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WHITNEY SOUTH SEA EXPEDITION

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Letters and Journal

of

Frederick P. Drowne, M. D.

Nov. 4, 1927 - Mar. 30, 1928

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Letters and Journals

Fredrick R. Browne, M.D.

Nov. 4, 1907 - Mar. 30, 1908

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Bagga Island is narrow, perhaps three miles long and about 500 feet elevation at highest point. It has no native population except the labor employed on coconut plantation, which at present is managed by Mr. Chaperlan who with his wife, children and a Mr. Risby, reside on Binskin Island, a very small island only 50 yards distant from east side of Bagga. Another small islet, Fairway, is perhaps $3/4$ mile distant. There is much mangrove swamp along the coast of Bagga, and a rather slow approach to the hills which rise quite abruptly when once encountered. Wild pigs are said to be plentiful and there are many pig tracks. Our anchorage is close to Binskin on the east side.

Richards, Hamlin and I collected in the afternoon, landing on the N. E. shore and making our way through the mangroves. Travel was difficult and both flies and gnats were legion.

Small birds were quite plentiful. The bald flycatcher, blackhead, red rump and yellow honeysucker and white-eye, all occurred here, all but the blackhead being fairly common. I saw but one brown fantail which I could not secure. The white-eye here has a medium dark brown iris, bill lighter yellow and feet very light yellow, in addition to plumage variation. They were generally encountered in small flocks, feeding in tree tops and shifting position rapidly. The red-rump honeysucker has the darkest shade of plumage I have seen it in as yet. The blackhead also shows plumage variation. Starlings quite numerous, but no large

Bagga Island is narrow, perhaps three miles long and about 500 feet elevation at highest point. It has no native population except the labor employed on coconut plantation, which at present is managed by Mr. Chapelman who with his wife, children and a Mr. Kibby, reside on Binkia Island, a very small island only 50 yards distant from east side of Bagga. Another small islet, Fairway, is perhaps 3/4 mile distant. There is much mangrove swamp along the coast of Bagga, and a rather slow approach to the hills which rise quite abruptly when once encountered. Wild pigs are said to be plentiful and there are many pig tracks. Our anchorage is close to Binkia on the east side. Richards, Hamlin and I collected in the afternoon, landing on the N. E. shore and making our way through the mangroves. Travel was difficult and both flies and gnats were legion. Small birds were quite plentiful. The pale flycatcher, blackhead, red rump and yellow honeyeater and white-eye, all occurred here, all but the blackhead being fairly common. I saw but one brown fantail which I could not secure. The white-eye here has a medium dark brown iris, bill lighter yellow and feet very light yellow, in addition to plumage variation. They were generally encountered in small flocks, feeding in tree tops and shifting position rapidly. The red-rump honeyeater has the darkest shade of plumage I have seen it in as yet. The blackhead also shows plumage variation. Starlings quite numerous, but no large

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tree colonies as at other islands close by. Blue-headed paroquet and red parrot common. The green parrot occurs but not particularly common. I heard the mina and longtail, also the white cockatoo on several occasions, although I did not see any. Hamlin shot at one graybird, I believe the only one seen. The red-knob, gray and white-tailed ground pigeon are all quite plentiful. White-headed, small blue-backed and a striped breasted hawk were taken here, although hawks did not appear very numerous. The wagtail and grayback shrike are both fairly common near shore and in the coconuts.

The white-headed, probably both large and small forms of "land" kingfisher, the "white-eared" and "little blue" kingfishers all occur here. Richards, Beck and I each secured one of the "white-eared" species and Beck had a shot at one of the little blue species. I saw three of the white-eared species today, darting rapidly about the shore, in and out of the mangroves and bush near shore edge, occasionally alighting on dead tree stumps on shore. Of those of this species secured, the stomachs of two were empty, the third containing a whole fish about the size of a sardine, enough to fill it to capacity.

The only dove secured was the red-breasted. I heard doves calling several times but did not hear the ground dove, although it very likely occurs. Green heron, reef heron, curlew, golden plover and several sandpipers were all fairly common on shore. No one

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either saw or heard the thickhead or black fantail.

November 5. Ashore early and collected all day. Spent most of the day making a trip to the top of the island. Birds were very scarce the higher one got on the ridge, even white-eyes and flycatchers seeming uncommon. Blackhead were encountered occasionally mostly in dense tangles of bush. No new birds were seen and I can add but little to bird notes of yesterday, except to emphasize the fact that bird life here seems pretty much confined to lower levels. There seemed to be only one main fresh water stream which is at low level. It is fed by perhaps several very small streams arising in the hills, but we only encountered one of these at about half way up where it emerged from the side of the hill. Birds were somewhat more plentiful in its vicinity. Travel was often very slippery and bad.

A brown lizard is the common species here, met with at all levels. I saw at least two other species, abundant on some other islands but not here. The monitor lizard is common near shore. One snake was taken here.

There did not seem to be any one land snail which stood out as the common species. although in two days I collected over a hundred specimens of at least a dozen species, several of them new to me. They were mostly on leaves of shrubs in the forest, although some of them were on leaves of trees, often as much as twelve feet from the ground. A few were

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as much as twelve feet from the ground. A few were

low down on boles of trees. I took a few of the fresh water snails, although they seemed the same as elsewhere.

A large milliped, similar to one found on many islands was quite common here in damp situations such as rotting logs and leaves. It appeared to be a different color, alternating black and white rings. Several were collected.

Insects were abundant including many large butterflies. I secured a few coleoptera including two handsome longicorns. I also took one small grasshopper which was the most gaudily colored of any that I have seen.

Hicks brought in one fairly large snake and Beck had two very lively scorpions and a couple of lizards.

The nygnali nut tree does not seem to be at all common here.

At this place in 1909, the wife and two or three children of a planter, Binskin by name, I believe, were murdered by natives during the planter's absence on a recruiting trip. They were killed by shots fired through the windows of their home. Their graves are on the small island Binskin, just at our present anchorage.

Flies are very abundant but no mosquitoes visit the ship and Mr. Chaperlan says there are none on shore.

The only native work which I saw brought on board were two perfect replicas of an axe and bush

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The only native work which I saw brought on
board were two perfect replicas of an axe and bush

knife, carved from wood and very beautifully inlaid with mother of pearl.

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Weather conditions quite pleasant. Very warm and heavy rain on Friday night.

November 6. Sunday. Spent the morning in writing notes, fixing up land-snails, insects, etc. from last three islands, and water color work. In the afternoon Hamlin and I paid a visit to a small islet off S. end of Bagga. The islet was perhaps 150 by 75 feet, and for vegetation had some 25 coconut trees, mostly in bearing, a few shrubs and cactus-like plants, and some low trees of the mangrove type. It was at least one mile from the nearest land and surrounded on all sides by shoals and reefs, on which the surf breaks constantly in great combers. For bird life I noticed a pair of white-headed kingfishers, a pair of yellow honeysuckers, several starlings and one gray pigeon. The island was almost carpeted with hermit crabs of various sizes and I noted quite a number of small striped lizards. There was very little noticeable insect life.

A very pleasant day as far as weather conditions were concerned. Hamlin more or less on the sick list with swollen inguinal glands, probably due to a small infected sore on foot. David has been on sick list for several days with mild attack of dengue.

November 7. Ashore early and collected on S. end of the island, the best approach for collecting that I have found on this island. Two graybirds se-

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with mother of pearl.

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cured today, a pair of minas, and additions to the series of white-eyes, brown fantail, bald flycatcher, blackhead, and little blackheaded flycatcher. Saw another little blue kingfisher fly past the long-boat as we were leaving shore. Natives tell me the white cockatoo is common on Bagga. The megapode is also common. There is a difference in color of the legs of white-eye here, the older birds showing a darker yellow (as in water color sketch which I did yesterday), the younger birds a lighter, greenish yellow. Many of the immature birds of the bald flycatcher have bill quite black and legs almost black.

Collected more land snails and a few more coleoptera and some of the "hard shelled" spiders.

Anchor raised soon after 11 a. m. and stood over to Vella, coming to anchor in less than an hour near Mr. McEachran's plantation, Nyanga. It is at a point between Turovilu (Renard Island) and W. coast of Vella.

Beck, Richards and Hicks were ashore in the afternoon visiting some burial caves not far from the plantation, while Richards and Hicks also hunted several hours for wild pig, but did not secure any. Pigs are said to be very common here, also on Bagga. Hamlin and I skinned birds all afternoon and part of evening.

November 8-12. Vella Lavella (Veka Vekalla or Gore Island) Island is charted as being about 26 miles in length in a north and south direction, by about 8 miles in average breadth. It attains a height of about 3000 feet above high water and is wooded. None

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of its peaks are conspicuous, but some are dormant
volcanoes. (Pacific Islands Pilot).

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From the 8th to the 12th inclusive, intensive collecting was done at various points on the island near anchorage. On the 9th, Richards and Hicks left in the ship's dinghy to follow up the big river nearby, try to reach a point near higher hills and spend the rest of the week in camp. Hamlin developed more trouble in his leg and inguinal glands, which threatened to be rather a serious matter, and on my advice kept quiet for the week. Beck collected from start on nearby small river, while I entered the bush at a point about two miles from anchorage which I found through employing a native for guide. This guide, a Malaita boy, was kindly loaned me by Mrs. McEachran. He spoke English quite well, had a large fund of bush knowledge and quite an acquaintance with birds, and proved to be quite a mine of information as well as a wonderful retriever of shot birds.

Weather conditions were only fair, there being a very considerable daily amount of rainfall, especially in the forest where it would often pour for several hours at a time.

The first day I hunted alone, entering the bush where there was no trail and a lot of swamp. White-eyes and the brown fantail were the only common birds seen here. Shrikes, wagtails, yellow honeysuckers, paroquets and red parrots were all common in the coconuts, of which there is a very extensive planting at

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8
this place. Hawks also were not uncommon, more particularly the white-headed and small blue-backed species. One of the latter which I shot was a male in a brown plumage, specimen no. 29198. Its stomach contained several of the small striped lizards so common here, especially near buildings and in the debris around coconut plantations.

The white-headed kingfisher is very common along shore, called here "cu-cu". The small white eared kingfisher is probably not uncommon. I shot one which flew along the shore while I was returning from the bush, and two or three others have been obtained here. In the five days, I have only seen one other on the open coast. I obtained one of the larger "land" kingfishers which seems to show some difference in measurements. Native name for it here is "ee-ee". It is probably not uncommon, but difficult to get at. I have heard it several times each day while in the forest, but was unable to get but this one. At this point it does not seem to spend much time in the coconut groves.

The brown fantail seems to be quite common, met with at all levels, but more commonly in lower spots near shore or the indenting rivers. The black fantail does not seem to be very common. All that I have seen were at comparatively low levels, particularly where bush was quite dense. In the five days, I have seen not more than eight of which I secured four. They are quiet in their habits, most often seen

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The blackhead is a little more common, more often heard than seen. It is very wary here and often seen only for a fleeting moment. While I saw or heard them each day, I did not obtain any until Friday when I got two. They also seem to prefer dense, tangled bush.

The thickhead here seems very quiet. I did not hear them call at all, and Beck reports that he heard them sing but very little. The two which I shot probably came near while I was calling other birds. They were both sitting motionless in dark spots in trees and seen only by the merest chance.

I heard the pigmy parrots several times, and by persistent calling managed to secure four of them. As usual they were feeding in tree tops. When seen lower down, they are generally clinging to the bark of a tree, often head down, or perhaps on a liana, only once in a while employing a "regular" perch on a limb. Here the iris is dark orange, bill very blackish and feet light gray. I notice here that the area around nostril is a dark red in the male and black in the female.

Both the red-rump and yellow honeysucker occur, the latter commonly in the coconuts and mangroves, and occasionally in the forest. The red-rump species seems to be scarce at this point. In the several days, I have only seen a very few. One which I prepared, a female with swollen ovaries, specimen no. 29195,

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a female with swollen ovaries, specimen no. 29195.

had a decided red rump. If I remember correctly all females which I have put up before this, lacked the red rump. Sex determination in this case positive and confirmed by Beck.

On my second day out I secured a yellow-bibbed dove, the only one taken from this island so far. It was in a low tree perhaps one-half mile from shore and at low level. I also obtained one of the common red-cap doves at about the same location. Both doves and pigeons were feeding in tops of very tall trees which bore a saffron colored fruit or blossom, the nature of which I was unable to determine. I had a couple of shots at doves in these trees, but range was too great to permit of my getting anything but a few feathers. The red-breasted dove also occurs and the ground dove is probably quite common. This island has very few nygnali nut trees on this side, although a native told me that there were some on the "other side".

The wagtails are very numerous in and about the coconut groves. The starling is also very plentiful, especially along the shore. I did not see any large flocks or any of their nesting colonies in big trees. The white-cockatoo is quite common as also the mina. The rusty-winged blackbird occurs. I shot one in the forest and Beck said that he saw several in the river mouth.

Small swifts and swallows are common and one evening just before dark, I saw a flight of some 30 to 40 long tailed swifts which passed along rather

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rapidly close to shore edge, uttering their screaming cries, but too high up to secure any.

The graybird occurs but not at all common. Beck saw the larger graybird near the river mouth. He also secured in same situation an eagle hawk and barn owl, the latter the first so far encountered in the Solomons.

The megapode does not seem to be common at this point. I have seen the bird only once or twice but heard it on several occasions.

The longtail is fairly common, heard quite often in the forest. It has here the same native name "mow".

Reef herons and green herons not uncommon along shore although I saw none of the former in white phase of plumage. Sandpipers, curlew and golden plover all quite common.

The bald flycatcher is the most common small bird in the forest with the exception of the white-eye. They seem to occur at all levels and respond well to calling. As in other places the males are very often seen, frequently several at the same time, but the female is seldom in evidence. They are present both in low bush and well up in the trees.

Richards and Hicks returned on the 12th. For new additions to list they brought back the bittern and small red-billed kingfisher. They also had a "little blue" kingfisher, one of which was secured by Beck on

rapidly close to shore edge, uttering their scream-

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which I examined contained a small fish, and of
stomachs of two of the large "land" kingfishers,
specimen nos. 29249-29250, one contained insects,
the other, insects and a small land crab.

Richards reports the river navigable for some
3 or 4 miles. They got to high land but found birds
scarce at high levels and secured no yellow-bibbed
doves and reported thickheads scarce.

Both large and small fruit bats occur here
and the opossum is reported plentiful by the natives.
My guide of yesterday caught a half grown one while
we were out which I made up today. It has very dark
brown fur with median black stripe. My guide tells
me there are white, blue and brown ones here. The
"blue" I take to be a shade of gray. He said that in
many years experience with this opossum on many islands,
he had never seen more than two young for a litter
and that they were always the same color as the mother.
He also said that the natives often tame them, letting
them run loose after a little while, and that the
tamed opossum would go to the forest to feed and re-
turn to its owners home to sleep.

I did not see any of the monitor lizards although
natives told me they were fairly common. Small lizards
fairly common but not so much in evidence as at many
of the islands. Two snakes were taken here, the only
ones seen. Small frogs fairly common in bush.

first day here. A stomach of "white-eared" Kingfisher
which I examined contained a small fish, and of
stomachs of two of the large "land" Kingfishers,
specimen nos. 29249-29250, one contained insects,
the other, insects and a small land crab.
Richards reports the river navigable for some
3 or 4 miles. They got to high land but found birds
scarce at high levels and secured no yellow-billed
ducks and reported thickets scarce.
Both large and small fruit bats occur here
and the opossum is reported plentiful by the natives.
My guide of yesterday caught a half grown one while
we were out which I made up today. It has very dark
brown fur with median black stripe. My guide tells
me there are white, blue and brown ones here. The
"blue" I take to be a shade of gray. He said that in
many years experience with this opossum on many islands,
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ones seen. Small frogs fairly common in bush.

Insects do not seem to be particularly common, at least there were not a great many in evidence. I secured a very few coleoptera. I found a peculiar shaped, small cocoon like object in the forest suspended from a low branch by a long thread. I judged it to be a cocoon and it was so interesting that I put it in a vial together with attached suspending thread for Museum determination. The thread was over two feet in length.

Land snails were quite plentiful and I secured several hundred of perhaps a dozen species. Most of them were obtained from leaves of low shrubs and trees in the forest, some in swamps, but none at height of over 300-400 feet. At present I am putting them in methyl alcohol as it is the only preservation available. I find that the shells can be cleaned readily when removed from this spirit. I should like to kill some at least of each species by drowning them in fresh water and then putting through graded strengths of alcohol, but have neither time, material or facilities for this work. I trust that in the shape I must perforce send them they will prove interesting, as even with my limited knowledge of land snails they seem to show marked insular differences. Their relative abundance as collected will show about the proportion on which they occur in each island. I am finding quite interesting differences in what constitutes the common snail or snails, even on

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islands situated very closely together.

Yesterday I noticed a large number of small snails on trunks of coconut trees in damp situations and on dead stumps and fallen logs. I had not noticed them except in this locality and collected a vial of them for identification. There seemed to be several species.

The large banded snail occurs here on shrubs and trees, sometimes as high as ten feet from the ground. I have previously seen this snail either on ground in very damp spots, or near or even in water.

There are few natives at present on Vella of the original stock. All the labor at this plantation is recruited, mainly from Malaita. My guide was a Malaita bush boy whose brother was one of the police boys killed in the recent fracas on Malaita. I had many interesting talks with him on various subjects relating to native life and customs, and learned much from him in rapid preparation of leaf houses for shelter from rain, etc. He also demonstrated to me the ease with which a bow and arrows can be made. The spear is made in the same manner. A few cuts with his bush knife and he had cut down a certain sort of small palm. Selecting the best part of the trunk, he cut off the desired length and standing the piece up on the sloping ground split it lengthwise into several smaller pieces. The grain runs the whole length and it splits very easily. With a smaller knife he rapidly fashioned

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an arrow, using the span of his fingers for certain measurements. Small fragments of the wood he sharpened and made into barbs of which he planed four for each arrow. These he said were poisoned in the old days with juice of a root which "stop along ground", so that if the arrow penetrated at all, the wound would prove fatal eventually. The bow is made in the same manner and with equal celerity, while the bow string is made from the threads of the liana, of which I have already sent on specimens, or sometimes from other vines. When desired, the wood is hardened by exposure to smoke or fire. Red and black colors are also added to it by juice of certain fruits which grow in the bush. Altogether it was a most interesting and illuminating demonstration of the ease with which a bush native can equip himself with weapons either for the chase or war.

I find the native a most interesting study in himself, and use every opportunity to try and draw him out about native customs, bush lore, the names and habits of birds and animals, etc. I find that they are very keen observers and have names for practically all the inhabitants of the forest. Those who are really bush people are quite well acquainted with even such things as the land and fresh water snails, ants, wasps, etc. As my guide of today said, referring to various mud nests which are seen on leaves of shrubs and trees in the forest, "Suppose you look

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16
him ground stop along leaf? He hang down, all right.
Him stop up close, you no touch him. Him ants." I
had found this out already by practical experience,
having already touched a couple of flat daubs of mud
which I took to be wasp nests, only on disturbing
them, to have my hand covered by a multitude of
very small and angry ants. The wasps make a larger,
firmer structure, which does "hang down" decidedly more.

Hamlin's leg was better by the 12th so that
he insisted upon helping in preparation of birds,
although I advised that he wait until the following
Monday. Have had quite a morning clinic lately, as
several of the crew are troubled with small sores on
legs, which are stubborn about healing. My pet sore
on right leg seems to be closing in gradually. Today
I was unfortunate enough to knock some skin off my
left shin due to a fall in the bush. I only hope
that it heals up with some degree of promptness.

November 13. Sunday. Caught up some on notes
for which I have had no time during the week, and
later, Richards, Hamlin, and I paid a visit to the
burial caves which lie fairly close to our anchorage
in a N. W. direction. There is a series of caves on
rather a prominent point, caves, or rather chambers,
chiselled out of the face of a cliff by the original
inhabitants of Vella. According to a native, it was
the custom to let a body decay, after which the skull,
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including the lower jaw, was placed in one of these

cells, provided the person was of some prominence. No care was taken of the rest of the skeleton, they not even bothering to bury or burn them. If the person was not of sufficient prominence to secure a place in the caves, which included some of the men and practically all the women and children, the skull was deposited on one of the little islands near the main island.

These caves or niches in the solid rock were carefully made. Some are as long as ten feet and perhaps 10 to 12 inches high by two feet deep, even deeper in some cases. There are smaller ones, 4 to 6 feet, and two very small niches, one of which contained a solitary skull, the other, two skulls. These are supposed to be the heads of great chiefs. One niche had rather an elaborate design carved in bas-relief around it, and at the first of the caves, which was also at the lowest level, there was a head, or rather face, nicely carved in the rock just above the burial niche. In front of this was the remains of what may have been a stone altar, and I rather understood that perhaps the natives worshipped here and had feasts of pig, etc.

All the caves were close to the salt water, the highest being perhaps 30 feet above the water, the lowest, where the stone face is, being about 10 feet.

The skulls are arranged in rows, one layer high, but one row back of another. In some places

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they were still in an excellent state of preservation, even the vine cords which bound skull and lower jaw together. Some heads were tied together in threes. Along with the heads were circles of shell, which we were told were "money". Also, the heavy, circular breast ornament, same as the one which appears on breast of native in pictures which I took at Ganonga, was evidently placed here with the skull. Many of these appeared to have been chipped, as if with the idea of making them valueless. Others showed wear marks from exposure to weather and constant pressure of growing roots and vines.

In some places, the skulls had fallen out of the niches and were scattered over the ground in the near vicinity. This probably is due for the most part anyway, to weather conditions, the disturbing effect of jungle growth, and perhaps the jar of falling coconuts, as there are coconut trees near the site of the cave where the greatest number of skulls have been displaced.

Most of the skulls were adult males, but I noticed a few of children and some which were probably females. Several had a circular piece of shell fastened in the orbit with a packing of clay, and from the number of shell rings scattered about the skull shelves, I imagine the skulls were prepared in this manner before being set up in their place.

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The total number of niches seen today was perhaps fifteen, and there may have been others covered up by soil which had slid from the top of the cliff, and by the rank growth of vegetation. They were all situated closely together, perhaps occupying an extent of 200 feet along this point. It is difficult to estimate the number of skulls in evidence at present, but doubtless several hundred.

Arrived back on ship in late afternoon and put in rest of day writing up notes and getting things in shape for another work day.

November 14. Expected to make an early start for some other point on Vella, but Beck decided to go ashore for a while, taking Richards with him. Hamlin and I were to put in the hours at anchor on notes, and I also developed film taken this last week. Pictures which I took yesterday with an old plate Premo camera which I have had over thirty years and equipped for this trip with a film pack, turned out quite well.

Beck and Richards returned after 11 a. m. with some birds, the most interesting being a thickhead in entirely black plumage. The thickhead has been taken here in some five or six variations of plumage, a most interesting series. The blackhead in young plumage also presents a striking contrast to the adult.

Two large frogs were added to collection from here, the same species apparently as the large river frogs secured at Ganonga. Two more snakes were

The total number of niches seen today was perhaps fifteen, and there may have been others covered up by soil which had slid from the top of the cliff, and by the rank growth of vegetation. They were all situated closely together, perhaps occupying an extent of 800 feet along this point. It is difficult to estimate the number of shells in evidence at present, but doubtless several hundred.

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Two large frogs were added to collection from here, the same species apparently as the large river frogs secured at Gannaga. Two more snakes were

also secured from the natives, so snakes may be fairly common here. It is rather surprising that the natives have not brought in a monitor lizard as they claim they are fairly common although in all my trips ashore I have seen none.

I find that land snails put in methylated spirits for two or three days clean easily, more so even than when they have been scalded in boiling water. It also prevents any odor from cleaned shells and seems to be a good method of obtaining fresh shells. Most of those I collect will have to be cleaned later as time seems to be lacking to do more than put them up in spirits.

Left Nyanga anchorage at noon and steamed to Mundi-mundi, an anchorage on W. side of the island, arriving at 3 p. m. A large coconut plantation here.

Got ready to go ashore after anchoring, but heavy rains continued for rest of afternoon and as bush was distant from shore, collecting was postponed until the next day.

November 15-16. Anchored at Mundi-mundi and ashore collecting both days. There is an extensive plantation here, about 800 acres, owned by Associated Plantations Co. and in charge of Mr. MacPherson who resides here with his wife.

There is one fairly large river makes its way to sea at the anchorage. A rather poor track led through the coconuts close to the left bank of the

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There is one fairly large river makes its way to sea at the anchorage. A rather poor track led through the coconuts close to the left bank of the

river and into the bush beyond where it seemed to end. I took this track on both days. The first day Hamlin and I climbed up on the ridge, but had to cut trail all the way and found birds very few, probably frightened away by noise of trail cutting, if indeed the character of the forest there encouraged much bird life which I rather doubt. In the flats, in close proximity to the river and its tributary streams, birds were very plentiful, all birds seeming to occur there.

The most abundant bird was the white-eye which was very plentiful indeed. The bald flycatcher was also common. The little black-headed flycatcher was taken but did not seem to be at all common.

Both brown and black fantails were more plentiful than at any other place so far visited, especially the latter. On one occasion I saw three black fantails at the same time in one tree, and on another, five brown fantails, probably young birds playing together.

Yellow honeysuckers seemed pretty well confined to the coconuts. The red-rumped honeysucker was present all through the forest but did not seem particularly abundant. I heard a few of these also in the coconuts. One very highly colored male which I shot had quite a bit of red showing on the scalp, the first time I have noticed it here. A young specimen which I obtained the last day, while able to fly well and call, had no red at all, so all the red in plumage

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I obtained the last day, while able to fly well and

call, had no red at all, so all the red in plumage

may come fairly late in development.

I saw several rusty-wing blackbirds which were in low bush along the river. This region was also thickly populated by starlings. One time I estimated that at least 50 starlings, in young and adult plumage, flew by me within perhaps three minutes. They were well distributed through the bush, but I saw none of the large communal nesting sites in tall trees. The mina was also fairly common.

Wagtails were fairly common in the coconuts, especially around buildings, and I saw a very few in the forest.

The thickhead did not appear to be at all common, although a few were taken. It also occurred at all levels. The same may be said of the gray-bird. The pigmy parrot I heard a few times, but was unable to get a glimpse of any. I have often thought that they call more loudly and persistently at the close of a heavy rain.

The white-headed kingfisher was fairly common along shore and I heard the larger of the two land kingfishers several times each day in the forest. They did not seem to be in the coconuts. One which I shot was busily tearing open an ant's leaf nest in a small tree. The little red-billed kingfisher occurred in the forest along the river and Hamlin and Richards each secured one. The stomach of one was empty, that of the other contained small insects. I am quite sure

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each secured one. The stomach of one was empty, that

of the other contained small insects. I am quite sure

that I saw a "little blue" kingfisher flying along the river.

The blackhead was not uncommon, as usual being far more often heard than seen.

The common ground dove, red cap and red-breasted dove were all fairly common. On the first day out I was fortunate enough to secure a specimen of the very rare "white breasted" ground dove. It was an adult male in beautiful plumage, specimen no. 29333. It flew into a low tree near the bank of the river and was so close to me that I was able to secure it with the aux. With the exception of an immature specimen, secured by Beck on Ramos Is., which may be the same species, this is the only specimen of this bird so far taken on the trip. The yellow-bibbed dove must be quite uncommon on Vella, also as the one I shot at Nyanga anchorage is the only one taken from the island, although both Beck and I saw a very few others.

Both the gray and red-knob pigeons occur, but not so common as at other stops made on this island. The megapode is very common and I heard the white cockatoo several times. Also heard the longtail several times each day and one was taken here.

Hawks did not appear to be very numerous at this point, although a few were seen, the white-headed and small blue-backed being the common species. Mr. MacPherson said several small owls were accustomed to fly about his residence in the evening.

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Little swifts and swallows were both quite common.

The only mammal taken was a large fruit bat which Beck shot the first day.

Land snails were not nearly as plentiful as at Nyanga anchorage, in fact they were rather uncommon. In the two days I collected perhaps 100 specimens of several species. Very small snails seemed to be more common than the larger ones. I obtained most of the small snails from the top side of leaves on low shrubs. The larger snails were mostly on under side of leaves of larger shrubs or trees.

No snakes were seen by any of the party at this anchorage. Small lizards were quite plentiful, the "blue-tailed" species being the most common. Beck secured one small frog. I did not see any monitor lizards.

Butterflies were not at all plentiful. I saw but comparatively few other insects. In the two days I secured some twenty specimens, mostly small coleoptera.

We had a great deal of rain here, commencing about 11 a. m. and lasting most of the afternoon. On Tuesday I spent several hours under a small leaf shelter which I constructed not far from the river bank. Anticipating the same sort of thing on Wednesday I added more leaves to improve the structure. It was a good thing I did so, as it commenced to rain at 11 a. m. cleared up some for half an hour, and then poured in torrents all the rest of the afternoon. The river at

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The larger anasias were mostly on under side of leaves

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No snakes were seen by any of the party at this

anchorage. Small lizards were quite plentiful, the

"blue-tailed" species being the most common. Beck

secured one small frog. I did not see any monitor

lizards.

Butterflies were not at all plentiful. I saw

but comparatively few other insects. In the two days

I secured some twenty specimens, mostly small coleoptera.

We had a great deal of rain here, commencing

about 11 a. m. and lasting most of the afternoon. On

Thursday I spent several hours under a small leaf

shelter which I constructed not far from the river

bank. Anticipating the same sort of thing on Wednesday

I added more leaves to improve the structure. It was

a good thing I did so, as it commenced to rain at 11 a. m.

cleared up some for half an hour, and then poured in

torrents all the rest of the afternoon. The river at

4 p. m. overflowed its banks driving me out from my shelter. I started for the shore some two miles off and found that the rising water had washed away two important log crossings in the trail and covered a considerable part of the trail itself. It was a case of climbing slippery banks, wading chest deep through swift running water, marching through piles of debris covering drains, and in general having a devil of a time. After about so long here, one gets to know the meaning of the expression, so often heard from native and European alike, "no matter", an expression which is illustrative of Solomon Island philosophy without which life here for long would be impossible.

Beck went high up on the ridge yesterday, and Hamlin and Hicks went up today but found no bird life different from that at lower levels.

November 17. Left Mundi-mundi in early a. m., heading north for Choiseul. On passing the upper end of Vella some natives came aboard in a canoe with squash, pawpaws and bananas for barter, and were quite enthusiastic about our stopping at Dobeli anchorage on north end of Vella. The France was turned in there, but on finding 20 fathoms of water close to shore we decided that it was no place to try to anchor at this season, so steamed out to sea again to continue the voyage to Choiseul.

Busy with notes and typing all day. I am developing a considerable practice aboard of late.

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Back went high up on the ridge yesterday, and
Hamlin and Hicks went up today but found no bird life
different from that at lower levels.

November 17. Left Munda-munda in early a. m.,
heading north for Ghoseai. On passing the upper end of
Vella some natives came aboard in a canoe with apples,
pawpaws and bananas for barter, and were quite enthu-
siastic about our stopping at Dobei anchorage on north
end of Vella. The France was turned in there, but on
finding 20 fathoms of water close to shore we decided
that it was no place to try to anchor at this season,
so steamed out to sea again to continue the voyage to
Ghoseai.

Busy with notes and typing all day. I am
developing a considerable practice aboard of late.

Someone on sick list most of the time and frequent cuts and sores on which to pass an opinion. I extracted a lower molar yesterday for Mr. McPherson.

Wind, while rather light, was favorable and made considerable progress away from Vella, both Kulambangra and Ganonga being plainly visible beyond it late in the afternoon. There was enough wind in the evening to keep the sails full, the sky was alight with stars, and it was delightfully cool and refreshing on deck after so many days at uncomfortably hot anchorages.

November 18. The wind seems to have deserted us again, and engine was started in early morning to keep up progress toward Choiseul. Busy in the early morning typing notes, a never-ending task. At noon, passed through a lot of small coelenterates, reddish brown in general color, about three-fourths to one inch in diameter, swimming on or near surface. Position at time about ten miles west of Choiseul. Temperature warm, 90 in cabin. Mrs. Beck caught some in a pail and I put them in formalin, as this is the first time we have encountered them. Later, at about 3 p. m. when getting ready to anchor at Moli anchorage near Moli Is., there were literally millions of the same coelenterate in the water, often large clumps of them floating on the surface, some as much as three feet in diameter.

Someone on deck last most of the time and frequent cuts and sores on which to pass an opinion. I expected a lower molar yesterday for Mr. Mobergson. Wind, while rather light, was favorable and made considerable progress away from Velle. Both Krimbanga and Ganonga being plainly visible beyond it late in the afternoon. There was strong wind in the evening to keep the sails full, the sky was bright with stars, and it was delightfully cool and refreshing on deck after so many days at uncomfortably hot anchorages.

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Dropped anchor at Moli at 3 p. m. A native came out from nearby village in small canoe, neared the France and then beat a hasty retreat as though frightened by the number of men aboard. Later, a larger canoe came out containing two natives, and they finally accepted my invitation to come aboard. One of them spoke fair English and told me that his village close by was Methodist mission, one of Mr. Goldys, in charge of a native worker. He said that one white man, Mr. Everett, was in charge of nearby plantation and paid occasional visits but was away at present time. I told him of our mission and he said there were plenty of "small pigeons" in the bush, but no good roads.

November 19. Ashore very early and collected until 3 p. m. The "roads" or trails in the bush proved to be very good from our point of view. One of these is said to extend to the other side of the island. The forest while dense, has many more or less open spaces. The grade of ascent is not difficult. Choiseul is said by the Pacific Pilot to be about 80 miles in length by 10 to 15 miles wide, and highest peaks about 2000 feet. I believe the chart puts the highest peaks as something more than that. There is no great height attainable from our present anchorage on N. W. coast, close to Moli Is.

Three old friends were present to greet us, the hornbill, crow, and midget. The hornbill is

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quite common here, many lone individuals and sometimes flocks of 2 to 5, more often the smaller number. The crow is heard quite often, but not as commonly as at other islands which we have visited. The midget I thought rather uncommon at first. I heard it occasionally, found it rather wary and not responsive to calling, shot at three individuals and only secured one. When on my way out, at a point only a few hundred yards from shore, I found a large flock of them busily engaged in some three or four trees. Here I collected four pair within twenty minutes and could have obtained many more. Sex organs much enlarged in both sexes, and all taken were adults, so it is probably the mating season. They were moving quickly about in tops of these small trees some 10 to 25 feet from the ground, very often chasing one another about in rapid, erratic flight. The trees bore some sort of blossom, which probably affords a source of food.

The thickhead is quite common here, and I heard it sing on several occasions although the most of the birds seemed to be quiet. It occurs at all levels from shore up. Its song is not nearly so loud as that of the same bird on Ysabel and Kulambangra.

The black fantail occurs commonly and did not seem to be particularly wary. They responded often to calling. I found them both in tree tops and in low, dense bush. The little brown fantail

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does not seem at all plentiful. I heard it several times but only saw one which I secured.

The white-eye is quite common, especially about open spaces where there was a growth of lower trees and reeds. It has an entirely different color scheme for bill and feet. The upper mandible is black, lower black with a varying amount but never much, of yellow. Tarsus a blue-gray merging into black at the toes. The iris is a chestnut brown. There is not nearly so much white in the ring around the eye. This white-eye seems much more like the one taken on Florida Island.

The red-bellied flycatcher also appears in a new dress, head and neck very black. It did not seem very common to me, probably more so at higher levels, and I heard it sing but very little. The little black-headed flycatcher appeared to be quite uncommon.

Several graybirds were obtained, the all gray with yellow iris, and the graybacked with black underparts, and several in diversified plumage colors. They are probably not uncommon here.

The green pigmy parrots are common enough, heard often in the forest, but in the whole day ashore I could only get a glimpse of one which I secured. The bill here is jet black, iris orange, feet gray, nostril area not very prominent. Of two specimens taken nostril area in one was a medium red, in the other cream color. Both were adult males.

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were adult males.

The white-headed kingfisher is common along the shore, having the same native name here, "cu-cu". The little kingfishers also are probably not uncommon, the natives calling them all "singa". The name for the common forest species is the same here, also "ee-ee". The white-eared kingfisher was seen several times and specimens secured. Of the very beautiful blue-backed kingfisher Hicks obtained three today, all in bush fairly close to shore. Stomachs of two were empty, that of the third contained a grasshopper. Richards obtained a new species of small kingfisher well up in the forest about the size of the red-billed, but color more like the white-eared. Iris dark brown, bill black and feet a flesh color in fresh specimen. This is specimen no. 29388 of which I made a color sketch. Unfortunately, the stomach was thrown away before I had a chance to look at it.

