

American Museum Novitates

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK 24, N.Y.

NUMBER 1792

SEPTEMBER 28, 1956

Results of the Archbold Expeditions. No. 74 The Birds of Goodenough Island, Papua

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The D'Entrecasteaux Group lies off the north coast of Papua at the extreme east end of New Guinea. There are many small islands in the group, but the three main islands are Goodenough, Fergusson, and Normanby.

In many respects the most interesting of these is Goodenough Island, for it is the only one of the group with a known mountain avifauna. The lowland bird fauna of the three islands is, on the whole, rather similar. There is not a single case known where a species breaks up into different subspecies on different islands of this group. However, some species seem to be restricted to one or two of the islands. The best known of these is *Paradisaea decora* which is found only on Fergusson and Normanby. There is no doubt that this conspicuous species is absent from Goodenough.

The Fourth Archbold Expedition to New Guinea visited Goodenough Island from September 22 to November 2, 1953. "Top Camp," a collecting station located near the upper limit of the mid-mountain oak and *Castanopsis* forest at an elevation of about 1600 meters, was in operation from October 7 to October 24. Although the prime objectives of the expedition were mammals and plants, the junior author, at the suggestion of Mayr, also collected birds at this camp.

There are now some 76 species of land birds known from Goodenough Island. Four of these are migrant visitors, 10 are mountain species, and 62 are lowland birds. Included in this last figure are two species, *Col-*

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localia vanikorensis and *Rhipidura rufifrons lousiadensis*, discovered for the first time on this island by the Archbold expedition. *Monarcha axillaris fallax*, a mountain bird, is also a first record. The others are recorded in "List of New Guinea Birds" (Mayr, 1941).



FIG. 1. Outline map of eastern Papua showing the relative position of the islands of the D'Entrecasteaux Group to the New Guinea mainland. Numbered localities on Goodenough Island: 1, Bolu Bolu; 2, No. 2 Camp; 3, Top Camp.

COMPOSITION OF THE MOUNTAIN AVIFAUNA

The 10 species that appear to be restricted to the mountains are:

1. *Ptilinopus rivoli bellus* Sclater

The only available male (wing 143 mm.) seems to be at the extreme of the species with respect to three characters: the deep blue spots on the scapulars are rather large; the white and yellow throat band is rather narrow; and the purple spot on the abdomen is rather small and separated from the throat band by a wide green belt. These three characters may not be significant, as the latter two characteristics may have been produced by the preparation of the skin, and the spotting of the scapulars is variable. Yet it would seem desirable to examine more specimens from Goodenough Island.

2. *Gymnophaps albertisii albertisii* Salvadori

Specimens are indistinguishable from those of the New Guinea mainland.

3. *Collocalia hirundinacea* subsp.

The available material is insufficient for subspecific determination.

4. *Turdus poliocephalus canescens* (De Vis)

This, the most interesting species of the island, has not been found again since it was first collected by Captain W. E. Armit, a Government Patrol Officer. Three specimens are in the Queensland Museum, Brisbane; the skins do not bear field labels (George Mack, *in litt.*). De Vis described this bird as a full species, *Merula canescens*, in a "Supplementary List" (De Vis, 1894, pp. 104-105) to his report on the Mt. Maneau (mainland) birds obtained by R. E. Guise and W. E. Armit. Neither Meek nor Hamlin, field representatives of the Tring Museum and the American Museum, respectively, collected above 1250 meters; Van Deusen did not collect above 1600 meters. Armit climbed one of the main peaks (Mt. Oiamadawa'a, 2160 meters), and, from evidence presented below, we believe that he spent about a week hunting at the high altitudes where this species occurs. There is little doubt that Armit took these specimens.

5. *Phylloscopus trivirgatus hamlini* Mayr and Rand

Two adult males were collected by the Archbold expedition. The measurements are: wing, 56.5 mm., 57; tail, 40, 40. These two additional

specimens fully confirm the original diagnosis (Mayr and Rand, 1935). This species was frequently observed in the well-lighted top canopy of the mid-montane oak forest, especially at the edges of the ridge tops.

6. *Monarcha axillaris fallax* (Ramsay)

One adult female was collected by the Archbold expedition. This is a new record for Goodenough Island, and the first one outside the mainland of New Guinea. The wing measures 72; tail, 74.5; weight, about 14 grams. It is indistinguishable in color from southeast New Guinea birds, but rather small. This individual was collected at the sunlit edge of the oak forest.

7. *Pachycephala soror remota*, new subspecies

TYPE: A.M.N.H. No. 388847, adult male; collected October 11, 1953, by Hobart M. Van Deusen; original No. G.6.

TYPE LOCALITY: "Top Camp," east slopes of Goodenough Island, D'Entrecasteaux Group, Territory of Papua. Altitude, about 1600 meters.

