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BIRDS COLLECTED DURING THE WHITNEY SOUTH SEA EXPEDITION. XL¹

NOTES ON NEW GUINEA BIRDS. V

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This paper² contains a continuation of my revisions of New Guinea birds, treating certain genera of the families Turnicidae, Rallidae, Charadriidae, Recurvirostridae, and Burhinidae.

TURNICIDAE

Turnix maculosa (Temminck)

I agree with Rensch (1931, Mitt. Zool. Mus. Berlin, XVII, p. 476) that the *sylvatica*-group and the *maculosa*-group are different enough to be regarded as different species, even though they represent each other geographically. No final revision of *Turnix maculosa* is yet possible, because most forms are represented by only a few specimens. Still, the Whitney S. S. Expedition has collected some previously undescribed specimens, which seem worth discussing.

Turnix everetti from Sumba has nothing to do either with *sylvatica* or *maculosa*. It is a distinct species with a distant relationship to *T. pyrrhоторax*.

Turnix maculosa maculosa (Temminck)

Hellmayr (1914, Avifauna Timor, pp. 94-95) has shown that this is the oldest name of the form from the Lesser Sunda Islands, and not *rufescens* Wallace, as Rensch assumes (*op. cit.*, p. 475). This form is quite different from the Australian race as I shall discuss in detail in a later publication.

Turnix maculosa melanota Gould

This is probably the correct name of the East Australian race, although *melanota* was described from Tasmania and I have not seen any Tasmanian specimens.

¹ Previous papers in this series comprise American Museum Novitates, Nos. 115, 124, 149, 322, 337, 350, 356, 364, 365, 370, 419, 469, 486, 435, 439, 502, 504, 516, 520, 522, 531, 590, 609, 628, 651, 665, 666, 709, 714, 820, 828, 912, 915, 933, 939, 947, 977, 986, and 1006.

² Manuscript received by the editor on Feb. 12, 1938.

This race, as shown by adult females from New South Wales, is distinguished by its rather pale coloration, throat and center of belly being white. There is a pale or deep rufous breast-band and the sides of the breast are heavily spotted. The superciliary and the sides of the head are pale buffy. The feathers of the crown have narrow gray edges and the pale line along the center of the crown is not always well developed. Some of the feathers of the nuchal band have gray margins. The upper parts are quite variable; the edges of upper wing-coverts and scapulars are pale buff; the black spots on scapulars and back are rather large and the gray areas in between rather dull and dusky; there is a liberal amount of rufous on the back of most specimens; wing (♀), 80–84, occasionally up to 89.

RANGE.—Tasmania, southern and eastern Australia.

Turnix maculosa yorki Mathews

The unique type is on the upper parts rather heavily marked with blackish. It can be practically matched in this respect by two or three specimens from New South Wales. In every other respect it agrees perfectly with New South Wales birds, which would have to be called *yorki* if they should prove different from Tasmanian birds.

Turnix maculosa horsbrughii Ingram

Turnix horsbrughii INGRAM, 1909, Bull. Brit. Orn. Club, XXIII, p. 65.—Yule Island, Brit. New Guinea.

Size small, wing 71–81, against 80–89 in *melanota*; deep tawny collar of hind-neck solid, and very conspicuous; similar to *maculosa*, but lores, superciliary, and sides of face bright orange-ochre, not pale buff; light edges of scapulars and upper wing-coverts rich ochraceous, not buffy; under parts more deeply colored, the rufous of the breast reaching upper throat and chin and extending along the flanks to the thigh feathers and crissum; in the type specimen even the middle of the belly is quite rufous; the upper parts appear darker on account of the heavier black vermiculation and spotting; gray edges of the black feathers of the crown rather narrow.

RANGE.—South New Guinea from the Fly to the Aroa River; Sudest group of Louisiade Archipelago.

This is one of the rarest *Turnix*. I believe there are only 5 (or 6, if Ramsay's bird is included) adult females of this race in collections. These come from widely separated localities and differ appreciably inter se. It seems therefore advisable to describe them in detail.

