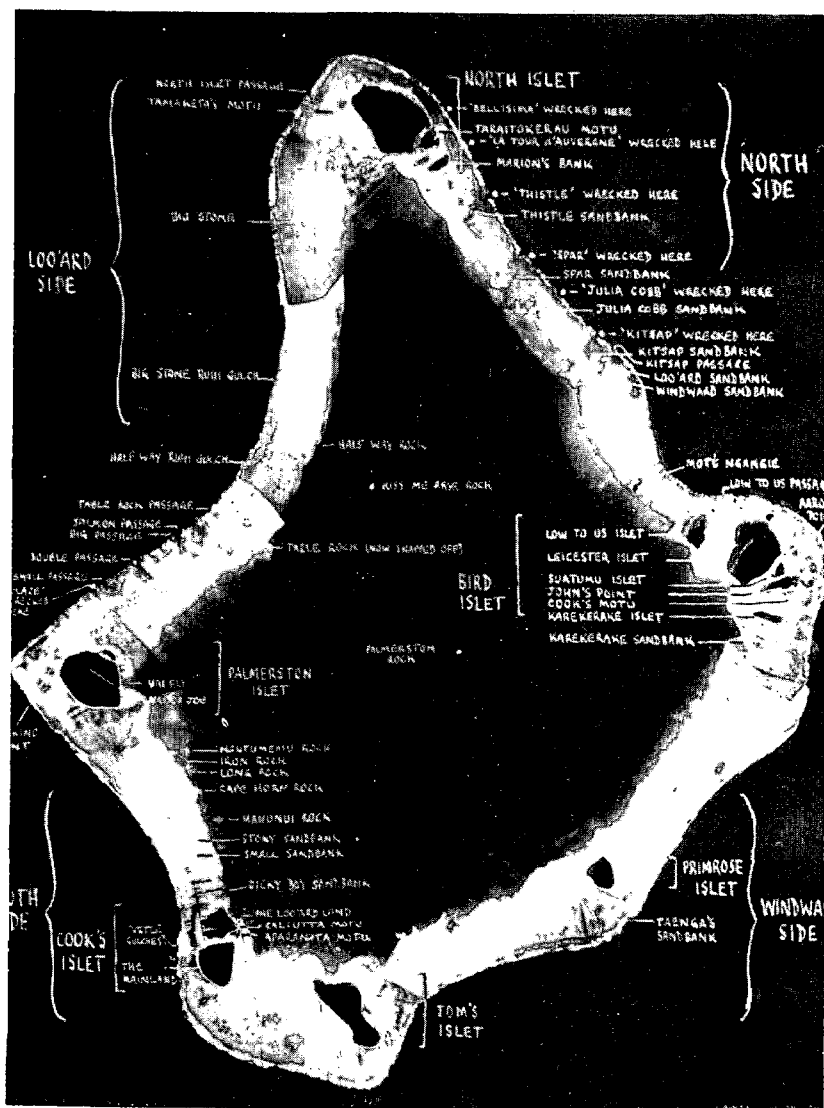


## SOME NOTES ON THE BIRD LIFE OF PALMERSTON ATOLL

By J. C. BURLAND

I spent four months exactly, from May 20 to September 20, 1960, on Palmerston Atoll in the Northern Cook Group to carry out historical



I — Palmerston Atoll, Cook Group

research. Before going I undertook to collect specimens of various kinds and make notes of the birds breeding on or visiting the atoll. This work, for the Dominion Museum, was undertaken as a layman with no ornithological experience, but the information gathered may be of some general use.

The period of my visit coincided with the winter breeding of the sea birds. For the first two months the outer islets were full of nesting pairs and chicks, but there was a gradual exodus from the beginning of July, and by the middle of September there were very few birds about; the Common Noddy (*Anous stolidus*) had all but disappeared, and the Red Tailed Tropic Bird (*Phaeton rubricauda*) was greatly depleted in numbers, with only a few late chicks still on the nests but almost fledged. There was, however, quite a number of land birds and migrants right through the period and it was noticeable that some of the migrants were increasing in numbers from the beginning of September.

At least three species, either recorded by Captain Cook in his Journal or remembered by the older inhabitants of the atoll, have ceased breeding on Palmerston. The reason given is the damage done by the serious hurricane of 1926 and a further severe blow in 1935. Whether the destruction of the bush cover was the reason or the depletion of fish by accompanying tidal waves, was not known, but the former would seem more likely.

The Red Tailed Tropic Bird, and the Common Noddy to a lesser extent, are collected for food by the islanders in considerable numbers, and though a rough form of conservation is maintained, this is preventing a rapid increase in numbers.