I did not see any parrots except the pigmy and the common red species. The white cockatoo is quite common, also the blue-headed paroquet. I heard the megapode quite often. The mina also called a good deal, although I did not see any.

Gray pigeons quite common, called here "kura". I heard the common ground dove several times and caught a glimpse of one. Did not hear other doves on today's trip. Starlings are fairly common and the rusty-winged blackbird is probably not uncommon. The wagtail occurs both along shore and in the forest.

The white-headed kingfisher is common along the shore, having the same native name here, "on-co". The little kingfishers also are probably not uncommon, the natives calling them all "singka". The name for the common forest species is the same here, also, "ee-ee". The white-eared kingfisher was seen several times and specimens secured. Of the very beautiful blue-backed kingfisher Hicks obtained three today, all in bush fairly close to shore. Stomachs of two were empty, that of the third contained a grasshopper. Richards obtained a new species of small kingfisher well up in the forest about the size of the red-billed, but color more like the white-eared. Its dark brown bill black and feet a flesh color in fresh specimen. This is specimen no. 29328 of which I made a color sketch. Unfortunately, the stomach was thrown away before I had a chance to look at it.

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I heard the yellow honeysucker along ashore but did not happen to encounter it at all in the forest. The black honeysucker here has black head and neck with bright red patch on top of head. Female lacks the red. It appeared to me to be somewhat smaller in size.

Hawks are quite common here. Along the shore I saw several white-headed hawks, the eagle hawk, and the small blue-backed species. Well up in the forest, a medium sized hawk came while I was calling birds and stopped in a convenient tree from which I secured it. This is specimen no. 29333 of which I made color sketch. Its stomach contained insects, mostly large grasshoppers or something on that order.

Hamlin obtained a brown heron in bush not far from shore, and both reef herons in blue phase and little green herons were seen along shore.

Small lizards not extra plentiful. I saw none of the monitor lizards and no snakes were seen by any of the party. Beck secured one small frog, different from those previously taken.

Land snails quite scarce, judging from today's observation, although there is plenty of dampness and some excellent sites for them both along shore and in the forest. I obtained only a few and some of these were dead shells.

Insects also appeared to be rather scarce. I saw very few coleoptera and not many butterflies.

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The village here is very small and poor looking. There are only a few houses, most of which set up on poles a few feet from the ground. The natives are rather small in stature, quite dark in color. Most of them wear a singlet and shorts, or at least one of these. They were inclined to be afraid of us at first but seem quite well acquainted after the day ashore. A native boy who accompanied me into the bush today, carried with him a small bow and some half dozen arrows. The latter are made from the ends of pandanus leaves, or something similar. They use them to hunt the kura and wild pig. I shot an arrow at a large tree and much to my surprise the arrow penetrated to a sufficient depth so that it required considerable effort to extract it. The point, simply the sharpened end of the leaf stem, was not damaged.

Weather pleasant, but very warm. For a wonder it did not rain. Put up nearly seventy birds between 4 and 9 p. m.

November 20. Sunday. Busy all day with color work and writing. I finished today a color sketch of hornbill and crow, which I commenced a long time ago. When in location where these birds were obtainable, I never had time when a fresh bird was available, to complete the sketch; while today I had the fresh birds which appear to be the same. I might note that the color on bottom of foot is not nearly as pronounced in this Choiseul Island crow, although we

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have only taken one specimen so far.

Natives say the opossum, called here "pāli", is very common, "big fella".

November 21-23. Ashore early all three days and intensive collecting in various parts of forest, penetrating much farther although without encountering any new species of birds.

The red-knob pigeon occurs commonly with the gray, and the white-tailed ground pigeon is probably not uncommon. Obtained specimens of the ground dove and red-cap dove.

The longtail probably does not occur here. No one of the party has either seen or heard it, and on showing a specimen to a native who spoke fair English, he said that he knew the bird but that it did not "stop here". This seems very surprising when it has been fairly common on all other islands visited nearby. The hornbill is very plentiful. I note that they often keep up a constant calling when in flight.

The pigmy parrot is very common here, and I collected quite a number. They are as a rule extremely difficult to see, although they may be heard calling very frequently. Their call is a sharp "tseet", often repeated rapidly several times. They seem to be practically always in flocks, and I have encountered them both in low and high trees. One day I had the pleasure of seeing seven of them at one time clinging to the white bark of a very large tree, their little dark green bodies standing out in sharp contrast against the

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white bark of a very large tree, their little dark
green bodies standing out in sharp contrast against the

creamy white of the tree. They were in all sorts of positions, sideways, and some with head up in vertical position, and some hanging head down. It was a most interesting and beautiful picture. The bills of those I collected were very black, the feet a light gray, sometimes a darker gray. Of several pair which I put up, all males had red nostril area, all females black nostril area, so in view of all my observations, I think this may be regarded as an accurate sex difference.

A hornbill which I obtained, age, as indicated by notches on top of bill, two years, sex male, had the area immediately around eye pink in color, naked area of throat cream white, naked area around eye slightly tinged with bluish, eye orange, feet black. Several adults, 4 or 5 years of age as indicated by notches, were colored as in sketch which I have made. The nictating membrane moves in an antero-posterior direction. It has been a deep orange. The blackness is

Stomach of a little blue kingfisher contained what appeared to be the remains of a grasshopper or some similar insect. quite common, occurring at all levels.

Hamlin reported seeing a small kingfisher on a river well up in the forest, which he felt certain had a red bill, the same as the little "red-billed" collected on other islands.

I saw several of the large green parrots, and am quite sure that I saw one of the smaller "yellow-headed" very and unresponsive to calling. I passed the spot twice daily, where I observed so many of them on the 19th.

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I saw several of the large green parrots, and am quite sure that I saw one of the smaller "yellow-headed"

species. The latter is said to occur here by the natives.

During the three days I saw and collected about all the birds previously noted, but can add little in the way of field notes. The thickhead and black fantail are both quite common and both seen often in tall trees as in bush. The thickhead sings quite often, not as loud a call as at some of the last islands visited. Its song seems to vary a little in different parts of the group. The black fantail sings often. It has several songs or calls, easy to imitate, but of such a character that I am unable to note them. The brown fantail appears to be quite uncommon and very shy. Several have been collected, but no one has seen or heard many. The little black-headed flycatcher is not very common. The inside color of mouth here is nearly normal, while at other islands in this part of the group, as I think I have previously noted, it has been a deep orange. The blackhead is fairly common but quite wary. Most of those which I saw were in tall trees.

The mina is quite common, occurring at all levels. The crow is not very common, heard once in a while, but seldom seen. The rusty-wing blackbird and graybirds are only fairly common. I have seen but few gray-back shrikes and collected one.

I did not encounter on any subsequent day the midget in any numbers, and found them always rather wary and unresponsive to calling. I passed the spot twice daily, where I observed so many of them on the 19th,

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Richards got a very large monitor lizard in swamp near shore, measuring four feet in length. This, I think is the largest we have taken. I saw a small one, perhaps 18 inches in length, some two miles in the forest. It does not seem to be at all common here.

Small lizards are quite common in the forest, mostly a dark brown species. One which I collected had a light green abdomen. Several species were taken, including a black specimen obtained by Hamlin, and a gecko secured by Beck. In all, only three snakes were observed during our stay, one of which was secured. A large frog was taken on the 23rd, similar to those obtained at Ganonga. A native, who was carrying it, told me that much larger ones of a different kind were sometimes found along the river.

In a fresh water stream, some two miles in the forest, I found prawns plentiful, also small water beetles and obtained some of each for specimens. The natives here have a very ingenious way of catching prawns. On my expressing a desire to have some of them, a native boy who was with me pulled some of the long leaves of a cactus-like plant, which grows commonly through the forest. These he stripped, exposing near base a white stalk somewhat resembling bleached celery in appearance. Three of these he placed in the stream at intervals of about 30 feet. They seemed to attract the prawns and were used for that purpose.

but they never appeared there again except one or two individuals.

Richards got a very large monitor lizard in swamp near shore, measuring four feet in length. This I think is the largest we have taken. I saw a small one, perhaps 18 inches in length, some two miles in the forest. It does not seem to be at all common here. Small lizards are quite common in the forest, mostly a dark brown species. One which I collected had a light green abdomen. Several species were taken, including a black specimen obtained by Hamlin, and a gecko secured by Beck. In all, only three snakes were observed during our stay, one of which was secured. A large frog was taken on the 23rd, similar to those obtained at Ganonga. A native, who was carrying it, told me that much larger ones of a different kind were sometimes found along the river.

In a fresh water stream, some two miles in the forest, I found prawns plentiful, also small water beetles and obtained some of each for specimens. The natives here have a very ingenious way of catching prawns. On my expressing a desire to have some of them, a native boy who was with me pulled some of the long leaves of a cactus-like plant, which grows commonly through the forest. These he stripped, exposing near base a white stalk somewhat resembling bleached celery in appearance. Three of these he placed in the stream at intervals of about 40 feet. They seemed to attract the prawns and were used for that purpose.

Next, he pulled the leaf of a certain fern which also grows commonly in the bush, and stripped the midrib free from "leaves". Next, he pulled down a banana-like palm, and tearing off the big leaves down toward the stem, exposed a layer which contained long and very fine threads of a considerable strength and practically colorless. With one of these, he fashioned a very small free loop at the find end of the midrib, lashing it securely. With this device, he commenced to fish for the prawns, which were now gathering in twos and threes about the vegetable bait. On lowering the tip of the fern midrib in their vicinity, they seemed to attack it, raising their bodies up and picking at it with their claws. By passing the loop back and forth slowly near the head of a prawn, he soon hooked the slender thread over one of its prominent eyes, and the prawn on giving a sudden jump backwards was immediately entangled and pulled from the water. This process was repeated many times, a rather delicate operation, but wonderfully successful. I understand from one of our native crew that the same method is employed by natives in Samoa, which if true, is rather interesting.

I secured several coleoptera, but did not find insects at any time very plentiful. There are some fairly large and very beautiful butterflies in the forest. I found near the little stream a grasshopper with very long antennae, perhaps 10 inches, out of all

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proportion to the body. I managed to get the specimen back safely by wrapping it in leaves and hope it reaches the Museum in good condition.

I shall have to revise my first opinion as to the scarcity of land snails. On my second trip in the forest, I found them more plentiful, and, large and small, probably secured two hundred specimens. The next day on my return to shore, I found that the natives, who had observed me getting them, had been doing some snail collecting on their own account. They had four leaf packages of live snails, more than 1000, which I purchased for 8 sticks of tobacco. They were of course mostly of common species, but out of the lot, I got a few rare specimens which, together with those secured by me, will make a very interesting lot from here. Seemingly, they all occur on leaves of shrubs and low trees. One large snail, of which I only found one live specimen on a shrub perhaps a half mile deep in the forest but at only slight elevation, is very beautiful when alive, most of the shell being a light greenish color. I made a color sketch of it to send along with the shell. I found a few dead shells of this and some other rare snails, all in good condition, which I preserved.

On Vella Lavella, I noticed a small canoe with outrigger, the only one I have seen in this part of the group, in fact, the only one I think since leaving Santa Cruz.

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I have been interested in watching the natives make it in their tricky canoes. It apparently gives them little or no concern. I have seen a fairly large canoe with eight paddlers, mostly small boys, in seas which were uncomfortable for our own longboat, easing along with no trouble at all, the occupants not seeming to have any difficulty in maintaining just the proper balance.

I also had a demonstration of archery with one of the primitive bows and arrows, such as I made note of after my first day ashore. I placed a half of a small coconut on a tree stump and a native, taking rapid aim from a point 50 feet distant, discharged an arrow which entered the stump at the very edge of the coconut. He also took a shot at a flying cockatoo and at 100 feet, missed it only by a couple of feet. They tell me that they use these arrows in hunting wild pig and pigeon, and I have no doubt as to their being effective.

They seem to have very few coconuts at this village, but an abundance of pawpaw, bananas, and pumpkin or squash. As I got to know them better, I found them a very interesting lot and well dispositioned. The school house is by far the most elaborate building in the place, and is equipped with blackboard and a few slates, the latter coming from New England.

The half-grown boy, who has accompanied me upon my trips into the forest, while unable to speak any English, has been a treasure in his ability to find

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shot birds. Extremely quiet in all his movements, always attracting my attention to anything unusual by a slight touch on my arm, he has been a valuable help and I believe any native like him could be easily trained into a most useful worker. Yesterday I persuaded him to try a couple of shots with the gun, of which he was somewhat afraid, I suppose, on account of its being a double barrelled hammerless. He quickly comprehended my demonstration of the safety device, and scored 100o/o in his two shots with the aux at a black fantail, and no. 10 at a mina.

Weather very pleasant the last two days, an unusual occurrence at this season. Richards has been on the disabled list for a couple of days with an infected wound on knee, which with rest is coming along nicely. Hicks also has been on the sick list with a gastric disorder.

November 24. Thanksgiving Day. A very fine day except for the heat. Did not go ashore, but spent practically the whole day in the hold putting up specimens. There were several large birds left over from yesterday, and also, I put up a large fruit bat which I shot yesterday afternoon well up in the forest. It was moving slowly about in the top of a high tree. When picked up, I found that it had enlarged nipples; and on looking over the spot where it fell, I found a little one with fur quite well developed, but apparently still dependent upon its mother for nourishment. The

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41

young one I put in spirits with same number as the adult. Both mammary glands of the mother were about the size of a half dollar and $1/8$ inch thick in centre. Iris in adult light brown. Length 12 inches, extent $53 \frac{1}{2}$ inches which I think is the largest measurement I have recorded.

After this I went at the miscellaneous material, spiders, insects, prawns, and shells. I had to clean a lot of the latter, I should think nearly 2000, a job in which I was very glad to have Hamlin's assistance. I have only a very few bottles to carry me until we get to Faisi where I may be able to get a few more. I put up three or four hermit crabs today which I collected yesterday well up in the forest. We see these hermit crabs all through the forest on all islands. The reason I took these was because they happened to have appropriated the shells of rare land snails for houses.

Did not get out of the hold until late in the afternoon, which left me barely time to make a sketch of a pigmy parrot and write up my notes.

Dinner in the evening was an especial occasion, pumpkin pies and cake made by Mrs. Beck serving as fond reminders of Thanksgiving Day at home.

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General character of the country here is flat. The bay is extensive and well protected from weather by

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several small islands all planted with coconuts. These and the large planted area on the main islands are all part of the holdings of the Associated Plantations Co. There is a wharf at residence site, several workshops and storehouses near shore, and a residence on hill side occupied by Mr. Everett, who is resident manager.

Two rivers enter the sea near this anchorage, one small river to the north and a larger one to the south.

Beck, Hamlin, Hicks, and I went ashore soon after anchor was dropped, Richards still being on the invalid list with infected laceration of knee. It was a long march through the coconuts in the heat of the day, some two miles with no trail.. On entering the bush I finally found an old trail which led up a ridge to probably the highest land in this vicinity. Birds did not seem very plentiful and no additions to list of those seen at Moli Island anchorage.

The large green parrot seemed more plentiful than at last anchorage. Pigmy parrots were quite common but extremely difficult to see. Color of feet of these little parrots seems to vary on this island from a pale brown to a pronounced gray, most of those secured being the latter color. I feel certain the more of them I examine, that the color of nostril area properly indicates the sex.

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fantails were both present, although I did not catch a glimpse of the latter. The red flycatcher, small black-headed flycatcher, and thickhead were heard fairly often. I only saw one graybird which I secured. Minas, starlings and the rusty-winged blackbird, all appeared to be common. The white-eye was quite common. I heard the blue-backed kingfisher on first entering the forest, but did not encounter it. The white-eared kingfisher was taken on the river later in the day, its stomach containing digested remains of a prawn. The stomach of one of the larger of the two "land" kingfishers taken in the coconuts contained the remains of a grasshopper and many small insects. The white-headed kingfisher was seen along the shore. It is rather peculiar that the large and small "land" kingfishers, so common in coconut groves in Eastern Solomons, do not appear at all common in groves in Western Solomons. Today I heard only two in the long walk through this grove, and often have made long journeys through the groves in this section without hearing any. They occur quite generally in the forest, more often heard than seen.

The hornbill is very plentiful here. In a female which I shot, estimated age 3 - 4 years, the area around eye was quite bluish, iris a light brown instead of orange.

The cockatoo and crow were both much in evidence, particularly the former. The wagtail was plentiful in the coconuts, and I saw a few in the forest.

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44

No rain fell during the day, but it was very hot. Birds do not seem nearly as plentiful as at Moli Island anchorage, a condition which I have noted before in the vicinity of large planted areas.

November 26. Made a trip up the larger of the two rivers, being able to get up it with the long-boat a distance of about three miles. It is a very beautiful river especially after the first two miles, where the banks are practically all mangroves. With an average width of 50 to 100 feet in first two miles it narrows considerably higher up, finally coming to an end, as far as navigation is concerned, about three miles from the sea, where there is an extensive waterfall. At this point, an area of perhaps five acres has been cleared and planted in coconuts, but nothing is being done with it at present.

Travel was very difficult near the river banks, a rough fissured terrain of volcanic rock with growth of very tall banana-like palms interspersed with small trees, and now and then trees of considerable height. The real forest was there, somewhere in back, but to reach it meant extensive trail cutting for which there was no time.

Minas, green parrots and the smaller "yellow-headed" parrots, cockatoos, hornbills and starlings were all common along the river banks. Hornbills appeared to be especially plentiful. A white-headed kingfisher was seen more than two miles up the river, the farthest inland I have ever seen this species.

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Both the white-eared and little blue kingfishers were noted along the river, several of the latter being seen winging their rapid flight away from our disturbing boat, to be swallowed up in the dark recesses of the mangroves. Curlews, herons, and the little common sand-piper were also common along the river.

We heard one alligator crawl from the mangroves into the river, and later came upon his tracks. These reptiles are probably quite common in the group, but even an expedition like our own gets but little chance to actually see them, although we have noted either the animal itself or its tracks at many islands. I saw a couple of monitor lizards on the way up the river. Late yesterday afternoon Beck saw one of the smaller "blunt-headed" reptiles at this point.

Near the upper end of the river at a point just below the falls, the face of the abutting rocks, ground shelves and some old logs were literally covered with a small milliped or larva, the nature of which I was unable to determine without a glass. There were millions of them within an area some 50 feet in extent, in some spots packed closely together and two or more layers deep. They seemed to be quite inactive judging from a very short period of observation. I collected a few for future identification.

On the way up also, we noticed an eel in shallow water, rather sluggish in its movements. It was perhaps 3 feet in length, somewhat larger around

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shallow water, rather sluggish in its movements. It
was perhaps 3 feet in length, somewhat larger around

than a broom handle, with, I thought, a considerably 46
flattened tail. The general body color appeared to
be yellow with numerous large black spots. Its cap-
ture was attempted but without success. No one present
had ever seen anything like it before.

✓ The most interesting discovery of the day was
a nest of the green pigmy parrot which contained two
eggs. The nest, in a large ants' nest (small red ants,
probably termites) was about 7 feet from the ground on
the side of a large tree with white bark very much re-
sembling one of our sycamores, the trunk being about
two feet in diameter and the tree perhaps 125 feet high.
The opening in the nest faced west.

The ants' nest, shaped like a very large ham,
was 20 inches high, 12 inches wide and 9 inches in
thickness. It was well tenated with ants as I found
out in cutting it loose and carrying it to the boat.

The nesting site was at the top of the river
bank, an elevation of perhaps 30 feet, and not more
than 50 feet from the water. The nest faced toward
the water.

The entrance hole to the parrot nest was 3
inches wide by 2 inches in height and penetrated to a
depth of 6 inches. In the rear it ascended to another
chamber or shelf which I was unable to feel with my
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47
boat. Hearing a slight rattle I immediately looked and discovered one egg in the bottom of the nest. A gentle tipping permitted another to roll into the same position whence they were both removed with great care. The eggs, white in color, measured 16 by 13 millimeters and were well incubated.

We had heard from the natives that the pigmy parrots, both species, made their nests in ants' nests, but this is the first time that one has been seen. It seems a strange nesting site for such a small bird, and one would think that the newly hatched parrots would suffer an early death at the hands of the legions of ants. I have wondered since the finding of this nest whether the ants or ant larvae play any part in the food supply of the young parrots. The adult parrots are often seen on smooth bark of large trees, sometimes moving about there, for what purpose I have not been able to fathom. One would think they might be in search of insects, and yet, in an examination of more than 25 stomachs, I have never found anything except small seeds. Small seeds may lodge in tiny crevices in the bark, or perhaps the parrots get drops of sap of something else, but I have never been able to identify them with any sort of insect diet. Of course this may not apply to the diet of the young, and yet, the problem still remains as to why such tenants should be left in peace and security by the ant landlords, who have thousands of police well able to punish any trespassers.

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passers.

The parent bird was flushed from the nest immediately on our landing, and both parents were in the vicinity most of the time that I spent near the nest, calling frequently. There was some doubt as to whether we should return another day, and I could not bear the thought of leaving such a remarkable nest, perhaps the only one ever seen by whites. There was no camera present to photo it in situ, so I carefully cut the whole thing loose with a large bush knife, leaving hundreds of larvae exposed on the tree trunk, made a hurried trip to the boat on account of the ants which certainly very much resented my presence, and wrapped the whole thing immediately in newspapers, tying it with vine. Later on the schooner, I poured benzine over it to destroy as many ants as possible. Beck secured a photo of it and it is now rewrapped in several layers of newspaper, ready for packing into the first available box. Needless to say, I was delighted to find the set of eggs included in the find. I certainly hope that the whole exhibit may reach the Museum safely.

About the same birds were seen here as in forest visited yesterday. Midgets and white-eyes were the common species. Wagtails were quite often seen even three miles up the river, so they do get away from habitations some times. Graybirds were, I think, more plentiful in the vicinity of the river. Longtail swifts were seen on the river and a couple of them obtained. A yellow-headed parrot was secured, an

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40
adult female, which differs in color of plumage and bill from the male. Iris in this bird was light yellow. The black honeysucker was not common at all, and I did not hear or see the yellow, although I dare say it occurs. I heard the small black-headed flycatcher, red flycatcher, both fantails, the black-head and thickhead on several occasions.

Small lizards were quite plentiful. One snake of a long slender type was taken, the only one seen.

Insects did not appear to be very plentiful.

In the course of the day I secured a few, mostly coleoptera.

Under the large banana-like palms I found a large number of dead shells of land snails and collected a few for purposes of identification. Careful search failed to reveal many live snails, although I did succeed in obtaining about a dozen of several different species, some of which differ from those taken at Moli Island anchorage.

In a tiny stream which trickled down waterfall fashion over the bank into the river, I found some long fresh-water snails and collected a few for identification. They were not very plentiful. In tiny pools in crevices in the rock there were also small prawns which bravely attacked my finger when I put it in the water, but rapidly retreated when I tried to catch them.

On account of the rough travelling and large amount of time consumed in going and returning from this place, not many birds were secured. Several ducks were

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All the labor on plantation is recruited from Malaita. A native out from some nearby village had some vegetable truck for barter, also two red parrots and a cockatoo which he had shot with a bow and arrow, so archery is not yet a lost art with the Choiseul Islanders.

Stomach of a longtailed swift contained a beetle about one inch in length, the first time I have found anything in stomachs of this bird except very small insects like small flies, of which one stomach may often contain a great number of the same species.

November 27. Sunday. Spent the day aboard writing up notes, preparing miscellaneous specimens, etc. Weather has been pleasant now for four days, most remarkable for this time of year.

Hamlin took a trip up the river in the dinghy. He reported seeing only one little blue kingfisher. He saw an alligator on the bank, the length of which he estimated as about 15 feet.

November 28. Beck and Hamlin went up the river in the dinghy, while Hicks and I landed on the wharf and made the long trip through the coconuts to the bush some two miles distant. We followed the same ridge as on our last trip in here, but with still less result. Birds were very scarce and the forest was practically silent except for the disturbance caused by a fairly strong breeze. While a breeze is appreciated at any

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time in this climate, it is not always the safest thing in the forest where it causes many a decayed limb, or even the whole tree to come crashing to the ground.

We saw very few birds on this trip, although out until late in the afternoon. They were not at all plentiful here last Friday when four of us collected the same region with very poor results, so I should judge that for some reason the birds prefer another locality.

I saw a small snake on this trip which I was unable to secure. It was about 3 feet long, very slender and also very active. I disturbed it in the top of a thick bush. It travelled with extreme rapidity across a couple of other bushes, reached the ground and disappeared almost instantly. So some Solomon Island snakes are active enough.

Beck and Hamlin had a more successful outing, although they also found birds very scarce on the shore and most of those which they secured were taken while in the boat going and returning on the river. One little blue kingfisher was taken and another seen. They also secured an eagle hawk. Of two hornbills taken by Hamlin one was a female between one and two years of age. Its iris was light brown, while iris in a male of the same age was orange. This female also seemed to have considerably more blue in naked area around eye.

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Beck reported seeing what he thought might be another nest of the pigmy parrot in an ants' nest on

side of tree about 40 feet from the ground.

I secured a few more insects today and also more live land snails, adding considerably to number of specimens from Choiseul Bay.

November 29. Underway early to steam westward in general direction of Shortland Group. Made a stop at very small island at outside of Choiseul Bay where Beck and Hamlin went ashore for an hour. Found here the same small island type of "ashy-headed" flycatcher, the phase which the red-bellied flycatcher seems to assume on so many of these small islands. It is very interesting to find it occurring here as well as in the more easterly and southerly Solomons. The yellow honeysucker was very common on this small island, although it did not seem at all plentiful on areas covered by us on the main island.

At dusk we were near Oema Atoll and Oema Island but not near enough to get into any anchorage before dark. Layed off and on in Bougainville Strait for the night, a tricky place which the captain had been warned by local sailormen not to get caught in at night.

November 30 - December 1. The strong currents in Bougainville Strait had put us in a position where it seemed inadvisable to try to make Oema Island. Also, the engine had developed trouble with water pump, which made it impossible to use it for any great length of time. After considerable jockeying about we finally came to anchor on November 30th in a sheltered spot between Fauro Island and nearby small island called

side of tree about 40 feet from the ground.

I secured a few more insects today and also more live land snails, adding considerably to number of specimens from Choiseul Bay.

November 29. Underway early to steem westward in general direction of Shortland Group. Made a stop at very small island at outside of Choiseul Bay where Beck and Hamlin went ashore for an hour. Found here the same small island type of "sandy-headed" flycatcher, the phase which the red-bellied flycatcher seems to assume on so many of these small islands. It is very interesting to find it occurring here as well as in the more easterly and southerly Solomons. The yellow honeyeater was very common on this small island, although it did not seem at all plentiful on areas covered by us on the main island.

At dusk we were near Gama Atoll and Gama Island but not near enough to get into any anchorage before dark. Layed off and on in Bougainville Strait for the night, a tricky place which the captain had been warned by local sailors not to get caught in at night.

November 30 - December 1. The strong currents in Bougainville Strait had put us in a position where it seemed inadvisable to try to make Gama Island. Also, the engine had developed trouble with water pump, which made it impossible to use it for any great length of time. After considerable jockeying about we finally came to anchor on November 30th in a sheltered spot between Furo Island and nearby small island called

Tauno. After early lunch Hamlin and I landed on Fauro while Beck visited small island of Tauno.

Our first lead took us into a mangrove swamp, such a tough looking place that we passed it up as being impossible. More search and a lot of good luck took us through a canebreak into the forest beyond where we struck an old trail leading up to the ridge, which at this point is not very high, perhaps 1100 feet.

Birds were very scarce indeed. In the dense growth near shore where there are a few low trees interspersed in the tangle, some small birds seemed not uncommon, especially the midget. Here also I noticed the black honeysucker, small flycatcher and brown fantail. In the forest we found the brown fantail, midget, blackhead, red-bellied flycatcher, small flycatcher and an occasional black honeysucker. The small birds seemed to show a preference for high trees, even the brown fantail and blackhead often appearing there.

The hornbill is very common here, present all through the forest and seen in the evening crossing in pairs or small flocks from Fauro to the small island Tauno. Both gray and red-knob pigeons were very common, especially the latter. I saw the pigeons, some red-cap doves, an occasional hornbill and cockatoo, all feeding in the same tree, an immense old tree some 5 feet in diameter at the base and reaching very high in the air with a great spreading top bearing some sort of small red fruit. Most of the time these birds were

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 of small red fruit. Most of the time these birds were

entirely out of gunshot, although I did secure one red-54
cap dove.

Minas were quite common and the red parrots made a terrible noise with their unpleasant screams. The large green parrot did not seem uncommon. I am still uncertain as to whether I heard the pigmy parrot. I thought I heard it on a couple of occasions, but only for a brief period, and one might easily mistake for it the sharp calls of the midget or honeysucker where the call is not given repeatedly and in chorus.

No one saw or heard the white-eye, thickhead or black fantail, which seems rather remarkable. The crow and longtail probably do not occur here either. The megapode seemed uncommon. Hamlin secured one gray-bird the second day out.

Altogether, bird life at this point was scarce as regards small birds, reminding me of Naroovo in this respect, although I think if anything even more uncommon here. Beck found practically similar conditions prevailing on Tauno Island, which he visited on both days.

On our second day in we found the old trail which we had been following ended about 1/3 the way up the ridge at a place where a native was making a dugout canoe. Hicks was along on the second day, and while we spent the whole day in this spot, the number of birds secured by all three of us was not large.

Only one white-headed kingfisher has been seen along shore, which is also quite remarkable, in view of

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Only one white-headed kingfisher has been seen
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the fact that they have been quite common at all islands visited recently. Both the blue-backed and "land" species were heard in the forest, but none secured.

In two specimens of the small flycatcher, which I had an opportunity to examine, both lacked the deep orange tint to inside of mouth and throat. One was about normal for color, the other very slightly tinged with pink. The red-bellied flycatcher and black honeysucker both show quite different plumage variation, and perhaps the brown fantail and blackhead are different.

There was a fair sized native village some two miles from our anchorage, which I did not have a chance to visit. Several of the natives were aboard, large quite black, good-looking men, seemingly quite intelligent. Some of them spoke very fair English. They use outrigger canoes, several of them equipped with sail. The name of the village is Kariki.

Insect life not particularly abundant. I saw many butterflies, some quite large and handsome. I noticed very few coleoptera. I captured one grasshopper, the largest I think that I have seen in the islands. Hamlin got a mantis.

One small snake was taken here, the only one seen. Small lizards were very plentiful in the forest. On our first day ashore Hamlin and I saw a large monitor lizard take to the water in the mangroves, swimming easily and gracefully. Here also I noted the large black lizard of which I collected several. It did not appear to be particularly abundant, the more common

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species being the small brown and the blue-tailed. The larger black lizards measured 13 inches in length, dorsal parts black, beneath a yellowish flesh. I also secured a green lizard which was climbing about a tree trunk some 12 feet from the ground. It measured 9 inches in length, all green in color except dorsum of hind legs, which were a variegated pattern of very light brown, the scales having a fine edging of black. Body a vivid, deep grass green above, lighter green below. This is the first green lizard I recall with dorsum of hind legs this color.

Land snails were not uncommon, and I collected several different species. I found here a very large snail travelling about on the damp leafy carpet of the forest, the largest snail I have seen in the islands, and the only one of this species seen by any of our party. Another ground species was not uncommon, and from leaves of shrubs I collected quite a number of different species. A snail commonly found attached to rocks in fresh-water stream beds, I found here in the forest.

Near a little stream where I stopped for a drink, I found a most lively earthworm on top of the moist ground, and as we do not see them often, I collected this one for identification. A flat type of milliped, not uncommon on many islands, seemed quite plentiful here. I collect them occasionally, thinking they may perhaps show some variation from the different islands.

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Richards' leg is healing quite rapidly now. It had an ugly look for several days, and discharged pus quite freely, but the pain has let up and wound appears to be filling in with healthy granulations. I have forbidden his going ashore into the bush until his leg gets better, knowing from personal experience and much observation just how badly such things can behave in this climate.

December 2. Anchor raised about 8 a. m., when tide was favorable, and headed south for southerly end of Fauro where the island is considerably wider and higher.

After a short sail, anchor was dropped in a nice little harbor at Fauro Plantation on southeast end, consisting of 366 acres in bearing nuts, at present under management of Mr. Leonard J. Pinnock, who resides here with his wife. The local name of the plantation is Kalia, and the bay is called Sina-sora.

Hamlin, Hicks and I were ashore soon after coming to anchor, making our way in the dinghy a short distance up a small river where we found an old trail leading through the forest and up the main ridge. We were able to get in quite a distance, but small birds were very scarce as noted at our last anchorage. The only common small bird seemed to be the midget. Black honeysuckers were met with in pockets, and occasionally I could hear the blackhead calling. I found one "pocket" of blackheads and red flycatchers and secured several of

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58
each, the only ones I obtained on this trip. The small black-headed flycatchers occur quite generally through the forest from low levels up. The red-bellied flycatcher seemed quite silent.

Hornbills were plentiful and the large pigeons also seemed to be quite common. Minas were calling on every side and I saw several cockatoos and both green and red parrots.

The most remarkable condition to me here is the comparative scarcity of small birds and the non presence of the white-eye, thickhead and black fantail. The pigmy parrot so very common on Choiseul, also seems to be missing here.

On a fresh water stream, perhaps a mile inland, I collected a few snails which were attached to the rocks in running water. Where the stream current was most swift, I found a few flat, limpet-like shells, but they seemed to be scarce. Later on, near the mouth of this little river, but at a point just above where the tide could make the water brackish, I collected more shells of different species. Land snails seemed to be very scarce, and I secured only a very few, one of which, a beautiful banded snail, was contributed by Hamlin.

December 3. Ashore early and followed the same trail with about the same results. Beck collected today and was inclined to think that birds were rather common in species represented, but this did not seem so to any of the rest of the collecting party. Today, while I heard several blackheads, I did not happen to get a

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glimpse of one and I did not see any red flycatchers. 59
I found the black honeysuckers in small flocks about certain trees where they were feeding from the blossoms. Yellow honeysuckers were not uncommon near shore. The graybird I did not see at all, although I believe two have been taken from this island. Kingfishers are also scarce. Three of the blue-backed species were taken today of which I had a chance to examine two stomachs, both of which contained small insects. No new additions were made to list of birds. The only dove taken is the red-cap. Hawks do not seem to be plentiful, although I have seen the white-headed species several times. Have only seen a few herons, and have not noticed the white-headed kingfisher at all at this anchorage. Both swallows and small swifts are very common in the vicinity of the river.

Small lizards are very plentiful and I have collected, I think, six species from this island. The most common one in the forest is the brown species with small black dots. Near shore the blue-tailed species is the most plentiful. The monitor lizard is quite common in the coconuts.

Insects are apparently not very abundant. I secured a few coleoptera of several species, including one fine longicorn.

A milliped about three inches in length, which I found on a hill side in the forest, was the most active of its kind that I have ever seen. It took me a couple of minutes to get it into a small vial, and in the course

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60
of its struggles it covered my fingers with an exudate, which stained them brown. Not knowing whether or not this particular species was poisonous, I took pains to remove stains with a vigorous scrubbing with saliva and fern leaf. The exudate from some of these millipeds causes severe burning and ulceration.

I saw only one snake at this place, a slender brown species, which was rapid in its movements, and escaped in spite of my efforts to secure it. Beck got three small land frogs.

The absence of the coconut or "land" kingfisher is very noticeable. Mr. Pinnock says that at times they are very plentiful here, appearing all about his house and outbuildings, and often coming to the roof of his house with hermit crabs and pounding the shells on the metal roof to dislodge the inmates. He is unable to account for their present absence, which, he says, is only temporary. Perhaps they are generally present at some other places where I have noted them as few in number or absent. I thought this a matter of interest. He also spoke of the small quail being present on this island, and said that a few years ago a native here obtained several alive for a collector of live birds, who came from Australia. I have had no chance to interview the native, and mention this for what it may be worth. None of our party saw any quail, and with no opportunity for verification, it seems to me quite possible that the native may have brought in young chicks of the megapode which are well feathered and

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61
very active as soon as hatched, and resemble very much the quail in general appearance.

Weather is very hot. Have had no rain for nearly a week, a most surprising happening at this time of year. The flies are terrible here, in perfect swarms, of a fierce disposition and a seeming preference to attack one's eyes.

Richards collected today for the first time in two weeks. I feel certain that he has avoided a very troublesome knee by giving it proper attention at the start. From such beginnings the dreaded "island sores" develop.

December 4. Sunday. Attended to the usual Sunday tasks in the morning, and Mr. Pinnock had us all ashore for a midday dinner, which was quite a treat. The fact that it was served in a fly-proof room added greatly to our appreciation. I returned to the ship early in the afternoon to try and catch up a little on writing.