TYPE. ♀ ad.—Agrees with the above given description, but it is very rufous underneath; the black spots on the back and the upper wing-coverts are very large; there is very little gray or rufous mottling on the back; wing 74.

♀ ad.—Lower Aroa River, Dec. 6, 1904, A. S. Meek.—Similar to the type, but middle of belly whitish; back very blackish; dividing line on crown well developed; wing 81, tarsus 23.

2 ♀ ad.—Tagula Is., Feb. 21, 1929, and Yiena Is., 6 mi. n. of Tagula, Feb. 22, 1929, Hannibal Hamlin, Whitney South Sea Expedition.—Smaller and more deeply

colored; breast very deep rufous; back and scapulars strongly mottled with chestnut-tawny; dividing line on crown washed with orange-buff; ochraceous edges of wing-coverts broad; lower belly light buff; wing 71, 72; tarsus 19, 20.

It is quite possible that the birds from South New Guinea (Fly River) (Archbold Collection), from southeast New Guinea (*horsbrughii*) and from Sudest Island really represent three different races, but the material at hand at the present time does not permit their separation.

***Turnix maculosa salomonis*, new subspecies,**

TYPE.—No. 329076, Amer. Mus. Nat. Hist.; ♀ ad.; Guadalcanar, Solomon Islands; June 2, 1927; R. H. Beck (Whitney South Sea Expedition).

Size large (wing 85 mm.); similar to *horsbrughii*, but deeper rufous underneath, particularly on the flanks and on the middle of the belly; rufous collar of hind-neck well developed; gray edges of feathers of crown very broad, almost completely hiding the black centers of these feathers; dividing line inconspicuous; upper parts similar to that of *horsbrughii*; principal color of back dark gray with rather large black spots and narrow vermiculation; outer edges of tertials and upper wing-coverts deep ochraceous; differs from *saturata* by the more grayish, less blackish back and by the presence of a rufous nuchal collar. Iris white, bill and feet yellow; gonads enlarged (laying).

Wing 85; tail 30; tarsus 20.

RANGE.—Only known from the unique type.

The Guadalcanar bird not only constitutes the first record of this species for the Solomon Islands, but it is sufficiently different from the neighboring races to be described as new. In general coloration it resembles, curiously enough, more the New Guinea race than *saturata* from the Bismarck Archipelago. It is, of course, much larger than *horsbrughii*. I am indebted to Mr. Kinnear for a comparison of this specimen with the types of *saturata* and *horsbrughii* and for his comments on the position of the Solomon Island bird.

***Turnix maculosa saturata* Forbes**

This rare bird was not obtained by the Whitney S. S. Expedition, although it was reported at one time to be common at the Duke of York Islands.

Its principal characters are the blackish upper parts and the reduction of the rufous collar which is absent in two out of three adult females in the British Museum and inconspicuous in the third; the under parts are colored very deeply; central stripe on crown indicated in one bird, absent in the other two.—Wing 85, 85, 85.

RANGE.—New Britain, Duke of York Islands.

RALLIDAE

Rallus (Hypotaenidia) philippensis Linnaeus

This species, although it is very common on many of the Polynesian and Melanesian islands, is one of the rarest birds in collections from New Guinea. There are little more than a dozen New Guinea specimens known. This makes the classification of these birds rather difficult and is the reason why most of these specimens have simply been recorded as "*Hypotaenidia philippensis australis*." With a great deal of material from other localities available it becomes apparent that the species is not as variable as has been claimed in older papers and that a good deal of what has been called individual variation is really geographical variation. The New Guinea birds before me belong to at least three different races, one in south and west New Guinea (near *yorki*), one in north New Guinea (related to *meyeri*) and one in northeast New Guinea (near a new race from Long Island). This preliminary arrangement of the New Guinea forms will probably have to be modified when more material becomes available.

