. We met most of the inhabitants going down as we were coming up, the men to work for the rest of the week at building a new house in the shore village, and the Marys to carry down material and supplies. The women here do practically all the carrying of burdens, the men as a rule contenting themselves with a bush knife and axe. It seems to me that very few of the men in the bush village smoked a pipe although they were very keen on trying cigarettes. All the women smoke pipes. This village may contain some fifteen men and their wives and numerous progeny.

We were able to obtain two men from the village to help in carrying supplies further up. One of them owned two small houses in the high bush either of which he said we might use for camp. We also borrowed from the village an old iron pot, a lantern, and two enamel plates of rather doubtful respectability.

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August 25-27. We went ashore early on the
25th and started for the interior with some of the crew
to help pack in supplies. Arrived at the bush village
which is quite a distance in and about 2,000 feet up,
before noon. The village occupies the top of a cleared
knoll and consists of some dozen houses. We met most
of the inhabitants going down as we were coming up, the
men to work for the rest of the week at building a new
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them carried two small houses in the high bush either
at which he said we might use for camp. We also bor-
rowed from the village an old iron pot, a lantern, and
two enamel plates of rather doubtful respectability.

After another climb we came to a fair looking house, located near water, and we were rather prone to choose it for a camp but the owner did not recommend it, saying "house no good-belong pig." Sure enough a little white, and very tame porker did show up as we were resting there. So, on being assured that the next place was "no too far" we pushed on again and climbed up another stretch of rather poor trail, finally coming to a small house located in the centre of a newly cleared and planted taro patch. Here we made camp at an altitude of about 3,000 feet, the bush village from which we had climbed since midday, showing plainly down below, and in the distance the shore and some outlying islands, especially Fara with its extensive coconut plantation where Mr. McKenzie has his residence.

It did not take long to establish camp as all our possessions consisted of some tinned provisions, ship's biscuit, blankets, cartridges and preserving materials, and the few borrowed utensils plus one spoon and one enameled cup. Brushed out the old trash on the dirt floor of the shack and covered it with some fresh leaves. Most of the sides of the structure had disappeared, so there was an abundance of air, but fortunately, the roof was in excellent condition which proved most important, as we were subject to several heavy showers during our stay. A disadvantage of the camp was that it was a considerable distance above the nearest water, a long carry over a poor trail. It would have been advisable

to rig a device for catching rain water to save this portage. We reduced the portage to a minimum by using very little water. At this point I remained for four nights with Hicks and David, collecting on the higher ridges and by cutting a trail through a heavy growth of reeds and fern, we were able to reach the highest point, Mt. Sasari, about 3,800 feet.

In the neighborhood of the camp was a dense forest, - tall trees but not so high as those lower down. Above the camp 300 to 400 feet, was a zone of low vegetation, - very dense, of reeds, young bamboo, bushes and fern. Passing through this and climbing still higher was the forest again, the trees being still lower. At the very top we encountered again the low growth of reeds, bamboo and fern. All this country consists of knife-like ridges and deep canyons, making it difficult to collect, as birds shot, even with the aux at close range, may drop 50 to 150 feet down the steep side of a canyon where it is very hard to find them. The same condition is encountered lower down with the difference that the ridges are often much wider so that the birds can be kept within vision as they fall.

The only birds which I should call common at this altitude were black-headed honeysuckers, mid-gets, white-eyes and crows. The three first mentioned were common all the way up, the honeysucker being

much more common at above 3,000 feet than below it.

They were inclined to stay in the tree tops while the midgets and white-eyes seemed to prefer the lower bush, although both were frequently seen in the trees.

The little black-headed flycatcher was not uncommon and the red-bellied species was fairly plentiful. Both seemed more shy than usual and were far more frequently heard than seen.

Gray-birds were heard often in the forest. I saw here the barred gray-bird, the plain gray, gray with black underparts and the gray-backed shrike. They seemed about equally common except for the one with black underparts which was seen only a few times. They often came out of the forest to perch on and play about the dead trees, standing in old clearings and in such situations we obtained the most of those collected. Their call is sort of a short, high-pitched scream, often repeated several times. It is to be noted that the iris in all species so far collected is a very dark brown with the exception of the barred species which has a bright yellow iris.

Two species of hawks were seen, the small blue-backed and the large white-headed. They seemed to be rather uncommon at this height. One small owl was taken, the only one seen.

Small swifts were not uncommon and the

large swifts were seen several times about the dead trees in clearings.

Doves did not appear to be at all common although they are hard to see and possibly are more common than one would think from such a short stay. We collected three species including one long-tailed dove. Those obtained were feeding on a blue berry-like fruit, about the size of a large wild cherry, which is found on trees that reach a considerable height. The ground dove was seen but unfortunately we were not able to secure any.

The gray and re-knob pigeons occur here and are fairly common, more often heard than seen. At the very top Hicks secured one specimen of the larger, white-headed pigeon, the only one seen.

The red parrot is not very common although seen every day. The large green parrot was uncommon. Here we found the small yellow-bibbed parrot but it was far from common. It seems to like to stay alone, has a short metallic note like a hammer hitting on iron, repeated several times. We secured several of them. The white cockatoo was seen daily but not at all common. The little green parrots were heard but not seen although I did not hear them above 3,000 feet. At the high altitude we did hear the green paroquets several times, as they were feeding in the tree tops, and one was shot but unfortunately could not be found. They did not seem to be at all plentiful.

Both the chestnut backed and black fantails occur here but neither is common although their habits are such that they may easily escape observation. They did not respond readily to calling although those secured were obtained in this way. I did not consider them much more plentiful than lower down. At this point we have taken both species at all stations from the shore up to highest elevation.

Megapodes were heard occasionally above 3000 feet and one was taken near the camp. A gallinule was secured in dense reed patch at about 3400 feet. The hornbill was seen daily and once I saw a flock of four, the only time I have seen more than one at a time since we have been at this point. The cuckoo was heard several times and one was secured.

Thickheads were fairly common but shy and far more often heard than seen. They did not call much except just at daybreak and in the late afternoon.

The "black-head" was seen only two or three times and we could not find the warbler of which one specimen was obtained by Beck at this point on another ridge.

Crows were very numerous on occasion. We wished to get a few on the last day to take down in flesh but only a few were seen at that time and could not call any within gunshot. At times during our stay at camp they were very noisy and seemed plentiful.

I heard a kingfisher call on two or three occasions somewhere between our camp and the village but none were seen.

Lizards did not seem to be as common as lower down and no new species were noted. We got one snake, rather a large one, the second day of our stay. It was in an old, deserted hut some 300 to 400 feet above our camp. Body color a dark gray. Lacking any liquid preservative and wishing to keep it for identification I left the head intact and skinned out the body, using our salt for a temporary preservative and putting it in formalin on return. It was different from any secured previously and was the only snake seen.

At night the forest resounded with calls of different frogs and toads but we had no opportunity to collect any.

Insects did not appear to be very plentiful during the daytime but at night, judging from the medley of sound, it seemed as though the bush was full of them as indeed it probably was. I collected a very few mostly coleoptera. Also secured a few snails although we did not see many in spite of all the wet weather.

It rained considerably Friday night and Saturday morning, making the trails very slippery, but we came down from the camp to ship in about five hours, too fast for me just at present although I

managed to make it.

Minas were not nearly as common as at lower levels.

Nights at camp were very cool more especially as we were sleeping on the ground. Two blankets would have been more comfortable than one, but meagre as our equipment was, it proved quite a task to get it up there. The owner of the camp and neighboring taro field was our only visitor. He came daily to work a little in his garden and supplied us with taro. He also spent the day with us when trail was cut through the bush. We were anxious to have him as a bearer for extra gear on the way down but on that day, the 27th, he had to go to another bush village in response to a letter which he said he had just received, and try to make an amicable settlement of a difficulty in which he had become involved, it having been alleged that his dog had killed and kai-kaid a pig belonging to another native. "I no go", said he, "maybe go courtee and all stop in calaboose."

Hicks struggled with the extra gear as far as the village and from there one of the women carried it to the shore. The loads that these native women carry with apparent ease over slippery, steep and often difficult trails are simply marvellous. I think that they are assisted a lot by a prehensile development of the toes as the imprint of toes is very marked in the trail mud, and I have seen some of

the natives use their toes almost like fingers for grasping objects.

Arrived aboard about one in the afternoon. Found Beck having an attack of fever. David had fever the last two days in camp. Prepared birds shot on the way down, during the balance of the afternoon.

Soon after reaching shore I secured a very large snake which was up in the rocks perhaps twenty feet from water. It was a large specimen of the common species, alternate bands of black and white.

One flying fox was seen near camp and at landing place on shore I saw a Pacific rat, the only one seen in a very long time.

August 28. Sunday. I developed some film and did some writing although work of late has been so intensive that I am getting quite behind on what writing I should like to do. Many natives came aboard during the day. They all wear calico here although at the bush village they still make a lot of tapa cloth, some of it very good quality. What they use it for I could not find out but it is not unlikely that it serves the purpose of blankets.

August 29. We left anchorage at an early hour, using the engine, and stood over to a point at the north end of the lagoon, a distance of about six miles. We came to anchor near shore at Darlington Point. The manager of the Solomon Island Rubber Development Co. had his residence here. He was away but

his assistant, Mr. Bray, whose residence was some two miles farther along the shore, is managing all three plantations of this company which cover a considerable territory. There are some rubber trees at the middle plantation and they are occasionally tapped although the rubber has been practically abandoned in favor of coconuts. Rubber trees do well here but low price received and scarcity and cost of labor do not permit competing with other markets.

We went ashore collecting and found it necessary to walk about two miles through the coconut plantations to find any place to get into the forest, the area being flat and all in back of the coconuts being a large mangrove swamp.

We observed several rivers of good size at this point. There are no hills of any great height until the main ridge is encountered upon which we had our camp. This ridge extends inland to the northwest. There is a fairly large bush village at no great height on a hill in back of the mangroves.

Red parrots were very common in the coconuts and wagtails more common than at any place so far visited. Kingfishers were not plentiful, the only one seen at all commonly being the smaller of the two species so often met with in coconut groves.

In the swamp megapodes, gallinules and the brown heron all seemed rather common. Of smaller birds

the black-headed and yellow honey suckers, red fly-catchers and white-eyes were the only common forms. White cockatoos and the blue-headed paroquet quite plentiful and also the gray pigeon. The gray-backed shrike was not uncommon.

I found the nest of a blackbird, probably the one with rusty brown primaries, oddly situated in a small tree standing rather by itself on the shore close to low water line. I believe that at high water the tree would be surrounded. The nest, a bulky structure, as large as a twelve quart peach basket, was composed of coarse materials such as reeds, and was about twenty feet from the ground. Both birds were about the nest and were very wary. They would not permit a close approach.

August 30-31. At the same anchorage on the 30th I visited Sule Island, a small island very close to Darlington Point. It is densely covered with vegetation, mangroves near the shore and a tangle of shrubs ferns, reeds and vines higher up with also many tall trees. Vision and travel were both difficult as there are no trails. Megapodes very common. Red parrots, cockatoos, blue-headed paroquets and gray pigeons were fairly plentiful. Small birds were scarce. I only noted the yellow honey sucker, white-eye, red flycatcher and grayback shrike. Heard an occasional crow and saw the white-headed and small blue-back hawk.

On the 31st we went in the dinghy to try and locate some track in the south end of the swamp. There is an immense mangrove swamp here and although we pushed the dinghy into three or four of the most promising leads we could not locate any track or place where it was possible to travel, so had to land on a point to the south and walk along the shore until I could get into the forest.

Birds were quite plentiful in the forest. We found the black fantails, large graybird, the larger kingfisher, red flycatcher, both honeysuckers, white-eye, small flycatcher and thickhead. Pigeons were plentiful. Shot a curlew which was perched some thirty feet up in a tree. Megapodes were common and we saw the brown heron and both species of hawk noted yesterday.

In addition to birds already noted as occurring at this point, the brown fantails and black-head were taken. Two species of the little kingfishers which live near fresh water streams were taken. They are very wary and on being frightened fly into the neighboring bush. The eagle hawk occurs here and after considerable hunting with rifle and 12 gauge loaded with buckshot, Beck finally secured a young specimen measuring six feet in extent. Hicks secured two specimens of a large black rail, and eggs probably belonging to this species were also taken. Beck reported seeing a large white heron. The mina occurs here quite commonly and the medium size hellow parrot as well as the large green species. The gray pigeons were

nesting. One which I shot contained an egg ready to be laid, creamy white shell, large as a pullet egg, probably the usual complement. I found a nest which I took to be that of a wagtail as there were a pair of birds close by. It was a small, compact, round nest, size of half a small coconut, situated on top of the dead branch of a tree, about ten feet over salt water.

Swallows and long-tailed swifts quite common here in spots. Graybirds did not appear to be common. Crows quite plentiful.

The stomachs of several gray-back shrikes which I examined contained small insects. Of two stomachs of the large graybird both contained many small insects and one a large leaf insect which had been swallowed whole. The stomach of a small blue-backed hawk contained four of the common lizards and one salamander, the latter a new addition to our collection from here. It also contained many small insects.

The monitor lizard is not uncommon here and one snake was taken. Small lizards are very plentiful but mostly the one common species.

I saw more of the very small fish, which spend part of their time on land, here than at any other place so far visited. In some parts of the mangrove swamp they were literally everywhere. Saw some larger ones jump from the mangrove roots to the water, probably the same species. Crabs were also very plentiful in the swamps, principally small species. One tiny white species

which lives in holes in the mud was very much in evidence, their white bodies forming a startling contrast to the black mud. I collected a few of them for identification.

Mr. Bray was just ready to kill off a few cattle, their number having increased too fast for the available grass, and very kindly offered to present us with all we wanted. We could only use two at this time and the fresh meat was a very welcome addition to our stores. Mr. McKenzie, at our last anchorage, also made us the same offer and we secured one beef there. Filled our water tanks here also from the tanks at the Darlington residence.

On Fara Island Beck found the white-headed kingfisher fairly common. Both the black and ashy phases of the red-bellied flycatchers occur there also.

September 1st. We intended to leave Darlington anchorage at daybreak but heavy rains and no wind prevented. The rain continued all day. I put up some birds in the morning and spent the rest of the day in writing up the journal and making some water color sketches of bird parts.

September 2. We left anchorage in the early morning after filling water tanks, and headed out for Ramos Island, a small island lying to the east and south. The wind was light and the 'France' rolled heavily in the swells. There was plenty of rain.