Some of the crew who were ashore brought back a snake, the same kind which I saw yesterday. It (spec. no. 29707) was over three feet in length, very slender, general color above light brown, below creamy white except for throat, and six inches just posterior, which was yellowish green.

I believe I have forgotten to note that the wagtail is common here, also the starling in a few spots near shore. The megapode is not uncommon, and I caught glimpses of three common ground doves.

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wastail is common here, also the starling in a few

spots near shore. The megapode is not uncommon, and I

caught a glimpse of three common ground doves.

Porpoises appeared several times at this anchorage, swimming leisurely about the ship. Fish were very abundant, but apparently no species which take the hook, as the captain, who is the chief angler, failed to capture any.

December 5. Anchor raised soon after daybreak and headed on a southerly and southwest course for Mono Island. Wind very light. Weather pleasant, but hot. A very few birds, mostly terns, seen through the day.

I did some printing in the morning, and spent all the remainder of the day in writing, including some "missionary" letters to various plantation managers in the group, who have been very kind to us and considerate of the interests of the expedition. It probably will give them a pleasant surprise to receive the greetings of the season from the Schooner France.

Came to anchor after 7:30 p. m. in passage between Mono and Sterling Islands. A bright moon favored our passage in. Natives in trim outrigger canoes were alongside soon after anchor was dropped. Many of them spoke some English, some of them quite well. They told us that Mr. Goldy (Methodist) had a mission here in charge of a native mission worker from Fiji; that there was a store here belonging to a white man who did not reside here, but, from what I could understand, left it in charge of two Chinamen. The natives referred to the islands as "Seri-seri", but said Mono was "all the same".

They were very well supplied with outrigger

62
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63
canoes. When we had been at anchor a short time, the native missionary worker from Fiji came alongside in a very large and finely constructed outrigger canoe. It was, from their account, 7 fathoms (42 feet) in length, beautifully made from a single tree trunk, dugout style. There was an extensive raised platform between the canoe itself and the outrigger. There were probably 20 men in the canoe when it pulled alongside, and when I inquired the seating capacity, they told me they thought it would hold 50. I believe it could certainly accommodate 40 by utilizing the outrigger platform. All canoes seemed to be of the same pattern, dugout with outrigger.

Mono (Treasury) Island is the westernmost island under the British protectorate. It is of coral formation, oval shaped, extending 6 1/2 miles in an east-and-west direction by 4 miles north and south, and densely wooded, rising by gradual slopes to a height of 1165 feet above high water. The population is estimated at under 500.

Sterling Island, lying close southward of Mono Island, is a raised coral island about 200 feet in height, 3 miles in length with an average breadth of 1/2 mile. In its eastern part there is a fresh water lake about 200 yards across and 3 fathoms deep. "Pacific Pilot".

Probably the present population of Mono is less, and they are all in 3 villages situated close together on the southeast side near our anchorage. Two of these villages, so close together as to seem one, are named Canaan and Nazarete respectively; the other,

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of these villages, so close together as to seem one,
are named Gassan and Naxate respectively; the other,

somewhat more remote, having a native name "Gée-so".

December 6-7. Ashore both days collecting and covered in the two days a considerable portion of the island, climbing up well toward the top, and covering much of the lower levels on the eastern side.

The island is very well watered, there being many rivers, some fairly large, and several very beautiful waterfalls.. At one which I thought particularly beautiful the water dropped for 100 feet over the perpendicular side of a huge rock, which I estimated as between 50 and 75 feet in width at base. The fall of water had caused a deep pool at base of rock from which the stream cascaded off to another very pretty fall below which was not as high. At the time of my visit the stream was low on account of lack of rain, but there was plenty of evidence that it was a mighty fall when the river was swollen by frequent rains.

There are trails all over the island and frequent patches of coconuts and gardens which are visited often by the natives. The bush at lower levels is mostly rather sparse and low, but very high trees are encountered as one enters the upper forest.

Small birds were very scarce. The only two which could be called at all common in the forest are the small black-headed flycatcher and the yellow honeysucker and neither of these was plentiful. The graybird occurs but does not seem at all common. In two days collecting I got only two, and I believe no others were taken. The

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Alcedo small white-eared kingfisher is very common on the rivers, rather wary, darting rapidly up and down the streams, particularly near their outlets, uttering a sharp quite loud "ee-a ch" occasionally. Stomachs examined contained either small fish or prawns.

None of the party saw or heard either of the fantails, thickheads, white-eye, pigmy parrot, black-head, or red-bellied flycatcher, and it is very doubtful if any of these occur. This is rather surprising with apparently good bush, plenty of water and abundant insect life.

The mina is quite common. Both the red-knob and gray pigeons are fairly common. The white cockatoo is very common especially high up in the forest. They were in nice plumage. The iris was dark brown in all that I collected and in several others which I examined. The large green parrot is quite common. I saw several of the common ground doves but failed to secure any. On the only occasion when I had a good shot, and this time it was a beautiful chance, I pulled the aux trigger by mistake, something which seems to happen to us all about once in so often, and generally when there is a desirable bird over the sight. The megapode I heard several times but did not see. I saw one white-headed kingfisher winging along well out from shore on the last day, and heard either the "land" species or the blue-backed in the forest, but could not get a look at it. The starling is quite plentiful and natives told me that there was one

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quite plentiful and natives told me that there was one

large communal nesting tree which I did not see. Shore birds did not seem to be very common. I saw a few reef herons and a few of the common sandpiper. Hawks also did not appear to be very common, although I saw the white-headed and osprey several times and a couple of smaller hawks which I could not identify at long range. The hornbill and longtail are both absent.

Although there is such a small variety of birds the islands abounds in other forms of animal life.

Both the large and small fruit bats are very plentiful. We have no series aboard for comparison, but the small bat appeared different to me. In the two days I collected some 10 of the small species and two of the large ones. One of the small bats had a well developed young, which I preserved. They would start to fly about late in the afternoon, generally around 4 p. m., being most often seen in the tops of tall coconuts where they would climb about in search of food. Often when shot dead they hang in the trees by one hook and cannot be dislodged unless one climbs for them. Some of the more energetic natives will climb even a very tall tree for a stick of tobacco. I also secured one small leaf bat which I found hanging under a leaf of a tall banana-like palm.

Opossums are very plentiful and the natives brought in quite a series after I had inquired about them and ascertained the native name. Several of these were females and two or three had very small young clinging to nipples in pouch. One had a young one quite well

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developed, the fur being a reddish, "foxy" brown, while that of the mother was a sort of gray-brown. All young were preserved. Judging from what I have seen, a single young at a birth is the usual thing both for the opossum here and the fruit bat. The natives here often trap the opossum and I saw a set trap in the forest. Two upright saplings about one inch in diameter, growing less than a foot apart formed the sides of the trap. At a height of about four feet two cross pieces had been lashed with vine, making a square opening perhaps 10 inches in diameter. A large liana, more than an inch through, had been arranged to go from another tree to the bottom of the square. Another taller sapling which grew close by had been bent over, a stout vine attached to its top, and the other end of the vine formed into a noose which was placed on one side of the square. This sapling was held down by another "trigger" piece on which bait, anything appealing to opossum appetite, could be placed. As soon as the opossum scenting the bait and crawling out to it on the liana puts his head through the square opening to touch it, he releases the trigger and is immediately swung into the air by the noose and strangled. The natives told me that it was a very effective trap. It resembles very closely similar "jump traps" in the States. In both the opossums and the fruit bats there was a decided variation in color of fur, which should make a very interesting series. Land snails seemed to be very scarce. In the

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two days I only secured three specimens of large snails, although I had offered the natives tobacco if they could find any. All three of these I found on leaves of shrubs in the forest. Two were species which I have not seen before, one of them very large. I secured a very few tiny snails in the forest. From the stalks and leaves, mainly from the stalks, of young taro I got a lot of one small species of snail which seemed to be very plentiful indeed. Possibly the continued dry weather may have affected the number of snails and this is a very hot month here.

Lizards were very common indeed of many species. In the two days, I secured some 8 or 9 species myself, and am inclined to believe that there are others from what the natives told me. I did not see the monitor lizard, but the natives told me that "one big fella stop here", which probably is the monitor. A native brought in a very beautiful gecko and they also contributed several lizards, frogs and two species of snakes. One of the latter bit me on the finger quite savagely as I was trying to get him out of the container in which they brought him aboard. Blood oozed from the two sides of my finger, and I was quite interested to find out whether the two punctures were from fangs. My second grab was successful and he proved to be harmless. This is the first time I have been bitten on this trip, although I have removed very many snakes from all sorts of native packages.

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Shortlands, Solomon Islands,
December 11, 1927.

69

Dr. Robert C. Murphy,
New York City.

Dear Dr. Murphy:

We are now steaming toward Faisi where we hope to meet the mail steamer some time today. The steamer's stop at Faisi is brief and in all probability there will be no opportunity there to write after receiving mail.

I am sending quite an addition to my field notes, bringing them up almost to date. I am trying all the time to make the notes of greater value, but I still fall short of what I should like to accomplish. Under separate cover I am sending a few more color sketches of bird parts, also a little sketch of the island which we named after Mr. Whitney. If you think he would accept such a poor effort I wish you would present the sketch to him as a souvenir of the occasion.

Richards and Hamlin are making very fine progress and I certainly have enjoyed their company aboard. I am sure that they have added a lot to the morale of the outfit in addition to their value in the field and at the preparation bench. Both of them are meeting with Solomon Island trials which they are bearing nobly. I have been doing my best to steer them clear of "island sores", so far with considerable success.

I expect to mail three boxes of miscellaneous specimens by this post. Most of this material I get personally, some of it from natives, but none of it is

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Dr. Robert E. Murphy,
New York City.

Dear Dr. Murphy:

We are now steaming toward Fatai where we hope to meet the mail steamer some time today. The steamer's stop at Fatai is brief and in all probability there will be no opportunity there to write after receiving mail.

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secured at the expense of the ornithological purpose of the expedition. If it is not too much trouble I should like to be informed whether this material, and tank specimens, reaches the museum in proper condition, and also to receive any suggestions -- practical under the existing condition -- which would make it of more value.

Weather is very hot just at present and for some unaccountable reason we are having a long dry spell. Flies are a torment and almost everyone has some sort of itch rash. I still have to dress my right leg once or twice a day, and for some time now have been doing the same thing for Richards and Hamlin. Other than that we are getting along quite well.

I understand that we are to go to Bougainville from Faisi and collect in that section if there is no trouble over getting a permit. Bougainville has seemed "close up" for some time now and should be a very interesting island to work.

I hope that I may hear from you by this steamer. A year is a long time to go on one letter and I do not share at all in your letters to Beck. Please give my best regards to Dr. Sanford and Dr. Chapman.

With best wishes to you all,

Sincerely yours,

Frederick P. Drowne

The address to which I have all my mail sent is Whitney-Sanford Expedition, c/o Burns, Philp & Co., Sydney, New South Wales; attention Mr. J. Sharp.

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Faisi, Shortland Group,
Solomon Islands,
December 12, 1927.

L. C. Sanford M. D.,
New Haven, Conn.

Dear Dr. Sanford:

After more than a year's absence from the States it seems high time that I wrote you a personal letter since I have by no means forgotten your courteous interest in my affairs when I was desirous of getting back into field work.

I remember very well our conversations and I recall that after perusing carefully a certain letter from Beck I made the statement that I thought I could successfully negotiate the hardships of this trip. After a year's time I can say that in my calculations I overlooked only one thing, or rather two. I was not aware of the existence of the so-called "island sores" which seem to be rather peculiar to this region, and with which I have had so much trouble. And I expected an entirely different personality in Beck. All other hardships which he recounted in his letter I seem to be able to weather as well as anyone else, and I have managed to carry on in spite of the two handicaps which I have specifically mentioned. As to the last of these I won't try to dilate on it as it can do no good and I have become quite used to it.

The tropical ulcers are a terrible thing. The cause is probably some specific organism, whether germ or parasite no one seems to know at present. They much resemble the leishmaniasis sores which occur elsewhere.

Walter B. Stanford
Solomon Islands
December 12, 1957

W. B. Stanford M. D.
New Haven, Conn.

Dear Dr. Stanford:

After more than a year's absence from the States it seems high time that I wrote you a personal letter since I have by no means forgotten your courteous interest in my affairs when I was desirous of getting back into field work.

I remember very well our conversations and I recall that after perusing carefully a certain letter from Beck I made the statement that I thought I could not easily negotiate the hardships of this trip. After a year's time I can say that in my calculations I overlooked only one thing, or rather two. I was not aware of the existence of the so-called "island sores" which seem to be rather peculiar to this region, and with which I have had so much trouble. And I expected an entirely different sort of hardship in Beck. All other hardships which he recounted in his letter I seem to be able to weather as well as any one else, and I have managed to carry on in spite of the two hardships which I have specifically mentioned. As to the rest of these I won't try to dilate on it as it can do no good and I have become quite used to it.

The tropical sores are a terrible thing. The cause is probably some specific organism, whether germ or parasite no one seems to know at present. They much resemble the leishmaniasis sores which occur elsewhere.

The cause not being known, there are many suggested forms of treatment all of which may do good but none of which seem at all specific. That considered the best at the present time is the intravenous use of antimony. I had 20 such injections at Tulagi and am inclined to believe now that the complete rest was fully as important a factor in the curative process. Of course I was in bad shape when I entered the hospital, and I did secure a cure of the ulcers on the left leg, but I still have the one on the right and it resists all forms of local treatment. I am inclined to believe that if I was to try absolute rest for a period of two or three weeks, it might finish healing under any of the applications which I am using. It gives me little trouble at present, however, and I am desirous of keeping about.

At the present time I am trying to protect Richards and Hamlin from the same experience. They both have had potential sores, which might easily have developed into island sores had they been on their own as I was. Since my own trouble and the experience derived from much observation I have quite a proper respect for this malady and I have insisted upon their taking some care of themselves. I rather think that after a certain time in the climate one develops a limited amount of resistance against this sort of thing, but never a complete protection.

Both Richards and Hamlin are progressing rapidly in field work and at the preparation bench. They also take most good-naturedly the many trials and discomforts of the trip and are already great believers in the Solomon Island

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philosophy, "no matter", which I am inclined to believe 73
is a step ahead of that of Shoopenhauer.

The work goes on, most intensely. I have great difficulty in finding time to write a few notes and perhaps tuck away a beetle or two. Making a color sketch of a fresh bird in "business hours", seems almost as much of a faux pas as appearing at a dinner table in pajamas. So I limit much of my activity in such directions to Sunday, the appointed day of rest, when one shall wash his clothes, write his notes and letters, make his pictures, clean his snails, and do all other things which are defendu on week days.

The atmosphere is much clearer now since Yale hooked up with us. Personally I am deriving much enjoyment from the company of Richards and Hamlin and I am sure that they have tuned up a lot the morale of the whole ship. We all keep so busy that the time passes quite rapidly. I rather think that I am feeling as well as could be expected in this climate, and certainly good for some more months of it.

We are getting some nice material and I feel sure that the collection is going to prove very valuable and help to clear up some of the problems in island variation and distribution. It seems a much more elaborate field than the Galapagos which has always been quoted in this respect since the day of Darwin.

My letter, journal, sketches, etc., will all go to the Museum by this same post.

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Hoping that this may find you enjoying
very good health, and with best wishes for the New Year,
I remain,

Sincerely yours,

Frederick P. Drowne.

There were several species of frogs in the lot
brought us by different natives, including one of the
large ones found along the river.

The lizards occur mostly on the ground, some
of the small green or striped species often playing
about in the bushes. The larger black species stay
generally on the ground, but will climb up trees when
disturbed. The handsome thick-bodied green species is
generally in trees. I saw one near the 50 feet up the
side of a recent palm. One lizard which I shot, one
of the more uncommon species, had a large grasshopper
in its mouth, just half swallowed. It seemed to me
that it could make rather an interesting exhibit of kind
and manner of lizard life. I preserved it in separate
alcohol with diet in situ.

Insects of all kinds were very plentiful indeed.
There were many very beautiful butterflies, and other
insects abounded. I was able to obtain some grasshoppers
and crickets and quite a number of coleoptera, including
several very fine longicorns. When making intensive
work it is very difficult to take care of any other
specimens. My net is quite well filled with bird spe-

Hoping that this may find you enjoying
very good health, and with best wishes for the New Year,
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Sincerely yours,
Frederick E. Brown.

75

I got three species of tree frogs in the two days, one of which was very beautiful, body above an intense grass green deep yellow on sides and cream underneath. They were resting quietly on under side of leaves of shrubs. We have been able to secure very few of these.

There were several species of frogs in the lot brought us by different natives, including one of the large ones found along the river.

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terial, but I generally carry a few empty cigarette tins and one small killing bottle and gather in what I can as I wander about. I hope enough of this material reaches the museum in good condition to warrant the effort. From a sago palm I secured some large beetles which seem to be attracted to the sago as others are to the coconut. I suppose this is a very common species but I have not encountered it before. Most beetles, when the leaf or branch upon which they are resting is touched, drop immediately to the ground or drop a certain distance and then fly. A great many others of the smaller insects disappear with a wonderful hop. I suppose both of these movements are protective in character.

In the pool at the base of the waterfall I found prawns very abundant and collected a few for purposes of identification. I also secured one small freshwater crab from the same place.

The natives have names for these two waterfalls calling one "U-bán-O-e", and the other "Maý-é-kó-yeh". I found also that they have names for all the birds, the different species of lizards, frogs, snakes, snails, and even a great many of the insects. One might easily suppose that they would group all of a certain kind, coleoptera for instance, under one common name to correspond with our word-beetles, but I found that natives familiar with the bush had names for many of the different species.

The tribe here appeared to be quite healthy and comfortable. They are mostly of large frame, well

75
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77
formed and featured, and quite dark in color. I met the chief and "second chief", both very large men and possessed of a dignity and charm of manner which befitted their rank.

At the time of our first visit ashore they were planning a feast which took place very late that afternoon. The occasion for it so we were told, was because the chief had lost some things, more particularly a much cherished pipe, when a big wave nearly capsized a canoe in which he was travelling about at the time. They were giving the feast so that he would not grieve too much over the loss. A platform some 10 feet high was erected upon which the food was placed, all of it wrapped in leaf bundles. There was taro in a sort of elevated bowl which stood in a huge bamboo upright at one side of the platform. The platform proper held all the rest, mostly bundles of smoked poi and some roast pig. The ladies gave a dance just before the feast, of which we took some photos. One woman stamped and pounded vigorously on a board which was placed in a shallow pit, not touching the bottom, producing a loud noise similar in effect to a large drum. All the other women were grouped about the pit several rows deep, all facing the music in the centre and going through certain slow body movements and singing a rather monotonous chant in time to the tempo as furnished by the sounding board. This kept up for some time and I believe was repeated later after they had partaken of the feast. Feasts, I understood, were given quite fre-

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78

quently by the different villages, the village giving the feast always inviting the other two villages as guests.

On my second day ashore I had a chance to see part of the process of making "bush flour" from the sago palm, the ivory nut tree. They make it near the bank of some creek where there is plenty of water, or even pipe the water some distance, when necessary, in bamboo troughs cleverly arranged on forked uprights. I only saw the finishing process, removal of the cleaned and pressed flour into bundles of leaves for wrapping and subsequent smoking. It was in a $2/3$ section of the bark of a tree, probably that of the sago palm which furnished the flour. This piece of bark was some 8 feet long, suspended trough fashion just above the ground. The newly made poi, about the consistency and color of new cheese, was cut carefully into two foot lengths and placed on a layer of overlapping palm leaves, in which it was completely enveloped and securely tied with strips of bark. One section, I should judge, weighed at least 75 pounds. I understood that they got 60 to 100 such sections from one tree and that the whole process of making might take from two weeks to a month. After being smoked for a couple of days it was hung up in their houses and would keep for a long time.

They make here a flask of pottery capable of holding a little over a pint. All appeared to be the same size and shape, although I saw two colors, brown and black, and the character of design differed somewhat

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in pattern. Small beads were pressed into the colored design, adding very considerably to the ornamental effect. They also do some elaborate work in bead necklaces. 79

I saw two small specimens of the stone adze, relics of days of long ago. All of the natives here wear calico and many of them have singlets and shorts for dress up occasions. They are very expert with their canoes, of which they have a large number, all of the outrigger type.

Left anchorage at Mono Island after supper on the 7th and spent the night at sea.

December 8. Soon after midday anchored at the first of a group of small islands not named on chart, which are about 11 miles west of the Shortlands. Beck and Richards went ashore each on a different island. It was quite surprising to find the thickhead here when it was apparently absent on Mono. Several were obtained, a white throated and somewhat smaller thickhead different from any of the varieties previously obtained. The ashy-headed phase of the red flycatcher also occurs here. These, together with the yellow honeysucker, megapode and blue-headed paroquet seemed to comprise the land birds. Richards secured a hawk and saw a bird new to him which was probably a cuckoo. The white-headed kingfisher is found here and several herons.

For purposes of reference we have called this little group "Whitney Island", which name will appear on the labels. They are approximately in Lat. 6 58 S. and Long. 155 32 E. The group consists of several small islets lying close together, no elevation. The largest

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little group "Whitney Island", which name will appear on
the labels. They are approximately in lat. 8 58 S. and
long. 155 32 E. The group consists of several small
islets lying close together, no elevation. The largest

perhaps $1/3$ mile in length covered with low bush, some high trees and a few coconuts.

Remained at this anchorage for the night. Still no rain and very hot. The temperature in cabin in mid-afternoon was over 90, and I did not care to find out how much hotter it was in the main hold where Hamlin and I were working. We are very thankful that there are no flies at this anchorage.

December 9. Moved over a few miles to anchor near two other small islands and Beck and Richards went ashore on the larger of the two which is called Momalufa on the chart. It is about $1/3$ mile long, flat and narrow, with a few acres of planted nuts at one end.

They found about the same variety of birds as at Whitney Island. The small flycatcher here lacks the orange tint to inside of mouth, which instead has quite a pink tinge. The brown fantail occurs, and thickheads and ashy-headed flycatchers quite common. Gray pigeons, cockatoos, and minas also common on this island, and Richards got one graybird. Reef herons, the brown heron, blue-headed parakeet, megapode and white-headed kingfisher were all noted. Beck got several geckos from under loose bark on trees. In same situations he found small eggs, probably eggs of gecko, very small white ovoids with parchment-like shells.

December 10. Richards and Hamlin collected on Momalufa in the morning while Beck went over to another small island about the same size, which is very close by, named Ariki on the chart. They were

perhaps 1/3 mile in length covered with low brush.

some high trees and a few coconuts.

Remained at this anchorage for the night.

Still no rain and very hot. The temperature in cabin

in mid-afternoon was over 90, and I did not care to

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another small island about the same size, which is

very close by, named Aiki on the chart. They were

back for lunch and got about the same variety of birds. Beck found the blackhead on Ariki. Richards got a pair of the common ground doves on Momalufa, also one of the large plover along shore. Several of the thickheads taken today seemed to resemble more in plumage the yellow phase from other islands. One of the land kingfishers was taken.

It does seem strange that these birds, missing from Mono, and several of them from Fauro, should all occur on these tiny islands. The only one missing seems to be the black fantail. Perhaps we shall encounter them all in the Shortlands of which Momalufa and Ariki are really a part.

Beck reported the gray pigeon very abundant on the small island of Ariki.

Put up birds in the afternoon. I have spent a large part of yesterday and today getting my journal typed so as to be able to send it on the Mataram, which we expect to meet at Faisi tomorrow.

Weather continues pleasant except for the heat. The flies, which were missing at Whitney Island, have come back to the ship in swarms since our arrival at the Momalufa anchorage.

December 11. Under way early and steamed to Faisi where we came to anchor about noon. A very pretty little harbor but not much in the way of buildings. On Shortland Island there is the residence of

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December 11. Under way early and steamed
to Ealai where we came to anchor about noon. A very
pretty little harbor but not much in the way of build-
ings. On Shortland Island there is the residence of

the D. O. on a hill and the post office with a few outbuildings on the shore. On the little island of Faisi is the Burns Philp store and warehouse, also a very good wharf.

The Mataram showed up in the afternoon and we were able to get our mail soon after supper time. Several of the officers from the Mataram were over for a brief visit. Very busy with letter writing.

December 12. Rain squalls all day. Finished letter writing and got all letters and packages mailed in good season. The D. O., Mr. Miller, is also the postmaster. Paid a visit to the store which was officially closed on account of its being steamer time. Had dinner aboard the Mataram and met several of the officers, passengers and islanders.

December 13. Ashore in the morning finishing up transactions with the store, a rather slow and trying matter so soon after steamer arrival, they being much occupied with opening newly received goods, customs, etc.

Met Mr. Evans, who has extensive holdings at Mono Island; Mr. Moncton, who is in timber business here; Mr. Percival Bedford, who manages the very large Burns Philp Plantation, Lafu, on Shortland; Mrs. Cruikshank, who operates on her own a plantation close by; and several others. The first man to greet us at Faisi was Mr. Pinnock from Fauro, who entertained us

the D. O. on a hill and the post office with a few
outbuildings on the shore. On the little island of
Tahiti is the Burns Philp store and warehouse, also a
very good wharf.

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Oriskany, who operates on her own a plantation close
by; and several others. The first man to greet us at
Tahiti was Mr. Rinnock from Rango, who entertained us

so well on the occasion of our visit at his plantation. A well-known island character whom we encountered here was Jock Kromar, who has been in the group for 45 years.

In the afternoon put up some frigate birds and made color sketches of perishable parts of adult male and female.

December 14-16. Ashore each day on Shortland Island, passing through the extensive plantation, Lofu, to the bush in the rear. The plantation is heatly kept and there was a trail leading to the bush, and several short trails in the bush, all of which came to blind endings. The trail through the coconuts passed through a grove of rubber trees several acres in extent in which I noted many yellow honeysuckers and white-eyes. The red parrot and blue-headed paraquet were very plentiful in the coconuts and I saw quite a number of cockatoos and wagtails. Curlew were not uncommon along shore and I saw a number of reef herons and green herons.

Shortland Island is not high, its highest elevation being given as 676 feet. It is about 11 miles in length in an east by west direction, with an average breadth of 7 miles. Coral outcroppings show all through the forest. It is densely wooded, the character of the forest often, in places, observed by us, changing rather abruptly from very high trees to very much smaller trees interspersed with a dense growth of the banana-like palms. Fresh water streams or pools seemed to be

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in which I noted many yellow honeyeaters and white-
eyes. The red parrot and blue-headed parakeet were
very plentiful in the coconuts and I saw quite a number
of cockatoos and wattails. Curlew were not uncommon
along shore and I saw a number of least terns and green
terns.

Shortland Island is not high, its highest
elevation being given as 575 feet. It is about 11 miles
in length in an east by west direction, with an average
breadth of 7 miles. Coral outcroppings show all through
the forest. It is densely wooded, the character of the
forest often, in places, observed by us, changing
rather abruptly from very high trees to very much small-
er trees interspersed with a dense growth of the banana-
like palms. Fresh water streams or pools seemed to be

very scarce and our drinking water was obtained from rainfall.

Birds were quite plentiful and all species generally encountered on other islands were present and some will probably show slight variations. The few which seemed to be missing were the black honey-sucker, pigmy parrot and longtail.

Both black and brown fantails, red-bellied and small flycatchers, thickheads, midgets and black-heads were fairly plentiful, more often heard than seen, and seemingly about as common in lower mixed bush as in the high trees. White-eyes were very abundant, especially in the lower trees. Starlings were very numerous and the rusty-winged blackbird not uncommon. Minas were also very plentiful all through the forest. The large green parrot occurs commonly and is quite generally distributed. One yellow-headed parrot was taken. Several times I thought I heard the pigmy parrot, but continued calling and observation always proved it to be something else, generally the midget.

Kingfishers seemed to be scarce. I saw the white-headed along shore and heard other species a few times in the forest, probably the larger of the two "land" species. I did not see any in all the walks through the coconuts. On one trip which I made into the mangroves in the longboat I had a glimpse of one of the "little blue" kingfishers, but did not get a shot at it, as my gun, for safety's sake, was unloaded

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at the time.

Richards secured one broadbill, and Hamlin got a crow and hornbill. The crow here is quite different, a very rich blue-black plumage and a black bill. Color of iris is the same, whitish. The hornbill seems to be the same as that taken elsewhere. Both are quite common but difficult to secure at this point. Residents told us of points close by where both crows and hornbills were very plentiful.

Hawks did not appear particularly numerous although several species occur here. Graybirds were fairly common in the forest and I noticed several gray-backed shrikes in the coconuts near shore.

Both gray and red-knob pigeons are quite common. The red-cap dove occurs and the common ground dove is plentiful.

The colors in white-eye did not appear to me to be different from one of the forms previously taken, iris a rich brown, upper mandible black or blackish, lower mandible yellow, feet dark gray. White-eyes were very abundant, met with generally in small flocks feeding in tops of low trees, moving quite rapidly from one tree to another. They responded well to calling.

The yellow honeysucker did not appear to be at all common in the bush and the absence of the "black" species, if it is absent, is very surprising.

Opportunities for observing bird life were

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 Opportunities for observing bird life were

not particularly good at this point, owing to lack of trails into the bush, and the indefinite length of our stay, which did not warrant the cutting of trails. Judging from the comparative abundance of birds in close proximity to large planted areas, they must be very plentiful on this island and doubtless more extensive observations can be made upon our return.

The weather was quite pleasant during our stay, although there were heavy showers each afternoon. They have had dry weather here for nearly a month.

Insect life did not appear to be at all abundant. I noticed some very beautiful butterflies but they were not at all common. Of beetles, grasshoppers, etc. I saw very few indeed, perhaps owing to the continued dry weather. Hamlin got a "walking stick" which is new to me, and one of the grasshoppers with very long antennae.

Land snails also were scarce, although I managed to get a few representing several species. Nearly all of these were found on very low bushes or shrubs in the forest. In wet weather I think they might be much more plentiful.

Lizards were very abundant and I collected representatives of some five species. I did not see here the large black species which has been rather common on islands recently visited. Neither did I see the monitor although it most likely occurs. Frogs were

not particularly good at this point, owing to lack of trails into the bush, and the indefinite length of our stay, which did not warrant the cutting of trails. Judging from the comparative abundance of birds in close proximity to large planted areas, they must be very plentiful on this island and doubtless more extensive observations can be made upon our return.

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heard quite often but only one small species taken.

Only one snake was taken at this point.

At this anchorage we saw practically nothing of local natives. I understand that the natives of Mono in past years killed off the Shortland Island natives and settled the place themselves. There are still several villages, all located on shore, some of which I hope we may visit later on.

December 17. Cleared from Faisi for Kieta, the port of entry, on Bougainville. Mr. Miller, the D. O., besides being postmaster holds the additional job of health officer and can clear ships for Kieta.

Anchor raised about 8 a.m. and headed on a north by west course for Kieta. Weather quite hot with some rain and but little wind. Have with us as passenger Father Shank, a Roman Catholic priest, who has been a resident for some eight years on Bougainville, his mission being located at Koromira some distance south of Kieta.

Spent most of the morning in the hold putting up what miscellaneous specimens had accumulated during the past few days. Our route takes us through very many small islands, some of them entirely planted in coconuts.

In the afternoon it commenced to rain and more or less heavy rain continued until late evening. Passed along the eastern coast of Bougainville and came to anchor just before dark south of Koromira point, a

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of local natives. I understand that the natives of Mono

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eral villages, all located on shore, some of which I

hope we may visit later on.

December 14. Cleared from Paitia for Kista.

the port of entry, on Bongaiaville. Mr. Miller, the

D. O., besides being postmaster holds the additional

job of health officer and can clear ships for Kista.

Anchor raised about 8 a.m. and headed on a

north by west course for Kista. Weather quite hot with

some rain and but little wind. Have with us as passen-

ger Father Shank, a Roman Catholic priest, who has been

a resident for some eight years on Bongaiaville. His

mission being located at Koromira some distance south

of Kista.

Spent most of the morning in the hold putting

up what miscellaneous specimens had accumulated during

the past few days. Our route takes us through very

many small islands, some of them entirely planted in

coconuts.

In the afternoon it commenced to rain and more

or less heavy rain continued until late evening. Passed

along the eastern coast of Bongaiaville and came to

anchor just before dark south of Koromira point, a

rolling anchorage in quite open roadstead, but the best obtainable before a dark night closed in.

The character of Bougainville has changed considerably as we have made progress along the coast. From being very low at the south it has gradually gained in height until now, about opposite our anchorage, Bonmartini Mountain rises to a height of over 5000 feet. There have been few planted areas visible from the ship, but here, near the Roman Catholic Mission at Koromira, there are two quite large plantations in sight, commencing at shore edge and extending back a considerable distance. We have not been in close enough to observe any land birds, while sea birds have been very few in number all day.

December 18. A very beautiful morning. Anchor raised soon after daybreak and continued on our course to Kieta. Still no wind and dependent on engine for progress. Weather very warm, temperature in cabin at noon 92.

Dropped anchor off government wharf at Kieta at 12:30 noon. Kieta has a very pretty little harbor, a natural bay in the island itself and further closed in and protected on the east by the little island Bakdwari. The area around government buildings is planted in coconuts. Several plantations dot the shore at other points, while at other places the bush comes down to the shore.

The medical assistant in charge, Mr. Gode,

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The character of Bougainville has changed
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points, while at other places the bush comes down to
the shore.
The medical assistant in charge, Mr. Gode,

the postmaster, Mr. Ryan, and revenue officer, Mr. H. Alday were aboard immediately after we anchored and there was no difficulty about our entry. We had brought three sacks of mail from Faisi, which they were glad to get. The Marsina we found is due in probably next Friday, the 23rd. Late in the afternoon Richards, Hamlin, Captain Lang, and I went ashore and paid a visit to the nearby Chinatown where we had a very good dinner served us by the proprietor of the largest Chinese store, a very intelligent and interesting Chinaman, Wang-Yu, who has been here 15 years.

December 19-23. Application made for gun permits which have to be obtained from Rabaul at a fee of ten shillings per gun. The permits did not arrive until the 22nd so nothing was done in the way of collecting. Ashore every day getting local knowledge concerning Bougainville in general and more particularly this section where Richards, Hamlin, and I are to enter the bush a distance, as far as may be necessary to permit collecting at an altitude of from 3000 to 5000 feet.

There are several trails starting from about this point. One leads to the south along the shore. Another leads to the south in a more westerly direction to Bouin, not greatly distant from the shore, passing over the Kronx Prinzen range of mountains. It is said to be necessary to climb 6000 feet in order to get over it. This trail is said to be rather rough, but the

the postmaster, Mr. Ryan, and revenue officer, Mr. N. Alday were aboard immediately after we anchored and there was no difficulty about our entry. We had brought three sacks of mail from Taisi, which they were glad to get. The Marquis we found is due in probably next Friday, the 23rd. Late in the afternoon Richards, Hamlin, Captain Lang, and I went ashore and paid a visit to the nearby Chintown where we had a very good dinner served us by the proprietor of the largest Chinese store, a very intelligent and interesting Chinaman, Wang-Yu, who has been here 15 years.

December 19-22. Application made for gun permits which have to be obtained from Kaban at a fee of ten shillings per gun. The permits did not arrive until the 22nd so nothing was done in the way of collecting. As soon as every day getting local knowledge concerning Bonzeville in general and more particularly this section where Richards, Hamlin, and I are to enter the bush a distance, as far as may be necessary to permit collecting at an altitude of from 3000 to 5000 feet.

There are several trails starting from about this point. One leads to the south along the shore. Another leads to the south in a more westerly direction to Bonze, not greatly distant from the shore, passing over the Krom Prison range of mountains. It is said to be necessary to climb 5000 feet in order to get over it. This trail is said to be rather rough, but the

south shore at Bouin can be made in three days. All of the southern end of the island, the Bouin district, is now quite under government control. Two other trails enter in a westerly direction where the ascent is quite rapid.

With the idea of using Kieta as a supply point we decided to take a trail to the west, one which would let us make first camp perhaps at Kupei, and after getting acquainted with the natives perhaps proceed as far as Karachi.

There is a large plantation around the peninsula from Kieta at a place called Arawa, the manager of which was seen by Richards and who was glad to extend us every courtesy if we wished to make the start from his place. As this would save several hours walk and portage it was decided to take advantage of his offer and move all our gear over to Arawa by the schooner.

In the meantime, we gathered up all possible information from government officials, traders, the hospital, etc. in regard to natives, character of country, and the various problems which would have to be met in entering it. They were all most courteous and helpful.