Rallus philippensis yorki Mathews

This race was described as follows (1913, Austr. Av. Record, II, p. 6.—Cape York): "Differs from *E. p. australis* in its smaller size and in having the buff on the chest much darker." There is only one specimen from Cape York in the Mathews Collection and this will have to be considered the type. There are also in the Rothschild Collection two birds from Mackay and one from "Queensland" which might be referred to the same race. They measure: wing 131, 134, 140, tail 60, 61, 61; bill from lateral feathering 25, 25, 25; tarsus 36, 37, 38, 38.

A single bird from Cairns, north Queensland, is so large that it must be considered a migrant from Tasmania or South Australia (wing 152, tail 70, tarsus 42). If it were a resident bird, we would have to assume that all the other north Queensland birds are immature, which is not probable.

Two birds from south Queensland (Brisbane and Eldersleigh) have the same measurements as a series of birds from Botany Swamps, near Sydney, N. S. W. This series of *australis* measures:

Wing, ♂ 144, 145, 147, 150, 152, 154, ♀ 145, 147; tail, ♂ 62, 67, 68, 69, 70, 73, ♀ 62, 65; bill, ♂ 25, 27, 28, 28, 29, 29, ♀ 29, 30; tarsus, ♂ 38, 39, 40, 40, 40, 40, ♀ 40, 41.5.

These measurements show that north Queensland birds are distinctly smaller than such from south Queensland and New South Wales.

There is very little difference between *yorki* and *australis* in regard to pattern and coloration. Both are rather pale forms with a well-developed pectoral band; the crown is hair brown though sometimes rufous in *yorki*, heavily streaked with black; the prevailing coloration of the upper parts is olive brown, liberally spotted with white and with relatively little black; usually little or no white on lower back and upper tail-coverts. *R. p. yorki* seems to have the back more heavily spotted, the crown more rufous, the pectoral band deeper ochraceous and the black bars on the underside more conspicuous. The difference is, however, slight.

There are four other specimens in the Rothschild Collection which must be referred to *yorki*, until more material is available from the respective localities.

♂ ad.—Head of Geelvink Bay, July, 1920, Pratt Coll.

Wing and tail molting; bill 29; tarsus 43.

Crown not very rufous; white bars on upper back, more or less interrupted in the middle; little spotting of white on rump and tail; under parts very pale; the breast band interrupted in the middle, the rufous feathers being replaced by pure gray ones; otherwise as *yorki*.

♂ ad.—Tual, Kei Islands, September, 1897; H. Kühn.

Wing, 138; bill, 28; tarsus, 39.

Similar to *yorki*, but general color of upper parts more brownish, less olivaceous; white spots on upper back numerous but small; breast band well developed, but each feather with a few dark bars; breast and abdomen heavily barred.

♂ ad.—Amboina, Moluccas, February, 1906; H. Kühn.

Wing, 142; tail, 62; bill, 26; tarsus, 40.

On the upper parts considerably darker than *yorki* and with the white spotting much reduced; no white spotting on lower back and rump; crown hair brown with heavy black shaft streaks; hind-neck deep rufous with numerous blackish spots; pale ochraceous breast band broad and with fine black vermiculations; barring of breast and belly rather coarse and with the black bars as wide as the white; the edges of the feathers of the back are quite olivaceous. Although darker than the known specimens of *yorki*, this bird does not approach the dark forms *lesouefi* and *meyeri* of the Bismarck Archipelago.

♀ ad.—Wahai, Seran, Moluccas, August, 1911. E. Stresemann.

Wing, 125; bill, 24; tarsus, 39.

Crown rufous; general coloration of upper parts very brownish and rather dark; upper back finely spotted with white; very little white on rump and upper tail-coverts; breast band very wide; middle of breast and belly very pale, with the dark bars almost obsolete; sides of breast and flanks heavily barred with black.

These birds from the Moluccas represent probably endemic races which cannot be described, however, without more material.

Bangs and Peters (1926, Bull. Mus. Comp. Zoöl., LXVII, p. 423) have recorded two specimens from South New Guinea, which they refer to *yorki*. The measurements, particularly those of the tarsus, of these birds seem to be still smaller than in *yorki*, but they are perhaps immature.

