

## NOTES ON THE BIRDS OF TUTUILA, AMERICAN SAMOA

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Very little information has been published on the present status, numbers and habits of Tutuila birds. Ashmole (1963) published a compendium on the birds of the Samoan Islands based primarily on literature sources and on specimens in the Bernice P. Bishop Museum, Honolulu. Her paper and two short annotated lists (Keith, 1957, and Dunmire, 1960), comprise all recent publications that present information on the birds of Tutuila. The purpose of this paper is to present supplementary observations made by members of the Smithsonian Pacific Ocean Biological Survey Program from 1963-1965.

Smithsonian field parties visited Tutuila six times from 1963 to 1965: November 8-12, 1963, March 6-10, 1964, July 3-6, 1964, October 28-November 1, 1964, February 21-25, 1965, and June 6-10, 1965. Although our primary purpose in visiting Tutuila was not bird study, we made many incidental observations and collected 49 specimens, most of them landbirds.

Our observations did not cover all parts of Tutuila, and some areas were visited much more frequently than others. We made observations at Pago Pago International Airport and along the coast road running west from Pago Pago to the airport on almost all visits. On most visits we walked the dirt road from the west end of Pago Pago Harbour up to the ridge over which the road passes toward the village of Fagasa. The east end of the island, and the mountain ride to the north of Pago Pago Harbor, the reservoir about a mile southwest of Pago Pago, and the west end of Tutuila were visited less frequently.

The airport area and coast road and the pass to the windward side are perhaps the two most rewarding locations for the bird watcher. At the airport, Banded Rails are both common and tame, and a great variety of small landbirds, including the Cardinal Honeyeater, White-collared Kingfisher, and Wattled Honeyeater may be seen here in scattered patches of forest. Among the species which may be seen with relative ease along the coast road are the White-collared Kingfisher, Wattled Honeyeater, Reef Heron, and various species of shorebirds.

Intersecting the pass an uncompleted road follows the ridge of Fatifati Mountain to the north. From this road swiftlets, kingfishers, honeyeaters, both starlings, and other species may be easily observed. The Purple Swampphen may also be found in this area. On almost every visit a small number of large fruit bats were seen flying from ridge to ridge or roosting in large trees along the road.

The reservoir, about a mile south of Pago Pago and near the base of Palapalaoa Mountain, may be visited by following a path from Pago Pago which ascends and crosses the ridge of Matai Mountain. The path up the ridge is very steep but is fairly level and is partially paved from the top of the ridge to the reservoir. A walk along this path provides the best opportunity for close looks at landbirds, particularly the two fruit doves.

Our observations on the birds are given in two annotated lists below; the first gives our observations on migrants and resident land-birds; the second, our observations on the seabirds. An account is given under each species of the number of specimens collected and of such data on gonad development and stomach contents as may be relevant.

We wish to express our thanks to other members of the Pacific Program who allowed us to use their field notes, particularly Lawrence N. Huber and C. Douglas Hackman; and to acknowledge our indebtedness to Dr. Philip S. Humphrey, who allowed us time from our other duties so that we might make these observations.

## PART I — NOTES ON THE MIGRANTS AND LANDBIRDS

### GOLDEN PLOVER (*Pluvialis dominica*)

Few Golden Plovers were seen on any visit to Tutuila. We recorded 5 to 10 birds in Pago Pago harbor in November 1963; 15 to 20 near the airport in July 1964; and 3 on the windward shore near the village of Masausi on October 29, 1964.

### RUDDY TURNSTONE (*Arenaria interpres*)

We recorded this shorebird less frequently than either of the other common shorebirds, the Wandering Tattler and Golden Plover. Four were seen on November 10, 1964, near the airport, and a small flock was present there in July 1964.

Although this common Central Pacific shorebird must have been seen in the past by other observers on Tutuila, we have been able to find no published record of its occurrence there.

### BRISTLE-THIGHED CURLEW (*Numenius tahitiensis*)

Only a single Bristle-thighed Curlew was seen during our visits to Tutuila. On November 10, 1963, a single individual was seen in an open field near the airport. It has not been previously recorded from Tutuila and is presumably a relatively uncommon migrant.

### WANDERING TATTLER (*Heteroscelus incanum*)

Wandering Tattlers have been seen with relatively greater frequency than any other shorebird species on Tutuila. They were usually found feeding along the rocky shoreline, either singly or in pairs. In November 1963 one was seen at about 800 feet on the ridge west of Pago Pago, feeding along a fast-flowing mountain stream.