The D. O., Mr. T. L. McAdam, who is going on a long leave of absence by the Marsina, due in Saturday, gave us much information and permitted the use of his office to study maps. His assistants, Mr. Ryan and Mr. H. Alday were also very helpful. We

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south shore at Hovind can be made in three days. All
of the southern end of the island, the Hovind district,
is now quite under government control. Two other
trails enter in a westerly direction where the ascent
is quite rapid.

With the idea of using Hovind as a supply
point we decided to take a trail to the west, one
which would let us make first camp perhaps at Knap, and
after getting acquainted with the natives perhaps
proceed as far as Karsch.

There is a large plantation around the per-
insula from Kista at a place called Arwa, the manager
of which was seen by Richards and who was glad to ex-
tend us every courtesy if we wished to make the start
from his place. As this would save several hours
walk and portage it was decided to take advantage of
his offer and move all our gear over to Arwa by the
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received a great deal of bush information from Mr. Sampson, a young patrol officer who within two weeks had been ambushed and wounded with an arrow in the foot at a point a short distance from Kieta. The senior medical assistant, Mr. J.C. Goad, also gave us considerable information and permitted free use of maps and data on file in hospital. Mr. Goad also donated some 13 jars of reptiles, fish, etc. to the collection.

There were many new problems encountered here. The natives are a different type from the Solomons. There are perhaps some dozen known tribal languages on the island so that tribes living within a few miles of one another are unable to converse except in the medium of pidgin English through an interpreter. The rainfall is very heavy particularly at this time of year. (Official rain chart for 1927 to be inserted later). Carriers are not too easy to get and have to be changed frequently. The scale of wage and government regulations concerning wage, loads and rations are all different.

There is a considerable area of the island, some of it very close to Kieta, where the government does not permit anyone to enter since nothing is known about it, and friction with the natives might easily be expected. Three government patrols have been ambushed within 25 miles of Kieta within the past year.

Shape and weight of load to be carried, usual

received a great deal of bush information from Mr. Thompson, a young patrol officer who within two weeks had been washed and wounded with an arrow in the foot at a point a short distance from Kieta. The senior medical assistant, Mr. J.C. Good, also gave us considerable information and permitted free use of maps and data on file in hospital. Mr. Good also donated some 13 jars of reptiles, fish, etc. to the collection.

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pay for carriers, and prospects of securing food from bush natives and at what exchange; whether the approaching Xmas would make any difference to shore natives—all these and many other questions had to be answered. Supplies were more of an ordinary matter, although here, too, there was the extra problem of possible needs for native labor, presents for chiefs, trade, etc. over an estimated period of two months for which the France would be absent.

Official Record of Rainfall
Kieta Station

	1927	Days
January	1952	26
February	3603	24
March	1020	20
April	1350	21
May	1345	24
June	667	21
July	919	20
August	804	20
September	628	19
October	718	14
November	850	16
December	(not recorded)	

100 points to 1 inch

In the course of our talks we learned the usual day wage is six-pence, although outside of the government, and particularly on short carry, the natives generally demand a shilling, or as it is called here by the natives on account of their former experience under German rule, a mark. Monthly wage is five or six shillings, plus, of course, some one of the usual government rations which are quite liberal. I should note that this is plantation wage based on long contract

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 would be absent.

Official Record of Rainfall Kista Station

Days	1927	
25	1928	January
24	3808	February
20	1030	March
21	1350	April
24	1345	May
21	667	June
20	919	July
20	804	August
19	838	September
14	718	October
16	850	November
	(not recorded)	December

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and wage for short time service would undoubtedly be more.

The law requires that an individual load shall not exceed 50 pounds and that in a single day the march shall not be more than 12 hours. The natives do not as a rule carry shoulder loads but on a pole between two men. They will carry in this fashion 100 pounds, but of course always prefer to get the lighter loads; and should a package weigh only 40 pounds they wish to carry it on a pole just the same.

Most of the villages under government control have a "tultul", who represents the government, is sort of a sub-chief, and acts as interpreter for the chief who is called a "ku-ku-ra", pronounced kóokuri. On being appointed to office these officials are presented with a uniform cap like our officers dress cap with visor, blue in color with red stripes, one stripe, I think, for the tultul and two for the kukura. There is often also a medical tultul, a boy who has received a three months training at the government hospital and is then sent back to his tribe, equipped with some medical stores to act as the local healer.

In travel, it is generally necessary to have the tultul from one village proceed with the party to the next to act as interpreter and get things under way with this tultul who does the same thing for the next village. If there is no tultul there is generally some friend of the tultuls who can speak some pidgin

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and serve the same purpose. The government regulation concerning medical supplies required and various ration lists is very interesting, and I hope to get a copy of it, Form 173, to send in.

It has been quite the general opinion that if we took our time, allowed the natives to get really accustomed to us and to our mission, and also made little presents to the chiefs and tultuls, we could probably secure their cooperation and not have any friction. There were one or two who were somewhat pessimistic on account of the recent trouble in which several natives were shot, and the custom which prevails amongst all tribes demanding a "head for a head".

In our case, we are all interested in natives, and have always been able to develop quite friendly relations. Also we have found everywhere that the natives consider quite crazy any people who wander about shooting birds too small for kaikai and wrapping them up carefully in paper; who pick up bugs and snails and put them in glass houses and who will even shoot snakes and lizards. This is rather a fortunate feeling to inspire since crazy persons are generally if not always tabu to the natives.

Scarcely any adhesive plaster was obtainable in Faisi, the small amount secured only lasting until we reached Kieta. I fully expected to be able to obtain some here, but there was only one roll at the local store of Ebery & Walsh and none at the stores in China-

and serve the same purpose. The government regulation concerning medical supplies required and various ration lists is very interesting, and I hope to get a copy of it, Form IV, to send in.

It has been quite the general opinion that if we took our time, allowed the natives to get really accustomed to us and to our mission, and also made little presents to the chiefs and tailors, we could probably secure their cooperation and not have any friction.

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In our case, we are all interested in natives, and have always been able to develop quite friendly relations. Also we have found everywhere that the natives consider quite easy any people who wander about shooting birds too small for kaka and wrapping them up carefully in paper; who pick up bones and shells and put them in glass houses and who will even shoot snakes and lizards. This is rather a fortunate feeling to inspire since these persons are generally if not always taken to the natives.

Scarcely any adhesive plaster was obtainable in Kaitai, the small amount secured only lasting until we reached Kaitai. I fully expected to be able to obtain some here, but there was only one roll at the local store of Sherry & Walsh and none at the stores in China-

town. Even the government hospital was short and I could only get one roll from them, although Mr. Gode was able to let me have some lint and bandages. Lack of adhesive plaster is rather a serious inconvenience as I use it constantly in dressing the various small cuts, abrasions and sores of those on board. If we are short in the bush I shall have to use bandage of which I have only a small supply and it is not nearly so convenient or desirable.

This is the malarial season here or perhaps it would be better to say the worst season. Malaria is said to be very prevalent and some of a severe type. Most of the malaria of course is confined to the lower land levels. There is not much dysentery. Tinea is quite common amongst the natives, and there is a lot of tropical ulcer and yaws, considerable elephantiasis and a few cases of leprosy.

In a medical patrol report which I looked over, some 60 villages in the Bouin (south) district had been visited. The villages had a population varying from 16 to 178. Yaws showed a percentage of occurrence from 0 to 25 percent, tropical from 0 to 20 percent, both being present to some degree in most villages. In this district there were 19 cases of elephantiasis.

The administration appears to be doing very fine work here. The colored maps which show progress in bringing natives under complete government control are most interesting and indicate a wonderful progress,

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In a medical patrol report which I looked over, some 30 villages in the Boin (south) district had been visited. The villages had a population varying from 18 to 178. Yaws showed a percentage of occurrence from 0 to 33 percent, tropical from 0 to 20 percent, both being present to some degree in most villages. In this district there were 19 cases of elephantiasis. The administration appears to be doing very fine work here. The colored maps which show progress in bringing natives under complete government control are most interesting and indicate a wonderful progress

especially for the comparatively short time which has elapsed since Australia took over from the Germans. The bulk of this work is done by four white officers and 60 police boys, although the medical department also adds to the patrols. These patrols are kept moving through areas under control, areas under partial control, areas in which some form of contact has been established, always edging out into the unknown areas little by little to try and get acquainted and establish friendly relations with new tribes. The difficulty is extra great on account of the many different languages or dialects. An attempt is made to furnish medical aid, seeds for planting such as limes, oranges, beans, tomatoes, cucumbers, corn, or even coconuts in some cases. No attempt is made to impose a tax until a tribe is under complete control when the head tax is ten shillings. We have several times seen strings of bush natives, all armed with axes and bows and arrows, coming in to pay taxes. Every effort is made to avoid friction and the rifle is resorted to only as a last resort. When possible, boys are brought back to be given a little training in the ways of the white man, learn some pidgin English, and be returned to their tribes to represent the government and act as interpreters. The same thing is done by the medical department in creating medical tultuls.

Some notes which may or may not be of later value follow. They were taken from government reports

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and should any of the material prove interesting, it should not be used as quoted note without obtaining permission through proper channels.

"Notes of E. J. Robinson, Senior Medical Asst.

Attached to Kieta Hospital at time
notes were taken.

"Roreana originally came over from British Solomon Islands and settled on Bakwari Island, which forms outer side of harbor of Kieta. A little time after there was trouble as to who should be chief of the village. Then half of them went around to what is now Rorvana, afterwards once again splitting up into two villages, half remaining in Rorvana and half going further along coast northwards and forming village of Berto. Some later moved further north from Berto and formed village of Borvi, later splitting up, half going still further north and forming village of Tarara.

"Two villages still further north show a peculiar custom of their own as to disposal of dead. Unlike all other villages on this coast, where they either bury in ground or burn the bodies, these two villages namely Makamaku and Taperoi, take the body out beyond the edge of the reef on canoe, and, weighted with heavy stones, bury at sea.

"All villages in Bouin and Siwai sub-district are particularly clean. The houses are built on poles and raised about five feet from the ground. All vil-

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"All villages in Bouin and Sival sub-district are particularly clean. The houses are built on poles and raised about five feet from the ground. All vil-

lages without exception have a good fence built around. The rivers are used as latrines in most cases. Certain rivers are kept for drinking purposes, not being used as latrines by any of the natives, and these rivers are known in all the villages through which they flow.

"Kiviri to Purnata. All these natives are a particularly fine crowd as far as physique is concerned, though work is far from being one of their strong points. A few tropical ulcers were noticed but practically no Frambesia or Skin Disease. Most of the older men were very hairy, possibly a growth owing to the cold climate experienced up there.

"The country is very mountainous, all the tracks run along narrow, razor-backed ridges, most of them with hundreds of feet sheer drop on either side.

"There are a number of large rivers, also fine waterfalls. The climate is cold in day and very cold at night. Houses are roofed with sac-sac and have either platted bamboo or bark for walls. They are all built on the ground and very low, the ridge being about five feet. Also roofs are laced on outside either with kunda or platted bamboo, this owing to fierce winds experienced.

"All single men wear dome-shaped hats, some being plain and some colored, this being just as the individual fancies and having no significance. When they take a wife the hat is taken away. To do this

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they have to cut the hair, too, as it is interwoven
into the hat. 99

"Names of villages end in "paia", which means along, i. e. Tonouipaia is place along Devil Stone. In this village is a stone perfectly shaped as if it had been cut, roughly 10' long by 18' by 12'. It is on the ground outside one of the houses. I was curious to know how it came there as village is 2250 feet above sea level. Natives explained through interpreters that long before they or their fathers were there the stone had been thrown from Mt. Pagi (Banoni) during an eruption. It is credited with great healing powers. When a native is using any medicine for sores, etc., firstly the drug is rubbed on the stone before being taken. These natives are nomads. They plant a garden and when the ground is worked they simply move village along. They bury the dead in a ground set apart for the purpose. Also they bury their dead at sundown and not at sunup as is done in S."

December 24. The Marsina arrived in Kieta early in the morning and departed soon after noon, not a particularly exciting event for us as she carried no mail for the France. The D. O. leaves on this steamer on a nine months' leave of absence and a new D. O. (Mr. Tutton) takes his place. Xmas is not a very tense time in this part of the world and no one seems to be worrying over its proximity.

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Kieta, Bougainville Is.,
Territory of New Guinea,
December 24, 1927.

Dr. Robert C. Murphy,
New York City.

100

Dear Dr. Murphy:

I had rather given up the idea of writing to you from here as I sent on all notes and sketches with my recent letter from Faisi. Also I wrote to Dr. Sanford at the same time. It occurs to me though that a short letter in re. to our plans for the immediate future might be of interest.

As to recent happenings aboard I think most likely you have heard enough. The whole matter really hinges on one thing. Beck as an individual collector of birds is a remarkable success. As a field leader in my opinion he is in the same degree a failure,-- or if you wish, put it misfit,-- in the sense that he is unable to work even to the best advantage, or to inspire their cooperation and loyalty. A feeling of loyalty to the Museum, or to someone else abroad has kept men on this thing, as in the case of sailors a contract, when otherwise they would have made sudden and speedy departure. To my mind there is also another side to an expedition entering foreign territory, i.e. the establishment of friendly relations at points of contact. But it is useless to go on with the discussion. Perhaps I can explain my own position in the same words which I used to Beck some days ago, "For you, Beck, I wouldn't work 24 hours at any price; what I have done, has been done in spite of you, for the Museum." Let it go at that.

Kieta, Bougainville Is.,
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December 24, 1937.

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bush from this point while the schooner goes to Rabaul for much needed repairs. We anticipate a two months stay. It is the season of heavy rains which will doubtless interfere somewhat with our collecting. No white man, except government officials, has been on the route we plan, so I understand, and only four white men have travelled it in the last year. We expect to be able to work at an altitude of from 3000 to 5000 feet. By living with them we hope to establish friendly relations with the natives and secure their cooperation. Of much of the interior here absolutely nothing is known, although the government has accomplished wonderful work in the period since they took it over from German control.

All three of us have been very busy here making the acquaintance of men who have been in on patrols, traders, etc., from the District Officer down to a young patrol leader who was recently ambushed and speared in the foot a short distance from here. We have studied many maps to pick out the best trail. The D. O. allows us to use his name in dealing with village "tul-tuls", or natives who represent the government in their villages (where any contact has been established) and act as interpreters. The senior medical assistant gives us the same privilege in villages where there is a medical "tul-tul", one who has had 3 months training in hospital here and goes back to his tribe to look after sores, etc. We have the names of medical "tul-tuls" in some villages. Everyone has been most kind and interested and I think we have gained some

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very valuable information, some most important for our trip, and some as a general contribution to our notes on the island. 102

I rather think we should have found it difficult to work this island in any other way. I hope that we get some more interesting material. You may be sure that we shall all do our best, both as individuals and as a team.

For the second time I am going to request that you have a letter written from the Museum, this time to Mr. J. C. Goad, Senior Medical Assistant, Government Hospital, Kieta, Bougainville Island, Territory of New Guinea,-- thanking him for 13 jars of specimens, (snakes, lizards, fish and centipedes) presented to me for the American Museum, and for very courteous interest and cooperation in connection with the proposed trip into the bush. He would appreciate it personally, I am sure, and he intimated that it would be an asset to the hospital as an official record.

I enclose two color sketches of frigates, the only product in that direction since last writing. We had to wait for gun permit from Rabaul so had no opportunity to do any collecting here.

I hope that we may all retain our health on this trip and come out of the bush better both in body and mind. The reward will be great in personal satisfaction if we can bring out with us some interesting specimens and notes from an island, the interior of which is so little known.

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With kindest regards from us all to you,
Dr. Sanford and Dr. Chapman, I remain,

Sincerely yours,

Frederick P. Drowne.



GUINNESS

PERSIAN BOND

MADE IN U.S.

December 25. Christmas day but much like other days. A small pig which we had received as a gift at Mono Island was sacrificed in honor of the day, relieving the condition of the main deck very much and adding considerably to the menu. In the evening Richards, Hamlin, and I attended a little dinner given by Mr. Ebery which was a pleasing change.

During the day got on board some additional stores which had arrived by the Marsina so that our field outfit as far as we can judge it is complete. There is a lot which I should like to jot down in the way of general notes but shall have to trust to my memory to fill it in later on, although I realize that this is taking considerable risk.

Both today and yesterday we have had still further conversation with everyone within reach who might give advice useful for our field trip. Everyone is most helpful and we are really acquiring a lot of useful information. Two possible personal "boys" whom we had supposedly engaged failed to put in an appearance. The M. D., Dr. Bolton, attached to this station, came down from the north on the Marsina and I had a long talk with him and he was very desirous of cooperating in every way. Also we met Mr. A. W. Esson, who is manager of the plantation at Arawa which we expect to make our base. He is a very fine type of Scot and greatly interested in our venture.

December 26-28. Up anchor in early morning

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December 26-28. Up anchor in early morning

of the 26th and steamed over to Arawa with Mr. Esson on board. Landed with all stores immediately after luncheon and managed to get our gear under cover in Mr. Esson's store before and between heavy rains. Mr. Esson has most kindly placed his entire plant at our disposal to any extent we wish to use it. With his help we are now trying to get hold of boys, a couple to act as full time helpers, and many more to act as carriers to place where we shall set up camp.

Had quite an interesting talk with the tultul of Amio, a village some three miles up in the bush. He would make a good boss boy and we are desirous of securing him. He does not like the idea of tramping much in the bush on account of trouble with one leg which I made big promises about healing with "strong medicine brought from America." We are also on the trail of a cook-boy who lives in the nearby village of Arawa.

The trials and tribulations encountered during these three days were many. All the stores had to be checked over and divided up into packages suitable for transport by carriers over the rough trails and with the possibility of continuous heavy rain and the surety of heavy daily showers. This was difficult on account of lack of proper containers. However, we finally accomplished it, giving the most secure wrapping to our bedding, collecting stores and ammunition.

The tultul at Amio proved a dismal failure.

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The tulul at Amio proved a dismal failure.

Not only were we unable to secure his personal services but no carriers were available from Amio because, as I understood it, they were rather fearful of traveling in the direction of Kupei.

News of our plans had gradually filtered into the bush and we were constantly having news of possible carriers. A police boy stopped on Wednesday and assured me that he had been to some of the villages and that the carriers would be down that day. In fact, I got quite excited through understanding him to say that they were already on the spot at Mr. Esson's house which is some $3/4$ mile from the shore and store where we are spending most of our time. They did not show up, however, until the next morning.

We engaged a cook-boy, Wagi, who was also to act as boss boy, and three other young boys from Arawa village. We expected them to cook, do washing, keep the camp clean, and in spare time act as collectors of insects. Also on the march we felt that they would be valuable carriers for some special packages such as medical stores and photographic equipment. Wonderful dreams!

Hamlin and Richards made one trip into the bush interviewing tultuls of several villages who all promised to send carriers with, as stated before, the exception of Amio. Mr. Esson, besides being a most hospitable host, has spent much of his time in our behalf, getting into communication with passing natives

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through his own boss-boy and labor boys. We found that our rice failed to put in an appearance, whether still on ship or stolen it is hard to say, and I am replacing it with some borrowed from Mr. Esson until more can be obtained from the local store.

We have had no time at Arawa Plantation to investigate birds. The bush is fairly distant and birds seem scarce except for the wagtail, common paroquet, red parrot, cockatoo, and an occasional hawk. There are about 700 planted acres in the plantation with more land being cleared.

Butterflies were very common about the shrubbery in the vicinity of Mr. Esson's house, many of them being large and beautiful. We collected a few and expect to be able to give them more attention on our way down.

Country all about here is flat bush, quite well drained although mosquitoes are plentiful and it is advisable to use sleeping nets.

Special Note. One of the passengers on the recent Marsina was aboard the France, Mr. E. W. P. Chinnery. At that time he was Government Anthropologist for the New Guinea district with office at Rabaul.

Since then he has been made Director of Indian Affairs. He has had 20 years experience in Papua and New Guinea. He had the following to say which may be of interest at some future time.

"The Sepik River can be entered for 600 miles

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"The Sepik River can be entered for 600 miles

by a schooner the size of the France."

(I have since than talked with a man who runs a plantation at the mouth of the Sepik. He operates a schooner on the Sepik, recruiting and trading, but seldom gets in farther than 200 to 300 miles. Says it is necessary to have native pilot. Mosquitoes are very bad on all the rivers and it is necessary to sleep ashore at night in carefully arranged nets.)

"Ramu River navigable for 200 miles but requires local pilot."

"Markham River ? further to the south can also be entered for a considerable distance."

"Overland trails are negotiable but not very good. Almost always necessary to camp by 2 p.m. on account of heavy afternoon rains."

Special Npte. I think it might be well to insert a list of stores selected for this bush trip with prevailing prices, as a possible guide for any further operations in this district. This was the original planned list for three men and boys and trade for an estimated stay of two months.

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Store List of Stores

1 dozen candles	3.0
1 case pork and beans	1.16.
1 can biscuits (40 lbs.)	16.
6 tins self-raising flour	18.
12 lbs. bacon	1. 4.
1 dozen 12 inch bush knives	1.10.
1 lantern	5.
2 cups	1.6
1 frypan	4.
1 roll Z. O. plaster	8.
2 cases Assorted meat	6.16.
1 case Globe meat	6. 66.78
300 5 gr. Quinine bihyd.	18.
2 tins (28 lbs. each) sugar	17.6
2 jars salt	2.
16 tins butter	2. 2.8
26 tins pork and beans	17.4
12 tins Nestles milk	15.
6 tins tea	19.6
24 tins Sockeye salmon	1.18.
50 tins sardines	1. 9.2
4 bottles Bovril	8.
3 cans (2 lbs.)dripping	6.
8 cans (2 lbs.)syrup	6.8
6 can tomatoes	6.
3 cans coffee powder	4.9
12 cans marmalade	12.
12 cans assorted jam	10.8
2 gross matches	8.
1 can pepper	.9
50 lbs. rice	12.
12 bars soap	10.
6 3/4 axes	1.10.
54 yards calico	2. 0.6
25 lbs. coarse salt	2.1
1 case tobacco 28 lbs.	7.14.
(26 sticks to lb.)	<hr/> 45.19.6

December 29. Hoped to make an early start into the bush. I had instructed our personal boys to bring poles and plenty rope from bush to tie on boxes, and to be on hand early. I was at the store before 8 a. m., but the boys did not show up until about 7:30 and then with no poles. Also no carriers

List of Stores

45.19.6	1 case tobacco 28 lbs.
7.14.	25 lbs. coarse salt
2.1	24 yards calico
2.0.6	6 3/4 axes
1.10.	12 bars soap
10.	50 lbs. rice
12.	1 can pepper
8.	2 gross matches
10.8	12 cans assorted jam
12.	12 cans marmalade
4.2	3 cans coffee powder
6.	3 can tomatoes
6.8	8 cans (2 lbs.) syrup
6.	8 cans (2 lbs.) dripping
8.	4 bottles Bovril
1.2.2	50 tins sardines
1.18.	24 tins Bockeye salmon
19.6	8 tins tea
12.	12 tins Nestle's milk
14.4	32 tins pork and beans
2.2.8	12 tins butter
2.	2 jars salt
17.8	8 tins (28 lbs. each) sugar
18.	300 2 oz. Guinane brandy.
8.6.7	1 case globe meat
6.16.	2 cases Assorted meat
8.	1 roll 2.0. plaster
4.	1 typewriter
1.6	2 cups
2.	1 lantern
1.10.	1 dozen 12 inch brass knives
1.4.	12 lbs. bacon
18.	6 tins self-raising flour
12.	1 can biscuits (40 lbs.)
1.16.	1 case pork and beans
2.0	1 dozen candles

Stores Taken From Ship

Arsenic and alum	6 cartridge boxes
Corn meal	1 kerosene tin
Cotton	10 rolls
Wrapping cotton	15 sheets
Thread	4 spools
Kerosene	1 gallon
Benzine	1 quart
Magnesia	1 small bottle
Small needles	
Long needle	
Bone cutters	Ammunition
Personal instruments	
Personal effects	500 No. 10
Medical stores	500 No. 7
Photo equipment	1500 aux.

These stores proved to be about enough to take us through. It proved necessary to send down for a few more things, principally calico and tobacco for purposes of trade. Also it would have been better to have had 1000 No. 10 shells. The amount of magnesia and benzine taken was not nearly enough for purposes of washing birds, and I had to get more benzine. One can wash plumage quite well if blood is removed with water, then the benzine, and dry in corn meal, and this was our usual procedure.

December 29. Hoped to make an early start into the bush. I had instructed our personal boys to bring poles and "plenty rope from bush to tie on boxes," and to be on hand early. I was at the store before 6 a. m., but the boys did not show up until about 7:30 and then with no poles. Also no carriers

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appeared. I sent the boys back toward Arawa for poles and after hanging about the store until 8 a.m. went up to breakfast with Mr. Esson. ~~after tendering our grates~~ We all went back to the store after breakfast and the carriers commenced to put in an appearance in groups from different villages, many of them being fine types of men. They evidently understood what was expected of them very well for they brought along stout poles and plenty of liana or bush rope, ~~seemed~~ ~~and~~ We found that we were going to need more carriers than we had planned on as some of the packages had to be altered to suit the ideas of the bush men, and even then they were unwieldy for the sort of travel that was to come. Some packages had to be made over to suit the fit of the pole, and always there was the thought of the surety of rain and the desire to save a wetting which would have been disastrous to much of our baggage. Even the bushmen, or Kanakas as they are always called here, seemed rather dazed at the task ahead of them and most of them stood around stolidly waiting for someone else to start things. Most of them of course understood no English. Fortunately, there were among them at least three tul-tuls and two kukuras and with their assistance we finally got things straightened out by noon and were really embarked on the great adventure. Mr. Esson was desirous of our having lunch with him as it was so late, but we decided to let well enough alone

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and hang on to our safari while we had one.

So we left Mr. Esson at the foot of the ridge on which his house is situated after tendering our grateful thanks for his interested and valuable assistance. And he wished us Cheerio after remarking that it was the first time he had ever seen so many tultuls and kukuras acting as carriers in a white-man's safari. I was the last to leave him and as I glanced at our carriers strung along ahead it seemed indeed quite an undertaking, for there were some 30 to 40 of them strung along in an extended snake-like column through the coconuts.

We made the village of Kino that afternoon after a march of three hours or more across many rivers, some of them waist deep and all swift running. The trail was very slippery and it seemed impossible at times that the natives could manage the loads.

Kino has an elevation of about 1300 feet. The village is small, some 10 houses all on uprights, with sides and roofs of sac-sac. The village is surrounded by a stockade fence some three to four feet high. The village courtyard is on a slope, the soil is a very slippery clay, and to walk across it was about equal to one's first experience on roller skates. The population was not at all effusive in greeting us, although some of our carriers were from Kino.

It was some job lining up the carriers and paying them off. They refused to go farther than this

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village, quite sensible on their part as we were to learn later. When in line it seemed that every man had carried one of the heavy "boxis." We tried forming a "pay line" and I guess made more or less of a success of it. From what I have learned later I think we got off easy, especially for a first experience. Men who carried the heavy boxes we had to pay two shillings, and the scale of wages graded from there down to pickaninnies who got a stick of tobacco for carrying something. There was a little greasing of kukuras and tultuls, also, for about the same reason that ward leaders are "slipped something" under our more complicated American civilization. We fully realized that there was more of a trip the next day, over still worse trail, and that fully as many carriers would be necessary.

There is a "house belong Kiup" here, or as it is often called, "house belong government." These are rest houses for the use of the government, established at frequent sites along trails used by government officials. They are built exactly as the native houses of poles, bamboo and sac-sac, with a floor of poles. They are quite roomy, dry, and comfortable as can be expected. In Kino there is also another structure besides the rest house, with dirt floor, for use of the natives attached to government patrols and as a cook house. I understand that similar accommodation is customary all over the controlled and most of the

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Our baggage was speedily installed in the two houses but only enough packs opened to permit of getting at some food stores and our bedding. It rained almost constantly. A meal was soon under way and Waggi proved that he was going to be a most useful addition by the manner in which he served up our supper.

In the meantime we had an opportunity to study village life at close range, a village so far at least very little affected by the onward march of the whiteman.

While at first quite timid, the natives gradually relaxed and we soon had many callers to the front of our house, most of them with something to offer for barter, mainly curios such as arm bands, arrows spears and stone axes. It took time for the idea to sink in that we were inward bound and already had more luggage than we knew what to do with, but that we should be open for trade on the return trip.

Children of tender years climbed up and down the precarious ladders leading into the houses with the greatest ease and abandon. One urchin of not more than a year, clad in a bead necklace, appeared with a twelve inch bush knife and proceeded to hack vigorously at a bit of stump in the middle of the courtyard. Unclad children were all over the place. The women wore calico lava-lavas and most of the men

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wore either a lava-lava or a small piece of calico suspended by a girdle. There were several of the older men, however, who wore nothing at all, the fashion to which they had been accustomed and which they saw no reason to change. Many of the men had cicatricial designs on sides of body and back. The women wear a good deal of paint, mostly white, smeared over the face in ever changing designs, all of which mean something, I suppose, to the initiated.

I tried to get them to put on a short dance or singsing, offering one new, shiny bush knife as a reward for that much exertion, but it evidently was quite unheard of to have a singsing without due cause and preparation and a feast. Finally, one youngster started off on a solo song and dance under the next house to ours and I could have given him a medal for persistency. There is practically no variation to either the dance or song, common to this locality, and I thought once started he would never stop. His efforts finally resulted in getting a few other boys and some of the older men out and they put on show enough to get the knife. This we intended to give them anyway, but thought it must as well that they did something for it.

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an enclosure to one side and kept up a continual

squealing which seemed rather a proper addition to the rest of the setting.

Several fowls wandered about the slippery courtyard, but when we tried to buy one for the table the natives refused to sell, from which I judged that all these birds were still producing an occasional egg. Dogs of the hound type were plentiful, and enjoyed the freedom of the houses, ascending and descending the rickety ladders with practiced ease.

The women evidently regarded us with great curiosity. They see white men very seldom, although they do sometimes accompany the men on their journeys to the big salt water. The women have a peculiar sort of large, folding leaf affair, which serves as an umbrella, vanity case, and also often as a protection from the eyes of men. Sometimes in passing in our vicinity they would cover their face and breast with it, moving it to different angles as they made progress along. (I have seen them do the same sort of thing in our main camp, although often they would not even have it with them. I have wondered whether it satisfies some feminine vanity, or perhaps it is even considered a means of added attraction or flirtation.)

We presented a little salt to the village which is greatly appreciated by bush natives. They brought us a pawpaw or two, some bananas and a little taro. Before night we were much better acquainted,

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and were even offered some encouragement to stay at Kino and do our collecting from there, some of them telling us that "Kupei long way too much and road he no good."

December 30. Awoke in the early morning to the sound of squealing pigs and crying babies, but evidently both outcries were due to hunger and were soon quieted.

It rained continually and there was sort of a dismal aspect to everything. Some time elapsed before any carriers put in an appearance. Those who did show up bore a message to the effect that the Kupei trail was very rough and slippery and no good in the rain. "Suppose rain he stop, plenty boy he come, we go Kupei." We were unable to find out how long it might take to get to Kupei as native ideas of time and distance are very vague, i.e. their ability to communicate their ideas. Finally Hamlin decided to go on ahead with a native and see about getting more carriers. He was gone less than an hour, having fallen in with more carriers on the trail and been given to understand that still more were on the way. They did not seem to show up, however, and I finally decided to go ahead to Kupei, ascertain the distance, character of trail, and send back word. All this time the rain was pouring down steadily which certainly did not make our problem look any easier.

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down steadily which certainly did not make our pro-
spect look any easier.

With a native from Kino for a guide I made the trip from Kino to Kupei in something like two hours. It rained all the time, and the trail was very slippery. The trail crossed several streams and at one point, as we neared Kupei, it climbed up the side of a waterfall, an ascent so precipitous that I wondered how carriers would ever be able to make it with our heavy boxes.

Kupei proved to be a smaller village than Kino, some eight houses perhaps with no enclosing stockade. It is situated on even more of a slope than Kino, and the clay seemed far more slippery. I felt very cold there as I sat in my wet clothes and wondered in which one of these houses we could put up. The Kukurai was an old man who did not understand any English and did not seem at all pleased at the prospect of entertaining our party. He repeated several times, through my Kino guide, "no many pigeon stop here." However, I saw some very interesting birds while talking with him, so I was not disturbed on that score. I finally found out that a "house belong government" was not far distant and went over to investigate it.

It was a most pleasing surprise, being a larger structure on uprights, built of sacsac, with a fairly large cook house, dirt floor, close by. The latter was in need of some repairs, but the house belong Kiup was in excellent shape. The Kukurai and

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long Kimo was in excellent shape. The Kukulai and

another Kupei native had accompanied me over here and I produced some biscuits and a tin of sardines to celebrate the find, in the meantime dispatching the native from Kino back to his village with a short note saying that the trail was bad but negotiable, and to come on if possible.

I shared the biscuits with the Kukurai and his head man, and let the Kukurai in on the sardines. With some white man's food in his stomach he unbent a lot and soon we were on the best of terms. What he lacked in knowledge of English he made up by being clever at understanding signs, and all three of us were soon busily engaged in repairing the cook house, making some additions to the main residence, getting fern for bedding, etc.

As we completed this the rest of the party showed up. After the whole caravan had filed in there was an even greater spasm of paying off than at Kino. Everyone seemed to have carried a very heavy box and there was a terrible gang of them. However, this was finally accomplished and we were duly installed in what was to be our home for nearly five weeks. Our cook boy, Wagi, served a very good supper, and it seemed great to feel that at last we had arrived. Altitude of Kupei 2300 feet.

December 31 to January 31. I am commencing my journal on the 31st of January 1928, not having had a chance during the past month to do any writing

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at all except labels for specimens, and letters to various people in Arawa or Kieta in connection with sending out specimens or ordering more supplies. For a short period of time we seem to have done very well, and possibly an account of the whole stay will be as valuable as daily notes, especially as both Hamlin and Richards will have journals to submit. I must confess, however, that I always feel safer in putting down notes at the end of each day, and not trusting to my memory.

In the first place, I decided from the start that if we were really to accomplish something worth while in a comparatively brief stay, it would be necessary to organize our work. Hamlin and Richards could shoot birds, but were not so clever at the preparation bench. It seemed advisable to have someone up the trail every day for the best chance of securing rare birds. So it was arranged that Hamlin and Richards should climb on alternate days, and skin birds on the day they did not climb, while I should skin and make up all the skins as well as attend to other specimens. I expected to be able to collect some also, but material came in so fast that I was hardly able to keep up with it. We had many visitors from other villages, and I spread the gospel that we were in the market to buy all sorts of specimens, frogs, snakes, insects, land and fresh-water snails, etc. In the beginning it

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was difficult to make them understand, and several times I had to draw pictures to "sell them the great idea." But the news spread rapidly and soon specimens, many of them very desirable, were coming in from all directions. I regret very much that I could not take better care of the frogs, snakes, etc. We had one pint of formaldehyde from the France, and no containers. For awhile I was obliged to use salt brine, later getting some methyl spirit from Kieta. Probably most of the material will be in good enough shape for examination and identification. Some may only be useful for skeletons. I thought it best to send the lot along and let it be picked over at the Museum.

There were most beautiful colors on some of the frogs, especially the tree frogs, black dorsal stripes, white dorsal stripes, gold bands, white labial bands, etc. I did so wish that I could make diagrams and indicate prominent colors, but it would have taken a lot of time and meant special labelling, all of which was impossible under prevailing conditions. I trust that all this will be understood and that I may be forgiven for sending in "en masse" what I hope may prove to be interesting material.

I also did the best I could with the land and fresh-water snails and insects. The land snails are certainly beautiful and I judge that they are not too common. None of our party saw more than a very few and the collection obtained was the result of the work of many natives from different villages. The

was difficult to make them understand, and several times I had to draw pictures to "sell" them the great idea. But the news spread rapidly and soon specimens, many of them very desirable, were coming in from all directions. I regret very much that I could not take better care of the frogs, snakes, etc. We had one pint of formaldehyde from the French, and no containers for awhile I was obliged to use salt brine, later getting some methyl spirit from Kiste. Probably most of the material will be in good enough shape for examination and identification. Some may only be useful for skeletons. I thought it best to send the lot along and let it be picked over at the Museum. There were most beautiful colors on some of the frogs, especially the tree frogs, black dorsal stripes, white dorsal stripes, gold bands, white labial bands, etc. I did so wish that I could make diagrams and indicate prominent colors, but it would have taken a lot of time and meant special labelling, all of which was impossible under prevailing conditions. I trust that all this will be understood and that I may be forgiven for sending in "en masse" what I hope may prove to be interesting material. I also did the best I could with the land and fresh-water snails and insects. The land snails are certainly beautiful and I judge that they are not too common. None of our party saw more than a very few and the collection obtained was the result of the work of many natives from different villages. The

natives were never able to produce very many at one time, which also inclines me to believe that they are not too common. I could not get the natives interested in smaller snails although I know they occur as I found a few myself. The only small snail which they seemed to comprehend was the taro snail of which they brought in several pints within a couple of days. News soon spread, however, that I was not buying that particular variety. Altogether they produced a very fine collection of land and fresh-water snails, many different species, some of which I think are rare.