***Rallus philippensis lacustris*, new subspecies**

TYPE.—No. 535134, Amer. Mus. Nat. Hist. (Rothschild Collection); ♂ ad.; Ifar, Sentani Lake; September 25, 1928; Ernst Mayr Coll.

A large and rather dark form with the pectoral band well developed; black bars of flanks much broader than white ones, lower abdomen barred in three out of four birds; brown edges of feathers of crown rather narrow and rufous; uppermost back blackish heavily marked with small white spots; fewer, but larger white spots on scapulars and upper wing-coverts; middle of back, rump, upper tail-coverts and tail-feathers little or not spotted with white.

Differs from *meyeri* by having the edges of the feathers on the back narrower and more grayish olive, less brownish; by having the uppermost back more blackish; by being more heavily spotted with white on the upper parts, particularly scapulars and upper wing-coverts and by being more coarsely barred underneath.

Wing, 3 ♂ ad. 147, 148, 154, 1 ♀ ad. 147; tail, ♂ 65, 68, 69, ♀ 62; bill (from lateral feathering), ♂ 30, 30, 31, ♀ 27; tarsus, ♂ 44, 44, 46, ♀ 41; weight (in gr.), ♂ 210, 225, 240, ♀ 185.

RANGE.—North New Guinea (only known from the type series).

The four specimens from the Sentani Lake form a rather uniform series. It is unknown how far the range of this form extends. Three single specimens are known from farther east in New Guinea, which differ from *lacustris* by their darker, more blackish coloration above and below, by having the upper back barred with white, instead of spotted, and by having the breast band much less developed. All three birds agree in their essential characters with the population from Long Island and may be referred to that race until more material is available.

***Rallus philippensis reductus*, new subspecies**

TYPE.—No. 422518, Amer. Mus. Nat. Hist.; ♂ ad.; Long Island, near northeast New Guinea; November 15, 1933; W. F. Coultas (Whitney South Sea Expedition).

Similar to *admiralitatis*, but larger, particularly with longer bill and tarsus; upper back more blackish; white on upper back in form of bars, not spots; tertials, lower back, rump, upper tail-coverts and tail-feathers with little or no white; ochraceous breast band absent or inconspicuous; if present barred with black like the rest of the under parts; barring of breast and abdomen rather narrow with black and white bars of about equal width; unbarred area on lower abdomen present.

Differs from *meyeri* by the reduction of the breast band and the prevalence of black and white on the upper back, differs from *lesouefi* by the reduction of the breast band, by the narrower black bars on the abdomen and by the reduction of white on the lower back.

Wing, ♂ ad. 141, 147, 148, ♀ ad. 137, 137; tail, ♂ 61, 63, 65, ♀ 55, 58; bill, ♂ 29, 32, 33, ♀ 27, 28; tarsus, ♂ 43, 45, 48, ♀ 40, 42.

RANGE.—Long Island and (subsp. ?) coast of northeast New Guinea from Astrolabe Bay to China Straits.

The three New Guinea specimens, which I am referring temporarily to *reductus*, may be described as follows:

♀ ad.—Madang, Astrolabe Bay; August 17, 1928; R. H. Beck.

Wing, 142; tail, 67; bill, 27; tarsus, 41.

A very dark bird; crown rufous with very heavy black streaking; edges of feathers of lower back and of inner wing very brownish; rump and upper tail-coverts with many small white spots; breast band narrow, interrupted in the middle and all rufous feathers heavily barred; center of abdomen unbarred, flanks heavily barred, with the black bars about twice as wide as the white ones.

♂ ad.—Giriwu River, near Buna, Collingwood Bay; Oct. 5, 1907. A. F. Eichhorn Coll.

Wing, 145; tail, 66; bill, 32; tarsus, 44.

Very similar to the Madang bird, but still more blackish above, with less and coarser white markings; the breast band is still less conspicuous; breast and abdomen are more broadly barred with black.

♀ ad.—Boboli, China Straits; August 19, 1922; A. F. Eichhorn.

