

## BIRDS OF THE TOKELAU ISLANDS

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Smithsonian Institution personnel C. Douglas Hackman, Lawrence N. Huber, Ralph D. Kirkpatrick, Richard W. Merrill, Max C. Thompson and Paul W. Woodward visited the Tokelau Islands from 26 February through 4 March, 1965. These islands lie between 8° to 10°S and 170° to 173°W. The atolls included in this report and time spent on each are as follows:

Fakaofu (= Fakaofu), 26 through 28 February, 46 hours

Nukunonu (= Nukunono), 28 February through 3 March, 66 hours

Atafu, 3 March through 5 March, 26 hours.

Some geographers (Weins, 1962) include Swain's Island as part of the Tokelau Group but it will not be considered here.

Atafu, the most northerly and smallest of the group, is composed of 42 islets with a land mass of about 550 acres (Macgregor, 1936:7). Presently about 300 people inhabit the atoll. As on all the Tokelau Islands, the main crop is copra and coconut palms have replaced the native vegetation. Since a limited amount of time was available we confined our investigations to one or two islets per atoll. On Atafu we concentrated on Fenulua Island.

Nukunonu is the central and largest of the Tokelau Islands. It has a circumference of 24 miles and is comprised of 24 islets constituting 1,350 acres (*Ibid*). Its population is about 500 persons. On Nukunonu we concentrated on Tokelau Island.

The most southerly of the atolls is Fakaofu which has about 60 islets of unknown acreage (*Ibid*). The village of Fakaofu is the most densely populated of any village in the Tokelau Islands with about 900 inhabitants. Nearly all our work was done on Matanga Island and nearby islets.

### CLIMATE

The weather during our stay was characterised by sunshine with occasional rain squalls. Seelye (1943) has summarised the weather for the Tokelau Islands: "Easterlies predominate during the day all the year around, attaining their highest frequency (over 60%) in June, July and August, the lowest (24% to 29%) in December and February. Northeasterlies and northerlies are the next most common from October to April, southeasterlies in the remaining months. In the summer months most of the fresh or strong winds are from the west.

"The annual rainfall at Atafu is also rather high with a mean of 123.68 inches, but the variations from year to year are considerable. The wettest 12-monthly period was from November 1929 to October 1930, when 177.9 inches of rain fell; the driest commenced May 1933, and 58.33 inches fell.

"The mean temperature is 82.5°F., with little variation from month to month. . . The average annual extremes are 91°F and 72°F, the absolute extremes 95° and 65°F."

Hurricanes are reported infrequently. Only two have caused damage in the Twentieth Century (January, 1914, and January, 1966).

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## VEGETATION

A limited variety of species was observed on those islets visited on the three atolls. Coconut palms predominated in the interior section of most islets with such species as *Scaevola*, *Messerschmidia*, *Pandanus*, and *Morinda* common along the beaches. Ground cover consisted primarily of scattered *Boerhaavia*, *Triumfetta*, several species of grass, several species of sedge and several species of fern. A parasitic species, *Cassythia filiformes*, was in vigorous competition with the vegetation along the beaches of Fakaofu.

Remnants of a *Pisonia* forest were found on one islet at Fakaofu and on Tokelau Island, Nukunonu. Several of these trees exceeded eight feet in diameter. Ground cover on Fakaofu, under the *Pisonia*, consisted of a dense growth of *Polypodium* ferns.

A species of salt bush occurred on all three atolls but was most common on Tokelau Island, Nukunonu, where a narrow belt was found along the edge of the lagoon. On the other atolls the species was confined to isolated clumps.

Banana, taro and sugar cane were cultivated in pits located on several of the islets of Fakaofu. The soil in these pits was reported to have come from Samoa as ballast on copra ships. No pits were observed on the other two atolls but investigations there were not extensive.