Of insects they also brought in a good many, although most of the butterflies were caught by our own boys. I tried to have some one of the boys out with the net every day, and in a way succeeded, although a butterfly net does not have the same attraction for the native as a gun. Between all methods a fair collection of insects was obtained, especially when it is remembered that this was only one of many side lines. With limited time and space for taking care of insects, I was obliged to pack some of them before they had properly dried. However, I used paper and camphor balls freely and hope that most of them will arrive in good condition.

I secured quite a lot of spiders, walking sticks, mantis, the larger grasshoppers, crickets, etc., most of which I have tried to preserve in solution, although I do not know in what shape it will

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I secured quite a lot of spiders, walling sticks, mantis, the larger grasshoppers, crickets, etc., most of which I have tried to preserve in solution, although I do not know in what shape it will

arrive. I did not receive the methyl spirit until about the close of this harvest, and brine and weak formaldehyde hardly seems to me the proper thing at all, but it was the best available and again I beg to be excused for handling interesting material in such fashion.

We secured an adult and young opossum, both large and small fruit bats, and I think two other species of cave bats. I also prepared skins of some eight rats and put a few others in pickle. The rat is very common here and proved, during the latter part of our stay, rather destructive to birds left in the flesh over night. The natives tell me that there is a large bush rat stops high up on the mountains and thought that they might secure a specimen, but none was obtained although I offered two shillings for a specimen. They also spoke of a smaller "rat" which "stops along ground" which I take to be a mouse, but I did not succeed in getting one of these either, although I kept after them about it all the time. Our Arawa boys tell me a mouse occurs near salt water, but I rather think it may be an introduced house mouse and would rather have a look at this mountain variety. I judge there are no other mammals here except perhaps a few small bats.

We are covering on this trip a section probably 4 miles wide by 16 miles deep, and reach an altitude of a little over 5000 feet. Our collecting has

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We secured an adult and young opossum, both large and small fruit bats, and I think two other species of cave bats. I also prepared skins of some silver rats and put a few others in alcohol. The rat is very common here and grows, during the latter part of our stay, rather destructive to birds left in the flesh over night. The natives tell me that there is a large brown rat stops high up on the mountains and thought that they might secure a specimen, but none was obtained although I offered two shillings for a specimen. They also spoke of a smaller "rat" which "stops along ground" which I take to be a mouse, but I did not succeed in getting one of these either, although I kept after them about it all the time. Our friends boys tell me a mouse occurs near salt water, but I rather think it may be an introduced house mouse and would rather have a look at this mountain variety. I judge there are no other mammals here except perhaps a few small bats. We are covering on this trip a section probably 4 miles wide by 10 miles deep, and reach an altitude of a little over 5000 feet. Our collecting has

been done from camp to that altitude which is the highest in this region. The village of Kokari, which is about 16 miles in, is the farthest village with which we established contact. It's altitude is probably about 3000 feet.

The ridge from Kupei camp up is without streams, but from Kupei down there are many streams and sizeable rivers. The general character of the country is knife-like ridges with deep intervening canyons, all heavily wooded. Our camp, the government rest house, is situated on a main trail much used by natives, which extends to the other side of the island. Being much travelled, it is in good condition, and compared to the primitive trail we used on Kulambangra seems a street, although of course steep and slippery. It resembles much the government road on Ysabel.

Natives, from among our numerous camp followers, went up with Hamlin and Richards each day and proved invaluable in locating birds and retrieving those shot. Often the birds fell a considerable distance in the deep canyons from which they could only be retrieved by a native. The more experience I have with them the more I am convinced that in the bush native, selected ones, is the answer for what to do about bird in the collecting under difficult conditions. They have wonderful vision, a sort of sixth sense which seems to permit of their locating

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birds in difficult situations, and altogether they are keener on retrieving than our own well-trained bird dogs. They also quickly learn to handle birds with care, and are adapt at making wrapping cases out of leaves to protect the plumage from wet.

As an experiment I permitted our cook boy to shoot one day, and he trained a couple of other natives to do likewise so that the guns were never idle even when we were all at the skinning bench. Between them they brought in many fine specimens, gray birds, blue-backed kingfishers, long-tailed pigeons, etc. Wagi, on one afternoon on another ridge, secured ten long-tailed pigeons with twelve shells. He also, from the same ridge, produced two "yellow eye" pigeons. This bird resembles the long-tailed species except that it is smaller in size, iris yellow, bill brown and feet a gray brown. As both specimens showed some immaturity I wonder if it can be an immature long-tailed pigeon? On the last day of collecting at this station I sent Wagi and one of our camp followers up the main trail with a couple of other natives for retrievers. They brought in sixteen birds, four yellow-bibbed doves, one warbler, one ashy fantail, one long-tailed pigeon, two thickheads, one blue-backed kingfisher, one curved bill olive bird, one red-bellied flycatcher, three crows and a hornbill; not a bad day's hunting for natives with such limited training. I may say that practically all these birds were in good condition. Selected natives

with proper training, I think, would prove invaluable in this sort of work. They can be hired for very little, are keen of vision, sure-footed, require less in way of food and clothing, and are perfectly at home in the bush. I have not tried to train any at bird skinning, but judging from the rapidity with which natives aboard the France have learned to make good skins I think they could be used in this manner also.

There has been no attention at all paid to the matter of collecting boxes to take on camping trips. It would require practically no expense and little time to make boxes out of packing cases, water-proofed with roofing paper, some of them equipped with lined tin trays, made from empty benzine tins, for taking care of valuable specimens. These cases could be used for packing in supplies, and filled with specimens in camp, obviating the necessity of trying to make boxes water-proof with leaves, casvas, etc. In the present instance we are fortunate in being able to send out birds and other specimens, as they accumulate, to Mr. Esson, the manager of Arawa Plantation, who is taking care of them until our return. Without his assistance we should be terribly bothered as there is not room enough for us to store much material here to say nothing about transporting it as a whole. Much of it has had to be transported while still too fresh, and without trained help to unpack immediately at other end I am somewhat uneasy as to how it may arrive. We have also been very short

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of wrapping cotton so that it has been necessary to 127
repeatedly unwrap birds after one or two days and use
the cotton over and over, replacing it on partially
dried specimens with paper. Even paper we have had
to beg from Arawa and Kieta, where it is scarce.

For funds I am depending upon my own re-
sources, Beck having landed us here for a two months
stay with five pounds in cash which was spent within
the first few days on carriers and a few specimens.
Fortunately, I had a letter of credit upon the store
in Kieta, Ebery & Walsh, good for nearly forty pounds,
and I expended all of this in the course of our work.
There are other things which I feel prone to criticise,
but as time for writing is limited I shall trust to my
memory for retaining such matters.

I give below a list of the material secured
here in one month's time, i. e. from December 30th to
January 30th. From it I think you will credit that we
have been quite busy, especially so when laboring under
many handicaps.

Red-knob Pigeon	1
Gray "	2
Long-tailed "	31
Crested "	4
Yellow-leg Ground Pigeon	1
Yellow-eye "	2
White-throated "	1
Red-cap Dove	9
Long-tailed Dove	23
Red-breasted "	19
Yellow-bibbed "	50
Black Hawk	1
Striped "	3
Blue-backed Hawk	1
White-breasted "	1

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many handicaps.

1	Red-knob Pigeon
2	" "
21	Long-tailed "
4	" "
1	Yellow-leg Ground Pigeon
3	" "
1	Yellow-eye "
9	White-throated "
28	Red-cap Dove
19	Long-tailed Dove
50	Red-breasted "
1	Yellow-billed "
1	Black Hawk
3	Striped "
1	Brown-backed Hawk
1	White-breasted "

Crow	14
Hornbill	1
Large Green Parrot	1
Mina	11
Thrush	16
Redbreast	15
Ashy Fantail	27
Brown "	4
Black "	12
Midget	17
Large White-eye	20
Small "	24
Black Honeysucker	27
Yellow "	3
Blackhead	5
Mt. Thickhead	50
Yellow "	14
Green Paroquet	9
Small Swift	15
Long-tailed Swift	5
Small Cuckoo	7
Blue-backed Kingfisher	11
Kingfisher (ee-ee)	2
Graybird	18
" (yellow-eye)	11
" (black-bellied)	1
Gray-backed Shrike	11
Rusty-wing Blackbird	22
Curved-bill Olive Bird	29
Red-bellied Flycatcher	26
Flycatcher	11
Warbler	25
Kokorbi (ground thrush)	1
Blue-headed Paroquet	2

Total 49 species, over 600 specimens

General collections in addition.

Bats	16
Opossum	2
Rat	12
Nestling Hornbill	1
Land Snails	1000
Fresh-water Snails	1000
Frogs	200
Geckos	8
Snakes	15
Lizards	10
Fresh-water eel	1
Iguana	3
Centipedes	9
Insects, etc.	1000 ?

Camp organization has been quite good. I found it necessary to fire two of the native boys we had engaged from

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1000	Insects, etc.
2	Cephalopods
3	Lizards
1	Fresh-water eel
10	Lizards
13	Snakes
8	Geckos
200	Frogs
1000	Fresh-water Snails
1000	Land Snails
1	Hesting Hornbills
13	Bats
2	Opossum
13	Lata

General collection in addition.

Total 49 species, over 800 specimens

2	Blue-headed Parrot
1	Kokoi (ground thrush)
25	Warbler
11	Flycatcher
26	Red-bellied Flycatcher
29	Curved-bill Olive Bird
22	Rusty-wing Blackbird
11	Gray-backed Thrush
1	" (black-bellied)
11	" (yellow-eye)
18	Graybird
2	Kingfisher (ee-ee)
11	Blue-backed Kingfisher
7	Small Cuckoo
8	Long-tailed Swift
15	Small Swift
3	Green Parrot
14	Yellow "
20	Mr. Thickhead
3	Blackhead
3	Yellow "
27	Black Honeyeater
24	Small "
30	Large White-eye
17	Widgee
12	Black "
4	Green "
27	Large Fantail
13	Redbreast
16	Thrush
11	Myna
1	Large Green Parrot
1	Hornbill
14	Oron

Arawa after about a week here. I fired them and gave quite a lecture to the other two boys and things seemed to go a great deal better after that. At first some of the stores were kept in the cook house, but it seemed that canned goods were disappearing at an alarming rate, and on taking inventory after the first week we found some forty tins, mainly meat, missing. It was impossible to properly place the blame with so many natives about, so all stores were moved to our quarters. Nearly always we had quite a camp following, rather a good thing in its way as these natives performed many services and from their number could always be obtained special boys for different things. As nearly as I could calculate it cost about a dollar a day to run the camp for the boys. Cooked taro was brought in generously at the end of each day from nearby villages, most of which I purchased at the rate of one stick of tobacco for a basket. Sometimes we had to use calico for this purpose. The supply was pretty much consumed in the cook house, but it is bad precedent to refuse taro, as once anything is refused the native gets the idea you do not want that thing anymore and does not bring any at all. We also had a steady supply of "kow-kow", a tuber much resembling our sweet potato only better if anything. Pawpaws were obtained in plenty and we generally had a good supply of bananas. Some squash was obtained and very fine long string beans on a few occasions. Only twice were we able to secure a fowl and the price was high for the bush, two shillings for a fowl. Eggs were offered only once when I got two eggs for two sticks of tobacco. I think anyone could quite easily live on the country here, with enough tea, coffee, salt, sugar and some syrup. Personally I like all the native vegetables and could easily get along with these and a limited amount of meat. Self raising flour and beef dripping are

two very useful articles of diet in the bush and the usual containers make excellent packages for small miscellaneous specimens. Coarse salt is a valuable trade article with the bush natives. We brought in 25 pounds and two subsequent occasions I secured 50 pounds more. It costs in Kieta two cents a pound and has a big value in the bush, besides being a very cheap medium of establishing friendly relations with villages encountered for the first time. Calico goes good as a trade article but is expensive compared to other things, and it often causes trouble if used at all freely, every native demanding calico for any trifling thing or service. Trade tobacco is perhaps the most useful single item, although it is not so much desired by the natives farther inland who raise a tobacco, or tobacco substitute, of their own with which they seem quite contented. Bush knives and axes are useful as presents but rather too elaborate for trade. All these things I am jotting down as I think of them, for I understand that practically similar conditions prevail on islands of New Britain and New Ireland and even in New Guinea and they may be useful hints for some future collecting expedition.

We entertained at our camp two men, Mr. Fordyce and Mr. Kemp, who had crossed the island on a recruiting expedition which had not proved a success. They came from Raboul and had quite some acquaintance with bush natives all along the line. Both were pretty well crippled up from their experiences on Bougainville, having encountered considerable sickness and hardship soon after their start from the Bouin district.

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There was often rainfall below and above the camp when it was dry 131
in the camp site. It seldom rained at night. We had no thermometer
so cannot give prevailing temperatures. It was fairly cool at night
so that a heavy blanket was quite comfortable. Temperature conditions
rather reminded me of our early fall weather in New England.

During our stay we became well acquainted with many of
the natives. Even the women, who were quite shy at first, watched
the doings around the camp with great interest and even condescended
sometimes to receive personally the sticks of tobacco in payment
for their baskets of taro. At first they refused to take the sticks
from our hands, using some little boy, or "monkey", as a go-between.
The women all wore a short calico lava-lava. The men wear either a
lava-lava or a bit (lik-lik) of calico dangling from a string.
Many of the older men wear no clothing at all. In fact in most of
these villages no clothing is worn except on the occasion of a
visit from white men. Often the bodies of the men show quite a
development of hair all over, the result I suppose of continued
exposure. The children as a rule wear no clothes, although after
our arrival many of them put on a scanty bit in our honor.

It is worth while to have a prolonged stay with bush
natives to really understand them. When seen in the labor gangs
on plantations one is rather apt to get the idea that they are
stolid, even sullen, that they talk little and have no sense of
humour. When seen as they really are in their homes they are
found to live quite a regular life, talking freely on all sorts of
subjects, with names for all the natural objects with which they
are surrounded, a quite profound knowledge of the bush and all that
it contains, an accurate knowledge of the weather, and often full
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reminded me very strongly of the habits of children of the same age at home. Here the great school is the bush and children become self reliant at a very early age. Even tiny children usually possess great strength and endurance. They are accustomed even when very small to carry burdens over these steep and slippery trails. All of them smoke, generally pipes, although they make long cigarettes of newspaper and trade tobacco which they pass around from one to another.

Our camp was a sort of gathering place and smiles and laughter were extremely common occurrences as the natives watched our actions and probably discussed among themselves the strange ways of the white man. In many ways they are like children, curious, wishing to see and touch things, often asking impossible things in barter, sulky if spoken to crossly, and yet often coming out of their pout quickly after a little petting.

On one occasion I tried to have a real sing-sing, on a Sunday afternoon for the purpose of securing some photographs. They brought in a lot of taro, which we paid for and arrange a structure, quite according to Hoyle, to put it on. We had saved the bodies of some pigeons, crows and doves to use for kai-kai and also contributed some rice and a bag of flour which had been left us by Mr. Kemp. Later it developed that they wished to have presents if they were to perform and this was not at all to our liking since we had already arranged the feast. The trouble seemed mostly to be with the natives from Kino, which is to be our next stop, the tutul of that place seeming to us to be considerable of a grafter. Finally, on being told flatly that there would be no presents, they did put on some kind of show, very interesting while

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present, they did not on some kind of show, very interesting while

it lasted, but rather a failure on account of having rain. They 133
make a four or five toned instrument out of some reeds on which they
produce rather a monotonous tune for their sing-sings. Often it is
aided by another instrument made from a very large bamboo and called
the kalulu, on which a deep and melodious note can be produced by an
expert. The dance step which they execute is quite simple, a sex
product I should think, and it is done over and over again as the
dancers parade about. Many of them, particularly the children,
carry branches of green leaves. The dance is quite interesting
and I believe they often keep it up for long periods.

Once while in Kupei I saw a sac-sac bundle hanging in a
tree. I inquired what it was and was informed that it contained the
body of an infant recently dead. Further inquiry as to whether it
would be burned or buried later on elicited the information that it
would stay there until pretty well destroyed by the elements, when
it would be thrown along into the bush. On another occasion two
natives walked through our camp with a fairly long bundle wrapped
in a blanket attached to a pole. I was wondering what it could be
until as they passed me I saw a naked foot hanging out. It was
the body of someone from their village who had died in the hospital.
They are allowed to remove the body if it is the village custom
to burn them.

The natives here are dark in color and the greater
part neither of large frame or more than ordinary height.
Occasionally I saw a gigantic black over six feet in height and of
large frame but natives of this size were uncommon. Natives were
constantly using the trail coming from villages way in the
interior. Generally they stopped at our camp, at least for a short
while, but sometimes they passed through with hardly a glance about.

188 it lasted, but rather a falter on account of having rain. They make a four or five toned instrument out of some reeds on which they produce rather a monotonous tune for their sing-songs. Often it is aided by another instrument made from a very large bamboo and called the kamin, on which a deep and melodious note can be produced by an expert. The dance step which they execute is quite simple, a sex product I should think, and it is done over and over again as the dancers parade about. Many of them, particularly the children, carry branches of green leaves. The dance is quite interesting and I believe they often keep it up for long periods.

Once while in Kogel I saw a second bundle hanging in a tree. I inquired what it was and was informed that it contained the body of an infant recently dead. Further inquiry as to whether it would be buried or buried later on elicited the information that it would stay there until pretty well destroyed by the elements, when it would be thrown along into the bush. On another occasion two natives walked through our camp with a fairly long bundle wrapped in a blanket attached to a pole. I was wondering what it could be until as they passed me I saw a naked foot hanging out. It was the body of someone from their village who had died in the hospital. They are allowed to remove the body if it is the village custom to burn them.

The natives here are dark in color and the greater part neither of large frame or more than ordinary height. Occasionally I saw a gigantic black over six feet in height and of large frame but natives of this size were uncommon. Natives were constantly using the trail coming from villages way in the interior. Generally they stopped at our camp at least for a short while, but sometimes they passed through with hardly a glance about

Some members of each party are always armed with bows and arrows, so there is evidently trouble occasionally along the line. Their bows are very serviceable and I judged from the few exhibitions which I witnessed that most of them are quite proficient with their weapons.

Many of the men have the cicatricial markings which here take the place of tatooing. I have also seen boys of not more than ten years of age with some of the same designs, so judge that the practice is often commenced at an early age. They do not seem to be given much to personal adornment. Some of them wear necklaces of beads or beads supplemented by opossum teeth. Natives from the interior often wear a piece of polished bone, about two inches in length, through the perforated septum of the nose, giving them a rather fierce facial expression. A piece of cord is often worn about the arm or lower leg. Sometimes a raffia circlet, obtained from the Buin district, is worn in the same situations. A few wear the long-toothed wooden comb in their hair.

They make very beautiful baskets in some villages, as good as I have seen anywhere. Also they make in all villages a large, grass woven bag, which is also used for a mat. They also make another sort of leaf affair which is used to wrap about articles or as an umbrella. The women carry a large fan affair made out of leaves which often has a little stitching near its circumference. To their use of this as a screen I have already referred. Some of their spears and arrows are finely barbed and painted with red and white clay paint. The women often have the white paint daubed all over their faces and sometimes a man will appear with a smotch of it on his face, but I have never been able to learn the real significance of this.

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They sleep on a layer of poles or saplings and do not seem to require much for cover. I rather fancy that they are quite accustomed to the cold, although the natives from Kupei felt it keenly when on the trips to the top of the mountain. They did not seem to mind electric storms, which are numerous here, but are afraid of heavy winds. The latter often cause excessive damage in the forest, blowing over tree giants, the crashing fall of which can be heard a long distance.

The health of our party was good. At about the end of the first week I had an attack of malarial fever of the gastric type. While incapacitated for a couple of days I had no return of it for some time and rather ascribed the attack to a neglect of quinine, the prophylactic dose of which I should have increased on commencing a sojourn in this higher altitude after so long a time at low levels. Several of the natives and both our cook boys had attacks of fever at about the same time. The natives in this district seem to be quite healthy. Yaws in some form is quite in evidence and I saw many cases of ringworm. Ulcers, probably due mostly to yaws, were extremely common, and from my observation largely neglected. During our stay I had a number of patients among the natives who desired treatment for fever or ulcers.

For the study of bird life we were probably very fortunate in our selection of Kupei as a camp site. Birds of all the more common species abounded in the vicinity of the camp. In the early morning and in fact all through the day minas, thickheads, black fantails and kingfishers could be heard calling about the camp itself. Midgets and honeysuckers were all over the place, while shrikes, blackbirds and the common pigeons and doves lit in the trees adjacent to camp. The trip from our camp to the top of the

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mountain, the height of which is a little over 5000 feet, could be made up and back in a morning or afternoon. Of course Hamlin and Richards on their trips practically always spent several hours on the top. The bird fauna commenced to change above 3000 feet. The long-tailed pigeon occurs at this altitude and perhaps even lower, as I think I have seen them about the village of Kupei. (Special note: There is a varying amount of pink in bill of long-tailed pigeon but never much. The shade of yellow is deeper in some specimens.) The crested pigeon was found at about 4000 feet, though it too may occur lower down. Our cook boys seemed to think that it occurred much lower down, but from our later experience I believe they are mistaken. It undoubtedly is quite rare and I believe we were lucky to get three good specimens. The only white-throated pigeon taken was shot by Richards from a tree in our front yard. The yellow-leg ground pigeon was shot by Hamlin near the top. It was known to the natives who said that it occurred only high up, and that there were "not too many.". Both the red-knob and gray pigeons, called by the natives "ba-loos", occurred about camp but did not seem to be very plentiful. The pigeon which I have called "yellow-eyed", and which may prove to be an immature long-tail, occurred in the same region with the long-tailed on another nearby ridge at an altitude of 3000 feet. None similar were taken by either Hamlin or Richards on the camp ridge.

Long-tailed doves, the red-cap and red-breasted species were all very common in the vicinity of our camp. The long-tailed species is especially common here and was nesting at this time. At least two specimens shot contained an egg ready for laying, and a pickaninny along with Richards found a nest near the trail in a bush some six feet from the ground. It was a flimsy structure of

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a few coarse twigs and contained one creamy white egg, which unfortunately was broken in transit. The male long-tailed dove has a narrow, vermillion stripe encircling the eye, which is replaced in the female by a dull black stripe. The yellow-bibbed dove was encountered at from 4000 feet up and seemed quite common, but as usual rather difficult to see since it fed in the tree tops. Several of those obtained were nearer the ground and some were shot with the aux. The species seems to resemble the type taken on Guadalcanal, as I remember it. No ground doves were seen at Kupei station.

At around 3500 to 4000 feet the mountain thickhead takes the place of the yellow variety which occurs lower down. It is quite surprising this rather definite dividing line of altitude between two birds, alike very much except in color of plumage. Thickheads were quite common, responding well to calling, and most of those obtained were shot with the qux. The legs of the thickhead vary in color from bluish and brown-gray to very dark brown almost black. On top the ashy fantail occurs, taking the place of the little brown fantail, the latter however occurring commonly well up the mountain. The thrush, redbreast and small green paroquet all occur near the high altitude of 5000 feet, the last mentioned being quite common but difficult to secure on account of its rapid movements about the tops of high trees, and the color protection which it receives from its plumage, which is so nearly the same as the foliage of the trees in which it feeds. The thrush is by no means common, and on many days none were secured. Several stomachs of the thrush which I examined contained a small green fruit about the size of a large pea. The little redbreast also is uncommon, but the series secured shows interesting plumages. All these species seemed to be the same as those taken at Kulambangra, although no

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specimens were available for exact comparison.

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The warbler occurs quite commonly from 4000 feet up and a considerable number were taken. Many of these were badly damaged by shot and skins were prepared with difficulty, still the series as a whole is not too bad.

Two hawks were taken on the mountain trail, both I think new to the collection. A small black hawk was secured by Richards on the very top and Hamlin got a "white-breasted" hawk a little lower down. The stomach of the black hawk (spec. no. 140) contained two small lizards and the remains of a small bird, probably the large white-eye. The stomach of the white-breasted contained the remains of what appeared to be a rat. I made color sketches of both birds which will indicate colors of iris, bill and feet.

The large white-eye occurs from about 3000 feet all the way up to the top, its place at lower levels being taken by a smaller, yellow white-eye which is very common. Both species have but little white in the ring around the eye and both species have gray legs.

Small swifts were common in the vicinity of our camp and the long-tailed swift occurred here also but not commonly. Early in our stay the natives spoke of a "pigeon stop along rock", and I wondered just what it might be. They soon commenced to bring in swifts alive, catching them in the caves where they go to roost and eat. So many did they bring that we had to call a halt as we were unable to put them up, so fast did our collections increase.

Both the blue-backed kingfisher and the "ee-ee" were often heard near camp and several of each were taken. I examined several stomachs of the blue-backed kingfisher and all contained insects. One had feasted on a small highly colored beetle,

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insects. One had feasted on a small brightly colored beetle.

Richards obtained two small cuckoos fairly well up the ridge and our cook boy secured several more close by the camp. All stomachs contained caterpillars. One had swallowed whole a butterfly larva some three inches in length. I noted a very few small insects in stomach contents. There seemed to me to be somewhat more orange in the bill of the male than in the female.

Three striped hawks were taken near the camp, two of them by our native hunters. The stomachs of two contained grasshoppers, the third was empty. A small blue-backed hawk, also secured by a native hunter, seems to me to be different from the blue-backed hawk taken on other islands, but I cannot be sure with no skins for comparison. I made a color sketch of head and feet in this in case it should be new to the collection (spec. nO.347).

The hornbill, called here "ko-ko-mo", occurs all the way up the mountain but is probably more common at lower levels. The crow is very common, probably the same as the crow taken at the Shortlands. This one has jet black bill and feet and brown iris.

The large green parrot, red parrot and blue-headed paroquet, were often seen in the vicinity of camp, as also the white cockatoo. No attempt was made to collect them as we expect to take specimens when at Arawa.

The black fantail was quite common both in the vicinity of camp and higher up. The blackhead we hear occasionally in the vicinity of camp but it does not seem to be very common at this level. All specimens secured here were brought in by our native hunters.

Both the small flycatcher and red-bellied flycatcher are common. Both are apparently the same as the Shortland forms.

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are common. Both are apparently the same as the Shortland forms.

The black honeysucker occurs more commonly higher up the ridge, although some were taken in the vicinity of camp. The yellow honeysucker occurs but does not seem particularly abundant at this altitude.

Three species of graybird were taken here and two of them, the ordinary species and the barred species with yellow eyes, appear to be quite common. Of thirty specimens secured practically all were brought in by our native hunters. The female of the black-bellied species must resemble very much the male of the ordinary species. I have had no opportunity for careful comparison, but in sexing specimens I found a female, sex organs enlarged, in the same plumage as the male of the ordinary form.

The rusty-wing blackbird was quite common in vicinity of the camp.

The bird which I have called "curved bill olive bird", perhaps a large honeyeater, occurs commonly in vicinity of camp and up the ridge. I hope we may find it lower down as a still larger series would be desirable. At first I attributed a call, three notes on a descending scale, to this bird. This is the call which on some islands we have considered coming from a "ke-kow". I find now that it is the call of the small cuckoo.

We have had with us all the time a boy from Kino, by name Tutipe. He is very intelligent, understands considerable pidgin and speaks a little English. Our cook boy, Wagi, taught him to use the gun, and on one occasion when he had been hunting in the vicinity of Kino, he brought back a most beautiful ground bird, which has the native name "ko-kor-bi." He says we can get more lower down and I certainly hope so, as it is a species and genus entirely new to the collection. According to the natives

it is strictly a ground bird, can run rapidly and makes its nest on the ground. (This is the ground thrush Pitta.)

I believe the only bird seen here which I have not mentioned is the eagle hawk, which has been seen flying over on at least two occasions. Richards thinks he has seen a night hawk, but I am not sure that he has not mistaken a bat for a night hawk, since bats were about at the time when he made his observations.

Habits of the various birds do not differ here from elsewhere, and as I have sent in considerable in way of notes from other islands, I shall not try to duplicate in the brief time permitted for note writing at this station.

We expect to get down to Kino February 2. I had carriers take down the last of our birds from here today and they reached Arawa without getting caught in a rain, much to my satisfaction, although I had tried to make the boxes waterproof.

February 1

Day spent in note writing, policing the camp, and getting ready for the trip to Kino tomorrow. Early in the morning we had a goodly crowd over from Kupei, expecting that we were to leave today. Also the tultul from Kino was up, a regular grafter of the greasy type whom we already dislike very much. The kukurai from Kupei appeared at the step of our house along with our cook boy who informed me that the kukurai wished to "talk along you." "Talk along what?" I queried. "He want talk along pigeon, you shoot him at Kupei." Of all the nerve! He wanted pay for the "pigeons" which we had been collecting over the range, an idea which must have been put in his head by the tultul from Kino, just to see how it would work out. He was very promptly and emphatically informed that the pigeons did not belong to him and neither did most of

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that the pigeons did not belong to him and neither did most of

the ground over which we had hunted. And then the people of Tulagi, Kieta, etc., say that these people have no imagination. One has to visit them on their own native heath to find out to just what length their imagination can carry them. Practically no one has shown up from Kupei since, but I have no fear but what there will be plenty of carriers for tomorrow.

The boys in the course of our stay here used up most of the pole beds in the cook house for firewood and I am having them replaced as well as leaving a small supply of firewood. In the army I learned thoroughly the lesson, always try to leave a camp better than you find it, a lesson which is well worth while. Our gear has diminished considerably in quantity, so we shall not need as many carriers going out. The packing also should be much easier as we have enough large boxes now the the distance to Kino is not great.

A native bringing in some large coconut beetles prompts me to make the note that coconut palms grow here up to an altitude of 3000 feet. There are not so many yet one sees them scattered about on the ridges. One in our front yard is bearing some twenty rather small nuts.

With the change in the moon (the new moon came some two nights ago) we seem to be getting more rain, which makes us feel that we did strike Kupei at a fortunate time for collecting. It rains heavily every afternoon, and now as I write the cloud banks are enclosing all the valleys below us and a fog hides the top of the mountain also.

During the day there have been slight periods of activity on the part of the natives, a few more snails, insects, frogs and one snake added to the collection. I rather feel that

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During the day there have been slight periods of
activity on the part of the natives, a few more snails, insects,
frogs and one snake added to the collection. I rather feel that

we have pretty well collected the place except for very rare things⁴³ but it is with regret that I leave without a bush rat and a mouse. Some time ago natives from Kokari brought in a nestling hornbill alive, rather a large nestling, although it was entirely naked. It was extremely awkward, flopping about on almost useless legs, the embodiment of helplessness. I made a color sketch of head and foot and then put it in pickle. The natives say that the hornbill generally nests well up in some tall tree and of course the "man" walls the "mary" in. We have three iguanas in the collection. Two of them were brought in alive by natives. They are very sluggish and could be placed about in almost any position. One showed fight when poked at, biting savagely at foot or stick, but all enthusiasm seemed to disappear when left undisturbed.

I took a couple of pictures today of our chief transportation officer, a native of quite unusual ability who has taken charge of most of the safari back and forth between Kupei and Arawa and Kieta. He has some beautiful cicatricial designs on cheeks, arms and back. I inquired at what age it was done, and I understood that he received the decorations as he reached maturity, the cuts being made one or two at a time with a piece of broken bottle.

We are doing our developing by tank method on the spot and meeting with quite some success. Hamlin brought out a German developer, Rodinol, which is giving excellent results. It can be used over and over in the tank, takes the regular time regardless of temperature of water, and produces fine negatives. I find that a lot of my trouble has been due to under-exposure. Even with the apparent bright light here it requires an exposure of $1/25$ sec., and it is necessary to use an 8 stop unless the

we have pretty well collected the place except for very rare things. But it is with regret that I leave without a bush rat and a mouse. Some time ago natives from Tokant brought in a nestling hornbill alive, rather a large nestling, although it was entirely naked. It was extremely awkward, flapping about on almost useless legs. The exhibition of helplessness. I made a color sketch of head and foot and then put it in pickle. The natives say that the hornbill generally keeps well up in some tall tree and of course the "man" calls the "man" in. We have three specimens in the collection. Two of them were brought in alive by natives. They are very sluggish and could be placed about in almost any position. One showed fight when poked at, biting savagely at foot or stick, but all enthusiasm seemed to disappear when left undisturbed.

I took a couple of pictures today of our chief translator officer, a native of quite unusual ability who has taken charge of most of the school work and forth between Tokant and Kawa and Kista. He has some beautiful circular designs on his arms and back. I inquired as to what was it was done, and I understood that he received the decorations as he reached maturity the cuts being made one or two at a time with a piece of broken bottle.

We are doing our developing by tank method on the spot and meeting with quite some success. Hamlin brought out a German developer, Rodinol, which is giving excellent results. It can be used over and over in the tank, takes the regular time regardless of temperature of water, and produces fine negatives. I find that a lot of my trouble has been due to under-exposure even with the argument bright light here it requires an exposure of 1/25 sec. and it is necessary to use an 8 stop unless the

February 2

Up early getting things in shape to go down. Carriers also showed up early, some of them having done portage for us several times now. Being quite familiar with our particular requirements they were of considerable assistance in arranging the packs for transportation. I policed the camp and think if anything it was in better shape than when we entered it.

Kino was reached the latter part of the morning without encountering rain, although it commenced to rain a few minutes after our arrival. The government house at Kino is about $1/3$ smaller than that at Kupei, floor space being about ten by twelve. We were able to get all our gear in, however, and still have room for sleeping. Spent the afternoon in getting our gear straightened out. I had quite an attack of fever, even worse I believe than that I experienced at Kupei.

Kino does not make as pleasant a camp as the one we have left. The village consists of some eight houses enclosed by a stockade fence and our house, facing about East into the main courtyard, is exposed of course to the gaze of the whole village. From early morning until dark the place resounds with the cries of numerous pickaninys. I might remark that they cry fully as much as spoiled or fretful infants in our homeland. A deafening, squealing shorus from the piggens just outside the stockade is the morning reveille.

Business started immediately upon our arrival, the Kino-ites having done considerable collecting in expectation of our visit and we traded for many shells, insects and frogs. Also got some boys interested in using the butterfly nets and added a number

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Kino-ites having been considerable collecting in expectation of our

visit and we traded for many shells, insects and furs. Also got

some boys interested in using the butterfly nets and added a number

of good specimens to the collection. Two of our native hunters 145
were out in the afternoon and brought back some good birds, including a small owl and a small white-footed kingfisher, similar if not identical to the one obtained by Richards on Choiseul. The stomach of the owl contained insects as did that of the small kingfisher.

February 3

Too ill to do much of anything except "tend store" part of the time. Richards and Hamlin did their best with the birds and our native boys did the hunting. Birds do not seem to be very plentiful here. I had hoped to secure a good series of the "kokorbi" at this station, but am beginning to believe that it is a rare bird. We are not likely to make many additions to our list of species here, except the most common species of which we shall only take enough to establish a record. The lack of wrapping cotton is proving quite an annoying thing since it is necessary all the time to unwrap birds which have not properly dried in order to secure wrapping for new birds. Natives continue to bring in specimens of all kinds. We are obliged to refuse many things, but this is always rather a doubtful procedure, as in dealing with these natives a refusal to take specimens often results in their not bringing any at all. The land snails accumulate and, along with the many of the more common banded species, we are getting some much more rare.

Salt, "toro", does not seem to be much in demand as we get closer to salt water. At Kupei I was able to use it to most excellent advantage (50 lbs., which cost \$1), securing all sorts of specimens besides establishing very friendly relations with many villages. It went so well that I had 25 lbs. more brought up, but I do not seem to have much success in disposing of it here. However as other trade stock disappears the salt may prove valuable.