September 3. We have made little progress from the coast of Ysabel. The wind remained very light and there were heavy swells. At noon the engine was started

and it took from then until 6 p. m. to make the less than twenty miles distance to Ramos where we came to anchor on the west side, about one half mile from shore in seven fathoms of water. The island is densely wooded. Two small rocks lying a considerable distance to the northwest, one of them also covered with dense vegetation, the smaller nearly naked and its top showing that it serves as a roosting place for sea birds. A pleasant, cool night but the vessel rolls a lot at this anchorage.

September 4th. We went ashore in the morning to have a look at the island and do a little collecting. The island is covered with dense vegetation, no trails but fairly open so that travel is not too difficult. The red flycatcher was very much in evidence, the head and back here being ashy gray as on Murray and Fara Islands. It, with the starling, is the only common small land bird. Both occur all over the island but more commonly on lower level near shore. The island is situated in lat. $8^{\circ}16'S$, long. $160^{\circ}11'E$, and is about 38 miles in a southeasterly direction from Maringe Lagoon on Ysabel. It is perhaps, three-fourths of a mile long, narrow, and rises quite abruptly to a height of about 150 feet, the part to the westward being the higher.

We saw smoke rising from the bush near the beach this morning and on landing found that four natives were camped there. They were on their way from Malaita to Ysabel and using this place as a halfway station, in the meantime were doing a little fishing and laying in a supply

of coconuts and wild yams. There are not many coconuts on the island. The natives told me that there were some bananas high up in the bush but none of our party saw any. No water on the island except that obtained from rainfall.

I heard the yellow honeysucker several times but it is not plentiful and seemed to be very shy. Hicks said that he heard the white-eye but none were obtained. Pigeons were quite numerous, the white-tailed, the gray, and a smaller pigeon which Beck named the "black-knob" The last mentioned is met with here for the first time although Beck says that it occurs in the Hebrides. One specimen of the white-headed pigeon was taken.

I found the yellow-bibbed dove feeding in tree tops and secured two of them. They are apparently smaller than any previously taken. The ground dove occurs here also but is seldom seen even on this small island.

Several white-headed hawks were seen, also sandpipers, turnstone, plover and the large peculiar plover first met with at Santa Anna. Several reef herons, both white and blue phase, seen on outlying rocks. The megapode is quite common.

The beach was strewn with lumps of organpipe coral, the first time I have seen so much of it at any one place.

In the evening we were treated to a flight of

frigate birds, there being between 400 and 500 in sight at one time, sometimes quite densely packed overhead, and again stretching out over an area of some two miles. They were milling about at a height of from 100 to 500 yards, from 5 p. m. until after sundown, very seldom seen flapping their wings at all except when leaving or approaching the main body.

September 5th. We were ashore collecting until late in the afternoon. Only additions to the list of birds were the cuckoo and small kingfisher but the number of species and abundance of bird life is quite marked on this island as compared to one of even larger size such as Murray.

Lizards very plentiful especially the small blue-tailed species common to many islands of the group. Some four species were taken as well as a couple of salamanders and probably three species of snakes.

Insects not very plentiful and saw few large or showy specimens of any kind. Land snails apparently very uncommon, even dead shells.

Came aboard about 5 p. m. and got under way immediately, standing over to Ysabel again. Strong S. E. wind and heavy seas.

September 6th. At sea passing up the coast of Ysabel at a distance. At daybreak we were too far up to make it worth while to try for Estrella Bay, so kept on to Rekata Bay where anchorage was made at

Suavana Plantation of the Fatura Island Development Company, at a little after 5 p. m. Mr. J. A. Johnson is in charge and he came aboard immediately on our dropping anchor. The plantation is extensive, covering 1300 acres. The anchorage was well sheltered from winds and very quiet. Only about one-fourth of this plantation is in bearing. There are about 125 head of cattle and, as is usual, when anchored near a plantation where there are cattle, flies were plentiful aboard.

September 7th - 8th: Collected at various points near this anchorage, all about the bush surrounding the plantation, on Fatura Island, and up two rivers which extend inland from this point, one navigable by a dinghy for seven or eight miles distance.

There are no hills of any height within a day's collecting distance. Much of the land is low and swampy. No new birds were found here. About the plantation the yellow honeysucker and gray-back shrike were fairly common. Wagtails were very numerous as in other places visited on Ysabel. Saw a few white-eyes in the bush near the edge of the plantation. Midgets were quite common and starlings very plentiful in some spots. Gallinules were common, ranging out into the planted areas of nuts. Late one afternoon I saw some nine pairs, while crossing a bearing and fairly clean area of coconuts. At different times they were leaving the coconuts to take shelter for the night in the heavy

growth of reeds and mangrove along the river bank.

The white-headed and small hawk were both seen frequently and the hornbill was often heard in the forest. The gray pigeon and red-knob were plentiful in the forest and the white-tailed less common. Both the black fantail and blackhead were taken but were not at all common. One small kingfisher was secured on the river. Long-tailed swifts and the small swift were quite plentiful as well as the Tahitian swallow. Megapodes common. Reef herons, curlews and sandpipers common along the shores and lagoons and the brown heron not uncommon.

Red parrots and the blue-headed paroquet occur both in the coconuts and in the forest but not common. The large green parrot was occasionally seen and the yellow-headed parrot was noted. The green pigny parrot also occurs here although none were taken. The white-headed kingfisher is not common on shores near plantation but more common on the little islands which dot Rekata Bay.

Good collecting points were hard to reach from this anchorage and bird life as a whole was not so varied or abundant as at other places visited on Ysabel. Even the mina did not seem at all common here although it was heard several times in the forest.

The monitor lizard occurs here but probably Mr. Johnson's two dogs, fox terrier breed, have pretty well cleaned them out in sections of coconuts nearer

the house. I saw them tree several, and one which I shot with the aux. from the top of a tree was rescued from them with some difficulty. It was little injured, and the two dogs siezed it as soon as it hit the ground, shaking it as they would a rat, dropping it only to sieze it in another place and give it another shaking.

Mr. Johnson has two hornbills in captivity, both under one year of age. Both could be handled and one was quite tame. They eat almost anything of a vegetable nature, being fond of rice and bread scraps, siezing a lump in their enormous bill, giving the head a toss to get it in the capacious throat and gulping it down. They progress on the ground by a series of rather awkward hops. He is obliged to keep them penned up as they kill and eat his young chickens.

Mr. W. H. Bennett from Kai, some 18 miles farther along the coast in a northwesterly direction, was a guest of Mr. Johnson. He has been in the islands about twenty years. He spoke of a lizard which had a "tail like a rat with hair on it", repulsive in appearance, which occurs on Ysabel and which the bush natives hunt and eat. I think he probably means the shorter, stocky, blunt-headed lizard, of which we have taken several specimens, which is eaten by the natives.

There is no village here, or rather a very small one, but at Kai there is quite a large one, about 250 natives, so he said.

Flying foxes of the larger species are quite common here. Of a pair which I prepared the female was 11 inches in length with extent of 48 inches, while the male was 12 inches in length and spread 53 inches.

The weather here was rather unpleasant with frequent rain squalls. We took dinner with Mr. and Mrs. Johnson both evenings of our stay, they proving most hospitable and insistent hosts.

September 9th. Left Suavana in the early morning and visited several small islands in Rekata Bay. A very bad day, with heavy rains. Found no new birds, but several species were taken during the day. On one very small island which Beck named Megapode Island, since the megapodes were very busy there digging in the coral soil preparatory to laying, several species of land birds were taken in a very brief visit. The wagtail, flycatcher, black-headed honey sucker, red flycatcher, red-knob pigeon and megapode. The two megapodes taken contained an egg ready for laying. They were also well plastered with a sticky mud from their digging in the coral. The reef heron, large plover and white-headed kingfisher were also taken here.

Reef herons, the large plover, megapodes and white-headed kingfishers were taken on the other small islands as well as the white-headed and small hawk.

We anchored for the night at the edge of Rekata Bay, near one of the islands and a sand cay

which we expect to work tomorrow.

September 10th. A very rainy and disagreeable day. We collected on several of the surrounding islands which are known as the Gijunabena Group. On one island, close to anchorage, birds were very abundant. In some three hours ashore, during which time there several heavy showers which made collecting impossible, I secured the small flycatcher, red flycatcher (ashy head and back as on other small islands), yellow honeysucker, wagtail, gray-back shrike, blue-headed paroquet, megapode, white-tailed pigeon, white-headed kingfisher and another large red-bellied kingfisher and starling. In addition, I saw the cockatoo, midget, several herons and plover, and I believe two or three more land birds. The flycatchers were especially plentiful and very tame, coming readily to the calling.

This island was densely covered with vegetation and very swampy over a considerable portion of its area. There were many trees, as well as the lower bush, and the going was not too bad over most of it. Four species of terns were collected from the sand cay where some of them were nesting. Also a small land bird, probably a warbler, was taken from one of the small islands where it was nesting. This bird has only been taken by us once before, on Guadalcanal. (*Acrocephalus*)

White-headed kingfishers are fairly common on most of these small islands although there are no rocky bluffs. This is unusual as practically always we have

found them only on rocky shores in close proximity to more or less high bluffs. Stomachs of several which I examined here contained fish.

There are many species of ants in the Solomons ranging all the way from tiny chaps up to the very large ant of which we have collected several specimens. Some of them bite severely and it is not an uncommon experience when collecting to get covered with them, when leaning against a tree for a moment, or perhaps standing near an unseen ant hill, or even from brushing against leaves. One species makes a nest by sticking together several fairly large leaves on a shrub, the whole nest being somewhat larger than a quart measure and situated from 3 to 12 feet from the ground.

These small islands which compose the Gijunabena Group are probably seldom if ever visited by white men, as there is nothing to attract them here and navigation is very difficult, often dangerous. The captain thinks it the worst pocket we have been in so far, which means that we are in, but it remains to get safely out. Natives may occasionally visit these islands to hunt for megapode eggs, as these birds are quite plentiful here. The only birds which seemed wary were the white-tailed pigeons. Possibly they are kept on their guard by the presence of numerous hawks.

I had some sixty or more birds to prepare, but got started earlier than usual and finished them all by nine in the evening. Occasionally some of the crew lends

a hand at this work, and they are doing fairly well, especially with the larger birds. Their names will sometimes appear on the labels. Tiora is our new cook, a Tahitian; Charles has been with the Expedition for some time as sailor, a Samoan; David, also a Samoan, has been with the Expedition some time in capacity of cabin boy.

September 11th. Sunday. The day was pleasant. I worked on water color sketches of birds practically all day. I get but little chance for this work which I consider rather valuable as our label descriptions of colors are often faulty. It calls for a combination of fresh birds, good light and time, and some one of these elements is generally lacking. However, the collection of sketches grows little by little and perhaps I can get most of the important ones in time.

It is worth noting that cockroaches are very much decreased in numbers of late, even in the hold. Also the spiders have shown a very considerable increase, although I no longer see so many species and wonder if with the falling off in roaches they have turned cannibals. It certainly is gratifying to be so well rid of roaches and I think the spider remedy can be safely recommended. Very few of the spiders which we have spin any web, so they are not in the way at all. I have them all around my bunk but they manage to keep out of the way, never annoying me in the least. I had been rather in doubt as to whether the spiders would attack the big roaches until

today when I saw a spider creep up stealthily on a very large roach until within some two or three inches of it when he made a rapid dart for his prey. The roach, however, was evidently on guard for he was able to dodge out of the way.

September 12th. Weather conditions bad, with rather violent squalls with heavy rains. We were under way early and made over thirty miles up the coast, coming to anchor just before dark off Bates Island at the eastern entrance to Kologilio Straits. The weather cleared in the afternoon and the evening was pleasant.

As we approached the more shallow water near Bates Island, sharks were very plentiful, as many as five being seen at one time under the stern. One about four feet long was caught on a troll line. We caught two fish as we neared anchorage, a very large one and a very small rather brightly colored red fish with large deep yellow eyes and prominent teeth. Passed the latter up as kai-kai as perhaps poisonous. I preserved a small sucker fish which was attached to the large fish caught.

September 13th. Beck and I went ashore early on Bates Island, which is the smallest, - about one-half to three-quarters of a mile long, mostly flat and narrow. There is a large salt water lagoon in which were many kinds of fish, some sting rays, and I saw one shark about two feet long. A fringe of vegetation along the shore was only negotiable in spots and it was necessary to wade about in the lagoon while looking this over.

Cockatoos were common and I saw several red parrots. 219

The white-headed and the smaller of the two common "land" kingfishers were fairly common. Both the black and ashy types of "red bellied" flycatcher occur here. The yellow honeysucker was fairly common and I saw both the midget and white-eye. There were some fairly tall trees on part of the island. Several hawks were seen but none were secured. One which flew over the ship seemed in size between the white-headed and small blue-backed and was gray in color. Spent only a brief time on this island being desirous of taking advantage of the tide in getting through Kologilio Sts.

We arrived at Molakobi Island at the western end of the straits just before 11 a. m. and landed there immediately, remaining ashore until late in the afternoon.

Molakobi is about two miles long, its highest ridge being about 350 feet. It is densely covered with vegetation and of course has no trails, as it is probably very seldom visited. There are many large and small trees. The salt water at high tide rises over the beach and forms a lagoon of varying width, more or less thickly covered with mangrove. Monitor lizards were very common along the shore.

Birds were quite plentiful. Several species of hawks were seen and some were taken, including one species of night hawk, the first so far encountered. Only two of these were seen. The gray, red-knob and

white-tailed pigeon all occur here, also the crow, red parrot, cockatoo and mina, although none of them are particularly plentiful. The gray pigeon seemed to me the most common of the three pigeons.

Black-headed and red flycatchers were quite numerous, more so close to shore. Both the black-headed and yellow honeysuckers are quite common. I did not see any of the ashy phase of flycatcher. The small chestnut fantail was quite common as was the thickhead. The black-head was seen but only one secured. It is perhaps not at all common but its habits screen it from observation. It seemed to stay in the tops of trees, some 40 to 60 feet up, and as always, was very wary. Probably the question of food takes it up in the tree tops as at other places I have noticed it closer to the ground in tangled bush, particularly close to streams. One Gray bird was taken and several of the white-headed kingfishers as well as the green heron. The white-eye was common, also feeding high up in the trees. The ground dove is here but uncommon, and no other doves were seen or heard.

Small lizards seem to be rather scarce on this island, which is somewhat surprising, as they are so common on most islands, even small ones, scampering out of the way all the time as one walks along.

I shot an opossum from the top of a tree, about 60 feet up, where it was probably feeding, as its stomach contained some sort of fruit. It was a female and seemed somewhat smaller than those previously taken, total

length being two feet. The eyes were a light chestnut brown. It was climbing slowly about the branches and when shot hung by its tail for some minutes before falling to the ground. This is the first opossum seen by any of our party in natural surroundings, although they are said to be very common here on many islands. The flying fox was observed but no rats. Rats have been but little in evidence in certainly the northern half of the Solomons. As far as I know, the only one seen by any of our party was one which I noticed along the shore when we were at Maringe Lagoon.