The appearance of some birds is regarded as a 'sign' by the people, and any such supernatural fears are included in the following notes on individual species.

Also included are the Maori names used by the local inhabitants, as these differ at times from the recognised Cook Island names. The Palmerston people are of polyglot blood, a single family group with a European as original progenitor, and with wives of later generations obtained from Penrhyn, Manihiki and Atiu. For this reason individual island dialects have been combined.

#### GREATER FRIGATE BIRD (*Fregata minor*) — "Kotaa"

According to the local inhabitants these birds nested on the home islet called Palmerston until 1907 in a huge *pukatea* tree. This was cut and burned down as it was an obstruction in the settlement. Adults and chicks were caught for eating from this tree up to that time. There is no record of their breeding freely on all the outer islets although Cook's Journal mentions their being in quantity in 1777. However, he visited only two islets, those now known as Cook's and Palmerston.

The species is still seen frequently over all the islets and it does sleep in the coconut trees on North and Bird Islets overnight, but certainly no breeding has taken place for many years. I was told that the birds are sometimes seen in groups of 20-30, but more often only from one to three at a time. I did not see one large flight in four months. Although a considerable concentration of birds was claimed I saw no evidence of it. The average number seen in a week over the home islet was about three.

While pot-shots are taken at low-flying birds over the settlement,

the main numbers shot for eating are in the two outer islets in the evenings. But this must be regarded as a sporadic activity; cartridges are expensive for the islanders and they also consider that anything involving such effort is too hard work. When easily come by, the birds are used as supplementary food.

The islanders call the Frigate Bird a 'lazy' bird because of its habit of taking food from other birds on the wing. *F. minor* was the only species seen over the atoll.



II — Common Noddy which was tamed as a fledgling by the author.

#### COMMON NODDY (*Anous stolidus*) — "Ngoio"

This bird breeds by the thousand in all the islets except the settlement islet. Rough nests are built in the coconut trees, the puka trees and the ngangie scrub. Nesting is shared by the parents while each in turn is away for food.

All young birds leave the nest before they are strong enough to fly, and spend some days on the ground while still being fed by the parents. The chicks at this stage are caught in large quantities for food.

After breeding these birds disappear almost entirely for a period out to sea. Breeding was well advanced in May, and by the end of August hardly one was sighted.



III — J. C. Burland, author of this article, with the Common Noddy fledgling which he tamed during his stay on Palmerston Atoll.

When the islanders see the *Ngoio* flying low over the water they say they know strong winds are coming.

It may be of interest to mention that I was handed a chick during my stay and was able to tame it completely within three days. It made a charming, if messy, pet which finally had to be taken to an outer islet and released, as it would not leave of its own accord. It made one attempt at independence but was back within forty-eight hours, not being able to find itself food, and settled in, it thought, permanently. I finally took it right across the lagoon in an open boat and it remained sitting on my hand the whole way. I left it in a tree and returned two hours later to check. It was still there and hopped on to my hand again as though it were boarding a bus. I carried it again to another islet, and left it on a coconut trunk by the water's edge, but again it had not moved after some hours. Finally one of the young boys made a grab at it and pulled out all the tail feathers. This destroyed all the trust it had, and it flew off up the beach. It is impossible to say whether it survived or was caught later for the cooking pot.

RED TAILED TROPIC BIRD or BOATSWAIN BIRD (*Phaeton rubricauda*) — "*Tavake*"

This bird breeds extensively and has been recorded since Cook's

visit. After the 1926 and 1935 hurricanes the numbers that returned to breed were very few indeed. The reason may be that most adults were lost at sea as a direct result, because the inhabitants claim that the birds return to the same nesting site year after year.



IV — Parent Red-tailed Tropic Bird with partly grown chick on the nest which is merely a comparatively clear patch of sand under the scrub fringing the beach. Nesting is never further than thirty yards in.



V — A successful hunt. One of the Palmerston women with both hands full of chicks. Note the complete disregard for the young birds, which are brought back alive to the settlement islet, barricaded in and fed until killed for the cooking pot.

The estimate of breeding pairs in 1959 obtained from the inhabitants was 1,000, but I had no opportunity to check on its accuracy. There is a tendency for these people to exaggerate. However, this number is said to be far below that of the early days.

This is the main bird taken for food. "Picking" days are arranged from the first Saturday in May and then every fourth week after that while the chicks last. Such an arrangement is designed to



VI — Tropic Bird chicks being distributed after collecting. Each family man puts his share, still alive, in his own baskets.

allow very young birds to reach the right stage for the next "picking," or reach maturity and fly away to sea. Some 400-600 chicks are taken each year, and although the people claim that adults will breed again if the first chick is taken, this is hardly an adequate conservation programme, if losses at sea are taken into account. The adults are not eaten as the skin is too leathery and the flesh tough.