## BIRDS

The birds of the Tokelau Islands are little known. The first known specimen, collected by the Reverend S. J. Whitmee (Ramsay, 1878: 139), was deposited in the Australian Museum, Sydney. The present whereabouts of this specimen is unknown (Disney, pers. comm.). Apparently no other specimens were collected until 1924 when the Whitney South Sea Expedition stopped at Fakaofu Atoll from 2 April through 5 April. Correia, who was collecting for the Whitney Expedition at that time, said 78 birds were collected (J. G. Correia, unpub. field notes) but only 67 were catalogued at the American Museum of Natural History. Sixty-five of the 67 have been located or evidence of their whereabouts noted. Although all the Whitney material was never published under one cover, several of the specimens are mentioned in four papers (Amadon, 1943; Bogert, 1937; Mayr and Amadon, 1941; Stickney, 1943).

Smithsonian personnel collected 99 specimens during their visit. In addition, estimates were made of the bird populations on each of the atolls. The large size of Fakaofu and Nukunonu Atolls made it impossible to estimate populations of the whole atoll so estimates were made only for the islets actually visited. Estimates were made for the whole of Atafu Atoll.

The Tokelau avifauna is closely related to that of American Samoa, having many species in common including the Reef Heron, Pacific Fruit-pigeon, Black-naped Tern and New Zealand Cuckoo.

## SPECIES ACCOUNTS

The following species accounts treat all specimens, sight records, or other evidence of occurrence known for the Tokelau Islands. The Tokelau name, if known, is given under each species heading. All specimens listed were verified by Thompson. Subspecific names have

not been used because several of the groups need taxonomic revision. Birds not previously reported in the Tokelau islands are marked with an asterisk. All USNM specimens were collected in 1965.

\**Phaethon rubricauda*. Red-tailed Tropicbird

Tokelau: Tavake

One record of a bird in flight at Nukunonu 1 March 1965. The bird was identified by Hackman. A nun on Nukunonu Atoll had collected several Red-tailed Tropicbird feathers, indicating that it is probably a frequent visitor and may nest there.

\**Phaethon lepturus*. White-tailed Tropicbird

Woodward saw one of this species flying over Fakaofu Atoll 27 February 1965. There are no other records.

\**Sula leucogaster*. Brown Booby

*Specimens* — 2. *Fakaofu*: USNM 494394, m., testis minute, 1102 gms, moderate fat, immature, 27 February 1965. *Atafu*: USNM 494395, m., testis 12 x 4 mm, 1043 gms, heavy fat, 3 March 1965, heavy body moult.

The Brown Booby was uncommon on all of the islands. On 26 February, six came in to roost in *Pisonia* trees on Fakaofu. Two were observed the evening of 28 February and three on 1 March at Nukunonu. Three immatures were seen at Atafu on 3 March with five adults. We found no evidence of breeding.

*Sula sula*. Red-footed Booby

This Booby was seen only at Fakaofu where three were seen flying in to roost on Matanga Island, 28 February 1965.

*Fregata ariel*. Lesser Frigatebird

Tokelau: Katawha

*Specimens* — 8. *Fakaofu*: USNM 494378, m., testis 17 x 8 mm, 697.4 gms, heavy fat, 27 February; USNM 494379, m., testis 12 x 9 mm, 830 gms, heavy body moult, heavy fat, 27 February; USNM 494380, m., testis 10 x 4 mm, 725.6 gms, heavy fat, 27 February; USNM 494381, m., testis 14 x 7 mm, 711.6 gms, 27 February; USNM 494382, m., testis 11 x 7 mm, 700.4 gms, medium fat, 27 February. *Atafu*: USNM 494383, m., testis 11 x 5 mm, 739.7 gms, heavy fat, 3 March; USNM 494384, m., testis 12 x 7 mm, 834.3 gms, heavy fat, 3 March; USNM 494385, m., testis 15 x 8 mm, 802 gms, 4 March.

This was the only species of frigatebird observed in the Tokelau Islands. On Matanga Island, Fakaofu, we saw a flock of about 450 roosting in a grove of *Pisonia* trees. We saw no roosting flocks on Nukunonu but flocks were noted each evening flying northerly at a high altitude. Fenualoa Island on Atafu had a flock estimated at 500 birds, also roosting in *Pisonia* trees. We found no evidence of breeding on the islands although the residents said they have bred there.