Butterflies of several species were quite common on Molakobi but I did not see many other insects.

No snakes were seen.

There are several smaller islands, no names on chart, near Molakobi, but we had no opportunity to visit them.

Hornbills were quite common on Molakobi, being heard many times, although none were secured. The wagtail was conspicuous for its absence.

September 14th. We tried to proceed to Anarvon Island under sail, but the wind was light and we had to make most of the distance with the engine, arriving at anchorage off the east coast of the island at about 11 a.m. We had an early lunch and went ashore.

There are probably two larger and several small islets, all in about the same situation about ten miles west of Molakobi, just indicated on the chart as Anarvon

Island. The one near which we anchored is about three miles in length, very flat, except at its north end where it reaches a height of perhaps 150 feet. It is extremely narrow, so that in walking close to one shore the opposite shore is generally plainly visible. It becomes somewhat wider toward the north end and there is a large salt water lagoon which was much frequented by herons, plover and sandpipers. There is much bog or marsh between the two sides all the way along. I did not see any monitor lizards although they were so plentiful at Molakobi. Small lizards were quite plentiful but not to the same extent as at other islands. Specimens of three species were collected.

The eagle hawk, white-headed, osprey and blue-backed hawk were all taken here. There were several nests of the osprey. Both the yellow and black-headed honey-sucker were common, seen both in tree tops and in lower bush. The chestnut fantail occurs and several were taken, but it is scarce. The ashy, red flycatcher was very common. None of the black-headed type were seen and it probably does not occur here. The small flycatcher occurs but is not at all common. The red parrot is quite common but I did not see or hear any cockatoos. Pigeons absent probably although Beck thought he saw one fly over. Beck saw one red cap dove. The white-headed kingfisher was quite common, also the small "land" form. One specimen was taken of the larger red-bellied species which I believe was the only one seen.

Megapodes were common and several large nests were located and many eggs secured.

Reef herons were not uncommon and the green heron was quite common. Beck saw one large white heron, similar to one which he saw at Darlington anchorage, in the lagoon.

No wagtails were seen and the hornbill does not occur on this island.

Tracks where crocodiles had entered or left the water were quite plentiful along the shore, all that I saw being of specimens not over four or five feet in length.

The island is quite thickly covered with vegetation and there are many fairly tall trees even in the swampy narrow portion. Coconut trees occur in spots, one little grove about midway on the eastern shore showing evidence of being occasionally visited, there being a shelter there and some old benzine tins. It is possible that the natives from Kia on Ysabel occasionally visit this spot, perhaps getting a little copra, and either fish or megapode eggs on the side. There is certainly nothing on the islands to attract any white visitors. There is considerable sand beach, entirely covered at high tide, there being a five foot tide here. Shoals extend out a long distance from the islands and they have to be approached with great caution.

A fairly large coconut crab was taken here.

No snakes were seen.

Dr. Robert C. Murphy,
New York City.

Dear Doctor Murphy:

I enclose my notes of the expedition work up to date and am sending under separate cover a few color sketches of bird parts. I hope that you will find it all of some value.

I rather expected a letter by this steamer and maybe will get one yet. We arrived here at 3:30 p.m. yesterday and the mail steamer Metaram about two hours later. Unfortunately our mail was not forwarded from Tulagi and the two new men sent out also disembarked at Tulagi, undoubtedly acting on local advice that it would be their best chance to meet the France. Beck received the cablegram, in regard to their coming, yesterday, and we got some mail which had been left by the last steamer, the first mail in three months. Have hopes of getting both the men and the mail here by a cutter which is supposed to be sailing from Tulagi in a few days.

I think I can report a considerable improvement in the condition of my legs. As you will note from my journal I have been ashore on all the islands touched since leaving Tulagi, and managed to make the camping trip at Maringe Lagoon, although it was something of an effort after so much confinement. Otherwise, I have kept quite fit and so far have escaped the malaria which seems to bother every one else at times.

I wish that I could do more color work as I regard this sort of data as very valuable since no two men are apt to describe a color alike, while the sketch furnishes a definite and permanent record. Unfortunately there seems to be little time for it and what I have done has been accomplished with considerable difficulty. I think that I am getting notes into a little better shape but they will stand improvement and I am by no means satisfied.

I shall not say anything about our adventurings during the last three or four months as you will have my journal for reference. As to future movements I believe we are to work the islands near here, the Shortland Group, Kulambangra, New Georgia, Choiseul and many smaller, outlying islands.

I wish you to feel that I am doing my best under existing conditions and no one regrets more than myself that I am unable to send on more elaborate contributions.

Hoping that this finds you and yours well, and with best regards to Dr. Sanford and Dr. Chapman, I remain, with best wishes,

Very sincerely yours,

Frederick P. Drowne

The weather was warm; temperature in the cabin was 90.

September 15th. We remained at anchorage until 4 p. m. when we set out for Gizo. Beck made two trips out after terns, which are common on small islets close by. He brought in specimens of four species, referred to in our list as red-billed, white-cap, gray-backed and lesser noddy. No new land birds were seen. I was busy all day preparing birds.

September 16th. A pleasant morning but the wind was light. Choiseul, New Georgia and Kulambangra were all plainly visible at daybreak. We were able to make position in between Kulambangra and New Georgia by dark but the wind did not permit any further progress. We lay off and on here through the night. The captain saw a large steamer pass during the early morning but was not certain that it was the Metaram, although this is due here at this time.

September 17th. At about the same point as last evening. Wind very light. We started the engine at 10 a. m. and crossed Kula Gulf, entering the Blackett Strait between Kulambangra and Arundel Islands with Wana Wana west of Arundel. Many very small and picturesque islands on the way, and on the southern shores of Kulambangra several very nicely arranged plantations.

We came to anchor off Gizo at 3.30 p. m., and soon after Beck and I went ashore after mail and to call upon the D. O., Capt. Barley, who gave us a very pleasant reception. He had already heard much of the 'France'

and the expedition. We secured the mail which had been left by previous steamer.

The Metaram arrived about two hours after ourselves.

September 18th. We had great expectations of receiving mail from this steamer, but on looking the matter up Beck found that he had given the postmaster at Tulagi instructions to forward mail only until Sept. 1st, so it is held in Tulagi. A cable received tells of two new men sent out to arrive in Tulagi on the 7th. From information gained on steamer they are at present in Tulagi having been advised that they were more likely to meet the 'France' there. It certainly is unfortunate, as they and the mail could have reached us so nicely by this steamer.

I have been aboard all day writing. Gizo is a very pretty spot, situated on the southeast side of the island of Gizo, which is about eight miles long. A large area at anchorage is planted with coconuts. There are two stores, B. P. & Co. and Green's, and several residences. That of the D. O. is situated on the top of a hill and commands a beautiful view of the ocean and neighboring islands on both sides. The high volcanic peak of Kulambangra rises majestically to the east and the whole water about is dotted with small islands and islets, several of which are entirely planted in coconuts. The European population of Gizo is small, probably about ten, but there are many white visitors from adjacent

islands.

The Metaram left today at noon but makes a return stop for mail after a couple of days.

September 19th - 20th. At anchor in Gizo harbor, taking on stores. It took a large part of the day to type copy of my notes for transmission, and write a few letters. On Monday evening all of attended a party given at Mr. Green's home in honor of a young lady who was leaving by this steamer for Sydney. On Tuesday afternoon the Miro 2nd, used by Lever Bros.' physician, Dr. Pinching, in making his frequent rounds to the various plantations owned by this company, came to anchor near us and I spent the evening and night aboard in response to an invitation received from the doctor whom I have met several times. He gave me an intramuscular dose of Sulph-Arsenol which he prefers to Antimony in treating tropical ulcer. As my case is so much improved, I thought it might add a finishing touch. I am also to try a special ointment which he has found of great value.

The Miro has a small generator and storage battery, such as is used on motor cars, attached to the engine and with four hours of running of engine enough current is stored to last ten days with the ordinary use of the several lights aboard. The battery I believe is 14 volt and the ordinary lights are 25 candle power, although the doctor employs stronger lights on occasion. The whole outfit cost him less than ten pounds and the upkeep is very little.

September 21st. The Metaram came and left again this morning. The Malanta, B. P. & Co. supply and cargo ship, is also in as well as numerous small craft from nearby islands.

In the afternoon we steamed over to Ariel Cove on west side of Kulambangra and anchored inside the cove near a deserted and very much neglected coconut plantation, owned by Mr. Norman Weakley. There are a few houses here in a state of general ruin. One of them contained a life buoy, in good state of preservation, bearing the name "Montauk, N. Y. " It is salvage from the five masted schooner Montauk which was lost on a reef in trying to pass Manning Straits a few years ago. I believe the crew all got off safely but the vessel and its cargo of lumber was a total loss.

Kulambangra, or Duki Island, is nearly circular in shape, about fifteen miles in diameter, and the slopes rise in a gradual gradient for perhaps 2,000 feet and then much more abruptly to the high volcanic peak some 5,000 feet above sea level. It is densely wooded, has several rivers, and extensive growth of mangrove on some of the flat, swampy areas near shore.

September 22. Went ashore early with two of the crew in addition to the usual shore party, Beck, Hicks and myself. There are few natives on Kulambangra and all of these live in coast villages, so there are no open trails to the top although we have heard of two whites who have made the trip in years past.

Progress up was quite slow, as it was necessary to do some extensive trail-cutting, also, on the route picked out today, there were several small rivers to wade and considerable bog. There was evidence of previous trails and at one point, a considerable distance from shore, we found three temporary native shelters, evidently used by a small party in an expedition after Nygnali nuts, with the broken shells of which the dirt floors were littered.

There are many tall trees and the ground underneath is covered with a growth of ferns, shrubs, reeds and vines, the growth varying in density and being not too bad in many places.

Birds are quite plentiful and prospects seem good for making some very interesting finds here. Today we secured both a large and small graybird, both perhaps showing minor differences in measurements. The black-head and black fantail are both new but the small red fantail seems the same. The "longtail" is common here and different. It seems strange that the hornbill does not occur here also as one at least of its favorite foods the nygnali nut, is plentiful. And another rather surprising thing is to find the wagtail common both here and at Gizo although not seen on several islands between here and Ysabel, as noted in my journal. The little river kingfishers were noticed as we entered the mouth of a small river in making our landing so we hope to obtain a few of them here. The thickhead has a different song, similar in general character but with marked

variations. The bird itself is also somewhat different. We heard the blue-backed kingfisher several times in the forest, also the cuckoo and kekow. Cut trail up a considerable distance and got back to the schooner just before dark.

September 23rd. Beck and the same shore party continued the trail making, employing a different entrance which avoids the constant crossing of streams and appears to be somewhat shorter. I explored a portion of shore area in and to the rear of planted area of nuts, the latter being rapidly taken possession of by a tangled growth of bush. Progress very far on this part of the island was barred by swamp and mangrove. Mosquitoes were extremely abundant.

Both the ground dove and long-tailed dove appeared to be quite common. The long tailed dove at least twice from the ground, as I have on other occasions, so part of the time at least it must be a ground feeder.

The yellow honeysucker was very common, apparently the same bird as elsewhere. The black-headed species of which I saw only one pair today, is again strikingly different, the one which I collected, a male, having a red throat and a bright red rump.

The gray-back shrike was quite common but seems to be the same as elsewhere. Found the small chestnut fantail here at shore level but not at all common. The wagtail is very common and also very tame. I heard the white-headed kingfisher along the shore and secured one of the small form of "land" kingfishers, the only one

seen. The cockatoo has a different call here but does not seem at all common and so far none have been seen at close range. Heard the megapode often and also a gallinule. The large plover were not uncommon along shore and I saw several herons and one white-headed hawk. Starlings were very plentiful.

Beck's party brought back a flycatcher, the red-bellied but in new dress, a marked and very beautiful change. Also a pigmy parrot which seems to be somewhat different.

September 24th. Hicks and I went up the trail and collected until the middle of the afternoon. Birds were quite plentiful but in "pockets", sometimes the forest seeming very silent and perhaps a little farther on several species being seen and heard at one time. The small brown fantail seemed quite common, both low down in scrub and high up in trees. The black fantail is apparently much less abundant. Both species required persistent search and calling to either see or secure. The yellow honeysucker does not seem to be at all common in the forest and I did not see many of the red-rump species. A female of the latter which I secured lacks the red rump but has the red on the throat. The new flycatcher does not appear to be very common although occasionally seen. It seems to prefer to stay rather high up in the trees, does not come readily to calling and may therefore easily escape observation. I secured one small flycatcher, similar in general coloring

to the ashy-headed flycatcher, but much smaller. It was shot at long range in the tree tops. I saw the black-head several times. The large graybird does not seem to be uncommon. One of those which I shot was being annoyed by several white-eyes, the noise of their chattering attracting my attention. The white-eye is common, a different species here. Its legs are a marked yellow. I saw several small graybirds but only secured one of several shot. It has a yellow iris but barring is confined to under wing coverts. The thickhead seems to be common but is far more often heard than seen.

Small lizards of several species very plentiful both at shore level and high up in the forest. I have not seen the monitor lizard but Beck reports seeing one at the shore. So far, have not seen any of the black lizards. Crocodiles are not uncommon here. Insects are plentiful but I have not seen many of the large butterflies.

Natives are very few and very much missionized. We have had several visitors from a nearby shore village who had very little to offer for barter. They all make some attempt at clothes, and all seem converts of the Seventh Day Adventist church which has a mission station near here. Most of them are quite black in color, well featured and quite intelligent. The original population of Kulambangra was killed off some time ago by headhunters from other islands.

We heard of another murder, while at Gizo, which

occurred very recently at a plantation in Manning Strait at the north of Ysabel. A white overseer was hacked to pieces with an axe following an argument which he had with one of his labor boys. Have not heard all the details but apparently it was in retaliation for grievances which the natives felt they had suffered at the hands of the overseer. I believe this is the first murder of a white man at the hands of a native in something like three years.

September 25th. Sunday. I spent the day aboard, occupied most of the time with water color sketches and typing.

September 26th. Went ashore early. Beck took Hicks with him to establish a camp in the hills and collect from there higher up, as distance from shore is too great to permit of making the trip and return each day.

