



**PROCEEDINGS**  
**OF THE**  
**NEW ENGLAND ZOÖLOGICAL CLUB**

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**A NEW RAIL AND A NEW DOVE FROM MICRONESIA**

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THE two birds described in this paper have been in alcohol, happily clean alcohol, in the collections of the Museum of Comparative Zoölogy for many years. One of the specimens, the pigeon, was taken by the Reverend B. G. Snow, a famous member of the Micronesian Mission, resident at Ebon, one of the southern islands of the Marshall group. It probably was taken in the late fifties or early sixties of the last century, but did not reach the Museum until it was brought back by the Reverend R. W. Wood in 1876.

The Rail is one of a great host of specimens taken by that extraordinary genius, Andrew Garrett. For years Garrett, under the patronage of Mr. James M. Barnard of Boston, scoured the islands of the central Pacific to send specimens of natural history to Mr. Barnard's friend, Louis Agassiz. Garrett visited the Marquesas, the Society Islands, the Fijis, and spent a long time on the various islands of the Hawaiian group. Many hundreds of his painstaking sketches, showing life colors of the fish and marine invertebrates which he sent to the Museum, are still in its files.

In 1859 Garrett determined to visit the Gilbert Islands, or Kingsmill Islands as they were then called, and the rail was procured on this journey. It bore no locality beyond the words

“Kingsmill Islands, 1861, Andrew Garrett Collector.” At this time there was but one missionary in the group, the Reverend Hiram Bingham, and it seemed probable that Garrett’s only chance to get to the Islands would have been in the missionary ship which once a year carried supplies to the Micronesian Mission. We knew that this ship was the famous Morning Star, and an inquiry addressed to the American Board of Foreign Missions in Boston revealed the fact that the history of the voyages of this vessel had been published.<sup>1</sup>

On page 257 we read, “Saturday was a busy day at Apaiang. A part of the provisions were landed, and the ship’s company dined and took tea with Mr. Bingham. Mr. Garrette [sic], an American naturalist had gone out in the Morning Star for the purpose of making a scientific exploration of the Kingsmill Islands, intending to remain at Apaiang while the vessel went on to the other stations.” Again, on page 265, “During Kanoas’ absence [Kanoas was a native Hawaiian catechist absent at a missionary conference at Ascension Island] Mr. Garrette [sic] the naturalist had occupied his house [at Apaiang]. He had found the Kingsmill Islands abounding with new wonders in every department of natural history and felt himself compensated for all his labor by the valuable collections of shells, insects, fish, etc., he had obtained. The collection was to be forwarded to America for Professor Agassiz.” This was during the third voyage of the Morning Star to the Islands. She arrived at Apaiang September 9, 1859, and brought Garrett back to land at Honolulu January 11, 1860, so that the rail was collected between these dates. The date on the label obviously is that of its arrival at the Museum. No mention of the bird is made in any of Garrett’s letters, nor have we any reason to believe that he considered it particularly rare or peculiar.

We do know, however, that the islets of Apaiang Atoll were barely more than narrow, lowlying sandbars, and it is very probable that this rail and perhaps a host of others on similar islands, were promptly exterminated by the cats which followed

<sup>1</sup>The Morning Star: History of the Children’s Missionary Vessel and of the Marquesan and Micronesian Missions by Mrs. James S. Warren. American Tract Society, 28 Cornhill, Boston. [No date. Harvard College Library copy received December 8, 1860.]

white residents far and wide. The bird is, so far as anyone can tell, a unique survivor of a peculiarly interesting species of a genus hitherto known only from New Caledonia and Lord Howe Island.

The Reverend B. G. Snow was also a generous contributor to Agassiz during the early years of the Museum of Comparative Zoölogy, and large series of beautifully prepared fishes and marine invertebrates are still to be found in the collections, all taken at Ebon. This was another low atoll, composed of small islets, and it has apparently not been visited by naturalists since Snow's time. It is not impossible, therefore, that the pigeon may still survive.