### REEF HERON (*Egretta sacra*)

Reef Herons were seen on almost every visit but were most abundant in July 1964 and February 1965, when small roosts were found on Futi Rock, a small island just southwest of the mouth of Pago Pago Harbor. On July 3, 1964, about 10 herons roosted on this island; in February 1965 about 15 roosted there, one of which was collected on February 24 (USNM 494401).

Smaller numbers were seen on other visits. On November 10, 1963, 4 Reef Herons were seen feeding in the rocky shallows near the coast road that leads from Pago Pago to the airport; on October 29, 1964, 2 were seen on a small peninsula near the road east from Pago Pago, and a few others were seen along the runway at the airport and in Pago Pago harbor. All of these birds have been dark-plumage morphs.

**BANDED RAIL (*Rallus phillipensis*)**

Banded Rails were seen on each visit, often at lower levels but frequently well on the mountainsides. They were abundant in the vicinity of the airport where 7 or 8 rails could be seen in a few hours. The Banded Rails in this area are extremely tame and may be seen walking around parked vehicles much like domestic poultry. They are much more common on Tutuila than the Purple Swampphen. A single female (USNM 493500) collected on March 8, 1964, had an ovary 13 mm. long.

**PURPLE SWAMPHEN (*Porphyrio porphyrio*)**

Despite Ashmole's statement that Purple Swampphens are "a very common bird found on all the [Samoan] islands," we saw this bird rather infrequently. On November 10, 1963, a single bird was flushed out of dense vegetation at about 1000 feet on the north side of Palapalalao Mountain. We saw another on July 5, 1964, on the near side of this pass above Fagasa and several more on the ridge southeast of Fatifati Mountain in June 1965.

Native informants state that Purple Swampphens frequently perch in banana trees and feed on the ripe bananas.

**CRIMSON-CROWNED FRUIT DOVE (*Ptilinopus porphyraceus*)**

The fruit pigeons were common in forested areas on Tutuila but were difficult to observe since their plumage blended exceptionally well with the foliage. Nearly all fruit pigeons seen and identified were of this species, which is perhaps from 20 to 30 times as numerous on Tutuila as the Many-colored Fruit Dove.

A single specimen (USNM 495761) was taken June 7, 1965, in the reservoir valley. This bird had enlarged testes (13mm.) and weighed 108.6 grams.

**MANY-COLORED FRUIT DOVE (*Ptilinopus perousii*)**

A single specimen (USNM 495762) collected June 7, 1965, on the south flank of Palapalalao Mountain, and another bird seen there the same day constitute the only Pacific Program records of this species on Tutuila. The specimen had enlarged testes (13 mm.) and weighed 108.6 grams.

**PACIFIC PIGEON (*Ducula pacifica*)**

On most of our visits we saw no Pacific Pigeons. Before the June 1965 visit we had seen Pacific Pigeons only once: a single bird observed flying over Fatifati Mountain on July 5, 1964. In June 1965 Huber saw at least 20 of these birds, often flying singly from ridge to ridge. We have never seen large flocks such as those described by Ashmole (1963). On this same visit, Huber met a group of hunters who had shot three pigeons. It is likely that the low Pacific Pigeon population is caused by hunting pressure.

**LONG-TAILED CUCKOO (*Urodynamis tailensis*)**

This species was seen only infrequently by Pacific Program personnel and is apparently not very numerous on Tutuila. On November 9, 1963, we saw a single bird flying between Palapalalao Mountain and the ridge west of Utumoa Stream. Two more were seen the following October on the ridge between Filiiae and Leaeno Mountains on the east end of the island. One of these, an adult male (USNM 493949), was collected on October 30, 1964. Another cuckoo, an immature male (USNM 495734), was collected on June 8, 1965, as it sat in a densely leaved tree on the side of Fatifati Mountain.

The adult male's stomach contained two locusts and crab and fish remains, indicating that the bird had been feeding along the shore. (Native informants state that these cuckoos are often terrestrial and are frequently seen walking along dirt roads). The weight of the adult was 135.3 grams, that of the immature, 90.1 grams.

#### BARN OWL (*Tyto alba*)

On October 30, 1964, we were given a specimen that had been killed about a week before. Agricultural entomologist Neal Spencer obtained the specimen from a native hunter who had shot it for food. The specimen, a female, (USNM 493942) was not in breeding condition (ovary: 5mm.).