I collected in to about as far as trail had been made and had a very interesting day. I found the blackhead and brown fantails quite plentiful and secured a small series of each. I also got the new flycatcher in several plumages. The young blackhead differs materially in plumage and I was fortunate enough to secure specimens showing this immature plumage. The white-eye is common all the way from the shore up. The brown fantail is also quite common near shore but I think more common as one gets up in the hills. The black fantail occurs near shore and so does the blackhead but neither is at all

common except as one climbs up into the forest. The same may be said of the flycatcher although the little black-headed flycatcher seems to be more common near shore. I do not recall seeing the yellow honeysucker except near shore, although it probably occurs higher up. The red rump honeysucker, as we are calling the new species here, occurs all the way along in the forest. Cockatoos seem to be uncommon and very wary. The pigmy parrot is quite often heard but seldom seen. I got a specimen of both the large and yellow eye graybird. Both species are very quiet in their habits and may easily escape detection. Neither appears to be very common. Megapodes are quite common. I heard the small blue-backed kingfisher several times but did not see any. The longtail is quite common. The thickhead does not seem to get close to shore but is quite common as one climbs up in the forest. Neither saw or heard the shrike after getting away from the vicinity of the shore.

September 27th. Had some birds to prepare, left from yesterday's collecting, and got rather a late start. Landed on the south side of the cove, where there are a few coconuts but no remains of buildings. After a time spent in swampy mangrove area, of which this side of the cove consists, it being just a neck of land extending out peninsula fashion from main body of island, I finally found an old native track which led around the shore, through the edge of the forest, to the south. An

extensive forest, but birds, particularly small birds, not at all common except white-eyes and yellow honeysuckers.

I should mention that on first landing on this shore, just in the rear of a fringe of coconut trees, in the mangroves and some other low trees, I found the red-rump honeysucker very common. Also secured there the brown fantail, small black-headed flycatcher, shrike, and noted many white-eyes and yellow honeysuckers. I did not see even one wagtail while on the northern side of the cove, only perhaps 200 yards distant, wagtails were very plentiful but in several hours collecting I only saw one pair of red-rump honeysuckers. Conditions on both sides of the cove are much the same except that there are perhaps a few more coconut palms on the north side.

In the forest I saw both the red-knob and white tailed pigeon, the former being common. The mina was very common also the blue-headed paroquet, but all kept to the tops of very tall trees. Heard very few flycatchers and only saw one which I secured. The brown fantail and black-head were not uncommon.

Bird life was not nearly so plentiful as at higher levels further from shore.

I found a few small land snails on leaves of a shrub, growing some 4 to 10 feet high, and collected specimens of several species.

Insects appear to be abundant on this island

and I note an apparently large number of species of butterflies, mostly of rather small size but some very beautiful.

Stomachs of three large graybirds which I examined contained entirely insect matter, small coleoptera and what appeared to be remains of grasshoppers and katydids, or something similar to the latter.

September 28th. We were ashore early and up the trail again. It rained in drenching showers all day long which made collecting very difficult and at times impossible. Found no new birds but added some to series of the more rare species. The mina is common all through the forest from shore to high levels and seems to prefer to stay in the tops of very tall trees.

One has great difficulty here in keeping birds in condition on days subject to these soaking rains. Today I had to change the paper wrapping several times although the material of my shooting coat is fairly heavy. It is necessary also to carry cartridges in tin cans for some of these spoil entirely as soon as wet, while others with heavier casings have to be "peeled" after a wetting in order to fit them into the gun.

September 29th. Ashore early and up the trail. Threatened rain in the morning but showers did not start until afternoon. Birds, however, must have been affected by the weather conditions as they were very scarce indeed. I noticed more red parrots than usual, feeding in

flocks on bloom in the tops of very tall trees. I shot one for identification, but it was the same as on other islands.

I secured what I think is a new species of hawk, i. e., new for our collection. I found it in a tree some two miles inland, rather a large hawk and a very beautiful one, blackish head, back and tail with white underparts, very faintly barred. Its stomach contained what appeared to be fur of an entirely digested rat.

Accipiter meyerianus

A snake was secured today nearly three feet long, of about the same build as our milk snake, and sort of a dirty cream color. It is the first snake seen by any of our party on this island, so I judge them to be scarce as we have done a lot of travelling here. Unfortunately, it got lost on my return trip through the paper wrapping getting wet and permitting its escape through a hole in the pocket of my shooting coat. We have only seen a few monitor lizards here although one of these I think is the largest I have seen anywhere.

I try to mention the presence, or apparent absence, of snakes, lizards and iguanas on each island and their relative abundance, as in the general summing up of the whole situation this may have a bearing on the bird life, since all three have a potential power at least of destroying both birds, their young and eggs.

Rain kept up all afternoon and was extra heavy during the evening.

Dear Dr. Murphy:

We have been here two days, meeting the mail steamer at this point, and so far I have not been off the ship, writing letters and typing notes keeping me busy from morning until night. Even so I fear that I shall not be able to type my journal any further than Ganonga Island in time to permit getting it on the steamer which is due to leave tomorrow morning.

I was very much pleased to receive your letter and to know that what I am accomplishing seems worth while. Through all the discomforts of the trip, both physical and mental, the thought has ever been present that could I produce results of some value to the Museum, my personal troubles were not so great but what I could bear them, and in work I have often found my only solace. No time is granted here for note taking and what I have done in that line, and in color work, has been accomplished only with considerable difficulty. Formerly, when we had some time at sea, there were idle periods which could be used for either complete rest or writing. For several months now our time at sea has been practically nil and work on shore very intensive. Often it is after nine or ten o'clock before getting away from the preparation table and as the arising hour is 6 a. m. it makes a long day. There is seldom any variation on Saturdays, and Sunday is all too short to permit of letters, journal, photography,

watercolors, preparation of special specimens, as snails, etc., and taking care of personal effects. However, I am doing the best I can. I could do much better I think had I the time.

Richards and Hamlin are a Godsend to me. I like them both very much indeed and they are catching on rapidly. I think their presence has produced a different atmosphere aboard and I hope this may continue to improve. In crowded quarters and subject to the many trials and discomforts of such a trip, a spirit of camaraderie does much to offset all petty annoyances and their presence makes this possible. I don't think there is any question but what they will add greatly to the "general morale" in addition to becoming efficient field workers.

It won't be necessary to mention details of the Expedition in this letter as you get all that from my journal. I expect our next port of call for mail will be Faisi. All these islands are proving extremely interesting both as to distribution and changes in bird life and of late I seem to be picking up more miscellaneous material. There is a woeful lack of vials and small bottles. I would appreciate it if some could be sent out, homeopathic vials two to eight drachm, and small, wide mouth bottles up to six ounces, mostly one, two and four ounce. We have run out of formalin and I guess will have to use methyl spirit for a while as it is the only thing available. It also would be a good idea to send out some numbered zinc or other label for use in tank as the small

cardboard ones now in use are very unsatisfactory.

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I am sending in this mail some more color sketches. Perishable colors I try to reproduce with care but am not so particular about feathered parts as you have the specimens and I just wash in enough to indicate the color and give me the benefit of the contrast. I am very pleased that you find them so interesting.

As regards my salary credit it can start from the beginning which I believe was October 15, 1926. What expense I incur out here I can take care of at this end for the present, and I will draw on the salary account as I need it.

The left leg has been free from bandage for more than a week and my right leg has improved a lot although still has to have a daily dressing. As you will see from my journal I have been fairly active and you can imagine perhaps what a relief it is not to be so crippled up.

I enclose a short article, containing some notes on habits of birds as observed at Tulagi, which I hope you may think of enough interest to publish in the Museum journal.

Your letter was an excellent tonic and busy as I know you are, I hope you may find the opportunity to repeat the dose at somewhat more frequent intervals. You would if you knew how much better it made me feel. I wish to take this opportunity of extending to you and your family, and to Drs. Sanford and

Chapman, my best wishes for a Merry Christmas and a very Happy New Year.

Trusting this will find you all in the best of health, I remain,

Very sincerely yours,

Frederick P. Drowne

Dr. Robert C. Murphy,
New York City.

September 30th. The day was spent on the north side of the cove, going in along an old trail which finally wound up in an immense swamp. Birds were not very plentiful but it was a cloudy day with heavy showers in the afternoon. I did not see any ground doves and only one long-tailed dove, although both seemed common here on a previous visit. Wagtails and yellow honeysuckers were common but did not see any of the red rumped honeysucker. Starlings were very abundant and I shot one, an adult female, which had a square tail, i. e., minus the long outer tail feathers. This may be some peculiar phase of plumage as all starlings, even in young plumage, seem to have the long outer feathers. I carefully looked over several dozen other birds at close range but did not see another similar tail. The starlings are very plentiful, both near shore and higher up in the forest, seeming to congregate in large flocks in spots, although occasionally lone birds are encountered. I shot one white cockatoo which seems to be the same as elsewhere although its call here is different. They are not common at any point near this anchorage, although some are seen every day.

I saw the brown fantail several times. Both the small swift and swallow are common. The latter often fly about the ship and perch in the lower rigging. The megapode is quite common although not nearly so plentiful as on many other islands.

I have seen very few monitor lizards here and no iguanas.

Land snails were very plentiful today in certain spots, perhaps due to the excessive dampness. I collected several hundred of several different species from the leaves and stalks of shrubs and the trunks of small trees in the swamp.

October 1st. Went ashore on the south side of the cove and followed an old trail which led through the fringe of coconuts and into a large mangrove swamp where there many tall trees. The going was very bad but collecting in the swamp was good. I found here the yellow-eyed gray bird, brown fantail, both the small black-headed and the new bald flycatcher, the blackhead, red-rumped and yellow honeysucker and the white-eye. Shot one gray pigeon and saw one white-tailed and heard several of the red-knob pigeons. Saw the white-headed hawk on two occasions and yesterday saw an osprey fishing. Saw the white-headed hawk on two occasions on this side of the cove but by no means so abundant as on the north side.

The blackhead seemed common in this swamp, fully as common as I have found it higher up in the forest. The thickhead however, seems to prefer to stay well up in the forest and I have only heard it anywhere near shore on rare occasions. While the blackhead, both fantails and the flycatchers are encountered often in low trees and bush they spend a large part of their time

here in the tops of high trees.

The large plover and sandpipers are common on the reefs at low tide and I have seen a few curlew, reef herons and the small green heron. Kingfishers do not seem at all plentiful here.

About noon Beck came back from the camp with some very interesting birds. The same highly colored pigmy parrot as taken at high levels at Guadalcanal, is here also. Two new kingfishers, one highly colored small chap with red bill and salmon feet, the other a large species similar to one taken at camp at Guadalcanal. The thrush and the little red-breast are here at high levels and a white-eye different from the common form. *murphy* It has more white in the ring around the eye, gray instead of yellow feet and a somewhat larger, differently shaped bill with the lower mandible half yellow. The yellow-bibbed dove is quite common at 2000 feet and the white-throated pigeon also occurs there.

Beck brought back several small frogs and reported seeing one snake high up in a tree. So in ten days time only two snakes have been seen by any of our party, with many ashore and much travel in different directions. Hawks also do not seem nearly as common here as at most of the islands lately visited.

Late in the afternoon, just before dark, there was a flight of some 30 to 40 long-tailed swifts which circled about the fringe of coconuts on the north shore of the cove, busily engaged in catching some insects

which to me were invisible. These are the first long-tailed swifts I have seen here and their sudden appearance in numbers makes me think that they were following some flight of small insects.

October 2d. Sunday. Spent in the usual fashion with time divided between writing and typing, developing film and making water color sketches.

October 3d.-8. I landed on the morning of the 3rd, with two of our native crew, to spend the week in camp on the mountain, while the 'France' proceeded to Gizo to take on a few stores and connect with the two new members, should they have been able to get transportation to Gizo. The morning was bright and it looked as though we might expect a week of better weather on Kulambangra. This hope was soon dashed as it commenced to rain before noon and rained in torrents from then until midnight of the following day. The trail to the camp is long, perhaps nine miles, the grade is fairly easy but for a considerable part of the distance pig trails have been taken advantage of and it winds over trunks of fallen trees, the spreading roots of giants of the forest, and through tangles of fern and reeds.

We left the shore at 8:30 a. m. and arrived at camp at 4.30 p. m., of course, soaking wet. A quart bottle of kerosene which I had put in the back of my shooting coat at the last minute before departure, since there seemed no other place for it, had leaked on the

way up and on taking it out I found that only about two ounces remained. This was rather discouraging, since wood that will burn is very scarce in the vicinity of the camp and the kerosene is extremely valuable as a starter. There was no wood in the camp and one of the boys had to back trail for some and after much coaxing and the employment of a little bacon fat we got enough of a fire to make some tea.

Our stay in camp was decidedly wet. It rained steadily all day Tuesday, in severe showers on Wednesday, was cloudy with slight showers on Thursday, showers Friday morning and almost continual rain in the afternoon. On our way out on Saturday it commenced to rain about 10. a. m. and rained in torrents until 3.30 p.m. at which time I made the shore. Then, as if the rain god was pacified by our withdrawal from the mountain, the rain ceased and the sun smiled upon us once more.

Naturally, the amount of rainfall greatly hampered the work and undoubtedly affected the bird life so that not nearly so many were seen as might have been under better weather conditions. The few times that we had any sunshine, the forest seemed to wake up and we had some bird music as a change from the rather dismal chirping of frogs.

The camp is situated beside a small stream at 2000 feet altitude. To the east there is an abrupt rise of 500 feet to the top of a ridge which climbs

way up and on taking it out I found that only about two
cannon remained. This was rather interesting. Since
wood that will burn is very scarce in the vicinity of
the camp and the remnants are extremely valuable as a
fuel. There was no wood in the camp and one of the
boys had to back trail for wood and after much searching
and the employment of a little bacon fat we got enough
of a fire to make some tea.

Our stay in camp was decidedly well. It rained
heavily all day Tuesday, in severe showers on Wednesday
was cloudy with slight showers on Thursday, however
Friday morning and almost continual rain in the after-
noon. On our way out on Saturday it commenced to rain
about 10. a. m. and rained in torrents until 5.30 p.m.
at which time I made the shore. Then, as if the rain
had been pacified by our withdrawal from the mountain.
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so that not nearly so many were seen as might have been
under better weather conditions. The few times that we
had any sunshine, the forest seemed to wake up and we
had some bird music as a change from the wailing of the
howling at night.

The camp is situated in a well known
1000 feet altitude. The best there is an altitude
line of 500 feet to the top of a little water divide

gradually upward to the top of the mountain, a little more than 5000 feet.

I was on the ridge Wednesday, Thursday and Friday and reached about 3500 feet, which was all I could do and make camp again in time to prepare birds, as neither of the boys with me could help any with the birds. Both boys, however, hunted more or less, but the combined efforts of the whole party only resulted in about thirty birds, many of which could have been obtained at lower levels.