Wing, 140; bill, 26; tarsus, 40.

Intermediate between *lacustris* and *reductus*. Agrees with *reductus* in the blackish back, the reduction of the breast band and the heavy black barring of the under parts; tends toward *lacustris* in the hair brown crown, by having the white bars of the upper back partly broken up in spots and by having the edges of the feathers of the back more olivaceous, less brownish. The upper tail-coverts are finely spotted with white. In general closer to *reductus*.

The other forms of *philippensis* in the Bismarek Archipelago will be discussed at a later occasion. I want to describe, however, at this time the form from the Solomon Islands, which I have found to differ from the known forms of this species.

***Rallus philippensis christophori*, new subspecies**

TYPE.—No. 227845, Amer. Mus. Nat. Hist.; ♂ ad.; San Cristobal, Solomon Is. (1900 ft.); December 19, 1929; E. Mayr, W. F. Coultas and W. J. Eyerdam (Whitney South Sea Expedition).

Similar to *R. p. reductus*, with the breast band much reduced; black shaft streaks on crown narrow and inconspicuous; edge of feathers of crown hair brown; upper back less blackish, more tinged with brown; upper tail-coverts spotted with white, central tail-feathers with white bars; more heavily barred with black underneath; general coloration of upper parts rather variable.

Differs from *sethsmithi* Mathews (Fiji and New Hebrides) by having the upper back averaging more blackish and by having the under parts considerably darker; the unbarred area at the lower abdomen is reduced and the black bars on breast and flanks are very much broader than the white ones.

Wing, ♂ 150, ♀ 143, 142 + x; tail, ♂ 60, ♀ 57, 55 + x; bill, ♂ 30, ♀ 26.5, 27; tarsus, ♂ 44, ♀ 40, 40.

RANGE.—San Cristobal, Solomon Islands, and probably all of eastern Solomon Islands.

A single male from Santa Anna (Awa Raha) agrees with the three birds from San Cristobal, except that it is slightly larger, that it has no indication whatsoever of the breast band and that it is darker and more heavily barred underneath. The back has rather less black than in *christophori*.

The species has also been recorded from other islands in the eastern Solomon Islands: Ugi, Guadalcanar and Florida. I have not seen any material from these islands to be able to determine whether or not they belong to *christophori*. The close similarity with *sethsmithi* indicates that this form has reached the Solomon Islands from the east or southeast.

RALLICULA SCHLEGEL

The classification of the forms of this genus was until recently considered very simple. Two species were distinguished, *leucospila*, restricted to the mountains of the Vogelkop (Arfak and Wondiwoi), and *rubra*, comprising all the other forms. This arrangement was no longer acceptable, after Stein had discovered that two of the forms which were included in *rubra*, *klossi* and *forbesi*, occurred together in the Weyland Mts. Lord Rothschild (1936, Mitt. Zool. Mus. Berlin, XXI, pp. 238-240) who revised the genus to devise a more satisfactory arrangement found that all the forms could be arranged in two groups. *R. rubra* (with *klossi*) had small size and unbarred upper and under tail-coverts. All the other forms were of large size and had barred upper and under tail-coverts. These latter forms represent each other geographically and were therefore considered by him to belong to one species, which he called *leucospila* after the first named form.

I agree with Rothschild in the division of the genus in two groups and in considering *mayri* and *forbesi* to be more closely related to *leucospila* than to *rubra*, but I do not agree with him in making these two forms subspecies of *leucospila*. The three forms *leucospila*, *forbesi* and *mayri* might be considered as belonging to one "*Artenkreis*" (super-species), but they are too different, particularly the males, to be regarded as subspecies.

The adult male of *leucospila* has upper back, scapulars and upper wing-coverts black with white longitudinal shaft streaks; the adult male of *forbesi* has the upper back rufous, and scapulars and upper wing-coverts solid black; and the adult male of *mayri* is rufous throughout without any black or white. It may be possible that the gap between *forbesi* and *leucospila* will be bridged by the discovery of the male of

steini, since the female of *steini* differs from *forbesi* in the direction of *leucospila*, but the very isolated *mayri* will always have to be kept as a species. Particularly remarkable in this species is the similarity of the male with that of *rubra*, which had led Hartert to describe it as a form of *rubra*.