The Whitney South Sea Expedition recorded this species but took no specimens (J. G. Correia, unpub. field notes).

*Demigretta sacra*. Reef Heron

Tokelau: Matuku.

*Specimens* — 10. *Fakaofu*: USNM 494402, f., largest ovum 6 mm, 4 collapsed follicles, old brood patch, 459.4 gms, light fat, 26 February; USNM 494403, f., ovary granular, 503 gms, little fat, 26 February; USNM 494406, m., testis 15 x 9 mm, 565.4 gms, no fat, 26 February; AMNH 205527, f., gonads small, 2 April 1924; AMNH 205526, f., gonads large, 3 April 1924; AMNH 205528, f., gonads large, 3 April 1924; AMNH 205504, m., gonads large, 4 April 1924; AMNH 205525, m., gonads large, 5 April 1924. *Atafu*: USNM 494404, f., largest ovum 15 mm, 508.2 gms, light fat, 3 March; USNM 494405, f., ova minute, 403 gms, 4 March.

The Reef Heron was common on all islands in the Tokelaus. We observed white, intermediate, and dark morphs. The specimen data indicate breeding occurs on the islands in February, March, and possibly in April. Population estimates were as follows: *Fakaofu*: 25±; *Nukunonu*: 15±; *Atafu*: 40±.

*Duck sp.*

*Tokelau*: Toloua

There are no known specimens of ducks from the Tokelau Islands. Father Goldfinch, the Catholic priest on *Nukunonu*, said they are seen nearly every year in February and March. A nun on the island identified them as Gray Ducks, *Anas superciliosa*, but there is no proof the identifications were correct.

*Pluvialis dominica*. Golden Plover

*Tokelau*: Kiakiao

*Specimens* — 14. *Fakaofu*: USNM 494515, f., ovary minute, 137.5 gms, heavy fat, 26 February; USNM 494516, m., testis 9 x 6 mm, 118 gms, moderate fat, 26 February; *Nukunonu*: USNM 494517, f., ovary 12 x 7 mm, 124.6 gms, moderate fat, 28 February; AMNH 205667, m., gonads small, moulting in breeding plumage, 2 April 1924; AMNH 205673, m., gonads small, moulting in breeding plumage, 2 April 1924; AMNH 205672, m., gonads small, no moult, 2 April 1924; AMNH 205674, m., gonads small, moulting in breeding plumage, 2 April 1924; AMNH 205671, m., gonads small, moulting in breeding plumage, 2 April 1924; AMNH 205669, m., gonads large, moulting in breeding plumage, 3 April 1924; AMNH 205679, f., gonads small, 3 April 1924; AMNH 205680, f., gonads small, moulting in breeding plumage, 3 April 1924; AMNH 205675, m., gonads small, 4 April 1924; AMNH 205676, m., gonads small, moulting in breeding plumage, 5 April 1924.

The Golden Plover was common on all of the atolls. Populations were estimated as follows: *Fakaofu* (*Matanga Island*): 20±; *Nukunonu* (*Tokelau Islands*): 10±; *Atafu*: 40±. All specimens belonged to the subspecies *fulva*.

*Arenaria interpres*. Ruddy Turnstone

*Tokelau*: Kolili

*Specimens* — 15. AMNH 205635, m., gonads large, 3 April 1924; AMNH 205633, m., gonads small, 4 April 1924; AMNH 205640, f., gonads small, 3 April 1924; AMNH 205636, f., gonads small, 3 April 1924; *Fakaofu*: USNM 494518, f., ovary minute, 134.9 gms, heavy fat, 26 February; USNM 494519, m., testis minute, 124.4 gms, heavy fat, 26 February; USNM 494520, m., testis minute, 135.8 gms,