I was very desirous of getting a sight of the thrush and redbreast which occur probably only at higher levels but did not see either. The new white-eye, gray legs, did not seem to be present on the ridge. At least, I looked over several dozen white-eyes and they were all the yellow leg species which occurs all the way from the shore up. Thickheads were very common and also the red-rump honeysucker. I did not see any of the yellow honeysuckers during my stay. Graybirds were not at all common on the ridge but more common just below the camp. Blackheads were very plentiful indeed and I saw and obtained several of the bald fly-catcher. I heard the kingfishers each day but only a few individuals and did not get a look at any of them. The mina seemed to be absent on the high land above camp. The yellow-bib dove was quite common, the red cap dove perhaps less so, and I saw only one of the white-throated pigeon but heard three or four others. The

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more than 5000 feet.
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the thrush and redbreasted robin about probably only at
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they were all the yellow leg species which occurs all
the way from the shore up. Thickbills were very com-
mon and also the red-wing blackbird. I did not see any
of the yellow throats, but they were common.
There was at all common on the ridge but were common
just below the camp. Blackbirds were very plentiful.
Indeed and I saw and obtained several of the pale blue
sunder. I heard the kingbirds each day but only a
few individuals and the got a look at one of them.
The blue seemed to be absent on the ridge and above
camp. The yellowish dove was quite common, the red eye
dove perhaps less so, and I saw only one of the white-
throated pigeon but heard three or four others. The

red-knob pigeon was present but not so common. The brown fantail is quite common all the way up the ridge.

I heard the megapode a few times but it seemed scarce at this altitude. The little black-headed flycatcher occurs and probably both species of pigmy parrot, the latter as usual far more often heard than seen. I did not see any on the ridge and do not think they can be as common there as at somewhat lower levels. Both the blue-headed and small green paroquet occur and I heard an occasional cockatoo. The red parrot was not uncommon. The longtails was quite common and I secured several along the trail. All stomachs of longtails which I examined contained insect matter, the remains of grasshoppers being especially noticeable. While the longtail can fly well enough, it seems to like to climb about in the trees using both bill and feet in the process. Often it climbs all the way from the ground, making its way to tree branches by means of hanging vines. It can run rapidly, but often progresses on the ground by a series of awkward hops much the same as the hornbill.

On the way out I saw the ashy-headed flycatcher and the black fantail a short distance below camp, neither of which I found on the ridge although they may of course occur.

Insects did not seem very abundant, although at night there was quite a chorus of insect voices. I did not see many butterflies and very few of large

red-bellied pigeon was present but not so common. The
green fantail is quite common all the way up the river.
I heard the meow of a few times but it seems
scarce at this altitude. The little black-headed fly-
catcher occurs and probably with species of grey parrot
the latter an usual but more often heard than seen.
I did not see any on the river and do not think they
can be as common there as at somewhat lower levels.
Both the blue-headed and small green parrot occur
and I heard an occasional scold. The red parrot
was not uncommon. The laughing was quite common and
I counted several along the trail. All specimens of
laughing which I examined contained insect matter. The
remains of grasshoppers being especially noticeable.
While the laughing can fly well enough, it seems to like
to climb about in the trees being both still and fast
in the process. Often it alights all the way from the
ground, making the way to trees branches by means of
hanging vines. It can run rapidly, but often, especially
on the ground by a series of awkward hops with the arms
and the hind legs.

On the way out I saw the black-headed flycatcher
and the black fantail a short distance below camp, neither
of which I found on the river although they are of course
common.

Laurels did not seem very abundant, although
at night there was quite a chorus of insect voices.
I did not see any butterflies and very few of large

size. Most probably the weather conditions affected the number of insects seen even more than the birds.

Small lizards did not seem to be very plentiful at this altitude. I saw two snakes of the same species, long, slender, very active chaps, the back a dark olive green and the under part of throat a bright yellow which color extended back perhaps six inches to merge into a light olive green. The larger of the two seen I succeeded in keeping by making small incisions which I filled with arsenic and alum. The specimen seemed to be in very good shape on my return when it was put in the formalin tank. Frogs were plentiful, seldom seen but heard all the time, more especially at night. They commenced their evening chorus just at dark and continued it until after midnight when it would die out gradually and by 3 a. m. practically cease.

I think there were rats about the camp. None were seen but I found what appeared to be rat tracks on several occasions. Also, a barred graybird which I shot on the way up and placed on newspaper on the floor of the camp to dry, disappeared in the night. It was very close to my head and I think that the presence of any larger animal would have awakened me. One of the boys saw an opossum.

On Saturday, the 8th we left the camp for the return trip. The long-tail skins were quite a proposition to carry. I finally folded legs and tail over the abdomen, wrapped them well in newspaper and rewrapped

the whole package in a large wild taro leaf. They reached the schooner in good condition in spite of the severe drenching on the way down. The smaller birds were in a flour tin, safe from the rain.

I reached the shore at about 3.30 p. m. and the 'France' was just making her entrance through the reefs to Ariel Cove. Unfortunately, the new members had failed to arrive although a small steamer, belonging to Lever Bros., came into Gizo from Tulagi this week.

Some collecting was done on Gizo, the only new birds added to the list being still another variety of white-eye, with bill all yellow, and a cuckatoo.

October 9th. Sunday. I spent the day in the usual manner, writing typing and colors. Some of the natives from ^anear by village came aboard and amongst other things brought three live ground doves which they had caught during the past week in some sort of trap of their own design. They have visited us only about once a week and have very little to offer for barter. All of them wear some sort of European garment, either singlet and shorts or at least one of these. Several of their women have been aboard, all wearing complete calico dresses. They are all very much missionized, very few of them smoke, this I believe being taboo by the Seventh Day Adventist mission, and in general conduct themselves as if they were very much above the status of the ordinary native and certainly equal if

not a little superior to the white race.

October 10th-14th. Beck went up to camp on the 10th taking Hicks and David with him and planning to spend the week. On the 11th Richards and Hamlin arrived aboard having made the trip from Tulagi in the little cutter, Awa, owned by Choiseul Bay Co. and operated by Capt. William Tate. They certainly were welcome as was the mail which they brought with them.

On the next and succeeding days Richards, Hamlin and I collected in mangrove swamps near shore and on the trail, birds being scarce and weather conditions none too good although much better than the previous weeks.

I can add but little to what I have already written about Kulambangra. One yellow-eye graybird which I prepared contained an egg ready for laying. It had been broken by shot but I was able to preserve it in fair condition and it may prove to be the only one so far taken. More stomachs of longtails which I examined contained insects, from small coleoptera up to large leaf insects. There were few coleoptera, the birds seeming to prefer grasshoppers or kindred insects. Stomachs of graybirds all contained insects.

Small lizards are quite common all the way from shore up but the monitor lizard seems very uncommon and no true iguanas were seen. No more snakes were seen, so the total number observed all during our stay was four, of which only one was preserved.

Land snails were fairly common in spots near shore, especially in swamps, but I did not find any higher up although on several occasions I made rather a careful search. Insects were quite plentiful but I had no opportunity to use a net and amount of collecting done was very meagre.

Beck returned on the 14th having obtained more specimens of all species which he noted on first trip to camp with the exception of the thrush and little kingfisher. No new additions were made to list of birds.

The rainfall on this island is very heavy all the time and I understand from information gained locally that the same condition prevails at Choiseul. During our stay it has rained some part of every day, and on many occasions it has rained all day.

Beck agreed with me on his return from this second trip to camp that there were rats there. None were seen but he also found their tracks and they devoured parts of a couple of birds.

October 15th. A little blue kingfisher had been seen on several occasions when our long boat entered the mouth of the river at Ariel Cove, but it is practically impossible to hunt such birds from this boat with several in it. Beck, on his return from camp, went in with the dinghy and secured three little kingfishers, two of different species and possibly all three. These specimens are 28639, 28640 and 28641, all of which I had made color drawings of. Specimen 28406, of which I also made

a sketch, was obtained by Hicks at an altitude of 2000 feet. I examined the stomachs of these kingfishers. Two were empty and the other, 28640, contained small fish. These little kingfishers dart rapidly up and down stream to disappear in the bush or dark recesses in the mangrove swamps. They are very wary and I have not heard them calling as yet. One of those secured today was a female with well developed ova, ready for laying in three or four days.

About noon we steamed out of Ariel Cove and spent the afternoon between there and Gizo, on the watch for seabirds, especially shearwaters, but were unable to secure any.

We anchored at Sandfly Cove on S. W. side of Kulambangra about 6 p. m. A small cove with surrounding bush extending to the water's edge. One solitary native was present in a very small dugout canoe and acted as pilot to guide the 'France' in through the outlying shoals.

I typed a short article on Tulagi birds for transmission to the Museum and in the evening Richards, Hamlin and I had a long and very interesting talk covering many subjects, general science, travel, etc., with a little philosophy mixed in. One needs a fairly large dose of the latter to maintain anything like a normal balance in cruising these islands under such conditions as prevail.

October 16th. Sunday. At anchor in Sandfly harbor, a usual Sunday devoted largely to writing. I was much gratified this morning in seeing one of the large spiders, which shares my berth, shed his skin. I have often found these casts hanging about and wondered whether the spiders shed their out covering once in a while, or whether these were the dried remains of defunct individuals. This spider had nearly finished the shedding process. The old covering was attached by a couple of strands of spider silk to the rack where I keep my toilet articles. The spider had emerged head on and part of the cast was still adherent to posterior abdomen, although all the legs were clear. Every 15 to 20 seconds the spider would give a convulsive twist. I did not hurry the performance which was complete in another half hour. Color on newly emerged spider bright and clean looking, but a trifle more pale than on the cast. The latter preserved all markings, even to tiny dots on the legs.

Some of the natives came aboard, more to visit than anything else although they had a few things to offer for barter. One man brought two more live ground doves which he had caught in a box trap. Several of these natives were very well featured, almost black in color, and seemed quite intelligent. They also possessed quite a keen sense of humor and one session in pidgin English, when Richards was endeavoring to obtain a small, basket-weave shield for either a gaudy finger ring

or necklace, was most amusing, the natives seeing the point of several jokes about the proposed exchange and making some clever repartee.

Pleasant all day, quite warm, a quiet anchorage and not bothered with mosquitoes or sand flies although ordinary flies are quite a nuisance on ship and have been ever since we entered the western Solomons. Prior to that we were not troubled much with flies except when anchored near a plantation where there were cattle.

Among other things accomplished today we repaired the gramophone belonging to our engineer, which suffered a complete fracture of its main spring several days ago. It took some time, owing to lack of proper tools and material, but by much perseverance we finally effected a cure, and since it is the only canned music aboard it was much missed in the evenings.

October 17th. Ashore early to do two hours collecting and then stand out to sea again after shearwaters. Several rivers enter the sea either at or near Sandfly Cove, the country is level, well covered with both low and high trees, and not too much undergrowth. There is quite a carpet of ferns in the forest. Birds are plentiful. Minas were calling from many trees, cockatoos seemed more common than at previous anchorage, and I saw several of the large green parrots. Heard several longtails and saw two white-headed hawks of which

one was obtained. The ground dove appeared to be quite common. Of smaller birds I noticed both the brown and black fantail, the little black-headed flycatcher, the bald flycatcher, both red rump and yellow honeysuckers, the graybird and starling. The latter were very plentiful. Many of them were nesting in the top of a very tall tree which stood in the middle of a native clearing near shore, the only live tree left. Their nests, rather bulky and coarse structures, perhaps as large as a four quart measure, were placed close together near outer ends of some of the lower branches. I noted a gray-back shrike in this tree also. On the rivers the same three species of little kingfishers, as obtained at Ariel Cove, were taken. I made color sketches of two of them as colors seemed to be a little different, specimens 28655 and 28665. The stomach of 28655 contained a crab about one and one-half inches across carapace, and that of 28665 contained partly digested fish. Of stomachs of three "little blue" kingfishers examined, two were empty and one contained partly digested fish. The stomach of a white-headed kingfisher which I examined today contained crab, the first time I have found anything except fish in a stomach of this species.

Six species of kingfisher were taken this morning, the three small river varieties, the white-headed, and the small and large species so often met

with on most of the islands. In a conversation with the native who owned most of the land on which we were collecting, he said the little river kingfishers were fairly common here, especially the "little blue" (28641), and the red-billed (28655). He said they dig holes in bank of river in which they "stop along night for sleep and raise pickaninny." He also remarked that bird life was much more plentiful in the level country between the rivers than on the slopes near our former anchorage at Ariel Cove. From what I saw this morning I am inclined to agree with him.

Hicks reported seeing near the shore the "white pigeon" (white-headed, I think, from his description), the same as obtained at 2,000 feet at Ariel Cove.

We did not get started out to sea until after lunch. The weather was quite warm, water very calm, and no sea birds close enough to get at, although both terns and shearwaters were seen.

Secured several bunches of bananas from the native who owned our morning hunting grounds. He was a very intelligent native, seemed to take quite a deal of pride in his wife and family of four children, and his estate. He both understood and spoke English fairly well and I conversed with him some time while waiting for a boat to get back to the ship. He had a cheap, long, single barrelled shotgun, with a bolt lock action. Very few of the natives here possess guns

although quite a number are accustomed to their use as they go pigeon hunting for their employers. This native said to me, "You shoot em pigeon too much. You make em scare me. I no can get may be many day. No matter. Plenty pigeon stop here, little pigeon, big pigeon. You stop may be two day and catch em plenty pigeon. Me, I like go along you. I leave wife and pickaninny my house close up, I go along you. We catch plenty pigeon." It was a tempting offer which I was sorry indeed that I could not take advantage of as I expect he knew every bit of the near by country thoroughly.

A flycatcher which I secured today I thought at first a new species. It was the same size as the bald-headedm but had the white on the head confined to a stripe over each eye. It was an adult in breeding condition. On comparing it with others secured on Kulambangra, however, I was rather convinced that it was probably a male which had not reached full plumage. There were not many specimens available for comparison but such as there were made it evident that this particular bird will furnish a wonderful study in plumage variation, both as to age and sex.

No snakes were seen by any of the party. I saw far fewer lizards than at Ariel Cove and no monitor lizards. Insects of all kinds I thought less abundant, particularly butterflies, although it was a very fine

morning.

Few of the natives in Kulambangra show any tatooing and where present it is likely to be their mission given name tatooed on arm. Many of them had a large hole in the lobe of the ear which was greatly enlarged and elongated from wearing heavy earrings or other ear ornaments. None whom I saw wear any now, perhaps due to mission influence. I think I remarked before that mission natives here do not smoke. My friend of today, who lives at his plantation close by where we anchored ("my place he close up, one minute, mission village he may be one hour"), must still be heathen, or perhaps a backslider, as he both smoked and chewed betel nut. At any rate, he was a producer and brought on board several bunches of bananas and quite a lot of potatoes from his place, more than all the mission natives contributed in our three weeks stay at Ariel Cove.