The people state that the birds are increasing very slowly, but they do not seem to be able, or want to understand that this is a result of their own actions. If they would not collect chicks for one year, or reduce their "picking" days, there is little doubt that the numbers of birds would increase vastly.

The chicks are brought back to the home islet alive and are fed with fish until they are required for cooking. Their feathers are used for stuffing mattresses, pillows and cushions, for fish lures, and for making crude shuttles for a form of badminton played with a wooden paddle solo. It is a children's game only.



VII — Some of the atoll men waiting for the distribution of chicks after the mass collection from the outer islets. Only a portion of the chicks collected are shown.

*Phaeton rubricauda* makes no nest. The egg is laid on the sand under the scrub fringing the beaches or a little inland in bush. These birds are helpless on the ground and are an easy prey. If a fish has just been given to a chick prior to its being caught, it is regurgitated on the sand. The islanders take this fish as a delicacy, wash it in the sea and eat it while still warm. They say it is good because it is "cooked."

#### WHITE TAILED TROPIC BIRD (*Phaeton aethereus*) — "Rakoa"

This bird never breeds on Palmerston. It is seen only rarely and is taken as a 'sign' that a hurricane or a heavy blow is coming.

Its coming is regarded with some dread by the islanders and

they will do it no harm whatever. They say it has never been sighted without being followed by bad winds or hurricanes. They say it flies low over the beach on Palmerston Islet, always in sight of someone, and it is understood from this that they regard the bird as some sort of supernatural messenger. They also reverse their claim to make it more definite and say that no blow has ever taken place without the bird having been sighted. This is open to doubt.

WHITE TERN (*Gygis alba*) — "*Kakavai*"

This is found only in small numbers but breeds on all the islets. The total number on the atoll probably never exceeds forty. This bird, at all age stages, is caught by hand for food as opportunity offers. Mostly the people climb trees at night and catch them while helpless.

When the islanders see this bird diving out at sea they take this as a sign of where the fish are and head towards the area in their boats.

SOOTY TERN (*Sterna fuscata*) — "*Seagull*" or "*Tara*"

This is another bird that no longer breeds on Palmerston. It appears to have been a victim of the hurricanes mentioned previously. It did breed until 1935. It is only seen very occasionally now, passing over in small flocks at a fair height. This bird, and its eggs, were eaten extensively before.

"GANNET" or "*Kena*"

I was not able to make any identification of this bird, although I saw it twice. It is a large black and white bird, obviously one of the tropical gannets.\* The islanders say that it comes in to roost about five o'clock every night on Big Stone, a coral boulder about eight or ten feet high on the north-western reef, a maximum of ten birds and a minimum of 4-5 at a time. I am inclined to believe that the night roosting is more intermittent because we passed the stone many times as late as half past seven and there was no sign of birds on most of these occasions. Just occasionally they are seen flying over the lagoon.

This bird never breeds on Palmerston and it may be another victim of hurricane or human occupation. Cook mentions seeing two sorts of Boobies nesting when he called during his Third Voyage.

"BOOBY" or "*Kapu*" (? *Sula leucogaster*)

This is an all-brown, large bird that is very seldom seen. I did not sight it, but was told of its appearance. It does not nest on Palmerston either and may be the second of the varieties mentioned by Cook.

It is said to appear between December and January only and is always on its own, never in pairs or greater numbers.

PETREL (? *species*) — "*Upoa*"

This species, which I did not see, was described to me as a dark brown, small bird with no markings and I was told that the son of one of the island men had seen the same bird nesting on the ground in burrows on Christmas Island.†

This bird is seen flying over Palmerston only three or four times

\* Likely to be *Sula dactylatra* (Ed.).

† Christmas Island Shearwater (*Puffinus nativitatis*); alternatively could be from description, *Bulweria* sp. (Ed.).



a year at most and the people will, under no circumstances, kill or harm it. It is a greatly feared bird as it is said to bring death or serious sickness.

I was told that the bird would turn and come in low over the head of anyone whistling or shouting or waving.

The origin of the 'sign' must have come from the Maori women from Manihiki or Penrhyn married into the family, but to-day all on the island believe it firmly. They say that, if any harm is done to this bird, "the person who harms finds a trouble on to himself or a person in his family."