heavy fat, 26 February; USNM 494521, f., ovary minute, 119.6 gms, heavy fat, 26 February; USNM 494522, f., ovary minute, 99.3 gms, heavy fat, 26 February; USNM 494523, m., testis minute, 108.9 gms, heavy fat, 26 February; USNM 494524, m., testis minute, 108.6 gms, heavy fat, 26 February; *Nukunonu*: USNM 494525, f., ovary granular, no fat, starving, 1 March; *Atafu*: USNM 494526, m., testis 2 x 1 mm, 107.3 gms, heavy fat, 3 March; USNM 494527, f., ovary granular, 141.9 gms, 3 March; USNM 494528, f., ovary granular, 122 gms, 4 March.

The Ruddy Turnstone was seen in small flocks on all of the atolls. All turnstones collected were in various stages of moult. Population estimates were: Fakaofu (Matanga Island):  $100 \pm$ ; Nukunonu (Tokelau Islands):  $10 \pm$ ; Atafu:  $200 \pm$ .

*Crocethia alba*. Sanderling

*Specimens* — 2. *Fakaofu*: AMNH 205917, m., gonads small, 2 April 1924; AMNH 205918, f., gonads small, 2 April 1924.

All observations and specimens of the Sanderling are from Fakaofu Atoll. Huber observed one on the beach at Fakaofu (Matanga Island), 26 February 1965.

\**Numenius tahitiensis*. Bristle-thighed Curlew  
Tokelau: Tiawhe

*Specimens* — 2. *Fakaofu*: USNM 494506, f., ovary granular, 580 gms, extremely heavy fat, 27 February. *Nukunonu*: USNM 494507, f., largest ovum 2 mm, 615.7 gms, heavy fat, 1 March.

We saw this curlew on all of the Tokelau Islands but it was not common on any of them. The specimens collected were in heavy moult. The primaries on one specimen had just emerged from the sheath. Population estimates were: Fakaofu (Matanga Island): 1; Nukunonu (Tokelau Islands): 2, atoll population probably not more than 25; Atafu Atoll:  $10 \pm$ .

*Heteroscelus incanum*. Wandering Tattler  
Tokelau: Vahavaha

*Specimens* — 9. *Fakaofu*: USNM 494398, m., testis 2 x 1 mm, 83 gms, little fat, 26 February; USNM 494399, m., testis 2 x 1 mm, 114 gms, medium fat, 26 February; AMNH 205626, f., gonads small, in breeding plumage, 3 April 1924; AMNH 205627, f., gonads small, 3 April 1924; AMNH 205628, f., gonads small, 3 April 1924. *Atafu*: USNM 494400, m., testis 3 x 2 mm, 130 gms, heavy fat, 4 March; USNM 494397, m., testis 2 x - mm, 123 gms, heavy fat, 4 March.

The Wandering Tattler was fairly common on reef edges on all of the atolls. Population estimates were: Fakaofu (Matanga Island):  $5 \pm$ ; Nukunonu (Tokelau Islands):  $5 \pm$ ; Atafu Atoll:  $80 \pm$ .

\**Anous tenuirostris*. Black Noddy

*Specimens* — 29. *Fakaofu*: USNM 494481, m., testis 10 x 5 mm, 120.2 gms, light fat, 27 February; USNM 494480, m., testis 4 x 3 mm, 122 gms, little fat, 26 February; AMNH 205734, f., gonads small, 5 April 1924; AMNH 205738, f., gonads small, 2 April 1924; AMNH 205737, f., gonads small, 4 April 1924; AMNH 205735, f., gonads small, 5 April 1924; AMNH 205741, f., gonads large, 5 April 1924; AMNH 205736, f., gonads small, 5 April 1924; AMNH 205733,