The engine was started late in the day and we tried to reach anchorage at the Methodist Mission on Vella Lavella, but darkness came on too soon to permit it. We lay off Vella for the night.

October 18th. Comparatively short distance from Vella Lavella at daybreak and used the engine to make anchorage near shore at Vaitasoli anchorage on the S. E. end of the island. The Methodist mission

is located here. Dr. Bensley is in charge, who with his wife and a teacher, Miss Barnett, are the only Europeans. There is a Mr. Fuller on a plantation near by whom we also met and who presented us with a large beef and also fresh milk, both very welcome.

There is a pier at this point and a fine road of coral leading up to the house of Mr. Bensley which is well up on the ridge. The church, quite an elaborate structure of entirely native construction, is in the rear of his residence. The whole plant is equipped with electric lights, with current generated by a gas engine and stored in Delco batteries. At least, a sign prominently displayed on the outside of the little power station bore the legend "Delco Products Sold Here." All the walks are beautifully bordered with hibiscus, crotons and other ornamental shrubbery.

At the beach there is a commodious canoe house which contained two very large canoes with highly ornamented prow and stern, both elongated, extending up at least four feet above the body of the canoe. The prow was most highly decorated with white cowry shellstuffs of green feathers, bits of red and at the very top the squat figure of a man with a decidedly Egyptian cast to the features. They possess several small canoes here. Some of the natives wore shorts and singlets but many of them were in calico lava-lavas. They were very taciturn when we first landed and I found it difficult to get

much, if any, information out of them. This was probably some of their mission importance and the fact of our landing with shotguns made them suspicious of our intentions. Later, After Beck had seen Mr. Bensley, who came back to the shore with him, they were quite agreeable and one who showed Richards, Hamlin and me to a lake on the opposite shore was most pleasant helpful.

The island is not high at this point, probably not over 500 feet. It is fairly level on top of the ridge, the trail is good and in spots the forest is quite open. I heard the white-headed kingfisher on the shore, and other kingfishers on a few occasions in the forest. The wagtail was present near village on shore, at Mr. Bensley's residence, and near native shacks on opposite shore, but not at all common. Birds did not seem plentiful in the coconuts although I saw the four usual kinds there, the red parrot, blue-headed paroquet, grayback shrike and yellow honeysucker. In the forest starlings were very common, being mostly confined to one very tall tree in which they were nesting. Minas were also very common. Longtails were much in evidence the same species as at Kulambangra. One of the longtails secured today, a female, has half of one of the tail feathers white. Generally, the tail feathers are entirely black. Possibly, this point may be interesting to investigate as Mr. Bensley says it occurs in certain number of birds, but he did not know its significance. I had not noted

this fact before.

The large green parrot is quite common here, also the white cockatoo. The megapode is much more common than at any place visited by us on Kulambangra. Graybirds were not uncommon but did not see the large graybird at this anchorage. I saw the red-knob pigeon and the common ground dove and heard other doves. The thickhead seemed scarce, at least, I heard it only a few times and did not get any. White-eyes were common along the top of the ridge, a different species with dark yellow bill and light yellow feet. Black fantails were not uncommon but I did not see any of the little brown fantails. Heard the blackhead several times but could entice none by calling. Both the black-headed and bald flycatchers were fairly common. The yellow and red-rump honeysuckers were in the forest and the former near shore.

There is very little fresh water except that formed by heavy rainfall. We encountered no streams in crossing this end of the island to the other shore in a northwesterly direction, and there was only one little pool where guide said we might get water. This must have had some effect on the number and kinds of birds.

The lake was disappointing. I had supposed it to be a fresh-water lake. It was near the opposite shore, at very low level, and the water proved to be very brackish. It is perhaps one-third mile in diameter, circular in shape, and bush extends to its very edge.

There were few birds in the bush, or about it. The guide said that ducks were sometimes seen there and that there were alligators in it. We saw small fish of several species during our short stay. The native name for the lake is "Kola-boli". It is not on the chart.

I saw curlew and several sandpipers on the shore, also reef herons and one small green heron, which I secured.

I got one small snake and Hicks a larger one of probably the same species. This species has small fangs and mine, which I pulled out of a hole in a tree, was very active and struck at my shoe savagely. Mr. Bensley said that the natives were made quite sick by the bite of this snake, having severe vomiting attacks, while they suffered no ill effects from the bites of other snakes. According to our guide, snakes are fairly common here. The natives are all very much afraid of them.

Small lizards of several species were common. I did not see any of the larger lizards. I secured a few land snails of several species from the under surface of banana leaves on the northwest shore, the only ones I saw.

Richards saw two opossums cross the trail on the ridge and the natives say they are very common here.

Beck visited a cave with Mr. Bensley and secured bats of two species, possibly three. One of these, a fairly large bat, with thickset body, has very large ears, out of proportion to the size of the body. I do not recall that we have met this species before.

Insects of all kinds quite common and many large and very handsome butterflies. The weather was very warm and only one slight shower all day.

October 19th. Busy at the preparation bench until about 10 a. m., when the engine was started and we headed over to Canonga Island, where anchor was dropped a little after noon at Kumbakota Anchorage on the northeast end of the island.

"Canonga, or Ronongo Island, is charted about 13 miles in length in a north and south direction, 5 miles in breadth, and is about 2,000 feet in height. With the exception of low land at the northern and southern extremities, the interior is covered by hills, attaining a height of from 1,000 to 2,000 feet."

There are several houses near the beach and a small village with school house and well kept walks a short distance from the shore. The natives were friendly but inclined to be rather taciturn on first acquaintance. Several of them speak quite a little English.

We went ashore collecting in the afternoon, finding birds quite plentiful but inclined to be rather wary.

October 20th - 22nd. We were ashore collecting every day and very busy indeed. The island is covered with Nygnali nut trees and there are trails leading in every direction through the forests, so many as to be very confusing at times. Several small streams make their exit to the ocean along the mile of shore near anchorage. The grade up the mountain is not too steep although the top seems quite a distance.

Birds of some kinds are abundant but most of them seem unusually wary for an island where they can be but little disturbed by man. Giant Nygnali trees cover the island in every direction and the ground is literally carpeted with nuts. The natives here call the nuts "nyg-nari". The larger trees rise straight in the air for perhaps 100 to 150 feet, with no branches until within 40 to 50 feet of the top, when the trunk divides into large limbs heavily clustered with dark green leaves, the arrangement of the foliage somewhat resembling that of our hickory. The trees are often two to three feet in diameter at the base and taper very slowly to the top. The ripe nut is about the same size and shape as a small hen's egg, dark purple, often a blackish purple in color. On cutting through the outer thin covering a lemon-yellow pulp is exposed varying in thickness from $1/4$ to $3/8$ of an inch, fairly firm in consistency when the nut is just ripe but becoming soft after laying on the

ground a short time. Inside the pulp is the nut itself, a three-sided, smooth and very hard shelled affair containing a kernal about the size of an almond and if anything superior to it in quality. The shells are so hard that I have seen natives break the rocks with which they were trying to crack them. Even with a hammer and solid anvil the nut has to be stood on end to open it with any ease at all. The kernals are pleasing to taste when raw and very fine when cooked in butter and salted.

To the Nygnali trees come the pigeons in large numbers, swallowing the fruit whole and digesting the outer covering. Both the gray and red-knob pigeons were very plentiful here, seen mostly in the tops of these trees, where they apparently feed at all times of the day. The natives distinguish between the two pigeons, calling the gray "kóoru-bóra" and the red-knob "koóru-ków", at least that is as near as I could get it. The pigeons make considerable noise in their movements about the tree tops, sometimes breaking off dead branches and often loosening nuts which they fail to get. Their loud calls resound through the forest.

The bald flycatcher is very plentiful here and one of the few birds which responded well to calling and did not seem particularly wary. A good series was obtained of different plumages, a most interesting study in the development of color markings. I should estimate that I saw easily 40 males to one female. I was much

interested to find that the female calls as well as the male, a high pitched, loud and pleasing note, repeated rapidly several times. One of these flycatchers which came to my calling, and answered it several times while within a few feet of my head, was an adult female. They seem to spend most of their time in trees, but come down in the bush on occasion. They are often in small flocks.

Both the yellow and red-rump honey suckers occur here, but neither seems at all plentiful. In the several days, I have seen but very few of either kind.

The white-eye is common all the way from the shore up, but seems to be very wary. They do not respond well to calling, and fly away on the slightest cause for alarm. The series of white-eyes from these different islands will be most interesting, as they seem to be different on all islands, even where the distances between are short.

The wagtail is not at all plentiful at this anchorage, and what few I have noticed are near native habitations or gardens.

The blackhead occurs, but is very shy indeed, a marked change in habits from Kulambangra where they were easily called and seemed to be very plentiful and quite tame. I have seen two or three each day, but only a glimpse when they would disappear, and all my efforts could not call them back. The thickhead stays at higher levels, a different thickhead here. In the three days,

I have only heard one near shore and it was perhaps at an elevation of some 400 feet. Graybirds are very scarce. I have only seen three, two of which I secured. Both of these were taken very near shore. Another which I shot at high up on the ridge, all dark gray as far as I could see, I failed to secure.

The green pigmy parrot occurs, quite frequently heard, but, as usual, seldom seen. The large green parrot is quite common, as is the red parrot and blue-headed paroquet. So far, none of our party has either seen or heard the cockatoo. This is rather remarkable when it is so common elsewhere in the vicinity.

The white-headed kingfisher is quite common along shore, and I have heard another kingfisher several times in the forest, but so far, have not seen it. The beautiful little red-billed kingfisher seems quite common in the forest all the way from the shore up the mountain. Its call is a little tweet-tweet-tweet, repeated very rapidly. The stomachs of several which I examined, contained insects, small beetles and soft insects and a few spiders.

Both the brown and black fantails also occur at all levels, the former probably being the most common.

The common ground dove is rather plentiful. Crop of one which I examined contained nygnali nut kernel, in pieces of uniform size, about half the size of a shelled peanut. They must glean these from places where natives have been cracking nuts, as I cannot conceive of a bird being able to cope with the hard shell of a

there was one bird here which could crack them. I am inclined to believe that this observer was confused by the fact that the pigeons and the hornbill swallow the nygnali nut fruit whole. Both the red-breasted and yellow-bib doves also occur, the latter apparently only well up the mountain.

Starlings are very plentiful in spots, particularly in trees in which they do their communal nesting.

Small swifts and swallows are fairly common, and one long-tailed swift was taken here.

The longtail is very common in the forest, its loud and peculiar calls being heard very often. The megapode also seems quite common. I have not seen many hawks and very few shore birds, a few sandpipers, curlew and a very few of the reef herons. Hamlin said that he saw a brown heron well up in the forest.

I had learned that opossums were common on Vella, but our stay there was too brief to permit of getting any from the natives. On landing here I made inquiry of the natives about the opossum, but had a great deal of difficulty in making them understand what I meant. I dodged all over the pidgin English field, "something all same rat but more big, something all same small dog; four legs; night time walk about, daytime sleep in tree; kai-kai leaf, climb tree and kai-kai mummy apple, kai-kai fruit, maybe kai-kai grass all

same bulla-ma-cow; his mary have pickaninny stop long 271
belly." After a considerable effort I made them understand and then it was easy. They are very plentiful on the island. In the daytime they sleep in hollows and holes in large trees and the natives in hunting them simply climb trees and feel in all the holes, pulling them out alive. I was particularly anxious to get opossums of different colors and the natives assured me that there were different colors of brown, gray, black and white. At night the opossums travel, and, according to the natives, eat almost anything of a vegetable nature, even grasses, but more particularly leaves and fruit of certain trees and other garden fruit when they get a chance. They have one or two young at a birth, not more than two according to my informants. The young may be of different colors. The natives brought aboard some eight or nine opossums, all alive, one female having a young one in its pouch. Several of these were quite dark, almost black in color, but so far, they have not been able to secure a white one. The eyes vary in color from a light hazel to a rich chesnut brown, possibly according to light. I was much interested to see that a Solomon Island opossum can "play dead" as well as any Virginia opossum. One which I was holding while Beck cut lashings loose from its legs, undertook to bite me, but as soon as I grabbed it by the neck it almost immediately feigned death, and permitted me to put it in any position without showing any sign of life except for movement of chest walls. One ate pawpaw while tied up in lashings and a couple

which were released in a cage ate and drank as soon 272
as they were put in there.

Hicks secured several of the large fruit bats one evening and I put up one skin. Eye in this bat was hazel brown. They are quite common here altho not often seen in flight near shore as we have found them at several anchorages. One day while hunting I saw a bat hanging well up in a tree. On shooting it the bat still hung by the claw joint of one wing, but its solitary young one dropped to the ground. I had quite a time retrieving this bat, a native finally climbing the tree and poking it loose with a stick when it lodged in two more trees before hitting the ground. It was a fruit bat of the smaller species and with its young should prove an interesting specimen. The latter was put in formalin tank as we have no alcohol.

I got together here an exhibit which will probably prove interesting in some department of the Museum. I have several times seen native made fishline of great strength and durability, but have not had a good opportunity to look into the matter. Here I got acquainted with the material from which it is made, a vine or liana which occurs commonly in the forest. This vine grows rapidly and to some length, one often twisting around another. According to my native informant only the very young vine has leaves, some of which I preserved as well as specimens of vine of different ages, altho none very old, as old vine attains a calibre of some two inches. For making fishline vine of a certain age is chosen,

about 3/8 inch in diameter. This is taken to shore and allowed to remain in salt water one day, when bark loosens and fine threads of great strength are obtained from the inner bark. These are sun dried and then spun into line by rolling them by hand on the thigh of the worker. I obtained a small hank of the unspun threads in the village and also some three fathoms of finished line. They told me the finished line had a sale value of one pound for ten fathoms in Gizo. The same material is used in making very fine and strong net bags.

Snakes appear to be quite plentiful and we have obtained several specimens of at least four species. One of these, similar to one found on Vella, has small fangs. The largest snake secured was over six feet in length. The natives seem to be very much afraid of them and yet those which they have brought in have all been captured alive.

Lizards do not seem to be as common as at some other islands, altho quite plentiful. So far, I have seen no large lizards of any kind.

We have obtained here several large frogs as well as smaller ones and they seem to be quite plentiful.

Insects of all kinds are abundant and I often regret the fact that we have not more time for them, as undoubtedly many of them would be of great interest.