#### WHITE-RUMPED SWIFTLET (*Collocalia spodiopygia*)

Swiftlets were seen frequently on each visit to Tutuila, and they were particularly abundant along the cliff faces on the ridge west of Pago Pago. On November 9, we saw several hundred swiftlets in this area, but on March 7, 1964, they were much less numerous, perhaps 50 in all being sighted.

We watched as they sailed by on slightly downbent wings, flapping much less than the North American Chimney Swift (*Chaetura pelagica*). For the most part they were silent, but occasionally they gave high-pitched "twi-tweet" notes.

A single specimen a male (USNM 493502) collected March 7, 1964, showed no sign of gonad enlargement (testes: 2mm.).

#### WHITE-COLLARED KINGFISHER (*Halycon chloris*)

We have seen Kingfishers on each visit, and they are probably more numerous than our observations would indicate. Secretive and inconspicuous, they are usually noticed only in flight or on exposed perches. On November 8, 1963, we saw 6 to 8 birds perching on telephone wires along the coast road from Pago Pago to the airport. Similar numbers have been seen on each visit.

On March 7, 1964, the senior author found a nest with young near the top of a 40 foot high mud bank on the ridge crest west of Pago Pago. Although we could not reach the nest, the chorus of harsh notes given by the young and their presence at the burrow entrance indicated that they were well grown. Their calls, a series of buzzy, rasping, "a-a-a-h" notes, easily audible more than 50 yards from the nest, continued incessantly — even when the adult birds were not present. A green lizard 2 inches long and a large green insect resembling a katydid were among the food items brought to the young, which were fed by both adults.

Five specimens were collected, two on March 7, 1964 (USNM 493484, 493485); two on March 8, 1964 (USNM 493482, 493483), and one on June 8, 1965 (USNM 495759). None had enlarged gonads.

Two green katydids and the head parts of a large beetle were found in the stomach contents of one specimen (USNM 493483).

#### RED-VENTED BULBUL (*Pycnonotus cafer*)

Keith (1957) recently reported that this species was common on Upolu, where it was presumably introduced (Ashmole, 1963). When we first visited Tutuila on November 8, 1963, from 3 to 5 of these bulbuls were seen in the tops of the palms and on the telephone wires in the centre of Pago Pago. In June 1965, the Red-vented Bulbul was numerous in Pago Pago, and several individuals were seen in the

hills bordering Vaitapo Valley south of the town. This suggests that Red-vented Bulbuls eventually may be found throughout the island.

This species has not been previously recorded from Tutuila and presumably was introduced sometime after 1957. (Dunnire visited the island in 1960 but confined his observations to the coast road northwest of Pago Pago).

#### MAO (*Gymnomyza samoenia*)

Despite prolonged searches on several visits, Maos were neither seen nor heard by Pacific Program personnel. At present Maos are either very rare on Tutuila or have been exterminated from the island.

#### WATTLED HONEY-EATER (*Foulchio carunculata*)

This very common Samoan species was the most conspicuous land bird, often found in noisy flocks of 8 to 10 birds in brushy second growth. As many as 40 or 50 were seen in the course of a single day's observations. Eleven specimens were collected, 7 on March 7 and 8, 1964 (USNM 493486-493492), 3 on October 29 and 30, 1964, and 1 on June 7, 1965 (USNM 495760). None of these birds had enlarged gonads.

#### CARDINAL HONEYEATER (*Myzomela cardinalis*)

On each visit Cardinal Honeyeaters were regularly seen in small numbers at the lower elevations, although they were more numerous at the upper elevations, particularly near the tops of Matafao Peak, where they were usually the only landbirds seen. They were common also in the vicinity of the airport, where about 15 were seen on November 10, 1963.

Ashmole (1963) stated: "Apparently there are many more males than females seen." At lower elevations our observations corroborate her statement, but we found that near the mountaintops females and immatures outnumbered males 4 or 5 to 1.

An adult male (USNM 493501) was collected on March 8, 1964, and another adult male (USNM 495758) was collected on June 8, 1965. Neither had enlarged testes, and the latter specimen was in heavy molt.

#### POLYNESIAN STARLING (*Aplonis tabuensis*)

This starling is decidedly less common on Tutuila than its congener, the Samoan Starling. While small numbers of Polynesian Starlings have been seen on every visit, the Samoan Starling is about 50 times as numerous.