f., gonads small, 5 April 1924; AMNH 205731, m., gonads large, 5 April 1924; AMNH 205729, m., gonads small, 5 April 1924; AMNH 205740, f., gonads small, 2 April 1924; AMNH 205732, f., gonads small, 6 April 1924; AMNH 205728, m., gonads small, 4 April 1924; AMNH 205739, f., gonads small, 5 April 1924. *Nukunonu*: USNM 494485, f., largest ovum 2 mm, 123 gms, little fat, 28 February; USNM 494482, m., testis 7 x 6 mm, 98.7 gms, medium fat, 28 February; USNM 494483, f., ovary granular, 140.4 gms, little fat, 28 February; USNM 494484, m., testis 10 x 7 mm, 125.2 gms, medium fat, 28 February; USNM 494487, f., largest ovum 1 mm, 121.1 gms, 28 February; USNM 494486, m., testis 8 x 5 mm, 121.8 gms, medium fat, 28 February; USNM 494488, m., testis 13 x 7 mm, 127.5 gms, little fat, 28 February. *Atafu*: USNM 494490, m., testis 1 mm, 111.8 gms, heavy fat, 3 March; USNM 494489, m., testis 1 mm, 108.8 gms, medium fat, 3 March; USNM 494492, f., largest ovum 5 mm, 106 gms, medium fat, 4 March; USNM 494494, f., largest ovum 2 mm, 110 gms, light fat, oviduct greatly enlarged, 4 March; USNM 494493, m., testis 10 x 5 mm, 105 gms, medium fat, 4 March; USNM 494491, f., ovary granular, 134.2 gms, 3 March; USNM 494495, m., testis (right) 8 x 5 mm, 105 gms, light fat, 4 March.

This tern was the most common breeding bird in the Tokelau Islands. Although we found no nests on Fakaofu, we saw several birds catching fish and carrying them inland. The roosting population on Fakaofu (Matanga Island) was about  $840 \pm$ . On Nukunonu (Tokelau Island), we found a nesting colony numbering about 150 pairs on the north end of the island. The nests were in a *Pisonia* tree estimated to be 60 feet high. We were unable to tell whether there were young or eggs in the nests. The total roosting population on Nukunonu (Tokelau Island) was about  $4,000 \pm$ .

On Atafu Atoll many birds were constructing nests. This atoll had the largest population, about  $5,000 \pm$ . On this atoll one of the residents found a Black Noddy previously banded by Smithsonian personnel on Cook Island, Christmas Atoll, Pacific Ocean. Another band had been found on Nukunonu Atoll (species unknown) but had been lost before it could be reported.

*Anous stolidus*. Brown Noddy

*Specimens* — 22. *Fakaofu*: USNM 494470, m., testis 9 x 5 mm, 192 gms, no fat, 27 February; AMNH 205761, ?, gonads small, 4 April, 1924; AMNH 205764, f., gonads small, 3 April 1924; AMNH 205765, f., gonads small, 5 April 1924; AMNH 205756, m., gonads small, 5 April 1924; AMNH 205757, m., gonads small, 5 April 1924; AMNH 205759, ?, gonads small, 5 April 1924; AMNH 205767, gonads small, ?, 5 April 1924; AMNH 205763, f., gonads small, 2 April 1924; AMNH 205758, m., gonads small, 2 April 1924; AMNH 205760, f., gonads small, 2 April 1924; AMNH 205762, ?, 3 April 1924; AMNH 205766, f., 5 April 1924. *Nukunonu*: USNM 494471, f., largest ovum 3 mm, 173.4 gms, light fat, 28 February; USNM 494472, f., largest ovum 4 mm, 181.8 gms, light fat, old brood patch, 28 February; USNM 494473, m., testis 4 x 3 mm, 214.1 gms, medium fat, 28 February; USNM 494474, f., one ovum enlarged, 202.2 gms, heavy fat, 28 February. *Atafu*: USNM

494475, f., ovary 5 mm, 166.7 gms, medium fat, 3 March; USNM 494476, f., ovary 1 mm, 185.2 gms, medium fat, 3 March; USNM 494477, m., testis 10 x 5 mm, 219.1 gms, heavy fat, 3 March; USNM 494478, m., testis 6 x 2 mm, 184 gms, light fat, 4 March; USNM 494479, f., largest ovum 2 mm, 176 gms, medium fat, 4 March.