We are having quite an opportunity for observing village life. Activity commences soon after daybreak when the men and children start to emerge from the houses and walk about, often munching on a piece of taro. I observe no smoke in the mornings and believe that all the cooking is done late in the afternoon. The women appear later than the men and many of them depart to their gardens for the day. There is some going back and forth and a few of the women always seem to be in the village, generally sitting on the porches in front of their houses, either doing nothing or working on native gear. They all smoke pipes continually, even very small children of both sexes smoking a great deal. They appear to be fond of children and the women and older men often lead them about by the hand or let them ride "pig-a-back". They do not eat any meal during the day until late in the afternoon, between four and five o'clock, when smoke appears from all the houses and the evening meal of taro is cooked. There does not seem to be much variety in their diet. Under ordinary conditions, I have never seen them with anything except taro, kowkow, breadfruit, banana and coconut, although they eat between meals many of the small fruits peculiar to the bush. There is considerable visiting from one house to another on the part of the women and children.

Gossip appears to be as popular as in one of our own back alleys and the conversation is often very loud and animated. Soon after dark the village quiets down, the people retiring to the seclusion of their houses and even closing the entrances with doors of saccac. Very little disturbance is heard during the night except coughs, and severe coughs are common here, and the cries of fretful babies.

We are enjoying very good weather during the mornings

but it rains every afternoon and night. The difference in temper-147
ature is very noticeable here, it being much warmer than at Kupei.

February 4-6

Similar conditions every day. Our two Arawa boys are getting fed up with the trip and asked my permission to leave, but I was able to persuade them to stay on a little longer, when of course we all expect to go down to Arawa. The scarcity of birds here is much more remarkable after their abundance at Kupei. The bush here is much more open, villages are quite plentiful, and I imagine a great deal of clearing has been done for gardens, all of which may have considerable influence on the food supply of the birds.

Minas, blackbirds, and the common doves (long-tailed, red-cap and red-breasted) are plentiful as well as the gray and red-knob pigeons. The hornbill also appears to be common and is often heard in flight over the village. White-eyes and midgets are plentiful. Two wagtails were taken, an unusually long distance for them to venture from salt water.

February 6-9

Conditions about the same. The camp boys, Wagi and Tutipe, are doing the most of the collecting here and both of them, but particularly Tutipe, bring in good birds. Both Richards and Hamlin have been out but find birds extremely difficult to secure. The natives are able to travel a greater distance, and this being all familiar ground they know where the best hunting is. Have not been able to secure any more "kokorbis", although Tutipe says that on two occasions he has caught a glimpse of one. I had about decided that the pigmy parrot did not occur here, since none were seen higher up, although a constant search was made for them.

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On the last day of our stay at Kino Tutipe secured one of the green pigmy parrots, similar as far as I can see to those taken on other islands. The native name for it here is "koy-tin-tin." They refer to it as the "pigeon kaikai skin belong tree." I wonder whether it ever does eat tiny bits of the bark of certain trees. As I have remarked before I have never found anything in stomachs of these parrots except small seeds. Stomach of specimen secured here was empty. It probably is not common in this district and confined to certain districts where food conditions suit it.

At this station I have paid Tutipe one shilling and a stick of tobacco per day for hunting. He has hunted faithfully and gets a better knowledge of our wants and of the gun every day. Both he and Wagi take very good care of their specimens.

There are three rare birds at this station of which we have secured only one each, the "kokorbi", white-footed kingfisher "see-ri", and pigmy parrot. While regretting that we have not taken more, it is impossible for us to remain longer, as supplies are all giving out and I have only enough money and tobacco left to pay carriers for getting us out. I have approached Tutipe on the subject of coming down to Arawa after a few days, securing a gun and cartridges, and hunting the three birds mentioned above intensively in the vicinity of Kino on the basis of a shilling for each bird secured. He seems quite willing to do so, and we may see him again, although one is often disappointed by the natives when they are not under direct supervision.

The natives secured two more owls, making a total of three from this place. Color of iris straw, bill greenish, horn and feet zinc yellow. This species they tell me is not uncommon nearer salt water. Stomachs contained large insects.

The little wader to which I have referred as river sand piper, occurs all the way up the mountain, found always of course along the rivers and streams. A brown heron was seen twice along the river but none were secured.

The yellow-headed was taken, one being secured from a tree on the edge of the village, a very tall tree which bears some sort of apple fruit and is frequently visited by flocks of the blue-headed paroquet. Wagi, from one trip on which he was gone a long time, brought in two swallows. As I have seen none in this vicinity I rather think he had been paying a call in the vicinity of Arawa, a suspicion which I mentioned to him but found him very uncommunicative on the matter.

A white-headed hawk was also added here, bringing up the list of species secured to 57, number of specimens taken 749, a good showing considering the fact that we have not as yet added on several common species and our large series are mostly of rare or uncommon birds.

The miscellaneous collection received substantial additions. I obtained one large male rat which I put in pickle, not having an opportunity of making a skin of it. It is considerably larger than the Pacific rat, has coarse fur, and is probably an introduced rat, although Kino is quite a distance from salt water. I talked several times with natives who knew of the large bush rat but did not succeed in securing any. From what I can gather, it is not uncommon but difficult to capture. Frogs of several different species were secured here including several large river frogs. I also secured two or three eels which appear to be a different species from the one secured at Kupei. Two or three prawns and two rather large fresh water crabs were the only

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different species from the one secured at Kapeh. Two or three
puffers and two rather large fresh water crabs were the only

crustacea taken. I tried to induce some of the younger natives to use the two butterfly nets and with some success, although they do not take too keen an interest in this sort of work. However, I was able to get enough butterflies and moths to fill a sugar tin, and among them are some very fine specimens. Some 500 land snails were added. These appear to be much the same as those secured at Kupei, although a few of the smaller species may be different.

On the last day, when entirely out of calico, tobacco and shillings, the salt proved good trade and I got many specimens for it as well as some banana and vegetables. We still had a supply of matches, which also made good trade when other things had "finish."

During our stay here Hamlin and I got some good pictures of the village and surrounding country. It is not too difficult to get the men to pose but a hard matter to get the women or small children. I think it would be very easy of one took along a printing outfit and made some prints on the spot. In fact I am convinced that prints would have a wonderful value in trade, so much so that it would be well worth while to take in an outfit on any subsequent expedition into a similar field.

The village contains a small house dedicated to "taburan", a sort of devil-devil whom the people feel it necessary to propitiate occasionally lest some harm befall them or their possessions, their children, pigs or crops. The tultul, on one occasion when stimulated by the hope of a gift of a little tobacco, explained that food was placed in this house occasionally, as on the occurrence of sing-sings, and that it always disappeared; that no one had seen Taburan, but that he could often be heard whistling; that to try to see him meant certain death. This tultul was certainly most disappointing

after knowing the kukurai at Kupei who was a very agreeable and dignified old man. The kukurai at Kino I did not see until we were ready to leave, when he acted as a carrier and also wanted a bush knife on the strength of his being the kukurai. He did not get it. The tultul, however, lived in the next house to ours, was constantly begging for something, and was most disagreeable and never helpful. His wife was just the opposite, unusually pleasant and good-mannered for a "bush Mary."

A few more remarks on village life. The natives became accustomed to our presence after the first few days and village affairs went on without any restraint. They appear to enjoy life very much and I could see very little difference between their lives and the lives of many of our own people. I suppose that in a way the occasional contact with the white man and his possessions in trips made to Kieta furnishes a partial substitute for the older excitement of tribal conflict. Their ordinary life is made up of planting and care of gardens, the care of pigs and fowls, and the erection once in a while of a new house. Taro is the principal vegetable. "Two moons" after its planting they commence to pick off the smaller ("liklik") bulbs, leaving the main bulb undisturbed. Each succeeding month these accessory bulbs are larger and at six months the main taro bulb is ready for consumption. Then commences the time of feasts or sing-sings, when all villages put on taro, yam and pig banquets and invite their neighbors.

Some of the old men are very interesting characters and I often wished that I could speak their language and hear from them their version of the coming to Bougainville of the white man. The older men wear no clothes at all. In fact in many of the villages no clothes at all are worn except when some white man puts

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in an appearance. It is quite customary though when white men are around to put on (the old men are an exception to this formality) either a calico lava lava or at least some sort of girdle or belt from which is suspended a bit of cloth. The old men with whom we came in contact were in excellent condition and many times acted as carriers, taking quite heavy loads without too much effort. They were also of good disposition, never quarrelling about recompense, and showing great appreciation for any trifling gift. Some of the men have beards. Many of them have a considerable growth of hair on their bodies, while effects in cicatricial design were common. In Kino some wore the piece of bone through the pierced nasal septum, and an opening in the lobe of the ear was a common repository for the ever present pipe.

It is amazing the way the very small children climb up and down the rather difficult steps to the houses and toddle about alone on the high, uneven porches, where a slight mistep would cause a fall that might produce serious injury. I suppose centuries of such environment has developed a certain nth sense of self protection similar to that possessed by the young monkey.

Two musical instruments are in common use with all these tribes, the "Buka pipes", consisting of six pieces of small bamboo of varying length fastened together in a double row, and the "kalula", made from a section of very large bamboo some three to four feet in length. By blowing across the Buka pipes a rather mournful, dirge-like tune is produced, consisting of only four notes, but seeming always to follow a set plan of music when properly played. The kalula requires considerable effort to blow and produces a loud bass note, used to accentuate the step in the dance at regular sing-sings. The outside of the kalula is generally highly ornamented

in designs done in red, white and black pigments.

Carving is done by certain of the natives and I have seen carved statuettes and canes which showed marked ability. Many of the baskets made in certain villages here are splendid examples of this sort of work. Practically all the ornamental raffia or "puspus" work is done by the natives at the southern end of the island, in the so-called Buin district.

February 10

Everything was supposedly prepared for the trip down to Arawa Plantation. The day dawned beautifully and in this region it is well to accomplish travelling in the morning, as the heavy rains often commence early in the afternoon. This condition is said to prevail all through this area even up into New Guinea. Our packing went on merrily and some carriers showed up but not enough to take care of all our gear. The garamut was sounded a couple of times to call in more boys but by the time we had finished packing, the carriers lacked several poles and it looked as though we were not going to be able to depart. It took considerable milling about amongst the loads, rearrangement of loads, and devilling of some of the boys who had picked out extra light loads to get even a showing of carriers for the heavier loads, and there were several heavy packages left. The tultul here at Kino has always got on our nerves and he added to it by remaining quite inactive this morning. Finally I had the happy thought to impress the Marys into service and told our cook boy to tell them that if they would carry some of the loads they would "catch mark all same boy." At first there was some outcry of "tabu", but the attraction was too great and some seven women promptly showed up and made up the deficiency in carriers.

We were quite a caravan going down to Arawa. Travelling conditions were very good and the grade down is not too bad. No rain fell until after everything was safely unloaded at Arawa. Part of the gear we sent near shore to leave it in Mr. Esson's store. The rest we took to his house. I found that he had taken very good care of all birds and other specimens sent down and everything was in as good shape as could be expected. It rained quite heavily in the afternoon but rain cannot bother us much now.

February 12
Paying off carriers cleaned out our cash, including a little which I had left in my grip at Mr. Esson's, but it has lasted well considering how long we have been in the bush. I made arrangements with our two Arawa boys to help in the work next week on a different salary basis, after which we were free to enjoy a rest period from the kanakas and to appreciate the hospitality of Mr. Esson. I unpacked gear in the afternoon and attended to the rearrangement of specimens.

February 11
Still sorting out and taking care of specimens and getting settled in our new quarters. In the afternoon Mr. Scriven, wireless operator at Kieta, Mr. Thomas Ebery, the store keeper, came over in Mr. Ebery's cutter for a week-end's rest. With them was a Mr. Sabine from New Britain, landing here on a recruiting trip over a similar route to that taken by Kemp and Fordyce whom we had already met in the bush. Mr. Sabine has had a long experience through this section of country and was able to impart very valuable information. Spent a very pleasant afternoon and evening.

February 12
Sunday. Rather a rainy and disagreeable day. In the afternoon Hamlin and I embarked on the 'Clara' with Ebery and

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Scriven to make the trip to Kieta, obtain some more trade for dealing with the Arawa natives, and also send a couple of cables, one in regard to mail and the other to the Museum for funds, as my personal funds on which I have been drawing are about exhausted. We had the offer of two or three houses in Keita, but as most of our business would be connected with Mr. Ebery we elected to stay with him and he is a most hospitable host.

February 13

Got cables off in the morning and paid a call on the new D.O., Mr. Norman Tutton, finding him very much interested in our little expedition and its results. Have now made the acquaintance of about all the residents of Kieta, all of whom are very cordial. Received a small amount of mail brought in by the 'Marqueen', Don Cameron master, from Raboul, which had arrived there by the 'Montoro'. Other mail which arrived several days prior in care of Burns Philp failed to show up. Also received a small box of supplies from Beck but no cartridges, of which our supply is about exhausted. A letter from him announces that finding no opportunity to get on the slip in Raboul for a long period he is proceeding to Samarai. We have no knowledge of when he will be able to pick us up at Kieta. This leaves us in an unfortunate situation as we were given only five pounds in cash on landing, which was used up in paying carriers at the very start of the trip. Ebery has been very kind in extending us credit at his store and I have spent some forty pounds of my own money. Hamlin also contributed the few pounds in cash which he had along, but we are now at the end of our resources until we hear from the Museum, and our credit much overdrawn at Ebery's. Also we are about at the end of bird collecting, since

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the supply of cartridges is nearly gone.

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On the France the birds secured have averaged about 33 1/3% of ammunition used. When all factors entering into the matter are considered, the long chances taken on some shots, variance in ammunition, difficulty in retrieving birds, and inexperience of some hunters, this percentage is not bad and we have more than maintained it on this trip. The 20 ga. #7 were not very well adapted to our use, although we used them as much as possible, often to the detriment of specimens. There should have been more large shells and more aux. In planning the trip I suggested 1500 20 ga., 1000 #10 and 500 #7, and 1500 aux. We received 500 #10, 500 #7, and 1250 aux. Of course it is a self evident fact that with an established base, all excess in the way of supplies can be easily returned to the ship if not used and yet supplies are available if needed. We are in the position now of being short of some material things and no chance to secure additional supplies from outside sources except after long delay. The package received from Beck today contains two large stone jug containers with small orifices, one empty, the other containing a small amount of formalin. Except in case of dire necessity a container with a small orifice does not appeal to me, as no inspection can be made of contents and neither is it possible to introduce a specimen of any size. Where benzine tins are plentiful they answer very well for containers and with open tins I have removed part of the liquid contents during portage, replacing it at the end of the journey.

February 14

Held up at Kieta all day by violent rains.

February 15

Got off in Mr. Ebery's 'Clara' in the late morning and made uneventful trip to Arawa Plantation where we landed with further supplies about noon. The supplies taken were of such a bulky nature that transportation cost overland would have about equalled that by water, to say nothing of the difficulty of securing carriers in Kieta, where very few are available.

February 16-18

Functioning again at Arawa but not as well as I could wish. I am bothered considerably with a low type of malaria which saps what energy I might otherwise have. I also expected better results from the salt water natives. Mr. Esson has a justified war on with the natives of the nearest village, Arawa, and indeed they are a shiftless lot.

Bird life does not seem to be very plentiful, although we have secured a paroquet new to the collection, somewhat larger than the green paroquet and the male having some very handsome colors. It is said to be fairly plentiful in the coconuts and nearby bush, and I hope we can secure a good series. The only really common birds here are the red parrots, white cockatoos, blue-headed paroquets, minas, starlings, yellow honeysuckers and wagtails. The hornbill is probably quite common in the nearby bush. A few hawks have been seen and one secured. Two herons and the white-headed kingfisher have also been taken, although neither herons or kingfishers seem as common as at many other places. I hoped we could obtain some of the common ground doves here for comparison. One shot by a native at Kino was in moulting plumage and so badly damaged that it could not be saved. It appeared to be exactly the same

as the common ground dove taken elsewhere. Birds do not keep well at all here on account of the great heat and humidity. We are using Mr. Esson's store house for a work shop and while it is the best place, we have ever had from the standpoint of convenience, it is about the same temperature as the steam room in a Turkish bath.

I have had the opportunity since reaching Bougainville of discussing the possible collecting of New Britain, New Ireland and adjacent islands, with many men of long residence and experience in this region and New Guinea. Some of them have spent considerable time in the bush, recruiting, trading or in the gold fields. Others were very familiar with island shipping and location of plantations as possible sites for base camps. From the experience on Bougainville and talks with men familiar with the work, I feel that I am fairly well posted on the matter of convenience and expense.

After considering carefully all elements that enter into the matter, I am convinced that to maintain a ship of the size of the France, should it be desired to work this group of islands, would be a needless expense. Much of the work would not require a ship at all except for infrequent moves from one base to another, for which there is plenty of available and rather cheap transport. For working adjacent smaller islands craft can be chartered suitable for the purpose with captains and crews familiar with the waters for reasonable amounts. The 'Marqueen', a local schooner of over 30 tons with power is about to be chartered by a local merchant for a run of eight days from Kieta to Raboul and back, for \$30 per day I believe. This includes everything except personal rations, and I understand the captain will also act in the capacity of caterer for any specified number of passengers for five or six shillings a day. Smaller craft suitable for most of the work can be hired at propor-

as the common ground have taken elsewhere. Birds do not keep well at all here on account of the great heat and humidity. We are using Mr. Brown's store house for a work shop and while it is the best place we have ever had from the standpoint of convenience it is about the same temperature as the steam room in a Turkish bath. I have had the opportunity since reaching Hounslowville of discussing the possible collection of New Britain, New Ireland and adjacent islands, with many men of long residence and experience in this region and New Guinea. Some of them have spent considerable time in the bush, recruiting, trading or in the gold fields. Others were very familiar with island shipping and location of plantations or possible sites for base camps. From the experience on Bougainville and talk with men familiar with the work, I feel that I am fairly well posted on the matter of convenience and expense. After considering carefully all elements that enter into the matter, I am convinced that to maintain a ship of the size of the French, should it be desired to work this group of islands, would be a needless expense. Much of the work would not require a ship at all except for infrequent moves from one base to another, for which there is plenty of available and rather cheap transport. For working adjacent smaller islands craft can be chartered suitable for the purpose with captains and crews familiar with the waters for reasonable amounts. The 'Mardian', a local schooner of over 30 tons with power is about to be chartered by a local merchant for a run of eight days from Kaita to Rabaul and back, for \$30 per day I believe. This includes everything except personnel, rations, and I understand the captain will also act in the capacity of caterer for any specified number of passengers for five or six shillings a day. Smaller craft suitable for most of the work can be hired at groups

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tionate rates. Passage between inter-island points on various island craft is not expensive and there are many ships moving about. On large islands, such as New Britain and New Island, as they are of the same type as Bougainville. On any of the smaller islands, large enough to warrant one or two weeks' stay, arrangements could undoubtedly be made to be dropped there with gear and picked up again when desired. On the other hand when the overhead expense is considered of a vessel the size of the France, viz. insurance, upkeep of hull and rigging, engine, wages of captain and crew, rations of captain and crew, etc., it seems an unwarranted outlay unless a ship is needed on account of a constantly shifting field of operations. Facilities for using some principal ports, such as Raboul, as a base of supplies to be drawn upon as needed are good here on account of the frequency of inter-island craft. I insert these few remarks on this subject for what they may be worth should the Museum at any time consider the proposition of conducting field work in this region. I may add that many of the plantation managers and some of the people of seaports, who have available room, will gladly put up field workers. They are very open in their hospitality, but I believe it is customary here in making any long stay to contribute at least two pounds a week toward the table, board here being high on account of the large proportion of tinned foods used. Many of the plantation managers, while so very ready with their hospitality, are on small salaries and it imposes a heavy burden to camp on them for any length of time without making some return.

February 18-25

Conditions about the same. Practically no ammunition and any desirable birds hard to get. Secured some more denatured

distance rates. Passage between inter-island points on various islands is not expensive and there are many ships moving about. On large islands, such as New Britain and New Ireland, as they are of the same type as Bougainville. On any of the smaller islands, large enough to warrant one or two weeks' stay, arrangements could undoubtedly be made to be dropped there with ease and picked up again when desired. On the other hand when the overhead expense is considered of a vessel the size of the France, viz. insurance, upkeep of hull and rigging, engine, wages of captain and crew, rations of captain and crew, etc., it seems an unwarranted outlay unless a ship is needed on account of a constantly shifting field of operations. Facilities for using some principal ports, such as Rabaul, as a base of supplies to be drawn upon as needed are good here on account of the frequency of inter-island craft. I insert these few remarks on this subject for what they may be worth should the Museum at any time consider the proposition of conducting field work in this region. I may add that many of the plantation managers and some of the people of asport, who have available room, will gladly put up field workers. They are very open in their hospitality, but I believe it is customary here to make any long stay to contribute at least two pounds a week toward the table, board here being high on account of the large proportion of tinned foods used. Many of the plantation managers, while so very ready with their hospitality, are on small salaries and it imposes a heavy burden to camp on them for any length of time without making some return.

February 18-25

Conditions about the same. Practically no ammunition and any desirable birds hard to get. Secured some more denatured

alcohol from Ebery and Walsh and added it to the tanks, but some of this material was badly damaged due to lack of preservatives and rough handling in transportation down the mountain. Adding a few birds to the collection each day, but nothing of particular interest. Heavy rain almost every day. No news of the France. On the 25th Hamlin and I went over to Kieta to be ready to start Sunday morning on the 'Marqueen', I to go to Raboul and Hamlin to try some field work in the vicinity of Numa Numa Plantation, further to the north on Bougainville.

February 26

Left in the early morning on the 'Marqueen' for various Bougainville ports and Raboul as ultimate destination. The little schooner was crowded, as in addition to the schooner master, Don Cameron, there were aft Hamlin, Ebery, Dr. Bolton, Sabine and myself. The craft carries a crew of some nine Polynesians and there were over fifty natives forward, mostly recruited labor.

Approached Numa Numa as it was getting dark and just as Skipper Cameron was remarking that he had "never kissed a reef", we landed on one very nicely, fortunately not at high water. Spent an uncomfortable night there as it was hard to sleep with the craft at an angle of about 45 degrees.

February 27

At high water in the morning we got the 'Marqueen' off the reef and paid our call at Numa Numa, leaving Hamlin and his outfit in the hospitable care of the manager, Mr. Thompson. Then on our way again making several calls on the island and in Buka Passage. Left Buka Passage late in the evening and were nearly carried on the rocks by the strong current when the engine went

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February 26

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dead for a couple of minutes at a critical moment. On the 'Marqueen' the engine is used constantly and the sails are simply added power when the wind is favorable.

February 28

At sea. Something like a real touch of the sea on a craft like this with only one small dinghy for a life boat, few life preservers and no one with any technical knowledge of navigation. These "schooner masters" depend entirely on land bearings and the compass and yet negotiate fairly long voyages, often out of sight of land for considerable periods. Sighted land in late morning and came to anchor in Raboul harbor in early evening. Went ashore later in the evening and happening to meet one of Burns Philps' representatives was quite astonished to find that Mr. and Mrs. Beck were also in town. With the D.O., Mr. Tatton, and several of the

February 29

Met the Becks early in the morning and had considerable discussion relative to the Expedition and the France. The France is in drydock in Samarai and is supposed to be in Kieta in a few days. Received my first mail in sometime, this lot having made the trip over to Samarai and back. Raboul is a large town, very pretty and very hot.

March 1

About the same program. Further conference with Mr. and Mrs. Beck, sightseeing about the town, some purchases in the stores, and in the late evening we put to sea again to return to Kieta via ports on Bougainville.

March 19

March 2-4

At sea or visiting island ports, arriving at Kieta

161
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when the wind is favorable.

February 28

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later in the evening and happened to meet one of Emma's friends.
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were also in town.

February 29

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discussion relative to the Expedition and the French. The French
is in touch with Samarat and is supposed to be in Kiet in a few
days. Received my first mail in sometime, this lot having made
the trip over to Samarai and back. Rabaul is a large town, very
dirty and very hot.

March 1

About the same program. Further conference with
Mr. and Mrs. Beck, discussing about the town, some purchases in
the stores, and in the late evening we put to sea again to return
to Kiet via route on Bougainville.

March 2-4

At sea or visiting island ports, arriving at Kiet

the 4th. Picked up Hamlin at Numa Numa on the way down. He had been unable to do anything with regard to climbing Balbi but thought something might be done from the other side. He had secured some large rats and reported seeing some birds different from those secured in Kieta district.

March 5-17

I spent the time at Mr. Ebery's house awaiting the arrival of the France or any further cables while Hamlin went over to Mr. Esson's plantation at Arawa. The France showed up on the 9th, having had an uneventful voyage from Samarai, coming under sail practically all the way. It was necessary to outfit with some additional stores and some cables were interchanged both with Beck and the Museum, of which I only make note.

On the 17th the D.O., Mr. Tutton, and several of the residents of Kieta were aboard to bid us farewell and wish us good luck and we spent a very pleasant evening. I must confess that I felt rather sad to think it was probably the last similar evening that I should enjoy aboard the France. Hamlin unfortunately had a touch of malaria.

March 18

Underway for Raboul, touching at Numa Numa Plantation and at Buka passage. No magneto is aboard the ship and it is a chance whether there is enough juice in storage batteries to keep us going. Hoped to get additional batteries at Numa Numa, but none on hand. Anchored at Numa Numa for the night.

March 19

Underway early in the morning and made Buka passage

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The ship. Picked up Hamilton at Kuma Numa on the way down. He had
been unable to do anything with regard to climbing Baldi but thought
something might be done from the other side. He had secured some
large rats and reported seeing some birds different from those se-
cured in Kista district.

March 3-17

I spent the time at Mr. Eberly's house awaiting the
arrival of the France or any further cables while Hamilton went over
to Mr. Eason's plantation at Anawa. The France showed up on the
3rd having had an uneventful voyage from Samsal, coming under sail
practically all the way. It was necessary to outfit with some
additional stores and some cables were interchanged both with Beck
and the Museum of which I only make note.

On the 17th the D.O., Mr. Totton, and several of the
residents of Kista were aboard to bid us farewell and wish us good
luck and we spent a very pleasant evening. I must confess that I
felt rather sad to think it was probably the last similar evening
that I should enjoy aboard the France. Hamilton unfortunately had
a touch of malaria.

March 18

Underway for Sabon, touching at Kuma Numa plantation
and at Bura passage. No message is aboard the ship and it is a
chance whether there is enough trace in stores batteries to keep
us going. Hoped to get additional batteries at Kuma Numa, but none
was had. Anchored at Kuma Numa for the night.

March 19

Underway early in the morning and made Bura passage

in the afternoon. The D.O. came aboard as did the local medical assistant and his wife. Remained at this anchorage over night.

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March 20

Underway early in the morning and negotiated the rest of the passage quite easily. At sea all day and night using sail when ever possible to conserve engine, but very little wind.

March 21-30

Entered port of Raboul on the 21st and were soon through with the inspection by the doctor and customs. All of us went ashore and during the ensuing days there were numerous meetings of the Expedition staff. My period of active field work being at an end I finished the packing of my gear and never before did I realize how much of it there was. Even after giving some of it away to the crew it was difficult to get it "stowed away" in the trunks. Richards also decided at the last minute to leave at this point.

As Hamlin's notes will carry on from here, and having nothing of any value to add to mine, I shall end my field journal at this point.

As regards the return journey I left Raboul on April 11th, arriving in Sydney on the 19th. I remained in Sydney longer than necessary, expecting to meet Dr. Murphy. Later, on meeting Mr. and Mrs. Beck, and finding that Dr. Murphy had cancelled his trip out, I took the first available ship sailing West, having a desire to see what it was like in the other oceans. The 'Caprera' of the N.G.I. was to leave Sydney on the 12th and I booked passage on it. At the last minute the schedule was changed and the 'Caprera' included Brisbane in her itinerary. I disliked the idea of so many days at sea in the wrong direction, so remained in

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in the afternoon. The D.O. came aboard as did the local medical
assistant and his wife. Remained at this anchorage over night.

March 30

Underway early in the morning and negotiated the rest of
the passage quite easily. At sea all day and night using sail when
even possible to conserve engine, but very little wind.

March 31-30

Entered port of Rabaul on the 31st and were soon through
with the inspection by the doctor and customs. All of us went ashore
and during the ensuing days there were numerous meetings of the
Expedition staff. My period of active field work being at an end
I finished the packing of my gear and never before did I realize how
much of it there was. Even after giving some of it away to the
crew it was difficult to get it "stowed away" in the trunks.
Richards also decided at the last minute to leave at this point.
As Hamlin's notes will carry on from here, and having
nothing of any value to add to mine, I shall end my field journal
at this point.
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1st, arriving in Sydney on the 18th. I remained in Sydney longer
than necessary, expecting to meet Dr. Murphy. Later, on meeting
Mr. and Mrs. Beck, and finding that Dr. Murphy had cancelled his
trip out, I took the first available ship sailing West, having a
desire to see what it was like in the other oceans. The 'Capetia'
of the N.S.W. was to leave Sydney on the 13th and I booked passage
on it. At the last minute the schedule was changed and the
'Capetia' included Brisbane in her itinerary. I disliked the idea
of so many days at sea in the wrong direction, so remained in

Sydney until the 'Caprera' returned to Melbourne, where I joined her. Left Melbourne on the 25th and arrived at Freemantle on June 2nd. Encountered heavy seas between Melbourne and Freemantle which delayed our progress. Albatross and smaller seabirds were very abundant off the southern Australian coast. Left Freemantle on June 6th, reaching Suez July 1st. Two hundred miles from the Australian coast birds were scarce and extremely few were noted in the long voyage across the Indian Ocean. Birds became common again as we neared the African coast and were very plentiful in the Red Sea with its many small islands. Arrived at Port Said same day and left July 3rd, arriving at Alexandria the evening of the same day. Stopped five days in Alexandria, giving me a chance to visit Cairo and the pyramids. Weather very hot through the Red Sea and in Egypt. I made the trip from Alexandria to Cairo by automobile and noted many very interesting land birds. Left Alexandria on July 8th, crossing the Mediterranean and arriving at Catania on the 11th. Left Catania on the 13th, arriving at Genoa on the 15th. I had paid passage for the entire trip to New York via the N.G.I., and the first available ship was the 'Duilio', which left Genoa July 24th, arriving at New York late in the afternoon of August 3rd.

I had one attack of malaria on the 'Montoro' between Raboul and Sydney, two while in Sydney, two on the 'Caprera' between Melbourne and Genoa, none on the 'Duilio', but on the train between Providence and Warren, and just as I was nearing home, I was taken with the most violent chill I have ever had. It was ever thus, but as I so well learned in Solomon Island native philosophy, "no matter".

Here I complete this journal which I hope may prove to be of some value to those who made it possible for me to have these most interesting experiences.

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Melbourne and Genoa, none on the 'Dallio'. But on the trip between

Providence and Warren, and just as I was starting home, I was taken

with the most violent chill I have ever had. It was even then, but

as I am well known in Solomon Island native philosophy, "no matter"

Here I complete this journal which I hope may prove

to be of some value to those who made it possible for me to have

these most interesting experiences.

New Britain.

About 120 miles of auto roads reaching elevation about 2500 feet.

Nakani, on West Coast, about the only region that could not be penetrated on account of hostile natives. Perhaps could be entered but very dangerous. Probably no trouble on this island in getting carriers. Good trails on northern end of the island.

New Ireland.

Has more auto roads than New Britain. Can get up to elevation of 3500 feet, highest point. The whole of New Ireland is safe. Trails are good all over the island.

Many off-lying islands all feasible to visit, many of these uninhabited.

New Guinea.

Sabine as entered from Aitape 5600 feet, Madang 1500 ? feet, Salamoa 7000 feet. Trails fair in Aitape and Madang, medium in Salamoa (Moresby), some good. Carriers good but expensive in Salamoa district. In other districts they are cheap, mainly salt except on beaches where money is required. Birds of paradise occur in the three districts, different varieties in each, encountered all the way from sea-level to highest levels. The "blue-bird", the least common variety, occurs at 6000 feet. Birds of paradise leave their localities in April and return in November with birds in young plumage and without gala plumes. No one ever able to get eggs of birds and breeding place uncertain, but presumed to be in Victor Emmanuel ranges which rise 14000 to 17000 feet.

Tree kangaroos encountered by Sabine in Aitap district at 3000 to 4000 feet. Has seen only two and knows of only one other being seen. Specimen stood about two feet high, tail two to two and one half feet long. One of those seen jumped about 40 feet from tree to ground. Color bluish gray and appeared to be fairly long fur.

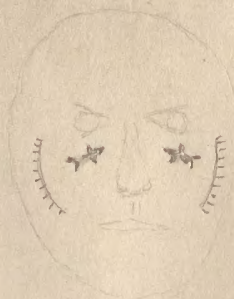
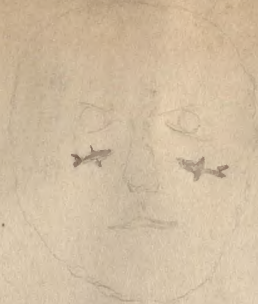
Rain to be expected in the ranges generally every day, especially in N.W. season, generally in the afternoon. In the S.E. season very little rain except at night. S.E. season extends from last of April to November or December.

Malaria not bad except on coast. Mosquitoes but no Anopheles higher up on ranges. No other diseases apt to be contracted by whites.

Three kangaroos encountered by Sabine in Aitap
 district at 4000 to 4500 feet. Has seen only two and knows of only
 one other being seen. Specimen stood about two feet high. Tail
 two to two and one half feet long. One of those seen jumped about
 40 feet from tree to ground. Color bluish gray and appeared to
 be fairly long fur.

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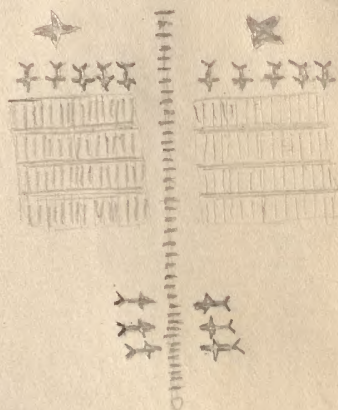
Anuda or Cherry Is. (Solomon group)

Feb. 8-1927

Sketch No. I.

F. P. Drowne.

Pattern of breast tattooing.



Anuda or Cherry Is. (Solomon group)

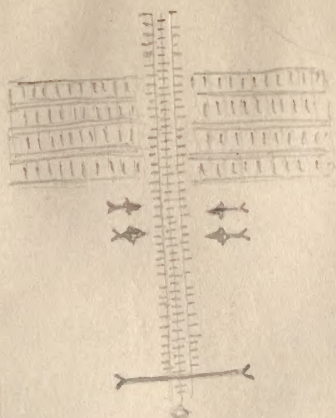
Feb. 8-1927

Sketch No. 2.

F. P. Drowne.

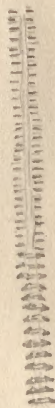
Breast design same as in
Sketch 2.

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Anuda of Cherry Is. (Solomon group)
Feb. 8 - 1927

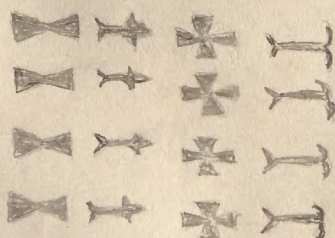
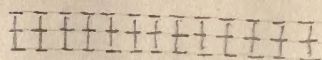
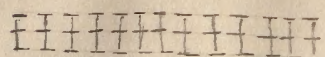
Sketch No. 3.
F. P. Drowne.



Anuda of Cherry Is. (Solomon group)
Feb. 8 - 1927

Sketch No. 4.
F. P. Drowne.

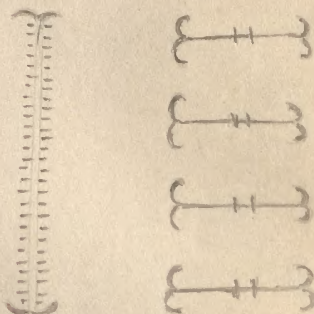
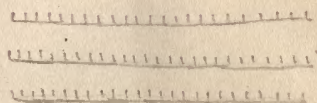
Outer Surface upper arm,
From 2" above insertion of
Halter to elbow.




Anoda or Cherry Is. (Solomon group)
Feb. 8-1927.

Sketch No. 5,
F. P. Drown.

Outer Surface Upper Arm
from 2" above insertion at
Halter to elbow.
Left Arm.



Right Arm

Same, except in addition
were 5 small figures in row
to left shaped like 

Anoda or Cherry Is. (Solomon group)
Feb. 8-1927
Sketch No. 6,
F. P. Drown.



"Yellow-bibbed Dove" ♂

Baue Is. - Solomons

March 21 - 1927

F. P. Droun.

Fresh killed Specimen.