The literature regarding Marshall Islands birds is very scanty. A short paper by Finsch (*Ibis*, 1880, p. 329) reports birds seen on a voyage to Jaluit, and points out that land birds are apparently absent. Finsch did not, however, visit Ebon which, by the way, is also called Boston or Covell Island. Since the Japanese Mandate over most of Micronesia, three papers by Japanese ornithologists have appeared (Kuroda: *Tori*, Tokyo, II, 1915, 1 pl.,—notes from Pelew, Caroline and Marshall Islands. Kuroda: *Dobuts. Z.*, Tokyo, XXVII, 1915, pp. 325-332, 389-392,—birds from the recently occupied South Sea Islands, all four groups. Momiyama: *Birds of Micronesia*—an 8vo. book published by Orn. Soc. Japan, 1922, pp. 1-31 (English summary), pp. 1-339 (Japanese), map, 6 pls., text figs., Tokio), none of which we have seen. Several birds were named in this last publication, but no *Ptilinopus* is among them.

As many maps do not show the locality of these islands, we may say that Ebon is an isolated outlyer in the extreme southern portion of the Ralick or Western group of the Marshalls, in North Latitude, 4° 48', West Longitude, 168° 45', the only island lying south of 5° North Latitude. Apaiang, also known as Charlotte Island, lies in North Latitude, 1° 43', East Longitude, 173° 07', and has an area of about fifteen square miles. It is in the northern part of the Gilbert Group, just south of the better known island, Butaritari.

**Tricholimnas conditicus** spec. nov.

*Type*, no. 21,943, Museum of Comparative Zoölogy, adult, eviscerated, hence sex not determined, collected at Apaiang, Gilbert Islands, 1859, by Andrew Garrett, skinned out of alcohol October, 1928, by George Nelson.

*Characters*.—Similar to *Tricholimnas sylvestris*<sup>1</sup> of Lord Howe Island but much smaller; wing coverts less conspicuously chestnut.

*Description* (no allowance made for possible bleaching effect of alcohol).—Top of head buffy brown, shading into cinnamon brown on the back, rump and wing coverts, the latter russet basally with obsolete dusky bars; upper tail coverts and tail chestnut brown. Indistinct superciliary stripe, lores, sides of head, throat and fore neck pale grayish brown; remainder of under parts buffy brown, becoming more cinnamon on the flanks; under tail coverts chestnut brown with indistinct paler barrings. Primaries and secondaries dull rufous ('russet' of Ridgway's 1912 color standards), irregularly barred with blackish and indistinctly tipped with dusky.

Length (skin), 305; wing, 128; tail, 68; culmen, 44; tarsus, 51; middle toe and claw, 50 mm.

*Conditicus* was certainly flightless; the primaries and secondaries are soft, and decomposed at the tips; the plumage is long and lax. The legs and feet are stout, the tarsus about as long as the middle toe and claw and more than one third the length of the wing. The nostril is slit-like, about one third the length of the maxillary groove, and situated largely in its proximal half; the groove is more than one half as long as the bill; there is a distinct ridge for almost the proximal third of the mandibular tomium.

While there is no material available in this country with which to make an actual physical comparison between the rails of Apaiang and Lord Howe Island, we have compared our skin with the plate accompanying Sclater's description of *sylvestris*, and with the plate of that species in Mathews' Bird of Norfolk and Lord Howe Islands, and do not hesitate to place our bird in the genus *Tricholimnas*.

<sup>1</sup> *Ocydromus sylvestris* Sclater, P. Z. S., 1869, p. 472, pl. 35.

The species and the distribution of the known members of the genus are:

*Tricholimnas lafresnayanus* (Verr. and Des M.), New Caledonia.

*Tricholimnas sylvestris* (Sclater), Lord Howe Island.

*Tricholimnas conditicius* Peters and Griscom, Apaiang.

Dr. Glover M. Allen has generously given us the following notes of an anatomical examination of the specimen of *Tricholimnas conditicius*.