Small numbers of the Brown Noddies were roosting on Fakaofu (Matanga Island) and Nukunonu (Tokelau Island). These populations were estimated at  $200 \pm$  for each island. The state of the gonads of the specimens indicated that the species probably nested on the two atolls although nests were not found. Munro (1941:2) stated they were present in the Tokelau Islands in 1938. We estimated their population on Atafu Atoll at 3,000 birds. On Atafu, large flocks were roosting on the edges of the reef on the leeward shore.

*Procelsterna cerulea*. Blue-gray Noddy

This species was not observed by us on the islands but was reported by Ramsay (1878: 139) from the island of "Tokelov."

*Sterna sumatrana*. Black-naped Tern

*Specimens* — 16. *Fakaofu*: AMNH 205710, m., gonads large, 4 April 1924; USNM 494451, m., testis 4 x 4 mm, 101 gms, little fat, 26 February; USNM 494452, f., largest ovum 2 mm, 99 gms, little fat, 26 February; USNM 494453, f., largest ovum .5 mm, 98 gms, little fat, 26 February. *Nukunonu*: USNM 494454, m., testis 4 x 3 mm, 103 gms, medium fat, 2 March; USNM 494455, ?, immature, 96 gms, 1 March; USNM 494456, f., largest ovum 1 mm, 92 gms, 2 March; USNM 494457, m., testis 6 x 4 mm, 96 gms, medium fat, 2 March. *Atafu*: USNM 494458, f., immature, 106.2 gms, heavy fat, 3 March; USNM 494459, ?, immature, 109.4 gms, heavy fat, 3 March; USNM 494460, m., testis 7 x 5 mm, 112.3 gms, medium fat, 3 March; USNM 494461, f., largest ovum 4 mm, oviduct enlarged, 95.5 gms, medium fat, 3 March; USNM 494462, m., testis 6 x 7 mm, 97.8 gms, light fat, 3 March; USNM 494463, m., testis 8 x 6 mm, 99.7 gms, medium fat, 3 March; USNM 494464, f., largest ovum 2 mm, enlarged oviduct, 110.4 gms, medium fat, 3 March; USNM 494465, m., testis small, 112.4 gms, heavy fat, 3 March.

This tern was fairly common in the Tokelau Islands. The small size of the gonads and flying young suggest the breeding season had just ended.

The Black-naped Tern population on each atoll was about  $40 \pm$ .

*Sterna fuscata*. Sooty Tern

Tokelau: Talo-gogo.

*Specimens* — 5. *Fakaofu*: USNM 494437, m., testis 11 x 6 mm, 194 gms, little fat, 26 February. *Nukunonu*: USNM 494438, f., largest ovum 8 mm, 196.8 gms, heavy fat, 28 February. *Atafu*: USNM 494439, m., testis 13 x 6 mm, 194.5 gms, heavy fat, 3 March; USNM 494440, m., testis 11 x 4 mm, heavy fat, 199.8 gms, 3 March; USNM 494441, m., testis 10 x 5 mm, 198 gms, medium fat, 4 March.

This species was uncommon around Fakaofu and Nukunonu Atolls but common at Atafu. The residents stated that the Sooty Tern nests on Fakaofu and Atafu. Although we saw little prime habitat on these islands, a specimen taken on Nukunonu showed

evidence of coming into breeding condition. There was a flock of several thousand Sooty Terns near Atafu. The residents, using live birds as decoys, capture for food up to sixty per day with long nets from their canoes.