DIAGNOSIS: Adult male similar to that of *bartoni* Ogilvie-Grant (southeast New Guinea), but slightly richer yellow below. Male (in juvenile plumage) indistinguishable in coloration from southeast New Guinea birds in similar plumage. Adult male larger: wing, 96, against 85 to 91 in *bartoni*; tail, 71.5, against 61 to 66 in *bartoni*. Juvenile male larger: wing, 88.5, against 85, 86; tail, 68.5, against 60.5, 64.

RANGE: Restricted to Goodenough Island.

HABITAT: The juvenile male of this species was collected on April 24, 1913, by Albert S. Meek (Rothschild and Hartert, 1914). Meek's collecting locality reads, "on the mountains of Goodenough Island during the months of March, April and May, 1913." From a report on the insects found by Meek on the same trip, we learn further that he collected at elevations up to 1250 meters during this 1913 visit. As defined by Leonard J. Brass, botanist to the Archbold expedition, the mid-montane oak and *Castanopsis* forest on Goodenough forms an important cloud-forest zone between a lower limit, which varies from 900 to 1100 meters, and an upper limit at about 1600 meters. This zone has a dense primary canopy, with a rather sparse under story except in the gullies where *Pandanus* trees grow more thickly. Scrambling bamboo is common, and its growth on the edges of the forest is especially rampant and helps to screen out light. Mosses, lichens, and hepatics are present everywhere, giving this forest its characteristic mossy appearance. Ferns are abundant; the tree ferns are particularly striking. When the almost daily cloud mass settles on

the mountains, this mossy oak forest is a dimly lit world of mists and dripping branches.

8. *Myzomela rosenbergii longirostris* Mayr and Rand

Five adult males (one in alcohol) collected by the Archbold expedition. The wings measure: 64, 65.5, 66, 67. The bill is strikingly longer than in the nominate subspecies of the New Guinea mainland. The average weight of three adult males was about 12 grams.

A conspicuous, large, canopy-climbing *Vaccinium* with beautiful clusters of rose-pink flowers was in bloom at the time of the visit of the expedition. Several honeyeaters were collected while feeding on this vine. At No. 2 camp (900 meters) in rain forest this red and black honeyeater was feeding on the flowers of a huge forest tree, *Terminalia*. Two were collected in this locality.

9. *Zosterops fuscicapilla crookshanki* Mayr and Rand

Hamlin is the only collector who has encountered this very distinct endemic subspecies.

10. *Erythrura trichroa sigillifera* (De Vis)

This is a widely distributed mid-mountain bird in New Guinea. It has been collected on many of the near-by islands, including Sudest in the Louisiade Archipelago.

REMARKS ON THE MOUNTAIN AVIFAUNA

The above list of the 10 known species of Goodenough Island mountain birds is interesting for several reasons. Four species, *Monarcha axillaris*, *Pachycephala soror*, *Myzomela rosenbergii*, and *Zosterops fuscicapilla*, as well as one subspecies, *Ptilinopus rivoli bellus*, are otherwise restricted to the mainland of New Guinea. Goodenough is the only place outside New Guinea where these forms occur. Perhaps even more interesting than the list of known species is the list of Papuan mountain elements that are absent. This includes all mountain birds of paradise, *Sericornis*, *Gerygone*, *Poecilodryas*, *Melidectes*, etc. One or more of these genera are undoubtedly still to be found. This is suggested by the fact that the following species have been found by only a single collector: *Turdus poliocephalus* by Armit; *Zosterops fuscicapilla* by Hamlin; *Monarcha axillaris* by Van Deusen. In the small list of species brought back by these three, there is an essential duplication of collections, indicating that the mountain fauna is indeed very much impoverished. This is particularly surprising in view of the relatively short distance (about 85 kilometers) between Good-

enough Island and the nearest high mountains of the New Guinea mainland. The distance to the nearest point on the mainland (Cape Vogel) is about 30 kilometers.

NOTES ON THE LOWLAND AVIFAUNA

Five lowland species (seven specimens) were also collected at "Top Camp" (1600 meters). *Macropygia n. nigrirostris* and *Lorius hypoinchrous devittatus* were seen almost daily flying up and down the ridges and feeding in the high forest trees near camp. *Collocalia vanikorensis* (subsp. ?) was found by Brass nesting at the edge of a small stream near camp under an overhanging bank of earth and rocks interlaced with tree roots (about half a dozen nests, some with no eggs, one with two eggs, no young in any nest). *Rhipidura rufifrons lousiadensis* was collected in the oak forest less than 5 feet from the ground; it showed a complete lack of wariness. *Myiolestes megarhynchus fortis* was commonly seen and heard near camp; its song perch was in the under story, 10 to 20 feet above the ground. A sixth species, *Lonchura castaneothorax nigriceps*, was collected at Bolu Bolu in grasslands near the southeast coast on October 2; its song perch was 6 to 8 feet above the ground. This is the second known specimen from Goodenough Island.