Two specimens were collected on March 8, 1964. One of these, a female (USNM 493499), had an enlarged ovary (10 mm.), the other, a male (USNM 493498), had small testes (3 mm.).

#### SAMOAN STARLING (*Aplonis atrifuscus*)

Samoan Starlings commonly were seen everywhere from sea level up into the mountain forest. It is a noisy and conspicuous species.

Eleven specimens, 9 of them males, were collected, 5 in March 1964, 3 in October 1964, and 3 in June 1965 (USNM 493493-493497, 498059-498061, 495755-495757). Gonads were neither fully developed in March (testis: 4-8 mm. in 3 birds), nor in October (testes: 6-8 mm. in 3 birds). Two of 3 males collected in June, however, had 11 mm. testes, suggesting a summer breeding season. Weights of the 3 October males were 132.3, 147.5, and 158.5 grams, while the 3 June males weighed 144.0, 135.5, and 151.0 grams.

## PART II — NOTES ON THE SEABIRDS

On three departures from Tutuila we made counts of all birds seen on our cruise track from the mouth of Pago Pago harbor for a distance of 10 miles. The numerical results of these counts are given in the table below. The annotated species list following the table contains observations made both on the island and offshore.

TABLE 1 — Numbers of Birds Seen Offshore Tutuila, American Samoa  
Dates and Periods of Observation

Species	Mar. 10, 1964 (0930-1030)	Nov. 1, 1964* (1100-1130)	June 10, 1965 (0930-1040)
Wedge-tailed Shearwater ----	1	—	—
Unidentified Shearwaters ----	7	—	—
Phoenix Island Petrel? ----	—	—	1
White-tailed Tropicbird ----	—	—	1
Red-footed Booby ----	2	—	7
Brown Booby ----	7	—	3
Common Noddy ----	63	84	42
Fairy Tern ----	6	15	100**

\* Includes observations for only the first five miles.

\*\* During this count Fairy Terns were too numerous for accurate enumeration. The figure given in the table merely represents the order of magnitude.

## ANNOTATED LIST

WEDGE-TAILED SHEARWATER (*Puffinus pacificus*)

This species was most abundant off Tutuila during the winter months. In addition to the bird listed above, we saw a single bird offshore on November 8, 1963, about 15 Wedge-tailed Shearwaters on February 21, 1965, and nearly as many on February 25 when we left Pago Pago. Most of these birds were the dark-plumage morph.

AUDUBON'S SHEARWATER (*Puffinus lherminieri*)

Hackman saw a single Audubon's Shearwater about one mile offshore on February 21, 1965.

PHOENIX ISLAND PETREL (*Pterodroma alba*)

A bird tentatively identified as a Phoenix Island Petrel was seen March 10, 1964, about 10 miles offshore. Since this species is difficult to distinguish, at sea, from the Tahitian Petrel (*Pterodroma rostrata*) we feel that a more positive identification is untenable, unless corroborated by a specimen.

WHITE-TAILED TROPICBIRD (*Phaethon lepturus*)

We saw only a small number of White-tailed Tropicbirds in Pago Pago harbor or close offshore. They were far more numerous in the hills behind Pago Pago, where 8 to 10 birds were often in sight at one time. Larger numbers were present there on visits in March, June, and July than on visits in October, November, and February. Two specimens (USNM 495683, 495684), both females, were collected on June 8, 1965. One (495684) had enlarged gonads (largest ovum 5 mm.). The weights of the birds were 295 and 277 grams.

**RED-FOOTED BOOBY** (*Sula sula*)

We saw small numbers, usually from 3 to 10 birds, on every visit, either from the shore near the east end of the island or outside the harbor during our arrivals and departures. We saw the largest number of Red-footed Boobies on February 21, 1965, when a flock of 45 was seen several miles offshore.

**BROWN BOOBY** (*Sula leucogaster*)

Small numbers of this species were seen on most visits, either offshore the east end of the island or near the harbor mouth. Brown Boobies usually were seen closer to shore than Red-footed Boobies.

In addition to those birds noted in Table 1 above, we saw 2 Brown Boobies as we approached the harbor mouth on November 8, 1963; 1 at the harbor mouth on March 6, 1964; and about 5 to 10 off the east side of Tutuila in March 1964.