*Gygis alba*. White Tern

Tokelau: Akiaki

*Specimens* — 12. *Fakaofu*: USNM 494413, f., ovary granular, 99 gms, medium fat, 26 February; USNM 494414, f., ovary granular, 112 gms, no fat, 26 February; USNM 494415, f., largest ovum 2 mm, 118 gms, 26 February; USNM 494416, f., 26 February. *Nukunonu*: USNM 494417, f., ovary granular, 108.5 gms, no fat, 28 February; USNM 494418, m., testis 7 x 5 mm, 126.8 gms, medium fat, 1 March; USNM 494419, f., largest ovum 2 mm, 102 gms, little fat, 1 March. *Atafu*: USNM 494420, f., 1 collapsed follicle, brood patch, 125.6 gms, moderate fat, 3 March; USNM 494421, m., testis small, 101 gms, heavy fat, 3 March; USNM 494422, m., testis 5 x 4 mm, 119.7 gms, 3 March; USNM 494423, f., ovary granular, 102.3 gms, little fat, 3 March; USNM 494424, m., testis 5 x 3 mm, 112 gms, medium fat, 4 March.

This was a common breeding bird on all of the atolls. On Fakaofu we observed  $500 \pm$  in a feeding flock over the ocean along the eastern shore of the atoll. We estimated the population on Nukunonu to be over 1,000 birds and on Atafu,  $500 \pm$ . Nests and young birds were seen on all of the islands.

Although the Whitney Expedition reported this species, no specimens were taken (J. G. Correia, unpub, field notes).

*Ducula pacifica*. Pacific Fruit-pigeon

Tokelau: Lupe

*Specimens* — 8. *Fakaofu*: USNM 494407, f., largest ovum 3 mm, 369.8 gms, light fat, 27 February; AMNH 205335, f., gonads large, 3 April 1924; AMNH 205337, f., 3 April 1924; AMNH 205336, f., 3 April 1924. *Nukunonu*: USNM 494408, m., testis 14 x 7 mm, 457.2 gms, heavy fat, 1 March. *Atafu*: USNM 494410, ?, 210.8 gms, medium fat, 3 March; USNM 494409, f., largest ovum 3 mm, 351.1 gms, medium fat, 3 March; USNM 494411, m., testis 14 x 7 mm, 392.8 gms, heavy fat, 3 March.

This pigeon was common on all of the atolls. One specimen taken on Fakaofu had been producing crop milk, indicating the bird was feeding young. These records extend the known range of this species northward into the central Pacific from Samoa.

*Urodynamis taitensis*. New Zealand Long-tailed Cuckoo

Tokelau: Kaleua

*Specimens* — 4. *Fakaofu*: AMNH 205929, m., gonads small, 2 April 1924; AMNH 627555, m., gonads small, 3 April; AMNH 205932, f.?, 4 April 1924. *Atafu*: USNM 494425, m., testis minute, 124.6 gms, light fat, heavy body moult, 3 March.

This is apparently a regular migrant to the Tokelau Islands as the residents know it well. The one specimen taken was the only record during our week's stay on the islands.



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## BIOLOGICAL OBSERVATIONS FROM THE RENNICK GLACIER REGION, ANTARCTICA 1967 - 68

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The 1967-68 New Zealand Antarctic Research Expedition carried out reconnaissance geology of 6,000 square miles of territory in Northern Victoria Land. The six man party with three motor toboggans and six sledges were landed south of Latitude 72°S between the Quartzite Ranges and then worked northeastwards to the Rennick Glacier and to Frolov Ridge. The expedition then detoured to the Morozumi Range in the west and there recorded a number of bird sightings and lichen localities.

### *Bird Sightings*

Three species were observed, all early in the expedition. The birds were sighted from Latitude 70°45'S in the north, to Latitude 71°58'S in the south, and observation points varied from 500 to 7,000 feet above sea level. Skua (*Catharacta macormicki*) were observed on three occasions. Snow Petrels (*Pagodroma nivea*) four times and ? the Antarctic Tern (*Sterna vittata*) once.

The sighting of *Sterna vittata* can be regarded as only tentative because of the inexperience of the observers. The bird observed was of small size, with a black crown to the head, red bill and a distinct forked white tail. Only the Antarctic tern fits this description.

A large variety of lichen forms have been found throughout the area investigated. Mosses were found growing on weathered

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