Hannibal Hamlin collected a juvenile male *Rhipidura rufifrons* on Fergusson Island on November 15, 1928 (no altitude given). Size and color characters of this specimen and of the two Goodenough examples separate the D'Entrecasteaux population from the populations of the Louisiade Archipelago. We do not feel, however, that this population should be named on the basis of so small a sample. Specimens from the Louisiades also show definite population differences among several of these islands. Particularly interesting is a large female collected July 31, 1930, by Hamlin on Panapompom, one of the Deboyne Islands. This specimen measures: wing, 80.5; tail, 93. The tail is rufous, basally, for over 50 per cent of its length. The female from Goodenough measures: wing, 68; tail, 84. The tail is rufous, basally, for only 25 per cent of its length. Obviously more material is needed from these islands.

HISTORY OF COLLECTING EXPEDITIONS TO GOODENOUGH ISLAND

Brief reference to the early biological exploration of the D'Entrecasteaux Group (including Goodenough Island) was given by Rothschild and Hartert (1914). This report also lists the papers based on these early bird collections but fails to mention the important work by De Vis (1894). In a "Supplementary List" to the main report (De Vis, 1894, pp. 104-

105) De Vis deals briefly with a few specimens from Cloudy Bay and the Kumusi River (both mainland localities), and Goodenough Island. This very important collection of 17 skins (11 species) from Goodenough Island was sent to the Queensland Museum. De Vis, however, does not mention the name of the collector. Armit visited Goodenough during the latter part of May and early June of 1894. We have proof, in the form of dated and annotated geological specimens, of Armit's visit to the 2160-meter summit of Mt. Oiamadawa'a, the lowest of the five northern mountains on the island; his ascent of a Goodenough peak is the first of record. Several species of known mountain birds are in the same collection. De Vis' "Supplementary List" is dated July 23, 1894; this date would have allowed ample time for Armit's specimens to have reached Brisbane for description.

Lamberto Loria, accompanied by Amadeo Giulianetti, visited Goodenough Island from January 13 to 18, 1890. They collected eight species of birds; none of these are mountain species. Giulianetti later became a Government Agent in Papua, but we can find no further record of collecting by him on Goodenough.

Albert S. Meek visited Goodenough several times during the years 1896 to 1899, and in 1913 he spent about six weeks on the island. Albert and George Eichhorn (brothers-in-law of Meek) collected on Goodenough for several weeks in 1923. Meek was a field collector for more than 20 years for Lord Walter Rothschild, who maintained the Zoological Museum at Tring, near London. It is due to the indefatigable work of Meek that the avifauna of the D'Entrecasteaux Group, the Louisiade Archipelago, Woodlark, the Trobriands, and other smaller islands in the same area is so well known. He is also responsible for several important collections from the mainland. Rothschild, Hartert, Mayr, and others have published extensively on his collections. Meek's specimens, together with the greater part of the famous Rothschild bird collection, were purchased in 1932 by the American Museum of Natural History.

Another important collection was made on Goodenough by Hannibal Hamlin for the Whitney South Sea Expedition of the American Museum of Natural History. From November 19 to 23, 1928, Hamlin secured about 14 specimens of mountain species on a single excursion inland from Mud Bay. Hamlin speaks in his diary of camping at the same site used by the Eichhorn brothers, "four or five years ago," when they "stayed six weeks, collecting birds and butterflies." This camp was at 600 meters, and Hamlin ranged up to about 1250 meters in forest. Owing to the broken terrain, collecting was very difficult. Three new subspecies were described by Mayr and Rand (1935) from this material.

REFERENCES

DE VIS, C. W.

1894. Report on ornithological specimens collected in British New Guinea. Ann. Rept. British New Guinea, 1st July, 1893, to 30th June, 1894, with Appendices, pp. 99-105.

HAMLIN, HANNIBAL

- [MS.] Journal and notes of Hannibal Hamlin. Whitney South Sea Expedition. November 8, 1928-August 8, 1930.

MAYR, ERNST

1941. List of New Guinea birds. New York, the American Museum of Natural History, xi+260 pp., 1 map.

MAYR, ERNST, AND A. L. RAND

1935. Results of the Archbold expeditions. No. 6. Twenty-four apparently undescribed birds from New Guinea and the D'Entrecasteaux Archipelago. Amer. Mus. Novitates, no. 814, pp. 1-17.

MAYR, ERNST, AND MARTIN MOYNIHAN

1946. Evolution in the *Rhipidura rufifrons* group. Amer. Mus. Novitates, no. 1321, pp. 1-21.

ROTHSCHILD, WALTER, AND ERNST HARTERT

1914. On a collection of birds from Goodenough Island. Novitates Zool., vol. 21, pp. 1-9.

STEENIS, C. G. G. J. VAN (ED.)

1950. Flora Malesiana. Djakarta, Noordhoff-Kolff N. V., ser. 1, vol. 1, clii+639 pp.