On the 20th, Beck was taken ill, probably a dietetic disturbance, while out collecting, and kept out of bush for rest of week. The next day I had a dose of

the same thing, probably due to additions in diet here of fresh meat, corn on cob and cucumbers. Between at 274
tacks of vomiting I investigated the land snails and succeeded in securing some hundred specimens of several different species. Most of them were taken from under surface of large leaves of plants in the forest, at no great distance from shore. I also found them on banana leaves, wild plants growing in forest, but did not secure any from bananas in gardens nearer the shore. I also took a few fresh water snails from a little stream several hundred yards from shore. On this occasion also, I happened on two very beautiful specimens of a black "walking stick", a male and female. I have seldom seen this species and think it must be quite rare.

The "hard shell" spiders, with colored spiny backs, are quite common here. In some places they spin a very beautiful web of geometric design, but here they seem contented with a very indifferent web of no particular design. There are probably several species of this spider and I have tried to get specimens from all islands where it occurs.

The natives here are mostly Seventh Day Adventists, altho here, smoking is quite common. I wished a guide on Saturday to take me to a trail along a river some distance off, of which I had heard several times. It was against their religion, being their Sunday, but finally one native couldn't resist the temptation and said he would go a "little way." The hunting instinct proved so strong, however, that he stuck it all day,

-being of great help both in finding trail and retrieval-275
ing birds which I shot.

They possess a good many canoes, all of the dugout pattern, which they handle very skillfully. Many of the men have singlets but often appear clad in simple lava-lava. The women wear calico dresses most of the time. They eat both the opossum and fruit bat and consider the megapode good kai-kai.

The natives here are very dark in color, for the most part rather small in size, seem to be quite healthy except for the ringworm and some island sores, and possess rather a happy disposition. Some of them, especially youths of about 16 to 18 years of age, have complete outfits of native regalia which they wear on ceremonial occasions. A few of them dressed up for me, a red circlet of finely woven grass around head holding a shell disc, 3 inches in diameter, against the forehead; often this disc mounted with thin fret work pattern of tortoise shell; arm bands of the same sort of grass material and many polished rings of shell; an elaborate necklace of beads and flying fox teeth around the neck and extending down over the chest, in which was suspended a very heavy polished shell ring; a loin cloth of brown tapa; woven grass circlets on the calves completed the costume which is very striking.

Several had cicatrices of the skin which here, on their very dark skins, takes the place of tatooing. In most of these I could see no particular design, but a few had a frigate bird, some 2 1/2 inches in length,

nicely done in same manner high up on each cheek.

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It has been a very busy few days. Up at 6 a.m. and two nights not through at the preparation bench until 11 p. m. and another at 10:30. Beck as I have remarked, was ill on the 20th, I on the 21st, and Hicks did not feel like working on the 22nd. Hamlin and Richards are getting quite an introduction. Both are somewhat lame from unusual exertions, and covered with scratches and mercurochrome, but bearing themselves very bravely through it all, making good progress at the work table, and making a wonderful addition to the general morale of the outfit.

Weather conditions fair. Rain most every day, especially in the forest. A rolling anchorage, but not so much so as to be too uncomfortable.

October 23. Sunday. Worked in the hold until late in the morning, finishing up opossum skins and putting up a mixed lot of specimens, insects, snails, etc., which had accumulated during the week. Went ashore after lunch and opened up a badly infected hand on a native who had cut his finger with a knife some days previous. I had an interested native audience and the patient seemed quite appreciative. I secured some photos of natives, several of whom dressed up especially for the occasion. Later came back to the France and spent the remainder of the day in trying to get something done in the way of notes.

October 24. All ashore early. I picked up a native who knew the trails very well, and he proved a valuable asset as he was also remarkably good at finding birds. Altho it rained most of the time from 11 a. m. on, I had

a most interesting day. Secured 28 birds including 277 seven pigmy parrots, three graybirds, a black fantail, several female bald flycatchers, as well as a few of the more common males, ground dove, white-eye, red-rump honey-sucker, longtailed dove and two rusty wing blackbirds. The last two species are the first we have taken on this island, and I rather think they are scarce. The iris in longtailed dove here is a light yellow, that of the green pigmy parrot, orange.

The pigmy parrots were as usual in flocks. The first flock I encountered in some very low trees not far in the forest. I should estimate from the calls that there were perhaps 15 in the flock, and I kept them around some fifteen minutes by calling. The second flock was farther in the forest and contained only six or eight. These were in high trees, and those I shot were clinging to the smooth bark of a very tall tree.

The graybirds were all in comparatively low bush with the exception of one which was in the top of a tree some 50 feet high. They are quite silent in their habits and may easily escape notice.

Heard a great many megapodes today and caught a glimpse of several. The longtail was also much in evidence, both well up in trees and climbing about in low bush. They climb very rapidly and are generally in motion.

I did not see any blackheads until nearly out of the forest on the way back, when I saw three at close intervals, all in motion. I spent some time in trying to call them, but they are extremely shy here.

The white-eyes were quite abundant, in flocks 278
both in tops of tall trees and in low bush. They also
keep continually on the move. Saw only two brown fantails
and two black fantails. The former are probably fairly
common here but the black species seem to be scarce.

The rusty wing blackbirds which I secured were
a pair. They had a nest, a coarse and bulky structure,
near the top of a very tall dead tree in the middle of
a native garden. Nest was probably 75 feet from the
ground.

I got one more snake today and the natives
brought aboard several, including two which are probably
very rare. One of these was a small ground snake, about
a foot long and not as large around as a lead pencil.
The other was a long, slender snake with a head much
larger than one would expect on such a body, with two
bulging eyes ringed around with gold. They also brought
aboard some 15 large frogs. Some of the larger of
these (spec. no. 28850) have the entire underparts a
deep lemon yellow, others being a creamy white. Five more
opossums were also offered, including two young ones,
and Hamlin found today in the trail a very young opossum,
its body only a few inches in length, so the series of
opossums continues to grow. We have several phases of
color now, gray, brown, and near black. The natives also
brought in several packages of smaller frogs, land snails
and fresh water snails. The land snails were practically
all of one common variety. The freshwater snails are
very plentiful on all the rivers and streams. My guide of

today told me that they were good kai-kai.

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Several more thickheads were secured today and Richards got another red-billed kingfisher. I have not heard the thickhead but twice near the shore, but Hicks shot one today very near shore so they must come down occasionally. The white cockatoo has not been seen or heard yet, and it is very doubtful if it occurs on the island.

The main deck of the France was quite a sight this evening, between bundles of nygnali nuts, vegetables, opossums, frogs, snails, snakes, etc., all of which came aboard at about the same time. I have spent a little time here in making collectors out of the natives, and they produce some very interesting material once they get the idea of what is wanted. Of course they may overdo it with some common things, but there is always the chance that they will bring in some most desirable specimens, as they have done several times here. Even the little boys have very keen eyes for such things as land snails and insects.

I found several new land snails high up in the forest today, and Hicks and Hamlin got a very interesting large reptile as they were approaching shore on their return. It is very similar to a species of which we secured several from the natives on San Cristoval.

I got today some native names for some of the opossum and flying fox.

Mow	: Longtail
Kooru-bora	: red-knob pigeon
Kooru-kow	: gray "
Pee-pee	: ordinary kingfisher(land)
Boó-ti	: ground dove
Sácondáli	: longtailed dove
Neén-dúko	: blackbird
Sec-sec-onbangara	: bald flycatcher
Nălă	: white-eye
Kóri-kóri-óraka	: pigmy parrot
Kăo	: megapode
Wécto-wáto	: thickhead
Shínga	: red billed kingfisher
Gon-doó-ee	: opossum
Lău	: flying fox
Bákaráu	: frog
Koóto	: big snake
Ungakóru	: small snake

Most of the opossums have been brought aboard alive, fore and hind legs lashed together with vine, and the animal wrapped securely in leaves. The natives here, have a rather peculiar method of killing them. As demonstrated the native grasped the opossum, as it lay on deck, with his left foot, holding the nape of the neck between his big toe and the next. With his left hand he took a hold about midway of the spine and then, seizing the tail with his right hand, gave it a sudden jerk. The opossum was instantly killed, probably by injury to the spinal cord.

I noticed one young man today with a frigate²⁸¹
bird cicatrix just above the insertion of the deltoid
on his left arm, the design about 2 1/2 inches in size
and quite well done. Tapa cloth is made here, brown in
color and of not very fine quality. I saw the stump of
a tree in the forest which had been felled for this
purpose. Its bark was brown and it had branching roots
like a pandanus. The stump two feet from ground was
only about five inches in diameter. The make also red
and green dyes from leaves of plants. Flying fox teeth
are much used in necklaces and armbands. They told me
that knowledge of these finer arts in native handicraft
has practically disappeared. They weave baskets of quite
good quality, both plain and with designs in red. I
noticed several wooden mortars of native design used,
I suppose, for pounding up lime and perhaps maize as
they raise some corn here. Many of the natives chew
betel nut and natives out with me always gathered the
leaves of a certain vine which they use with the lime
after each piece or two of betel nut, chewing them up
and swallowing them, "all same bulla-ma-cow" as one of
them put it.

October 25. Hicks and I remained aboard to
put up birds, opossums and miscellaneous material, while
Beck, Richards and Hamlin went up the mountain again.
It took all day to prepare the specimens left over from
yesterday. In the evening the natives brought aboard
still more material. Yesterday I expressed a wish for
some prawns which are often found under rocks in the

mountain streams. At the time none could be secured but this evening my guide of yesterday showed up with some fifteen or twenty which I put in the formalin tank. They are quite common on some islands and used by the natives as food. I do not recollect that we have preserved any specimens prior to this. Several more snakes were brought aboard including another very large one, over six feet in length. More frogs, a few insects, two very peculiar looking scorpions, different from any I have ever seen, if indeed they are true scorpions, five centipedes, a lot of long and very slender fish (salt water) or perhaps young eels, and even the larvae of a large wood beetle. All in all the natives here have made some valuable contributions to the collection.

Beck and Richards got back before dark and Hamlin, somewhat later, he having got off the trail for the second time at this island and not able to make the shore before dark. Both times, however, he got close to shore and was easily located by search party. Beck and Hamlin each got a yellow-bibbed dove and more thickheads and blackheads were secured. Prepared birds all evening, finishing about 10 p.m.

One of the remarkable things about the avifauna of this island is the absence of the white cockatoo. None of us saw or heard any and today, I showed a skin to some natives, and while they knew it they said it did not occur on the island. I tried to find out whether a black one of same appearance was here, but results were not satisfactory. Some bird, black in color, which we did not

decide that it was a cockatoo. I think they call it 283
"mák-a-ra" in their language. The midget probably does
not occur and neither does the hornbill, although with
all the nignali nuts and other food, one would think
this a veritable paradise for the hornbill.

Snakes of several species very common. Small
lizards common, but no monitor lizards seen although I
think that they occur. Both large and small frogs common.

Land snails common and fresh water snails very
common along the streams. The latter are used by the
natives as food.

Insects of all kinds abundant.

Stomachs of two more small red-billed king-
fishers which I examined, contained insects. Stomach of
a graybird contained insects and a few small seeds. Crops
of pigmy parrots all contained very small seeds.

Weather conditions here have been fair. Heavy
rains on mountain every afternoon of our stay.

Both porpoise and turtle seen several times at
this anchorage.

October 26. Anchor raised soon after daybreak
and steamed away from Ganonga on S. W. course to Narovo.
As we approached the main island, which has two prominent
peaks, passed a small, off shore, flat island where there
were many noddy and sumatra terns.

Narovo (Eddystone) Island, about 7 miles south-
ward of Ronongo (Ganonga) is about 4 miles in length
and about 1 mile in average breadth. It is formed by two
hilly portions connected by a low narrow neck. With the

exception of Simbo Islet adjoining and that narrow neck 284
which are of upraised coral, the whole island is of volcanic formation. Signs of activity are confined to the southern portion, which contains the more elevated land, Middle Hill and South Hill, rising to a height of 1025 and 1100 feet above high water, respectively.

On the S. W. coast, at the foot of the northern slope of the crater (South Hill) there is a salt water lagoon, which is connected with the sea on its northern side. On the southern shore of this lagoon is a boiling spring and in its vicinity the water is hot for about thirty yards from the shore. (Pacific Islands Pilot, Vol. I, 1916.)

These same conditions prevail at present. We came to anchor on western side of island in a very snug little harbor at 11 a.m. Had an early lunch and all went ashore collecting.

Renewed acquaintance with Mr. Victor Polson, who at present is managing a cocoanut plantation and trade store here. He has been resident in the islands for many years, generally employed as captain and pilot for ships, and has travelled most extensively in the group, one of the few whom I have met who is acquainted with Choiseul. There is a very fair residence and store as well as several warehouses and outbuildings on this plantation. Mr. Polson roughly estimated the number of natives on the island, including Simbo, as a little more than 1000. Their villages are for the most part fairly close to shore.

although one is constantly running on native houses is 285
lated in the bush. The natives are very dark skinned,
of good stature and features, and quite intelligent.
They appear to be very friendly. Their houses are quite
neat in appearance, much more so than at any places we
have visited.

There is a large canoe house near Mr. Polson's
residence and in it two small canoes and one very large
canoe, capable of holding 30 men, were near completion.
The separate pieces of wood, forming bottom and sides,
were all in position, the seams being carefully sewed
with some sort of vegetable fibre. They were awaiting
a supply of the native gum or pitch ("tita") obtained
from a nut with which they cement and further strengthen
these seams, also rendering them waterproof. Several
picturesque old men were working here, two of them hav-
ing sparse moustaches and goatees. I visited the place
on my return and they were much interested in what I
had secured. I showed them a couple of small birds
mainly to find out what they could tell me in regard to
them. One old chap asked, "You kai-kai small pigeon?"
"No kai-kai, " I replied. "We send America, stop along
big house, too big house. Many man come, all world, to
look him."

He got the idea right away but countered with
another question. "America long way. Pigeon, he no
stink?"

So I went into the matter of bird preparation to
a limited extent and invited him aboard to watch proceed-

ings in the evening. There were many aboard later on, 286
and no question now but what Narovo Islanders are quite
well informed about the work of the France. Several
were about the hatch when I descended into the hold to
remove birds from my hunting coat. There were various
comments on the birds as I took them out. Two megapodes
and a couple of golden plover excited no particular in-
terest, but when I began to unpack flycatchers and a
pigmy parrot there was excited comment and some titter-
ing. After the birds, I pulled out a small frog which
caused them to laugh freely especially when I put it in
a bottle. When I finally extracted several landsnails
and put them also in a bottle, some of the natives were
so affected with mirth that they got away from the hatch
to a point where they could give free vent to their feel-
ings and indulge in repeated attacks of explosive laughter.
While they must often get a vague idea of what it is all
about, I am convinced that the average Solomon Island
native thinks we are all more or less mad.