“The skeleton of the rail shows by the condition of its bones that the bird is immature. In length of femur and width across the sacrum the bird is practically of the same size as a king rail, but the femur is slightly heavier. The musculature of the legs is relatively very stout, as characteristic of a ground-living bird, but even more striking is the degenerate condition of the pectoral girdle, indicating that this was undoubtedly a flightless bird. The sternum is of the usual ralline form, narrow, slightly pinched in at the middle, and with a single narrow postero-lateral process on each side, some 13 mm. long. The sternum is a trifle wider than that of the king rail, but the median keel for muscle attachment is extremely low, barely 6 mm. high at the front end, contrasted with a keel 15.5 mm. deep in the latter species, itself a bird of rather weak flight. The median length of the keel from the front end is only 25 mm., practically the same as that of the little sora rail, or half that of the king rail. There are five sternal ribs. The clavicles are slender, with a length of some 36 mm., practically only as long as that of a sora. The pectoral muscles, so well developed in a flying bird, are extremely thin and of slight area, and could not have been of use in flight.

“The large, thick-walled stomach contained seeds of two species, the chitinous shell of a small beetle, and an entire harvest fly.”

**Ptilinopus marshallianus** spec. nov.

*Type*, no. 240,271, M. C. Z., adult, sex unknown, Ebon Island, Marshall Islands, collected by the Rev. B. G. Snow in the latter part of 1859, and preserved in alcohol, skinned out of alcohol in October, 1928, by George Nelson.

*Characters*.—Connecting *P. ponapensis* and *P. hemsheimi* of the Caroline Islands with the *P. coralensis* group of the Tuamotu Archipelago (*P. coralensis* and *P. chalcurus*) and Henderson Island (*P. insularis*). In color nearer *P. hemsheimi*, in structural characters nearer the *P. coralensis* group. Broad tail-band, vent and under tail coverts bright gamboge yellow as in *P. hemsheimi*; remaining under parts much less yellow, more gray-green, as in *P. coralensis*, but darker on abdomen and sides. Outer primary much less emarginated than in *P. hemsheimi*, in this respect similar to the *P. coralensis* group; breast feathers less narrow and less bifurcated than in *P. ponapensis* and *P. hemsheimi*, without their 'hackled' effect.

*Description of type*.—Forehead and crown rose purple with a sharply defined green (or greenish yellow) posterior margin; rest of head, neck and breast dull grayish green, lighter on the chin; back, rump, wings and tail deep grass-green, as in *P. ponapensis* and *P. hemsheimi*, darker than in the *P. coralensis* group; tertials, scapulars and secondaries with deep bluish green spots, the margins and tips with bronzy iridescence; abdomen and sides dark grayish green, the centre of the abdomen, vent, under tail coverts and a broad terminal band on tail bright gamboge yellow.

The chief problem in writing the description of this bird was the degree to which color change might have taken place after 69 years in alcohol. By the greatest piece of good fortune, the Museum of Comparative Zoölogy has a specimen of the closely related *P. chrysogaster*, collected in 1860, and also skinned after having been for years preserved in alcohol, as well as fresh material for comparison. This material shows exactly the maximum degree to which the pigment in these birds' feathers is dissolved, and enables the colors of the new species to be reconstructed with confidence. The greens are unchanged, the rose purple is only slightly dulled, but the yellows are more affected. The bright gamboge yellow on the center of the abdomen and under tail coverts has faded out to a pale dirty buff, and the yellow wash on the rest of the under parts

*P. ponapensis* and *P. hemsheimi*



*P. marshallianus*



*P. coralensis*



*P. chalcurus*



*P. insularis*



*P. chrysogaster*



Outlines of Outer Primaries  
of  
*Ptilonopus*  
About  $\frac{2}{3}$  natural size

is only faintly indicated in a pale buffy tinge. In the type of *P. marshallianus* this pale buffy tinge is entirely wanting. The under parts therefore cannot have had the yellow wash so obvious in *P. chrysogaster*, *P. bernsbeimi* or even *P. coralensis*. The centre of the abdomen, vent and under tail coverts of the type of *P. marshallianus* are, however, a much clearer and brighter buff, and noticeably deeper on the under tail coverts with a salmon tinge. It is highly likely, therefore, that these parts might actually have been orange in life.

The discovery of this Pigeon is of considerable geographic interest, as the genus has been unknown between the eastern Carolines and Samoa.

We are greatly indebted to Dr. Thomas Barbour for the historical and geographic information in the introduction, most of which was written by him.