A key of all the forms has been published by Rothschild (*loc. cit.*).

***Rallicula rubra rubra* Schlegel**

This race is restricted to the Arfak Mts. where it is probably much more common than the few specimens in collections indicate. Measurements are quoted under *klossi* (see below). It is rather doubtful whether the female of this race is yet known. Salvadori does not describe it and there is no specimen either in the Rothschild Collection or in the Leiden Museum. A specimen from the Arfak Mts. in the British Museum, labeled *rubra*, might be the female of *rubra*, since the tail is pure rufous, the upper and under wing-coverts are unbarred and the culmen is long. On the other hand, it is a very large bird (wing 106, tail 74) and the feathers of upper back, scapulars and upper wing are striped with longitudinal ochraceous stripes, both characters suggesting *leucospila*. More material of both *leucospila* and *rubra* must be collected before this specimen can be placed correctly.

***Rallicula rubra klossi* Ogilvie-Grant**

Rallicula klossi Ogilvie-Grant (1913, Bull. Brit. Orn. Club, XXXI, p. 104) was compared in its original description only with *forbesi*, with which it, of course, has nothing to do. It was therefore for a long time considered a synonym of typical *rubra* until I showed in 1931 (Mitt. Zool. Mus. Berlin, XVII, p. 709) that it seemed to differ from *rubra* by the purer rufous-red, less blackish coloration of nape and upper back. Lord Rothschild (1936, Mitt. Zool. Mus. Berlin, XXI, p. 240) found as additional differences the smaller size of *klossi* and the reduction of the white bars on the under wing, although they are never quite absent as Junge (1937, Nova Guinea, N. S. I., p. 144) points out correctly.

The difference in size is not very striking.

Four males of *rubra* (2 New York, 2 Leiden) measure: Wing, 95, 98, 100, 102.5; tail, 64, 66, 67, 70; tarsus, 38, 38, 39, 39; and culmen, 30, 30, 31, 31.

A series of male *klossi* (New York) measures: Wing, 89–93 (91.7); tail, 50–59 (54.7); tarsus, 35–37; culmen, 28–30.

Up to the present time *R. r. klossi* is known from the Weyland Mts.

(see Rothschild, *loc. cit.*), from the Nassau Range (Ibis, 1915, Suppl. II, p. 290) and from the Orange Range (see Junge, *loc. cit.*).

***Rallicula leucospila* (Salvadori)**

The characters of this species are sufficiently well known to make any additional description unnecessary.

Four males measure: Wing, 106, 108, 109, 111; tail, 65, 68, 69, 71; tarsus, 35, 36, 36, 39; culmen, 26, 28, 28; one female, wing, 107, tail, 61; tarsus, 31; culmen, 27.

The single male collected by me in the Wondiwoi Mts. at 1200 m. agrees very well with two males from the Arfak Mts. except that the rufous of the nape seems to extend farther on the upper back. This is possibly due to a different preparation of the specimen.

. *Rallicula forbesi steini* Rothschild

Rallicula leucospila steini ROTHSCHILD, 1936, Mitt. Zool. Mus. Berlin, XXI, p. 239.—Kunupi (1500 m.), Weyland Mts.

This race, known from a single female, differs from *forbesi*, according to the original description, by the "brown-black, not brown-red" coloration of lower back and rump. The specimens of *forbesi* in the Rothschild Collection, with which *steini* was compared, were, however, old and foxed. The difference is practically non-existing in fresh skins. *R. f. steini* seems to differ from the female of *forbesi* (as indicated by Rothschild in the key) by having the spots on the upper back pure white, instead of buff, and by having the scapulars, upper wing-coverts and tertials marked much more coarsely with broad streaks of buff. The tail shows very little barring.

Wing, 107; tail, 62; tarsus, 37; culmen, 29.