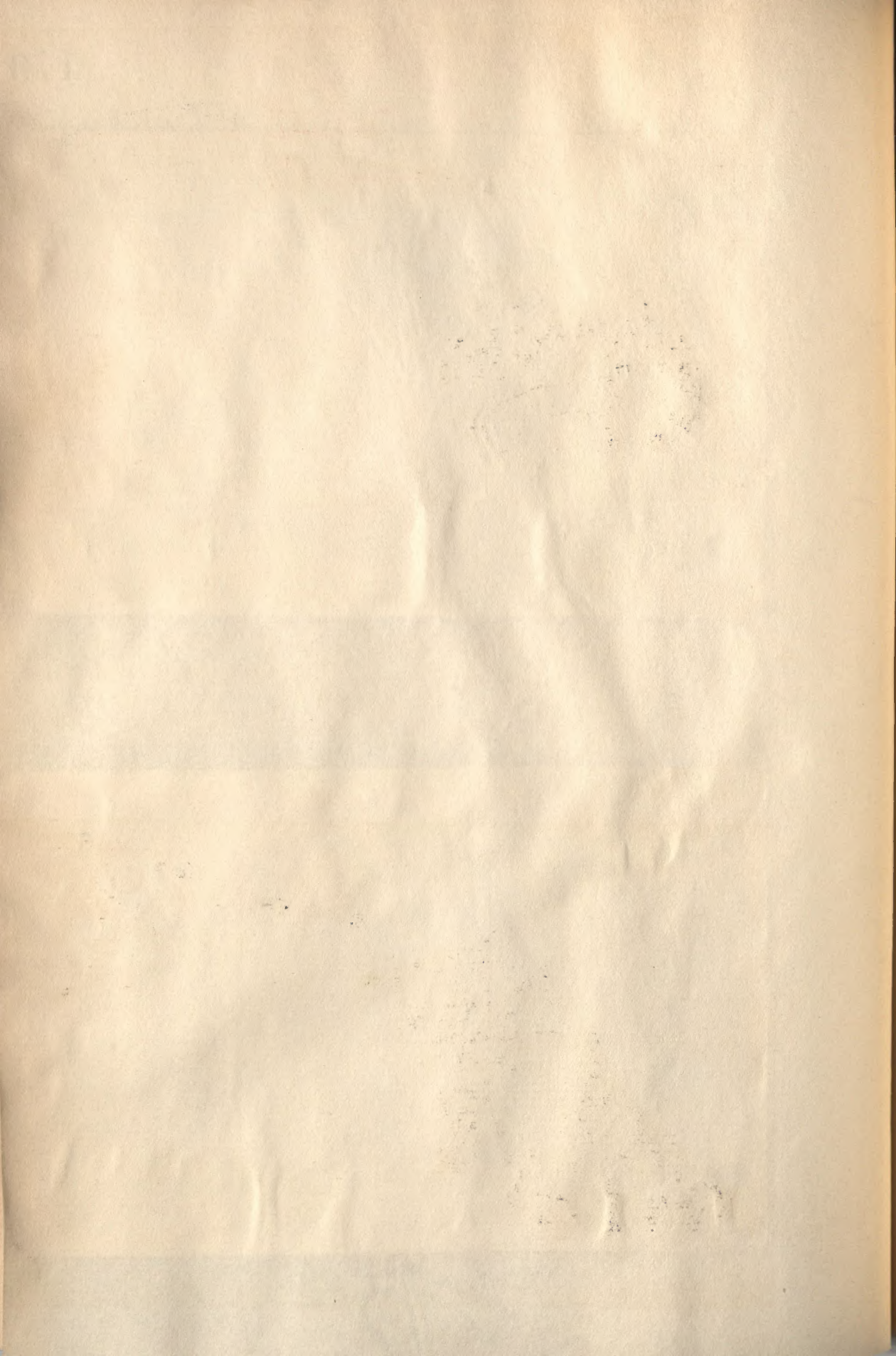
"White-capped Dove"

Baue Is. - Solomons

March 23 - 1927

F. P. Droun.

Fresh killed Specimen.



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Red-tailed Tropic
20 miles E. Mitre Is.
Feb. 2 - 1927
Spec. No. 24596
F. P. Drown



Cormorant
Tukapea Is.
Feb. 11 - 1927
F. P. Drown
Spec. No. 24697



Red footed Booby

♂ Mitre Is.

Feb. 3-1927

Spec. No. 24603

F. P. Dronke.



Red footed Booby ♂

Mitre Is.

Feb. 2-1927

Spec. No. 24603

F. P. D.



"Long-tailed Dove" - (Some reduced)
 Baur's Is. - Solomon Is.
 March 26, 1927.
 T. P. Drown.
 From live specimen in cage.



"Knob Pigeon"
 Baur's Is. - Solomon Is.
 March 22, 1927.
 T. P. Drown.
 Fresh killed specimen.



"Gray Pigeon"
 Bauva Is. Solomons.
 March 21-1927.
 F. P. Drown, Jr.
 Fresh killed specimen.



"Long-tailed Pigeon"
 Bauva Is. - Solomons.
 March 22-1927.
 F. P. Drown, Jr.
 Fresh killed specimen.



"Red-bellied Pigeon"
 Bauv Is.
 Solomon Is.
 April 6 - 1927.
 F.P. Droune.



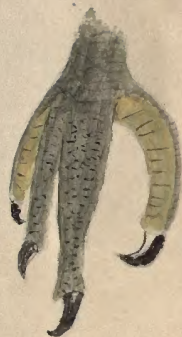
"Paroquet"
 Bauv Is. - Solomon Is.
 March 22 - 1927
 F.P. Droune

Fresh killed specimen.



"Yellow-billed Parrot"
 Bauro Is. - Solomons
 March 23 - 1927
 F. P. Drew

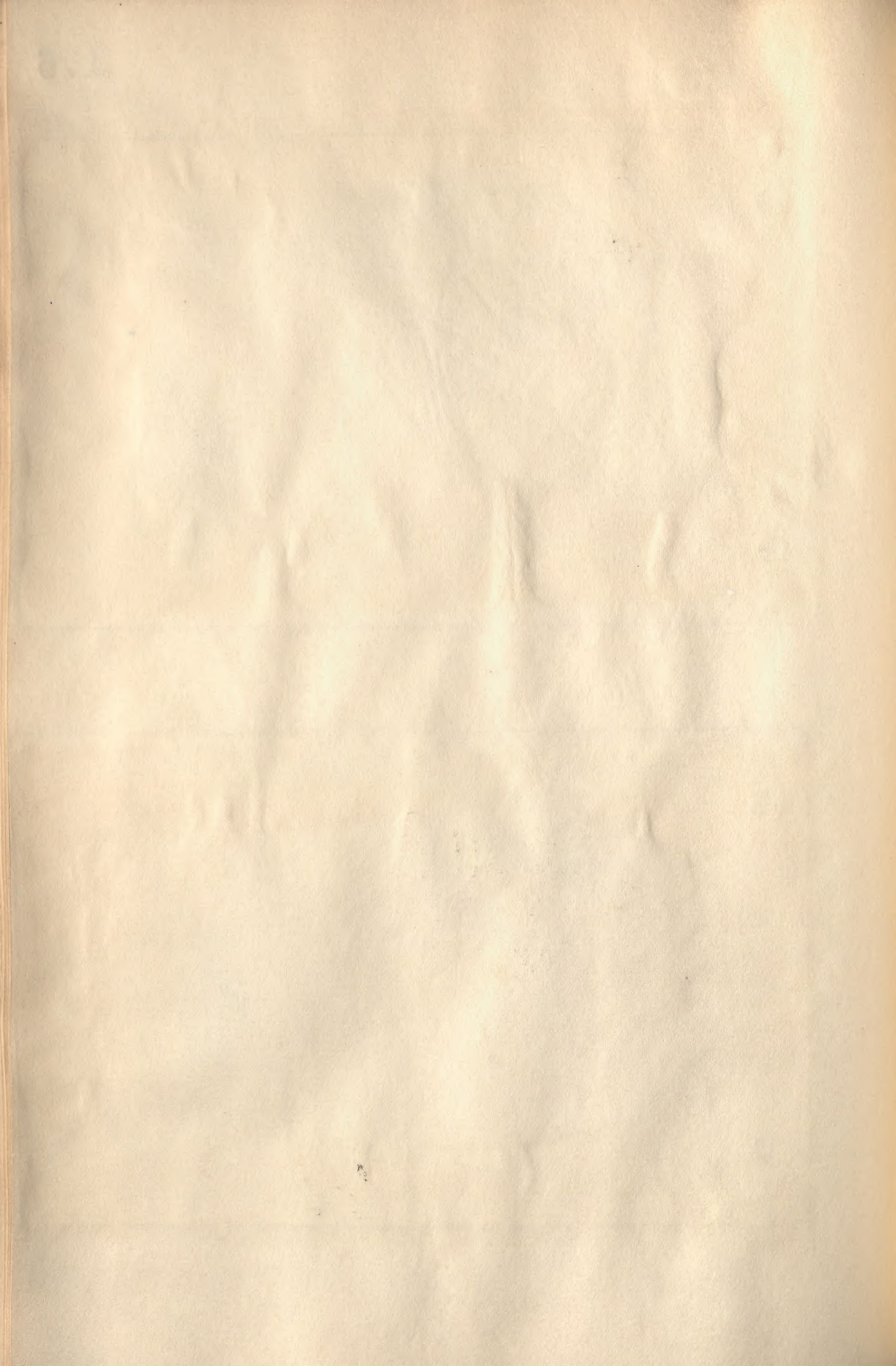
Fresh killed specimen



"Black-capped Parrot"
 Bauro Is. - Solomons
 March 20 - 1927
 F. P. Drew

Fresh killed specimen







"Yellow-headed Parrot"

Bauvo Is. - Solomon

March 20 - 1917

F. P. Drown

Fresh killed specimen



"Broad-bill"

Bauvo Is.

Solomon

April 6 - 1917

F. P. Drown

Fresh killed specimen

Spec. No. 25651



"Blue-belly Parrot"
 Bauvo Is.
 Solomons.
 April 6-1927
 F. P. Drown.
 From fresh skin.
 Spec. No. 25652



"Red Parrot"
 Ugi Is.
 Solomons
 4-13-1927
 From fresh killed specimen.
 F. P. Drown.
 Spec. No. 25625





"Minz"
 Mareau Sound
 Guadalcanal Is.
 Solomons
 4-17-1927
 F. P. Drowne
 Freshly killed specimen



White-headed Pigeon
 Ramos Is. Solomons
 Sept 4-1927
 Frederick P. Drowne, M.D.





White-tailed
(Nikobar) Pigeon ♂ adult.
Ramos Is.
Solomons.
Sept. 4-1927.
F. P. Drowne, M.D.



'Black-knob' Pigeon
Ramos Is., Solomons.
Sept. 5-1927.
Frederick P. Drowne, M.D.

Rail
Isabel Is. Solomons
Spec. No. 27827



Adult



Juv.



Starlings. Skewing
difference in color of iris
in young bird and adult.

Fredrick P. Brown, M.D.

Kinister
Isabel Is. Solomons
Spec. No. 2781



F. P. D. Young, M.D.



"Eaved" in
Graybird
Isabel Is.
Solomons.
(all other gray birds
have dark brown iris)



Small Yellow-bill
Parrot
Isabel Is.
Solomons





Plover.
Spec. No. 27893
Isabel Is., Solomons.
Sept. 4, 1927.

Some specimens
show more yellow
on legs.

Frederick P. Dove, M. A.



Small blue-backed
Hawk
Ysabel Is., Solomons.
Sept. 3, 1927.

F.P. Droune, M.D.





"Red-billed Tera"

Gjunabena Islands

Rakata Bay, Ysabel

Solomon I. Sept. 15-1927

Adult ♂ Spec. No. 28040

Frederick P. Brown, M.A.



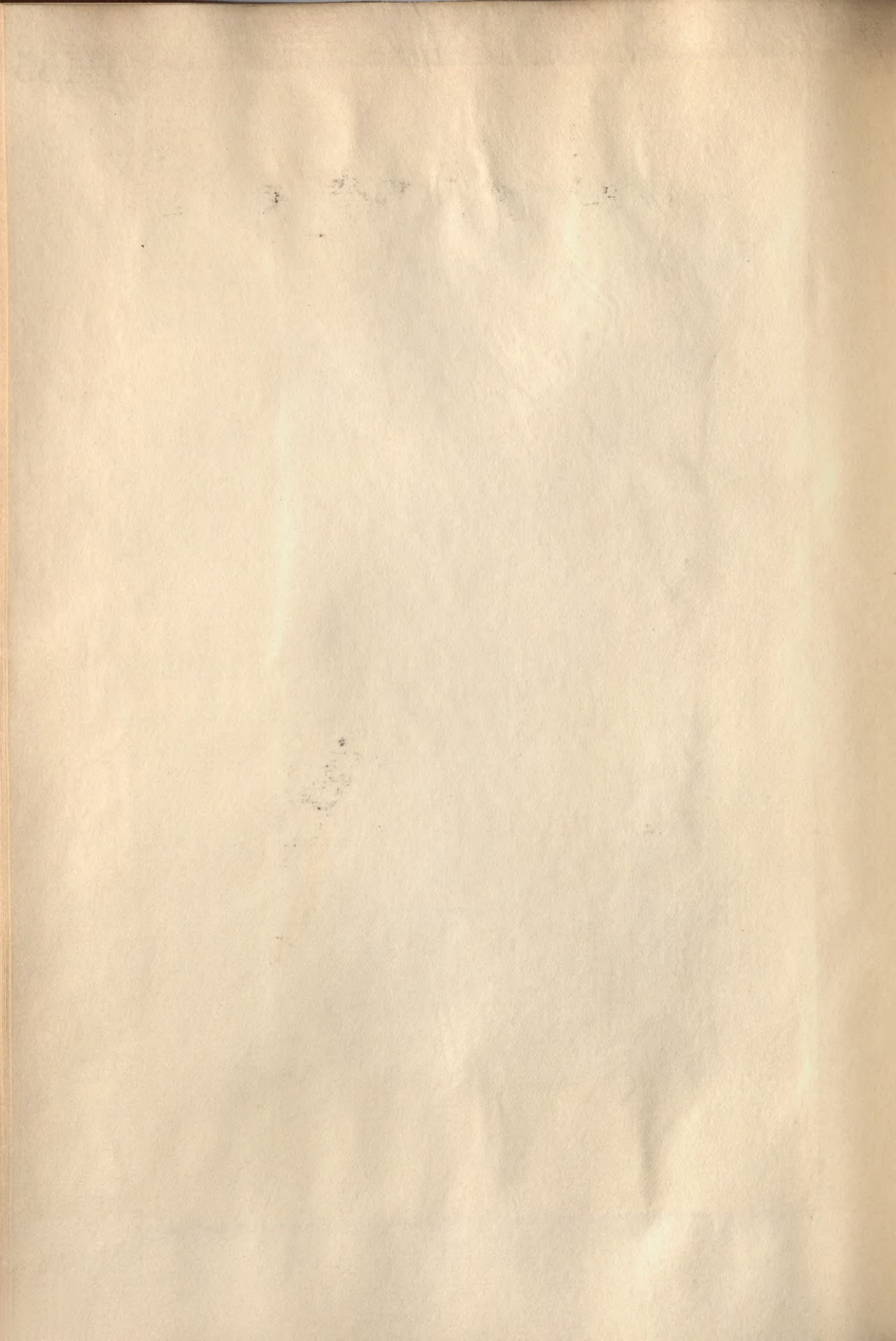
"Red-billed Tera"

Gjunabena Islands

Rakata Bay, Ysabel

Solomon I. Sept. 15-1927

Adult ♀ Spec. No. 28052



Spec No. 27969

Adult ♀

Brown Heron

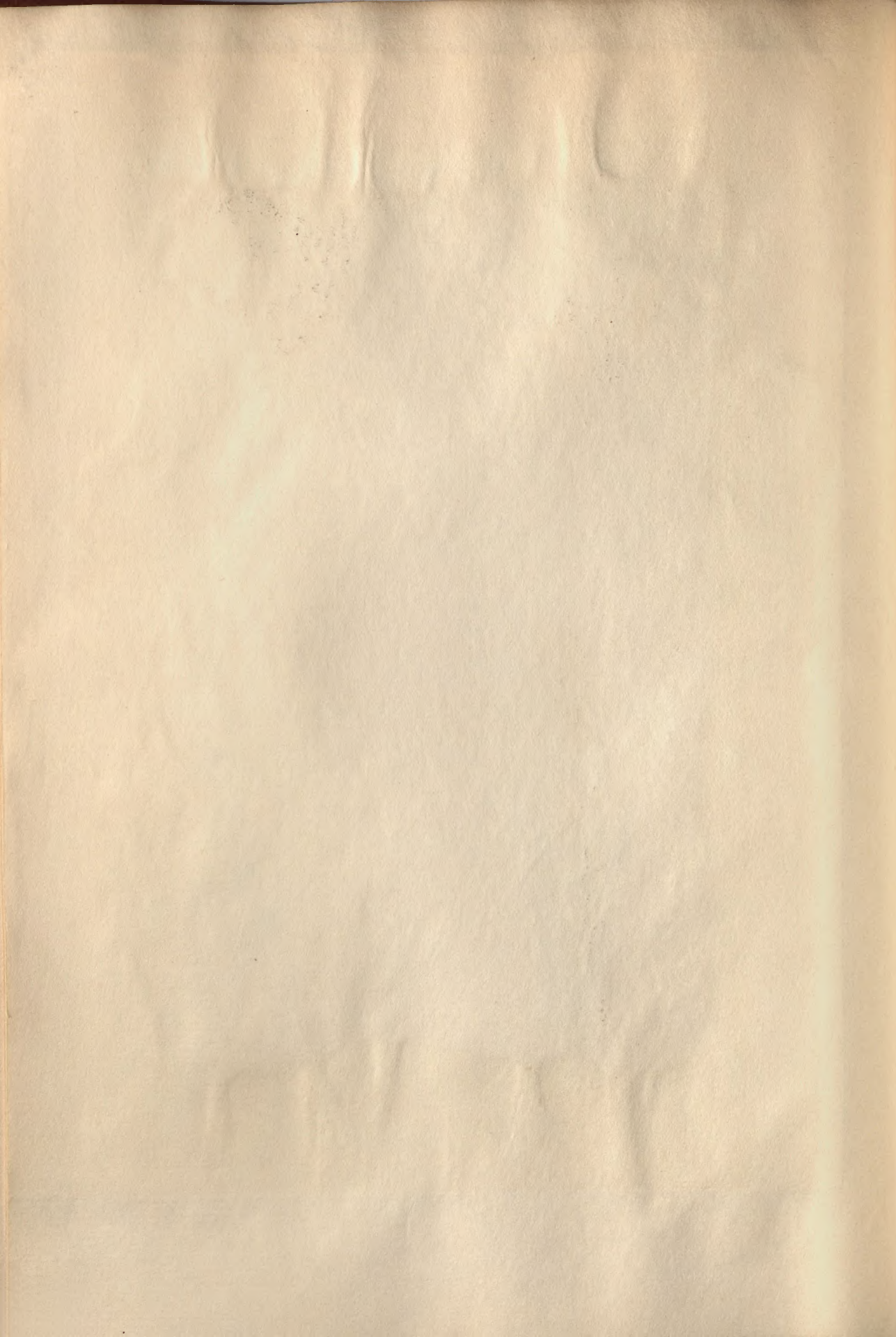
Rekate Bay

Ysabe Is.

Sept. 9-1927.

Frederick T. Drowne, M.D.



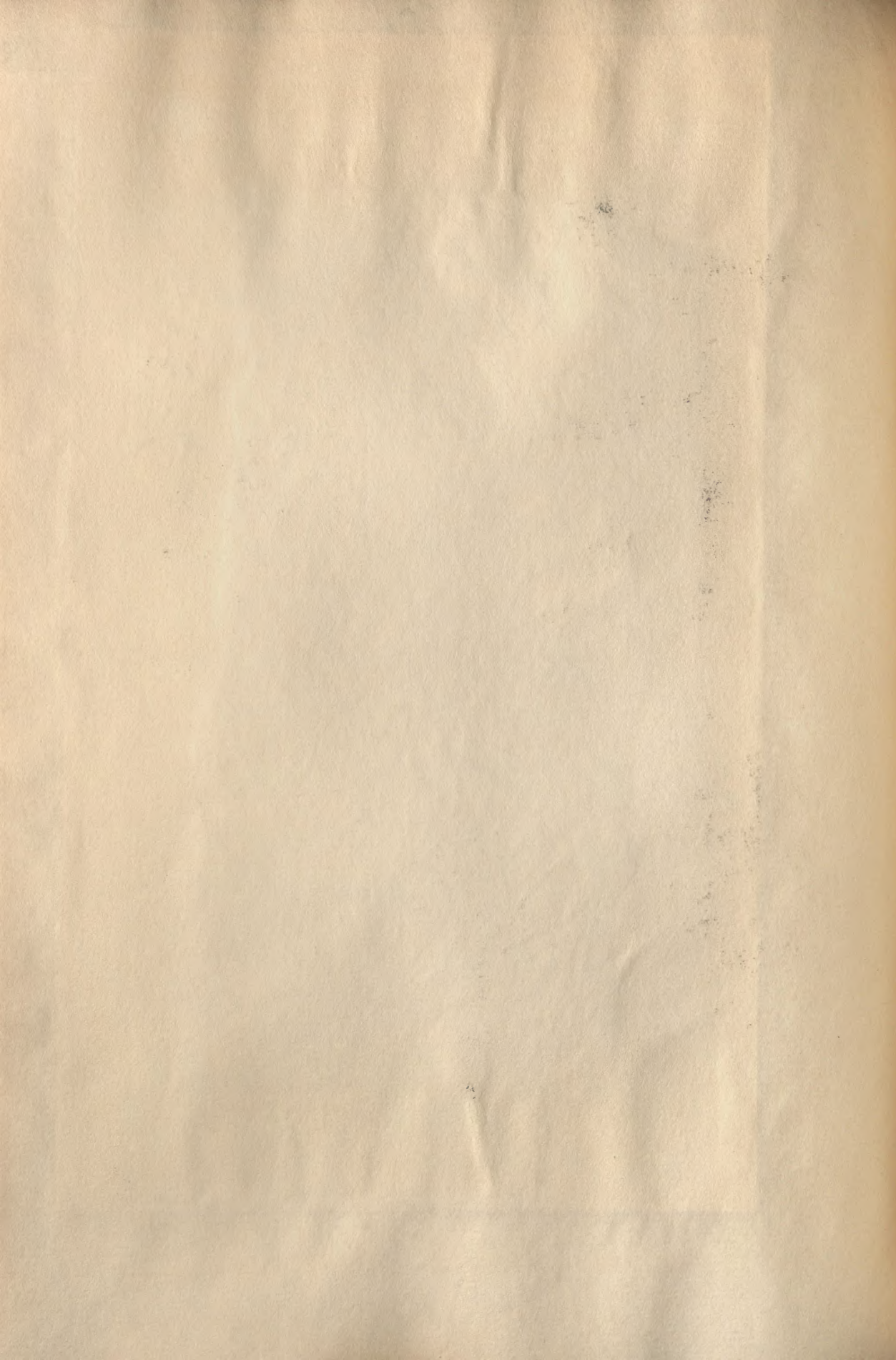




Red Parrot "B"
Spec. No. 28154 Sept. 14-1927
Annunzio Is. Solomons
F. P. H.



"White-cap Tern" "B"
Spec. No. 28025 Sept. 10, 1927
Gingabena Island, Solomons
(Hobbs)
Frederick P. Hume, M.D.





Adult ♂ Spec. No. 28043



Adult ♀ Spec. No. 28042

Magapide.
Gilman's Islands
Rekote Bay, Yapel
Solomon Sept. 10-1927.
Frederick T. Drowne, M.D.



'White-headed Hawk'
Spec. No. 28179
♂ Sept. 15-1927
Anahon Is., Solomons
Frederick P. Dummer, M.D.

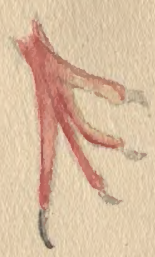


Osprey
Spec No. 28148
6 Sept. 14-1937.
Aradon Is., Solomons
Frederick P. Hume, M.D.

'Eagle Hawk'
Spec No. 28153
Sept. 14. 1927
Anauvon Is., Solomons
Frederick P. Towns, M.D.



Long-tailed Dove
Spec. No. 28217 ♀
Kulabangra Is.
Solomon Is.
Sept. 25-1927
T. P. Drouin

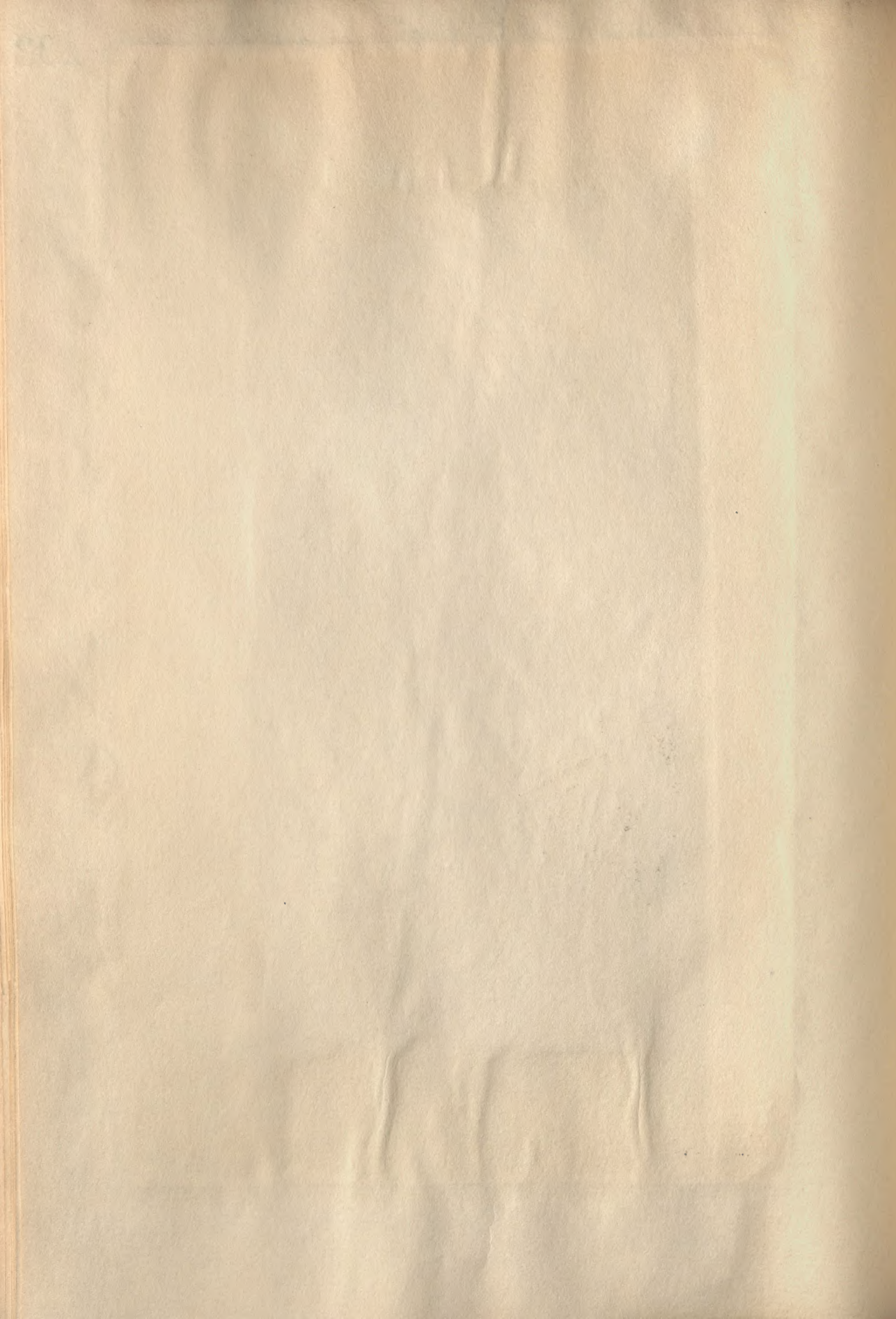


Kingfisher (Red-bill)
Spec. No. 28406 ♀
Kulabangra Is.
Solomon Is.
Sept. 24-1927
(From fresh skin)
(2000' elevation)
T. P. Drouin



Ground Dove
Spec. No. 28238 ♂
Kulabangra Is.
Solomon Is.
Sept. 25-1927
T. P. Drouin



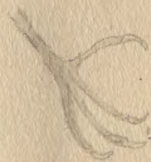




Minia
Spec. No. 28205 ♂
Kulambangva Is.
Solomon
Sept. 25-1927
T. P. Drouine.

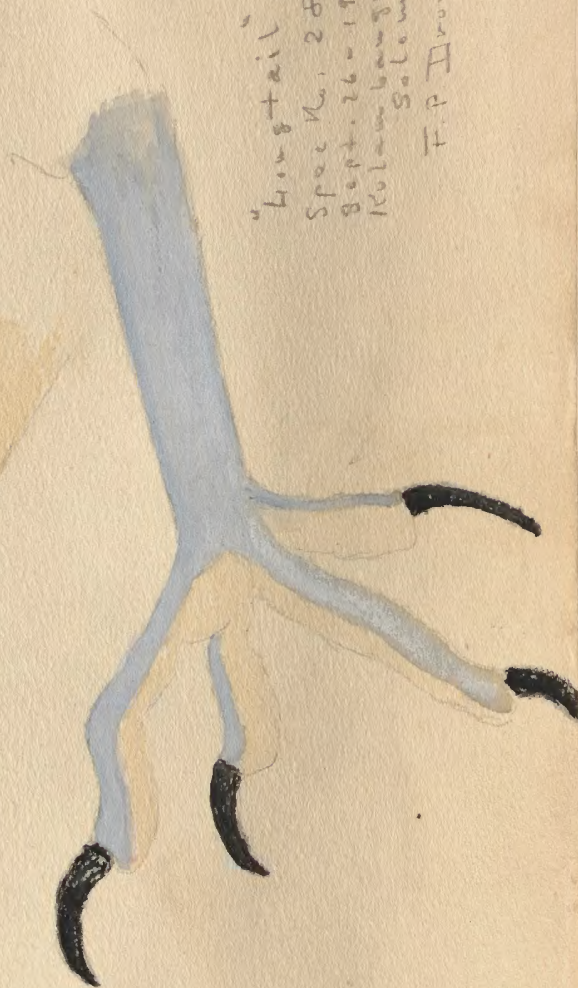


'White Eye'
Spec. No. 28265 ♂
Kulambangva Is.
Solomon
Sept. 25-1927.



'White Eye' 28376 ♂
Spec. No. 28376 ♂
Kulambangva Is. Solomon
Sept. 30, 1927.
(Found at higher levels)

T. P. Drouine



"Longtail" 16
 Spec No. 28313
 Sept. 26-1927
 Kuluw, Borneo
 Solowong
 H. P. Brown



Hawk - ♀.
 Kulambhanga Fi.
 Solowang.
 Spec. No. 28365
 Sept. 29 - 1927.
 T. P. Browne.



White-throated Pigeon
Spec. No. 28374
Kulambanga Is.
Solomons
Sept. 30-1927.
F. P. Dumas



Thrush
Spec. No. 28380 ♂
Kulambanga Is.
Solomons
Sept. 30-1927.
Circ. brown-orange ring
surrounding eye
F. P. Dumas



(All from fresh specimens)



♂ juv.
Spec. No. 28639
Kingfisher
Kulambangra Is.
Solomon Is.
Oct. 15-1927.
Shore
T. P. Droune.



♀
Kingfisher
Spec. No. 28641
Kulambangra Is.
Solomon Is.
Oct. 15-1927.
Shore
T. P. Droune.



Kingfisher
Spec. No. 28640 ♂
Kulambangra Is.
Solomon Is.
Oct. 15-1927.
Shore
T. P. Droune.



Kingfisher
Spec. No. 28665 ♀
October 17-1927
Kulambanga Is.
Solomons.
(From fresh specimen)
Shaw
T. P. Druce.



Kingfisher
Spec. No. 28655 ♂
October 17-1927
Kulambanga Is.
Solomons.
(From fresh specimen)
Shaw
T. P. Druce.



Red-breasted Dove
Spec. No. 28587
Oct. 11, 1927
Kulambanga Is.,
Solomons.
F. P. Druone.



Bengal Tiger
Spec. No. 28637
Oct. 15, 1927
H.
Solomons.
F. P. Druone.



Studies of Opossum (9)
 Glenwood Fe.
 November
 October 25-1927.
 F. P. Irvine.

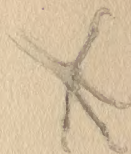


← This shade
is perhaps nearer
the right color.

'White-eye' ♂
Griso, Solomons.
Nov. 2-1927
Spec. No. 29030
F.P.H.



'White-eye' ♀
Bassett, Solomons.
Nov. 5-1927
Spec. No. 29085
F.P.H.



'White-eye' ♂
Spec. No. 29334
Nov. 19-1927
Chelso, Solomons
F.P.H.



Crown.
 Study of adult ♀.
 In western Solomons color of
 under surfaces of foot is not
 so pronounced.
 F. P. Browne.



'Striped-Breast' Hawk
Spec. No. 27096 ♂
Bassa Is., Solomon Is.
Nov. 5-1927.
F. C. Drowne



'White-breasted Ground Dove'
Spec. No. 29333 ♂
Nov. 15, 1927.
Vella Lavella Is.,
Solomon Is.
F. C. Drowne



Honolulu,
Study of Adult ♂
Solomon Islands
Nov. 1927.
F. S. H. Brown

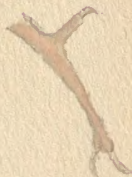




Nov. 19-1927
Spec. No. 29333 ♀
Choiseul Island
Solomons.
F. P. Drowne



Spec. No. 29388 ♀
Nov. 19-1927
Choiseul Is., Solomons.
F. P. Drowne





Figmy Parrakeet
Spec No. 29487 to
Choiseul Is., Solomon Is.
Nov. 23-1927.
F. P. Drouine.



This pale brown color
occurs in same specimens.



"Yellow-headed" Parrakeet
Spec. No. 29592 ♀
Choiseul Is., Solomon Is.
Nov. 26, 1927.
F. P. Drouine.



Tanna Is., Solomons,
Dec. 1-1927.
Spec. No. 29666 ♂
F. P. Drown.

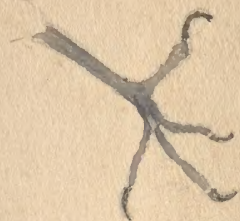


Blue-headed Parakeet
Whitney Island - Solomons.
Spec. No. 29832 - ♀.
Dec. 8-1927.
F. P. Drown.





Spec. No. 29925-4
 Shortland Is., Solomon
 13.1.1927.
 A. C. F. H. M. A. H. M.



Red-bellied Flycatcher ♀
Spec. No. 120
Dec. 31, 1927
Burginville, Tenn.
T. H. Brown, Jr.



Red-bellied Flycatcher ♀
Spec. No. 121
Dec. 31, 1927
Burginville, Tenn.
T. H. Brown, Jr.



Black Hawk ♂
Bougainville Is., F.N.E.,
altitude 5200.
Jan. 5, 1928
Spec. No. (140)
F. P. Drowne, M.D.



Cuckoo ♀
Bougainville Is., F.N.E.,
Jan. 5, 1928
Spec. No. (134)
F. P. Drowne, M.D.



Long-tailed Dove '16
 Bougainville Is., T. N. G.
 Jan. 6 - 1928
 Spec. No. (177)
 F. P. Hume, N. H.



Red-breasted Dove '16
 Bougainville Is., T. N. G.
 Jan. 4, 1928
 Spec. No. (125)
 F. P. Hume, N. H.



Yellow-billed Dove, ♀
 Bogalouville Is., T.M.G.
 Jan. 6-1928.
 Spec. No. (172)
 T. P. Brown, N. A.



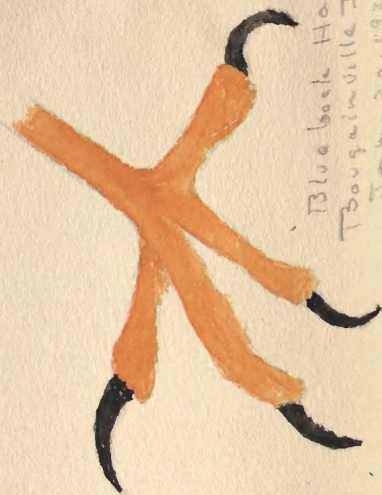
Long-tailed Pigeon, ♀
 Bogalouville Is., T.M.G.
 Jan. 5-1928.
 Spec. No. (171)
 T. P. Brown, N. A.