**GREAT FRIGATEBIRD** (*Fregata minor*)

A few of these birds were seen on 3 of our visits. We saw 2 birds, a male and a female, over Futi Rock on November 10, 1963; another on March 9, 1964, at the east end of Tutuila offshore Folaui Point; and 3 more over Pago Pago harbor on February 24, 1965.

**LESSER FRIGATEBIRD** (*Fregata ariel*)

On November 10, 1963, we saw an adult male and an adult female over Futi Rock. The distinctive white flank markings of the male and the sharp delineation between breast and throat in the female were seen clearly. In addition, both birds were compared with 2 Great Frigatebirds seen simultaneously in the same area. On October 29, 1964, 2 adult males were seen on the windward side of the island. Although this species is not listed as occurring in Samoa by Ashmole (1963), an earlier paper noted that 2 Lesser Frigatebirds were seen along the coast road without giving further details (Dunnire, 1960).

**COMMON NODDY** (*Anous stolidus*)

The Common Noddy and the Fairy Tern were usually the two most numerous species offshore Pago Pago harbor. Common Noddies were frequently observed in feeding flocks with other species such as Fairy Terns, Brown Boobies, and Red-footed Boobies. Numbers of Common Noddies in such flocks include observations of about 30 birds on March 6, 1964; about 20 on March 10, 1964; about 80 on November 1, 1964; about 40 on June 7, 1964, and about 40 on June 10, 1965. These birds also frequented the forest hills behind Pago Pago and were often seen along the coast. In either area, 8 to 10 individuals were in sight at one time.

On October 29, 1964, several Common Noddies persistently dived on Pacific Project personnel, suggesting the presence of nesting activity. On this visit Huber found on the windward side of the island near Cape Larsen a colony of about 200 Common Noddies nesting in tall trees that grew up a cliff at an 80° angle to the water. On June 6, 1965, Huber saw a nestling Common Noddy almost ready to fledge.

**HAWAIIAN NODDY** (*Anous minutus*)

We saw 2 Hawaiian Noddies in a flock of feeding Fairy Terns on March 6, 1964. This single observation, when compared with our numerous observations of Common Noddies, indicates that this species is the less common by far of the two noddies on Tutuila.

FAIRY TERN (*Gygis alba*)

We saw Fairy Terns on each visit to Tutuila. They were usually most abundant in the forested hills behind Pago Pago where (as in November, 1963) as many as 10 birds were in sight at one time. The largest numbers were seen in June, 1965, when at least 100 were observed just outside the harbor. (Peculiarly, Fairy Terns had been much less abundant the preceding July 1964, when relatively few birds were seen either offshore or in the hills). Three specimens were collected. One, a female (USNM 494412), collected at Futi Rock, February 24, 1965, had partially enlarged gonads (lg. ovum 2 mm.). The other two, a female and a male (USNM 495597, 495598) collected June 8, 1965, had partially enlarged gonads (lg. ovum: 3 mm; testes 6 mm.) and weighed 111 and 107 grams respectively.

BLUE-GRAY NODDY (*Procelsterna cerulea*)

These small terns were seen on every visit to Tutuila. A few were seen flying high up the mountainside in company with more numerous Fairy Terns and Common Noddies, although they were distinctly less frequent there than along the coastline and in the harbor.

On November 10, 1963, we saw 4 Blue-gray Noddies flying about Futi Rock near the mouth of Pago Pago harbor, and on the twelfth saw a flock of 25 or 30 birds in the same area. On March 6, 1964, about 40 were seen at the harbor mouth in a feeding flock composed of Common Noddies, Fairy Terns, and Brown Boobies. The following July small numbers were seen about Futi Rock. Others were seen flying high up on the mountain ridge on the east side of Tutuila. On October 29, 1964, when we again visited the east side of the island, the junior author found a nearly fledged nestling and several old nests on Malo Point, near the east end of Tutuila.

Five specimens, 3 females and 2 males (USNM 494496-494500), collected at Futi Rock, February 24, 1965, were not in breeding condition, judging from the size of the gonads. The 3 females weighed 45, 47, and 48 grams; the 2 males, 52 and 57 grams.

## SUMMARY

Observations on 19 species of resident and migrant birds and on 12 species of seabirds are reported herein together with data on specimens. Breeding records are given for the White-collared Kingfisher, Common Noddy, and Blue-gray Noddy. Red-vented Bulbul, Bristle-thighed Curlew and Ruddy Turnstone are reported from Tutuila for the first time.

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