Two examples were given in justification: the first is of a girl coming out of her father's house one night with a lamp. One of these birds flew into her and she caught hold of it and wrung its neck. Just a few days after her mother caught sick and died. The second example is of a man of 28 who killed one of the birds by yelling and whistling and then hitting it with a stick when it came low. A month or two later he died after a pain in his stomach. The people say that the spirit of his uncle came and spoke through him on his death bed and then "took" the spirit of the young man with him. It is claimed the body was dead when the ghost voice left. Other description makes it appear that the young man died of appendicitis or hernia, but otherwise the tale is beyond comment.

REEF HERON (*Demigretta sacra*) — "*Kotuku*"

This bird is seen around all the islets in grey, white, speckled and "black," a colour I did not see; but one of the islanders claimed it was definitely darker than the normal blue-grey.

They make their nests in the low ngangie scrub on North, Bird and Primrose Islets only, but are seen fishing everywhere. There cannot be more than fifty birds on the whole atoll and yet they are shot at continuously for food. How they exist I cannot say, because up to forty at least must be killed each year.

GOLDEN PLOVER (*Chrysodromus dominicus fulvus*) — "*Kuriri*"

Seen on Palmerston right through the year. From January to April they are seen in much greater numbers. At the time of my visit there would have been fewer than fifty. They do not breed on the atoll and they are not shot for food.

WANDERING TATTLER (*Heteroscelus incanus*) — "*Kuri*"

This bird is called the "*Torea*" on Palmerston because of its habit of nodding its head when on the ground. It is not shot for food. It also appears in greater numbers from January to April, but is never seen in very large numbers. Some remain right through the year.

BRISTLE-THIGHED CURLEW (*Numenius tahitiensis*) — "*Kivi*"

The same remarks apply as for the "*Kuriri*" and "*Kuri*." The number estimated by the people at the time of my visit was about 200, although this again could be an exaggeration. They were increasing by the end of August and flying in small flocks. They are shot for food. The bird does not breed on Palmerston.

PACIFIC FRUIT PIGEON (*Ducula pacifica*) — "*Rupe*"

These birds breed on all islets except the settlement islet. They are shot constantly for food.

The inhabitants' estimation of numbers was 500, but this is, I think, a gross exaggeration. It would be hard to make a close estimate, but I think the figure of 200 is closer.

**LONG-TAILED CUCKOO** (*Eudynamis taitensis*) — “*Karavia*”

This is called the “*Fantail*” or “*Kokorove*” on Palmerston. It is present all the year round and I was told that the numbers don't vary seasonally. This would seem to be incorrect. The bird has never been seen to breed on the atoll. During my visit there were probably between 20-40 of this species combined on all the islets. It is not shot for food. The people say that when it is heard whistling it is a sure sign of rain.

I was given a list of birds recorded as breeding, those probably present and those classified as vagrants, before I left for Palmerston and, by comparison, the number of birds commonly or even occasionally seen, is greater than anticipated. At the same time there are some surprises in the small number of species breeding. The only bird listed as a likely vagrant which was not seen was the duck; but while Muscovy ducks are bred and eaten in the settlement, I could not discover any record of migrating species having rested on the atoll; they probably do so, however, as recorded from Penrhyn and elsewhere.

It is unlikely that a visit to Palmerston of similar length to mine will be made for a considerable time because of its isolation. For this reason I hope these notes will be of some value in the general compilation of data on the birds of the Cook Group.

**THE FOOD OF THE MOREPORK**

By C. J. LINDSAY and R. G. ORDISH  
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In the earlier periods of ornithological history in New Zealand it was thought that the Morepork (*Ninox novaeseelandiae*) lived on birds, rats, and to a lesser extent, on insects. When regurgitated pellets were examined however, they were found to contain mainly insect remains.

Over the last six years twenty-five Moreporks have been received at the Dominion Museum and we have taken this opportunity to study further the feeding habits of this bird. The stomach of each bird was examined and, where possible, the contents were identified. The results, shown in the Table, also indicate an insect diet, vertebrate remains being found in only two specimens.

The specimens whose localities are known are all from the North Island and those without locality are almost certainly so. Because they were obtained in all seasons they give some indication of the Morepork's feeding habits.

Firstly the diet is varied and suggests random feeding on readily available species rather than a search for particular prey. Several insects such as moths and cicadas would only be available for a limited period while others, particularly the wetas, would be available throughout the year. As a result the wetas emerge as a staple item of diet.

Moreporks have been observed to feed on insects that have been attracted to street lights and also to take insects from trees. The presence of grass grub moth larvae in the samples suggests that Moreporks will feed also from the ground. This larva is a grassland pest which burrows deep in the soil and emerges at night to feed on grass. Of incidental interest is a sample of forty-two Noctuid moths eaten in mid-winter.