The natives here wear a great variety of dress,
many in singlets and shorts, some women in calico, and
many more in the ordinary lavalava. Quite a few striooed
about the villages in a very abbreviated loin cloth.
The women, both here and at Ganonga, are not timid and I
have several times been invited by the men with whom I
have talked to visit their houses, which invitations I
have accepted whenever possible. Skin disease, particu-
larly ringworm, is very prevalent here, but otherwise
the natives seem to be quite healthy. They seem to poss-

ess a well developed sense of humor.

There are two Tongans here, the man I believe being the native mission worker. They have taught some of the natives to make mats after the Tongan fashion. In such manner, I suppose many bits of handicraft have been transplanted over a period of many years, accounting for some of the strange things which show up in this line every once in a while.

Today when well up in the forest I met a young couple coming in from a trip after nygnali nuts. They were each clad in only a single garment, a lavalava from waist about to knee, that of the lady being slightly longer. The man carried a 12 inch bush knife and their 6 months old baby, while his wife was lugging their catch of nuts, a heavy mesh-bag holding at least a half bushel which was suspended by a headband. They were both well featured, the mary being one of the best looking I have seen. There was a wild expression about her eyes like that of a forest doe, and yet she approached in the wake of her husband without any sign of fear and exchanged quite a few remarks with the boy who was acting as guide for me. I tried to get acquainted with the pickaninny but my attempts at familiarity started a squall which I only quieted by handing over a "capeeka" fruit, something which I had just become acquainted with.

It grows here on trees about the same size as a large pear tree. The fruit, about the size of an ordinary plum when fully grown, is at present sort of a light

green color. It grows in clusters directly from the 288
branches of the tree, the leaves being given off at entirely separate points. Some which I saw on the ground were slightly pinkish in color. When peeled, the skin being thin, a white pulp is exposed of the consistency of apple, having a not unpleasant, crisp taste but no especial flavor. The single seed or pip is large.

Mr. Polson says that the nygnali nut season is the most important one for the natives. It lasts about three months, September, October and November. The natives gather the nuts and store them away, they being a most important item of diet. Many make puddings from them which are carefully wrapped in a tight casing of woven reeds or grasses and hung from the rafters of the house to be consumed later. The same thing is often done with taro.

I covered quite a lot of country in the course of the afternoon, through muddy flats up to the top of steep hills, through the forests both on trails and without trails, and across native clearing and gardens. I found birds very scarce with the exception of starlings which are most abundant, confining themselves principally to certain trees where they live in large colonies. The red-knob and gray pigeons are fairly common in the nygnali nut tree being called here "bóraku". The green parrot is also quite common and several times it imitated the cockatoo's call so closely that I mistook it for the latter. I solved the mystery of the word "ma-ka-ra" as the same name is given here to the green parrot. Minas were also

quite common, its native name here being "pertillio". 289
The bald flycatchers seemed to be the only common small bird and they were met with in small flocks, 4 to 20, in spots. One could travel a long time without seeing or hearing any small birds. I secured one green pigmy parrot which came while I was calling the flycatchers. I do not think it at all common here although the natives know it. The yellow honeysucker is not at all abundant but occurs quite generally distributed in the coconuts and along shore. The "broad-bill" was encountered here again but is not at all common. Both the white-headed and the larger of the two "land" kingfishers occur but neither is at all common. The natives call the white-headed species "kick-i-u", the other "pee-pee", both names doubtless being derived from the calls of the birds, as the land form both here and at Ganonga (where it has the same name) very often calls with a double note very much resembling the word "pee-pee". The wagtail is not at all common here but occurs in near vicinity of houses.

One of the first birds which I saw was an eagle hawk which permitted a fairly close approach. I tried to get it with small shot but it got away. Mr. Polson says they are fairly common here. The white-headed hawk is also rather common. The longtail occurs and has the same native name, "mow", but is not at all common and none were secured.

Reef herons and sandpipers were seen on shore, the green heron in the bush near shore, and golden plover I encountered in the uplands. Swallows were quite common

over the harbor but I do not recall seeing any swifts. 290

In the evening just at dusk, there was a flight of the large fruit bats, some forty, flying out from the island toward the ship. The natives say they are very plentiful here, large colonies sleeping in certain trees. I secured one of the smaller fruit bats today.

October 27. Heavy rain in the morning, so going ashore was postponed until afternoon. Busy in the hold all morning preparing and packing specimens, and got a chance to write up a few notes. In the afternoon covered about the same ground as yesterday but secured no new additions to list of birds. Considerable rain in the afternoon. The bald flycatcher, called "ā-vín-jo" here, seems well distributed over the island and it is certainly the only common small land bird. I visited one of the starling trees to secure a few specimens and estimated roughly that there were easily 150 in this one tree, if not more. Both the red parrot and blue headed paroquet are common here.

Mr. Polson gave me a small pupa case, gold in color and very beautiful, which he had obtained from a native. They are not at all common. I think I shall try to preserve it as it is, as it is a most unusual thing.

The megapode is very common here, does not seem as wary as at many islands and there are extensive nests on the closely connected small island of Simbo.

Natives brought aboard several snakes, including one small ground snake. The latter was very active. They also brought out one of the large fruit bats, which

October 28. Ashore early and collected all over the island. At one point on a side hill with low and rather dense vegetation, I found the brown fantail and secured one. They must be rare here as the two I saw today were the only ones seen by any of our party in three days ashore. Also added the white-tailed pigeon to the list of birds. I saw only the one which I secured but the natives say it is fairly common. Also secured one of the land kingfishers, specimen no. 29024. Its stomach contained grasshoppers and small insects, mostly the former. Found the flycatcher the same as on previous days. It rained considerably during the day.

Land snails are quite common on this island. In the three days, I have secured perhaps 300, mostly from the under surface of low shrubs in the forest. The common species is different from the common species on Ganonga which is rather interesting, as habitat and other conditions seem much the same. I obtained several species, some of which appeared to be rare here. They seem to occur at all elevations but mainly in the shade of the forest. I looked over rather carefully, the leaves of bananas and other plants in several native gardens and seldom found a snail.

Small lizards are only fairly common. Several species occur here including a bright green one which we have seldom seen of late. Hamlin secured one of these. The monitor lizard occurs although I saw none in the three days stay. The natives say it is quite common, but speaking relatively I should call it uncommon.

Snakes are quite abundant. I saw at least one 292
each day and so did other members of our party. The natives also brought in several. We have secured perhaps a dozen snakes here and I think some five species. They seem quite active here and I believe two species have small fangs.

The large fruit bat is very common and the small species probably not uncommon although the natives told me "no too many here".

Insects of all kinds quite plentiful. I obtained a few coleoptera and hemiptera, but have little opportunity for doing anything with insects. Today I found in the forest four large "walking sticks", larger and different from any which I have previously collected. I think they are probably of three different species and Hamlin secured one each of two smaller species. Mine were without wings, laying sluggishly on leaves which I was able to fold over them in securing them without any difficulty. When touched they exuded a creamy white juice rather freely, which had a distinct, rather disagreeable odor. I am very much bothered about the preparation and preservation of these "by products" of the trip as vials and bottles are extremely scarce, and of preserving fluids there is only formalin and methyl alcohol. Even the formalin came to an end several days ago. My "laboratory" is a small 18 inch space on a crowded shelf, often disturbed by others and much affected by the rolling of the ship. I can only hope that a portion of this material will reach the Museum in such condition that it can be studied to advantage and perhaps

Frogs are common here although none of the large frogs, like those obtained at Ganonga, have been seen. Perhaps they do not occur here on account of lack of suitable streams and rivers. I secured two species of small frogs. They were in damp leaves on ground and captured without difficulty.

It is surprising that such birds as the cockatoo, white-eye, black-headed honeysucker (or local variety), midget and shrike should not occur here. The cockatoo and shrike were apparently missing from Ganonga as well as the midget, and it is most strange that the white-eye should not occur on Navoro when it is so common on the nearby islands of Gizo, Ganonga and Kulambangra. I feel quite positive that it does not occur, as none of our party saw or heard it, and a native whom I found to be quite well acquainted with birds told me that he knew of it on Gizo and Ganonga but that it was not here. The shrike has been so generally present at all islands that it seemed queer to miss it entirely at both Ganonga and Navoro. As far as I could determine, there is nothing lacking in food conditions to prevent the presence of any of these birds here.

To change from natural science to something eminently practical I contribute a few notes about preparation of yeast for bread making which may be of value to some future expedition. We have experienced a great deal of trouble with bread and only recently have apparently solved the problem. Formerly our yeast was made with

lemons. Two tablespoons each of flour and sugar, made²⁹⁴ into a smooth paste, dissolved in a quart bottle filled with warm water, and to this added the juice of two lemons or limes. The bottle tightly corked (cork tied in) and allowed to stand. It has to be made in a seasoned bottle, i. e. one in which it has been prepared regularly or else left for some time, 24 to 48 hours, when entire contents are used in one batch of dough, enough for 5 or 6 loaves. Results from this yeast were often very poor and it does not seem dependable, although it is a common formula and of course far better than none.

Of late we have been using a hop yeast which is less trouble to make and lasts longer. The formula is as follows: Two tablespoonfuls each of flour and sugar with one-half teaspoonful of salt dissolved in a little cold water, and then put in a quart bottle of hot water. A good pinch of hops that can be held between the thumb and two fingers added to this and bottle kept tightly corked, cork tied in. After 24 to 48 hours it is ready for use in proportion of one tablespoonful for each cup and one half of flour used. After removing quantity desired, cork tightly again and it keeps well until entirely finished. With this formula, we have had bread of uniformly excellent quality.

Since collecting expeditions, like armies, must eat, this information may be appreciated by some other field workers, as hops is easily carried and lemons are not always obtainable.

Sharks did not seem plentiful at this anchorage.

Alligators occur but in no great numbers. Flies still 295
a pest aboard, but fortunately there were no mosquitoes
here.

I believe I have failed to note that the common
ground dove is quite plentiful here, and I heard one
other dove, probably the red-brested variety.

Beck secured some noddy and sumatra terns from the
little islet close by. Said he saw a few Bengi terns
there also.

October 29. Anchor raised at daybreak and wind
being of little help, engine was started and we headed
over to Gizo, where the Mataram is due today.

Arrived at Gizo soon after lunch. Spent the
afternoon and evening aboard the France writing letters
and typing. The Mataram did not get in until very late
in the evening, but Richards and Hamlin went ashore to
see what could be done about mail, and returned after
midnight with the letters. I had turned in, but soon
climbed out again on their arrival.

October 30. Aboard all day writing and typing,
a terrible task when it comes all at once, especially
if just at mail time.

In the evening we were treated to a severe
rain squall, which lasted about half an hour. It car-
ried away the awning and dragged our anchor so that we
barely escaped going on the shore. When the other anchor
was dropped, we were within a very short distance of
shore and close up to some ugly looking rocks.

Started the engine in the morning and got back on our former anchorage.

November 1. Finished letters in the early morning and got them posted at last minute. Met the D. O., Mr. Barley, Dr. Price, Mr. Williams of Balaili, and renewed acquaintance with many others whom I met at time of last steamer. The Mataram left Gizo about 11 a. m.

November 2. Richards, Hamlin and I went ashore collecting, spending the morning in the bush back of a nearby coconut plantation. Trails good and forest quite open. Weather hot.

Cockatoos, red parrots, paroquets and minas, all very much in evidence by their calls. Saw one red-cap dove and heard others. Heard one longtail. Secured one white-eye which came to calling, but they did not seem at all common. The white-eye here, has iris reddish brown in color. Both the yellow and red-rump honeysuckers were common, especially the former. Both were present in the forest, but only the yellow near shore and in the coconuts. Wagtails quite common in the coconuts and near houses. The bald flycatcher was quite plentiful, the little black-headed species less so. I heard several blackheads, but was unable to see one. Heard the gray and red-knob pigeons calling in the forest. Starlings were quite abundant.

I secured one small lizard of a species which seemed unusual to me, and Hamlin got a green lizard.

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The only land snail which I saw, I secured from underside of a leaf in the forest. While of same size and general shape, it appears to be different from what I have taken on other islands.

November 3. I went ashore in the morning to spend a couple of hours on the reefs looking for shore birds. There was no cover and the birds were very wary, so I did not get much reward for my efforts. Curlew, golden plover, and turnstones were most in evidence, but there were small sandpipers, I think the lesser yellowlegs, two or three of the large thick-billed plover and several reef herons, the latter all in blue phase of plumage. The white-headed kingfisher is also fairly common here. I saw a grayback shrike in the coconuts this morning.

Last of stores came on board this morning and at 11 a. m. anchor was raised and we stood off for Vella Lavella.

It rained all the afternoon with squalls. We were unable to get to Vella, so the engine was started to make anchorage for the night at Kumba-kota on Ganonga.

November 4. Anchor raised at 7 a. m. and fresh start made for Vella. An idea of making a short stop for seabirds at Reef Island, about four miles N. W. of the north end of Ganonga was abandoned, on account of weather conditions. At about 11 a. m. came to anchor at Bagga Island which is close to Vella, only a few miles separating the two.

Thanksgiving Day
On Board the 'France'
Choiseul Island
British Solomon Islands
November 24, 1927.

By Frederick P. Drowne

Thanksgiving always calls to mind
 roast turkey and mince pies,
Old friends to greet, keen bracing air
 and snow clouds in the skies.
While here are countless coco palms,
 blue seas and coral sand,
Mosquitoes, flies and lots of things
 they cannot understand,
Who have a land and climate both
 which God created first;
For there I think He did his best,
 out here He did his worst.
And so this day we'll have to change
 a bit the bill of fare,
Attempt to substitute some things
 which sound both rich and rare.
Soup pigeon, bonita grilled,
 omelette au megapode,
And yam and taro baked and boiled;
 and crayfish a la mode;
With hornbill steaks, a juicy dish,
 washed down with coco milk,
And then the salted nygnali nuts,
 the best of all their ilk.
Then while we sit and sweat and try
 to kai-kai all this stuff,
And swat the flies and curse the roll,
 and think we're living tough,
It's well perhaps to pause a bit
 in all this push and drive;
When everything's considered, we're
 thankful to be alive.

The same sun shines this Thursday
 in the good old U.S.A.,
As beams down upon us in these
 tropic isles today.
And when night spreads its blanket, why
 the same old moon will be
Just smiling down upon our friends
 from its lofty canopy.
The stars can carry messages,
 take ours then as you go.
Fond thoughts we're sending. As for us,
 Here's luck, mate. Cheerio!





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100220814