'Yellow-legged'
Ground Pigeon ♀
Bougainville Is., T.N.G.
Jan. 17-1928.
Spec. No. (273)
T. P. Drouve, M.D.



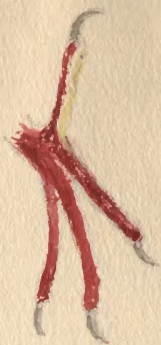
Sm. 11 Green Parakeet ♀
Bougainville Is., T.N.G.
Jan. 14-1928
Spec. No. (240)
T. P. Drouve, M.D.



Blue-backed Hawk ♂
 Bougainville Is., T.N.G.
 Jan. 20, 1928
 Spec. No. (347)
 F. P. Droume, M.D.



Crested Pigeon ♂
 Bougainville Is., T.N.G.
 Jan. 20, 1928
 Spec. No. (387)
 F. P. Droume, M.D.



'Red-crested Dove'
Bourgesville H. T. N. 6.
Jan. 22, 1928
Spec. No. (412)
F. P. A. Brown, N. A.



'Striped Hawk'
Bourgesville H. T. N. 6.
Jan. 22, 1928
Spec. No. (411)
F. P. A. Brown, N. A.

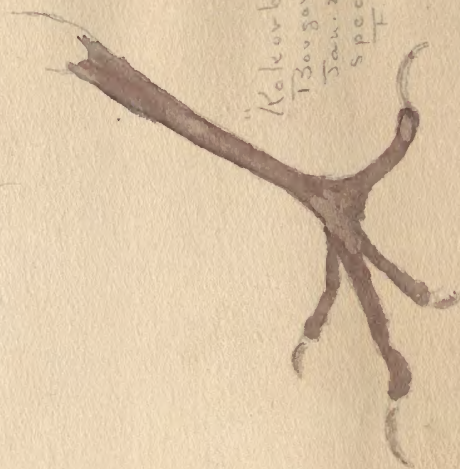


Nestling Hornbill
Drawn from live specimen.
Gular pouch inflated.
(Specimen preserved in alcohol)





"Kolibri" ♂
Bougainville Is., T.N.G.
Jan. 25-1928.
Spec. No. (521)
F. P. Dronner, M.D.

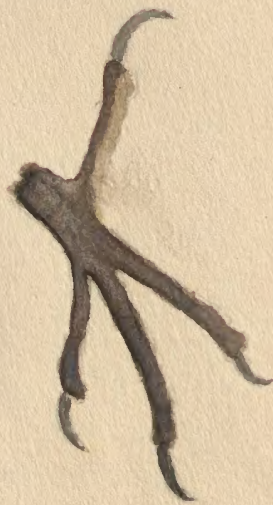


'White-breasted' ♀
Hawk
Bougainville Is., T.N.G.
Jan. 25-1928.
Spec. No. (525)
F. P. Dronner, M.D.





White-headed Hawk
Boggsville, T.N. Co.
Feb. 6-1928
Spec. No. (702)
T. P. Drouno, M.D.



Yellow-eye Pigeon
Boggsville, T.N. Co.
Jan. 26-1928
(Spec. No. 552)
T. P. Drouno, M.D.

Loneliest Folk in the World

Pitcairn Islanders Only Heard From Semi-Occasionally—
Need Nails to Finish Their Schooner—Wildest
of All South Sea Stories.

*Probably
old*

By AGNES BURKE.

*July
File Jan. 1920
date ?*

The tale of Pitcairn Island is one of those true stories that later sceptical generations always refuse to believe. Some parts of this tale, the sceptics admit, may have occurred, for when a band of mutineers sailed the English warship *Bounty* down to Pitcairn Island in 1789 and settled with a number of Tahitian men and women there on the eastern fringe of Polynesia, anything extraordinary might have happened.

One expects the strange and adventurous in the South Seas. But it is beyond belief that the 160 descendants of this bloodthirsty crew should now be living the communal life on the same island, devout Seventh Day Adventists and very exact about the observance of the Sabbath.

The most astonishing part of the whole Pitcairn story—legend as well as fact—is that most of it is truer than it sounds. Lord Byron wrote a poem, English naval officers and various ladies have written books about it. Bligh, the old sea captain whose men mutinied and started the whole story, left a memory; but why Joseph Conrad has not written the island's story or the story of any one of the numerous adventurers who dropped into its life to teach the islanders' children or to steal their breadfruit must remain a mystery.

The first ten years of its history, from 1790 down to 1800, were years of violence and blood. From that time until the death in 1829 of John Adams, the last of the mutineers, a marvellous process of humanizing and Christianizing went on under his leadership. The present condition of the islanders, 160 isolated souls on the edge of a great trade route, has some of the elements of a tragedy. This handful of men and women have achieved a democracy, but they have no nails with which to finish the building of a schooner.

The latest messenger from Pitcairn Island to the outside world—even to the South Seas, because there is no mail route to Pitcairn—is Capt. Griffith Griffiths of the Commonwealth & Dominion Line steamship *Port Hardy*, now at the foot of Pier 10, Brooklyn. Capt. Griffiths, whose ship sails from New York to Australian and South Sea ports, stopped at Pitcairn in June, 1916, going out of his regular route to see the islanders whom he had last visited twenty-five years ago in a sailing vessel.

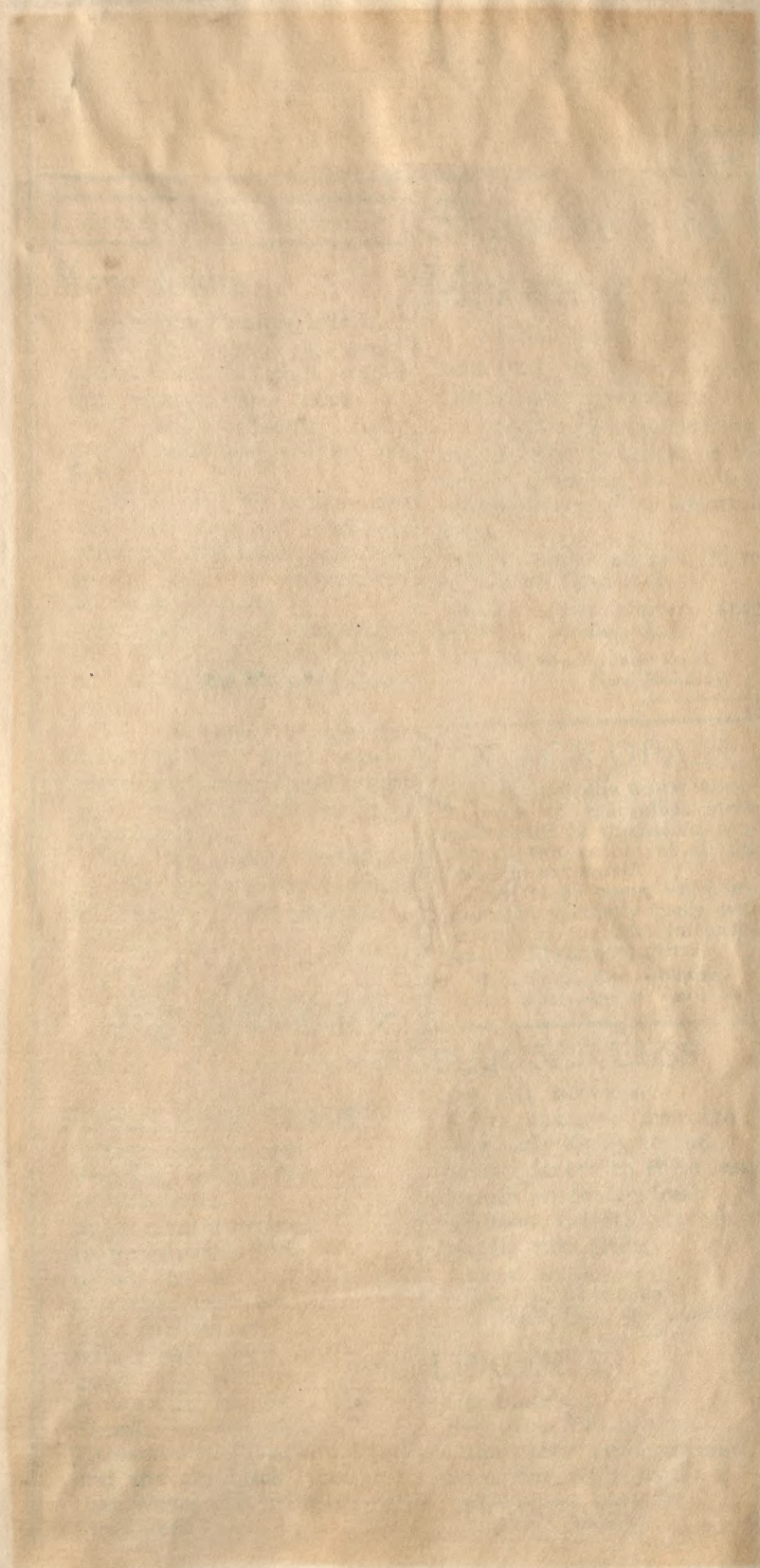
and they settled there, burning the *Bounty* after they had removed all her stores in order to destroy the last trace of their crime. And then the nine mutineers had to face the primitive life—pastoral without any cattle—that Pitcairn afforded them.

What followed is a sad but true commentary on the ways of the human race. The nine white men and the six natives had not lived on the island more than a year when they began to quarrel. The reproaches of their consciences and the evil results of a tea-plant distillery which one of the men did not neglect to set up had their usual results. The quarrels of all factions came to an issue when the wife of one of the men, Williams by name, fell from one of the cliffs and was killed, and Williams seized the wife of one of the natives in her stead.

In the resultant fight five of the white men were killed, and the unfortunate wives became so alarmed at what might happen to them that they attempted to escape from the island in a frail raft that they built with their own hands. They were discovered and brought back and lived to see the day when the four remaining white men for their own safety killed the natives.

The four remaining white men did not wait long to exterminate themselves or each other. McCoy, who was the spirit behind the distillery, in a fit of delirium cast himself into the sea with a stone tied around his body; Quintall, who tried to steal another wife when his own died, was killed deliberately by Adams and Young. Young died from an attack of asthma in 1800 and then John Adams suddenly faced life alone on the island with the care of the native women and twenty-three small boys and girls entirely on his shoulders.

The mere contemplation of the past and the responsibilities of the future must have sobered Adams to a sense of his role as protector of the children whom the mutineers had heedlessly brought into existence on an island where there was no conceivable future unless the inhabitants made it for themselves. As if he were frightened at the horror of the events that had taken place there since the mutiny, Adams set himself to teach the young children the things that make for self-control and morality. All that he had to teach them from was a



The Port Hardy stopped for an hour and a half and two boatloads of islanders, including several women, paddled out and came on board. They told Capt. Griffiths the same story that has come from the island since its earliest days—the ability of the islanders to live on the fruits and the fish that are plentiful enough, but the pressing need of all the secondary necessities—of needles, thread, women's and children's clothing, books, papers, pencils, nails, tools, and even soap.

The Port Hardy was the fourth steamer that had called there in the history of the island, the first to bring them news of the European war; sailing vessels used to stop at intervals when their course brought them near the island, but sailing vessels are fewer nowadays. The nearest mail service is at Tahiti, which is some five hundred miles away, but the schooner that the islanders have been trying to build for years has never been finished for lack of nails and tools.

The need of the islanders made such an impression on Capt. Griffiths that he promised on his return trip this January to touch at the island with whatever supplies he might be able to gather during his stay in New York. The owners of his ship have given him permission to stop, and now he is waiting for the Pitcairn contributions to accumulate.

The story of the Bounty went up and down the South Seas and later around the world when Capt. Bligh, whose men abandoned him and eighteen others in an open boat, finally returned to his own country. The Bounty had been sent out by the English Government in 1787 to transplant breadfruit from the Society Islands in the Pacific to the British colonies in the West Indies. Bligh and his crew got as far as Tahiti, procured the breadfruit and started back. They got no farther than Anamooka, however, for there the crew under the leadership of Fletcher Christian, the master's mate, mutinied and left the unfortunate Bligh and seventeen men to their fate in the open boat. After unimaginable hardships from thirst and hunger and after sailing in the open boat 3,600 nautical miles without a chart or navigating instrument and with hardly any food they finally reached the Dutch island of Timor, from which place Bligh made his way back to England with his wild sea yarn.

The nine mutineers, however, had seized their opportunity and a few other things and had sailed for Pitcairn. They took with them from Tahiti, to which they had returned after parting with Bligh, six native men as servants, ten native women as wives and a girl of 15. Pitcairn was their objective because as far as they knew it was uninhabited and out of the track of all vessels, and they hoped they might hide there from English men-o'-war that would surely come after them. They reached Pitcairn

Bible from the Bounty and one or two books, but he taught them to speak and to write and to read English.

According to Capt. Griffiths and the other visitors who have actually landed on the island, including some who have written books about its life, the same religious imprint is still strong. During the nineteenth century a motley collection of men, school teachers, ministers and adventurers, have lived for a time with the community and have left this or that imprint upon its life. Since 1881 the people, under the influence of Dr. and Mrs. Braucht, a medical missionary and his wife, from San Francisco, who have given their lives to the islanders, have become Seventh Day Adventists. But the social organization of the people is as communal as ever. All men and women over 17 vote and women have an equal voice in the councils of the group. The island, which is now a part of the British Empire, is governed under the British Consul at Tahiti by James Russel McCoy, who has held office as chief magistrate for many years. Seven delegates to the island parliament are elected by the people.

According to Capt. Griffiths, the natural resources of the island are limited, since there are no cattle and no grain. There is an abundance of fruit; there are even a few imported apple and peach trees. The inhabitants raise arrowroot and sugar cane and it is in the hope of trading these things with the outside world that they have clung to their hope of building a new schooner by which to carry their exports to Tahiti. But since they have not nails enough nor timber enough the schooner has had to wait. Fortunately Tahiti has all the fruit it needs.

The officers of the Port Hardy speak of the Pitcairn folk as an amazing people. They work three days a week for themselves, three days for the community and spend most of Sunday in their church, "three hours at one reel." They have the most elaborate code of justice, and although there is very little vice and virtually no crime on the island, there are all sorts of sins. If your dog chases your neighbor's dog to his detriment, there is a punishment for the dog.

The great excitement in all their lives is the chance passing of a vessel of any sort. The whole island is at ~~an~~ immediately in the two treasured boats that were given them by an old whaler decades ago and that survive by infinite care and endless patchwork. If Fate has put them out of the track of the world they must chase the world down whenever it appears on the horizon. With the opening of the Panama Canal more and more ships pass along the horizon. Some time they hope world changes may divert some of the lonely routes of the Pacific so as to take them in and make them of the world as well as on it.

RHODE ISLANDER
RETURNS FROM
"CANNIBAL
ISLES." Dr. Fred-
erick P. Drowne, of
Warren, who has
just returned after
spending two years
with the Whitney-
Sanford expedition
in the South Sea
Islands, with some
of the curios and
weapons of native
cannibals which
he brought back
with him.



The scientist-explorer frequently precedes the pure adventurer and Dr. Drowne, in his search for feathered creatures of the jungle, found few restless souls seeking atmosphere and color for romantic writing. Rain and malaria, he holds, are a sure cure for

romance, if alone is the objective sought.

His interest in the scientific purposes of the expedition was sufficient to distract his mind from the climatic conditions and other hardships, and that, he now believes, is the true secret of successful exploration in the tropics. The scientist seeking facts and the college boy seeking adventure are an uneven match with the odds all in favor of the former.

Returning to the States after an absence of two years, he finds the comforts of civilization strangely unfamiliar. Moreover, he has for the time being lost his faculty for getting out of the way of automobiles and is inclined to agree with the Arctic explorer who announced recently that the frozen North held less fear for him than city traffic.

Dressed in his island costume for the benefit of a Sunday Journal photographer, and holding a native skull picked up in a jungle tomb, Dr. Drowne, scientist and physician, presented a picture that would startle the average housewife and might even cause him to be picked up by the police on suspicion.

But in the islands from which he has just returned the costume, in its every detail, was as appropriate as evening dress at a fashionable dinner. And to fight the jungle swamps, mosquitoes and flies in anything more pretentious would be laughable, as every Australian coconut planter well knows.

Planters Not Curious.

The planters of the Solomon Islands, which form a part of the area, 2000 miles square, traversed by the museum's expedition, have little or no curiosity about the jungle. They seldom do any exploring on their own account and are content with the information which they pick up from others.

Two thousand miles north of Sydney is Tulagi, seat of government in British Solomons, and in all this group of islands there are only about 400 white people. These are principally planters and their coconut groves seldom extend very far into the interior.

At no time was Dr. Drowne in physical danger from the natives and this is equally true of all scientists and collectors who visit the islands. The natives seemingly cannot understand why anyone, even white men, should collect birds, reptiles and other wild creatures.

They watch the scientific men with much amusement and consider them crazy or, as they express it, "likliklong-long." An individual who has any mental trouble is tabu and must not come to any harm. As a matter of convenience, and in the interests of safety, they are never disillusioned.

"I came away from the islands with an immense respect for the ingenuity of the natives," declared Dr. Drowne. "Considering their sources of supply and the tools which they have to work with, they accomplish wonders. They have endless patience. Time means nothing on the islands.

FOURTEEN months of "scientific beachcombing" in the countless islands north of Australia have convinced Dr. Frederick P. Drowne of Warren that adventurers still have worlds to conquer.

And these worlds are to be elsewhere than in the frozen extremities of the globe which have lately been receiving so much attention. The rain-soaked and malaria-infested islands just south of the equator have vast regions more impenetrable even than Tibet's highest and most inaccessible retreats.

The romanticist who has resigned himself to the comforts of the club-room and the spinning of yarns on the theory that missionaries have brought civilization to every corner of the earth is making a mistake, Dr. Drowne believes.

His travels beyond the borders of the "cotton shirt belt," from which he has just returned, have given ample proof that there are places where the heathen still rage in their own sweet way. At least they do in the Solomon Islands, New Hebrides and vicinity.

Furthermore, there are jungles within the scope of his wanderings which will be unmolested by white men for a number of generations to come. Airplanes may soar overhead and cause a stir among the native tribes, but explorers have not yet discovered an efficient means of cutting the jungle with enough supplies to take them on long marches.

Only One-Third Explored

Bougainville, one of these coconut-growing islands, is twice the size of Rhode Island, but only one-third of its area has been explored. Scores of tribes inhabit the jungle and at least a dozen languages are spoken.

These tribes are sensible in that they seldom encroach on each other's territory. Particularly is this true of the natives who live along the shore. They are content where they are and cannot be persuaded to accompany whites into the jungle.

Dr. Drowne is a scientist first and an adventurer second, but this does not prevent him, on his roaming, from wearing a sleeveless hunting coat and a felt hat which looks as if it had been picked up in the subway. As a member of an expedition sent out by the American Museum of Natural History, he lived in surroundings aptly typified in current South Sea Island drama, and adventures and hardships came without seeking.

In the work in which the museum is engaged the scientist and the explorer are one and the same. This is necessary because the object of such expeditions is to obtain specimens of bird and animal life that become extinct shortly after the arrival of white men with domestic animals which are foreign to the territory and which prey upon the natural wild life.

"I saw one native go into the jungle, cut a stick of wood and carve a bow in less than two hours. Then he went to work on an arrow and finished this even more quickly. Its almost uncanny the way they can find material in the jungle growth with which to supply their every need.

Women are as particular about their appearance as American flappers, and they have quite as many articles of adornment. Their bracelets, necklaces and pendants, made from shells and



Typical Native Hut Used as Camp Site

teeth, represent weeks and months of exacting labor.

Practically all of the women carry combs which are masterpieces of fine workmanship. These are made of wood and have long and remarkable straight teeth. They carry these with them and occasionally stick them in their hair at jaunty angles.

Even powder puffs are used on some of the islands. But they are not the same powder puffs common in the States, nor do they serve quite the same purpose. They consist of a lump of clay shaped round and large like a baseball. They are hard on the complexion but as effective as whitewash.

Carry Fans and Umbrellas

To complete the picture, it is fashionable among some tribes for the women to carry fans and umbrellas. These are constructed from the bark of trees. The fans are used with the same coyness that they are in civilized countries, while umbrellas serve a decorative rather than a utility purpose.

Dr. Drowne has brought home a number of these articles to show his friends and they represent a collection that arouses admiration for a people who have so little to work with.

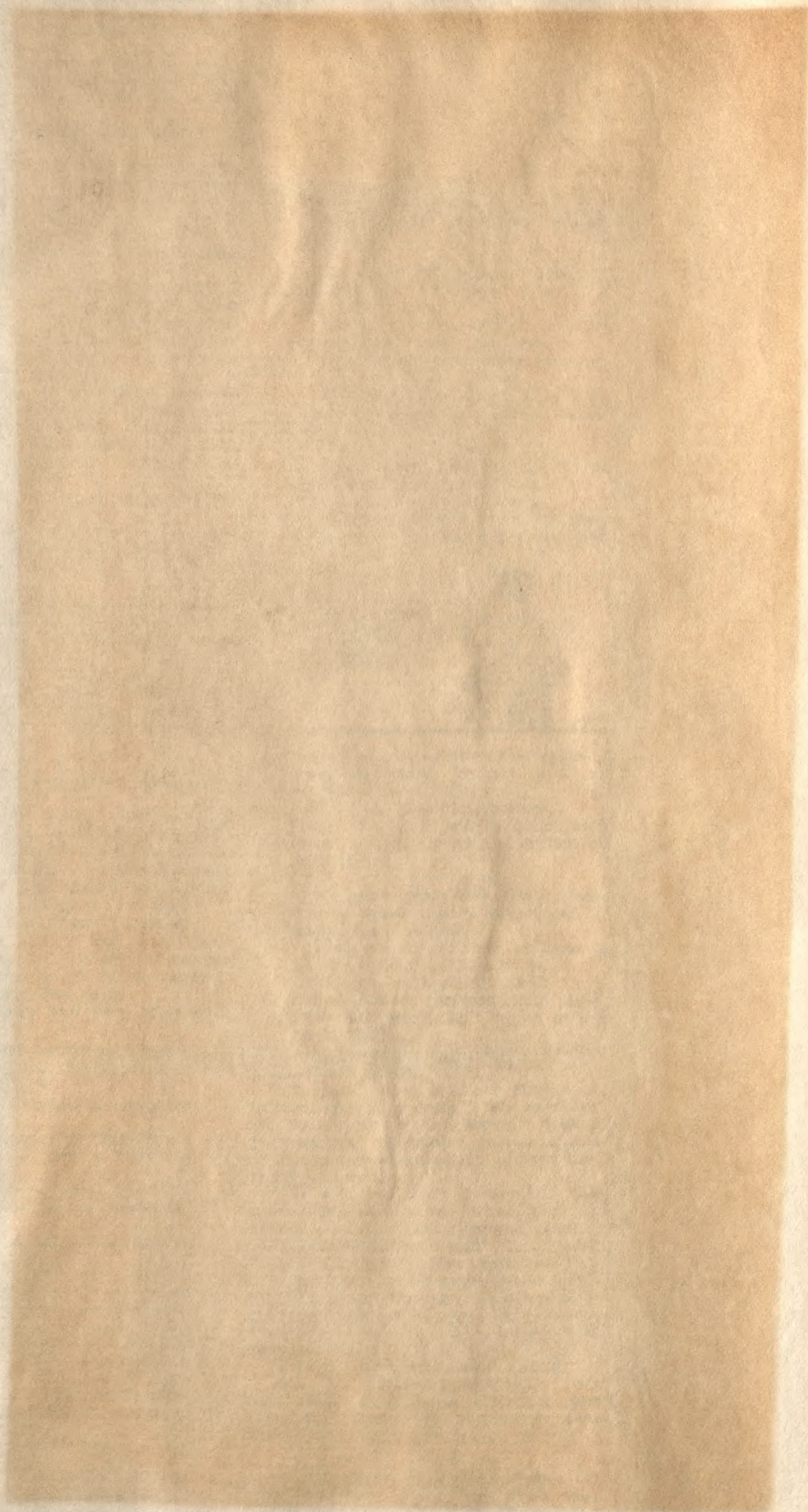
For currency, the natives use mate-

rial which is equivalent to the wampus employed by the American Indians. Tiny beads fashioned from shells are carried on string. The beads are made by rubbing shells against smooth stone with the finger tips. The red beads are more valuable than those of other colors and a yard or so is worth about 50 cents in American money.

Despite the small value of the currency, the British have made it impossible for white men to drive sharp bargains as did the early settlers of New England in their trading with the Indians. It's impossible to buy tracts of land with trinkets. Land is not bought from the natives. It is leased.

Everywhere throughout the islands, according to Dr. Drowne, the natives are happier, healthier and more contented when they live by themselves in the interior and have no contact with the whites. Tuberculosis and other diseases originating in northern climates are particularly dangerous to them.

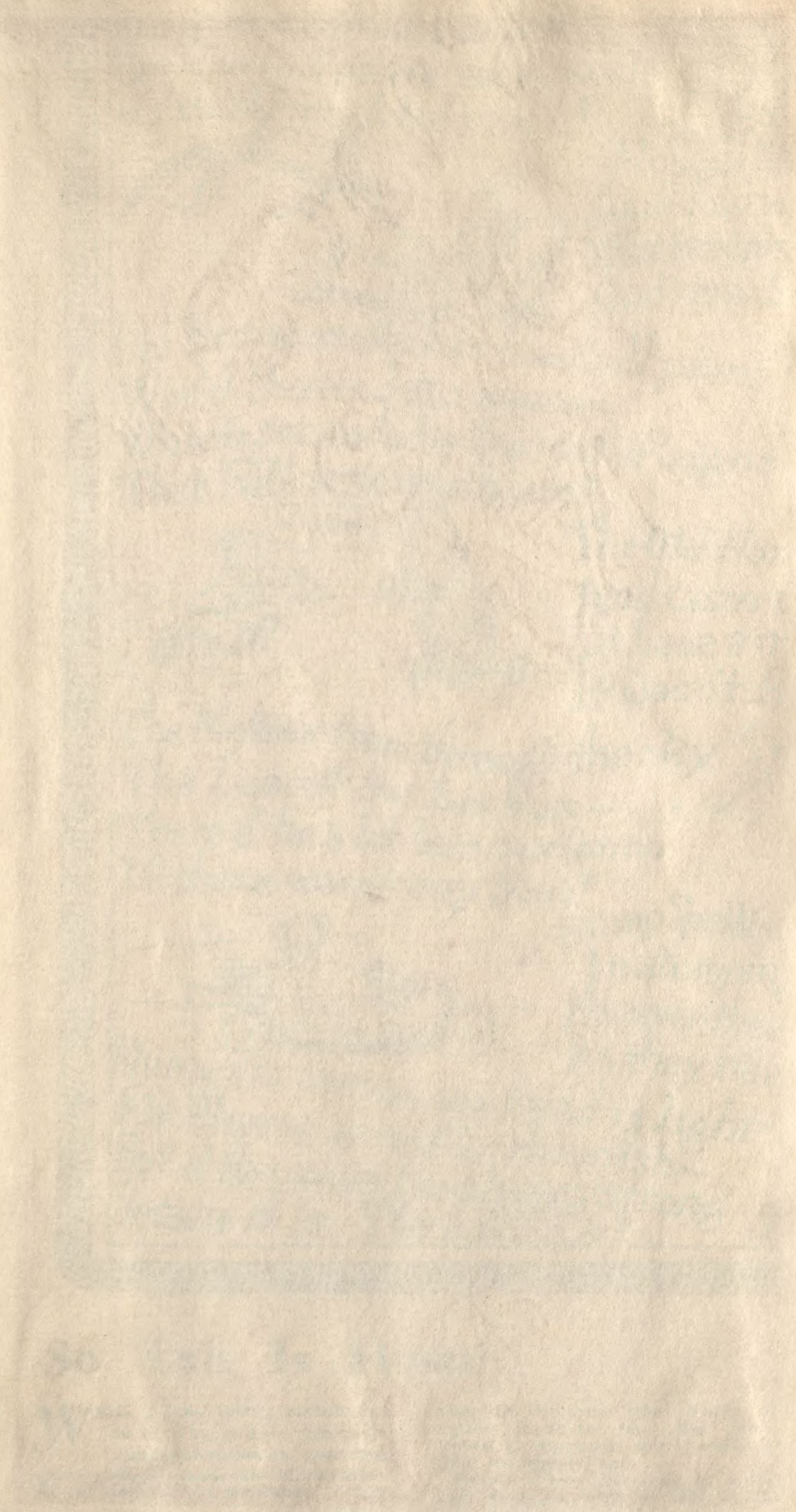
Scientific exploration is not entirely new to Dr. Drowne. In 1897 he was a member of the Webster-Rothchild expedition to the Galapagos Islands, lying off the coast of South America. At that time, as on his last trip, he visited places that never before had known the touch of a white man's foot.



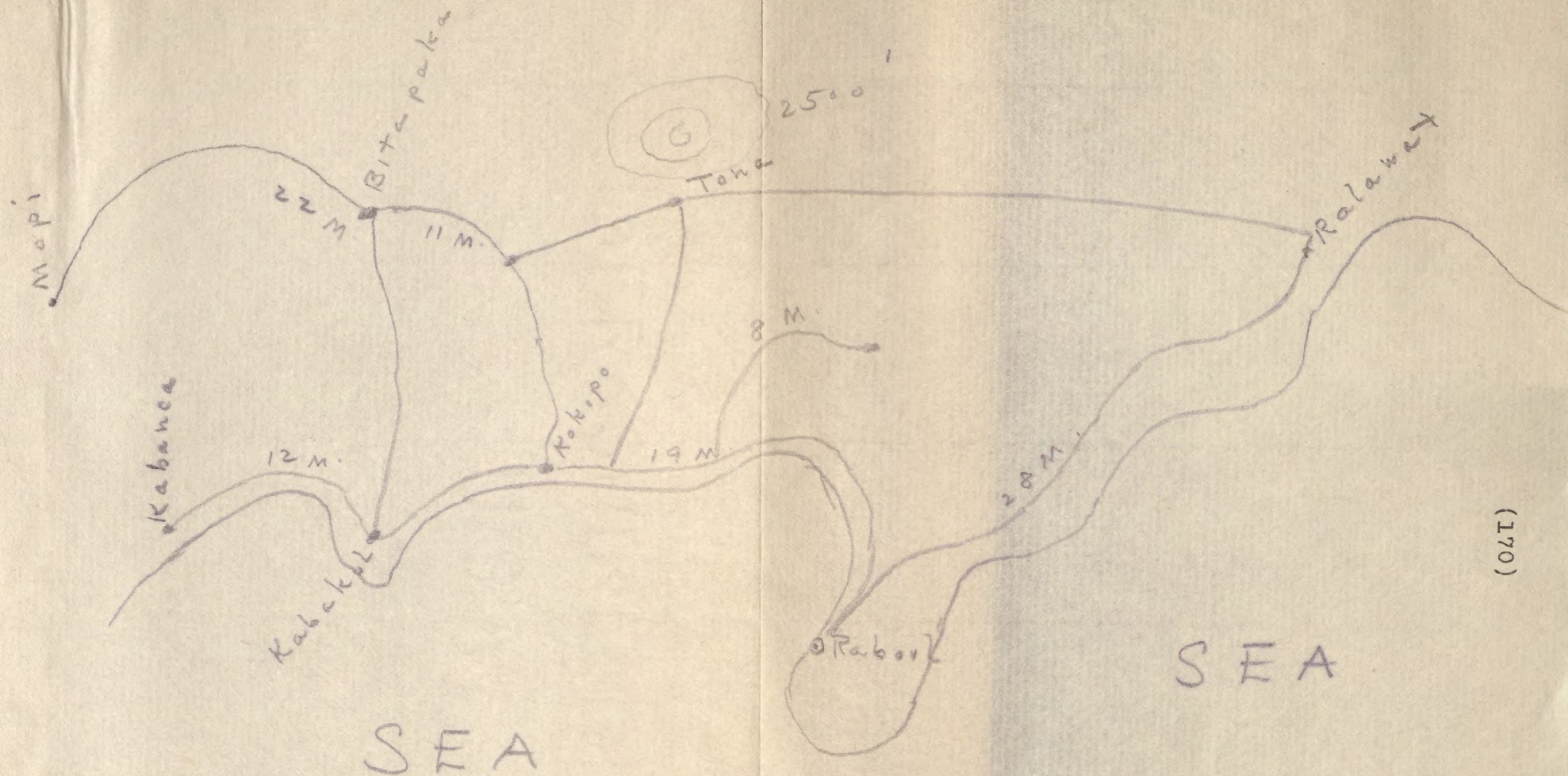


Dr. Frederick P. Drowne in Explorer's Costume

Holding one of the gruesome relics found in Solomon Islands. Another portrait of Dr. Drowne will be found in today's Artgravure Section.

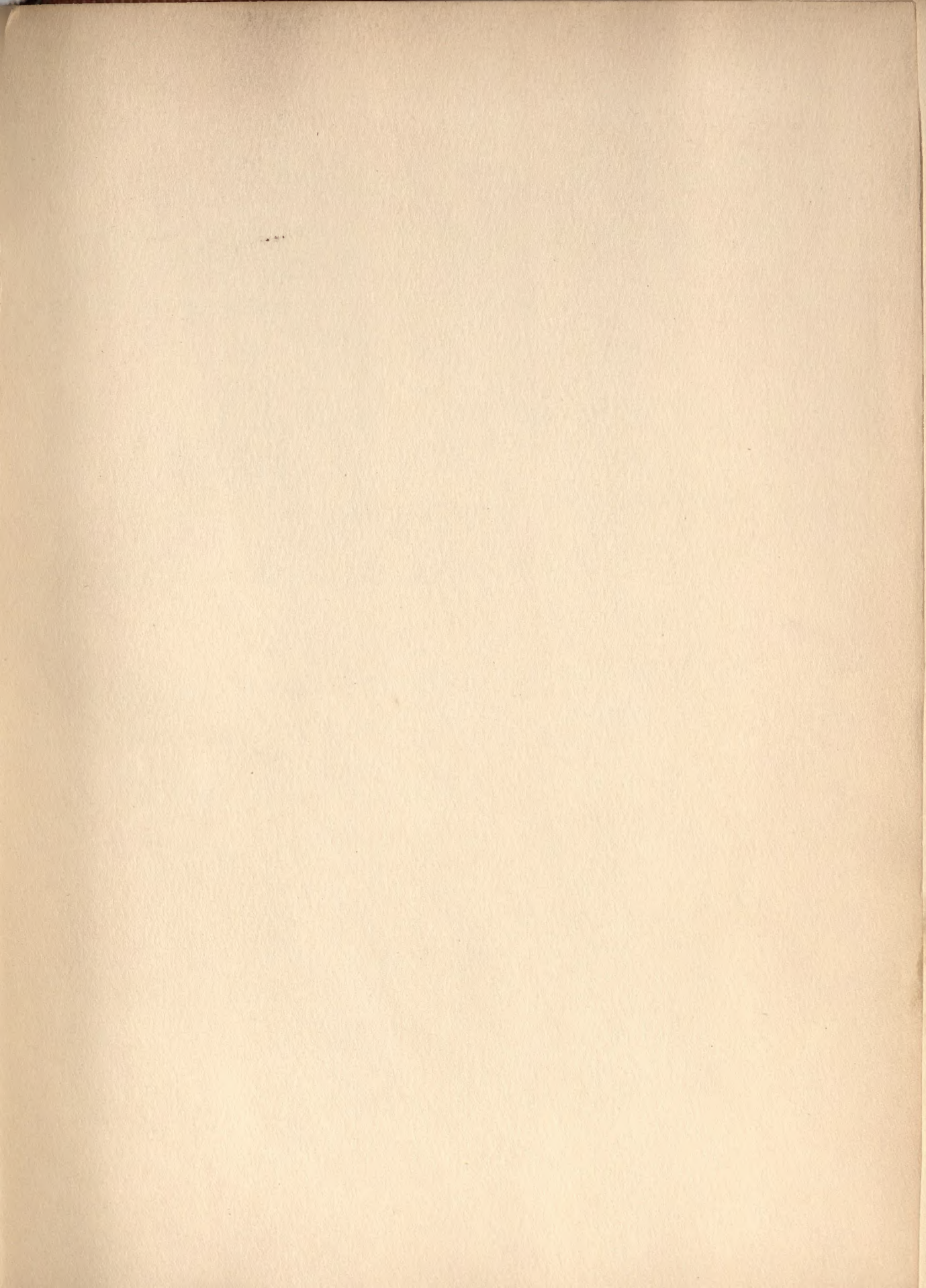


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Rough Map of Automobile Roads
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