This bird has a much lower vertical distribution than *R. rubra klossi* (above 1800 m.).

***Rallicula mayri* Hartert**

Wing, ♂ 111, 115, 116, 117, ♀ 110; tail, ♂ 63, 69, 70, 72, ♀ 65; tarsus, ♂ 37, 37, 38, ♀ 36; culmen, ♂ 27, 28.5, 28.5, ♀ 26; weight (in gr.), ♂ 123, 123, 129, ♀ 119.

This is a large bird. It agrees in size with the largest examples of *Rallicula f. forbesi*, but is considerably larger than *R. f. dryas* Mayr. The males of *dryas* weigh 78–106 (av. 88.4) g., and the females 65–96 (av. 82). The males of *mayri* are therefore 42 per cent heavier, the females 45 per cent heavier than those of *dryas*.

This species, isolated on the Cyclop Mts., has an exceedingly small range.

Amaurornis olivaceus moluccanus (Wallace)

In 1879, Schlegel described, apparently on the basis of an immature specimen, a new form from the Vogelkop which he named *frankii*. This form was considered a synonym of *moluccanus* by most authors, but Hartert stated in a recent paper (1930, Novit. Zool., XXXVI, p. 124) that New Guinea birds seem to be "darker gray on the underside, and a shade darker olive on the back" than birds from the Moluccas. I have insufficient material (1 ♂, 2 ♀ from the Moluccas, and 2 ♂, 4 ♀ from New Guinea), but I fail to see any constant difference between the two series. One of the New Guinea males (from Ifar) has the lower belly and crissum very dark, but a male from Batjan is also rather dark and a male from southeast New Guinea is rather light. Females are in general much lighter on lower belly and under tail-coverts. The only difference I can find in regard to the upper parts is that the fresh skins (collected during the last 10 years) are much darker and less brownish than the old skins (collected 40 years ago or longer). I therefore consider *frankii* a synonym of *moluccanus*.

I am quite at a loss to understand how van Oort (1907, Notes Leyden Mus., XXIX, p. 172) and Siebers (1930, Treubia, Suppl., Fauna Burana, I, p. 64) can maintain that *moluccanus* and *frankii* are different species. My measurements do not bear out their conclusions at all:

A. o. moluccanus.—MOLUCCAS: wing, ♂ 145, ♀ 136, 143; culmen, ♂ 35, ♀ 30; tarsus, ♂ 53, ♀ 49, 51. NEW GUINEA: wing, ♂ 156, 158, ♀ 135, 137, 142, 142; culmen, ♂ 34, 34, ♀ 29, 31, 31, 31; tarsus, ♂ 49, 50, ♀ 47, 49, 50.

The geographical variation that occurs within *nigrifrons* in the Bismarck Archipelago and in the Solomon Islands will be described at another occasion.

PORPHYRIO BRISSON

Only a decade or two ago the forms of this genus were divided into a great many species. Slowly they were combined with each other, as our knowledge of the genus grew and as intermediate forms were discovered. Hartert in his review in 1924 (Novit. Zool., XXXI, pp. 105-108) still kept *melanotus* specifically separated from *poliocephalus*, but Peters (1934, Check-list, II, p. 208) unites them in one species. The fact that this species combines such widely differing forms as *poliocephalus*, *elliotti*, *bellus* and *fletcheræ* immediately suggests to draw the specific lines still wider and to include also *porphyrio*, *madagascariensis* and *pulverulentus* in the same species. These species are hardly more different from each other than the various forms of "*poliocephalus*" (sensu Peters) and not

more different than a great many island forms which have been unhesitatingly combined in one species by all recent authors. H. v. Boetticher (1935, *Folia Zool. Hydrobiol.*, VIII, p. 47) proposes to accept such a large species, a conclusion at which I had arrived independently. There is no reliable evidence that the ranges of any of the forms ever overlapped, as had been maintained by some of the older authors for *porphyrio* and *madagascariensis*.

The use of the specific name *porphyrio* for the eastern forms will prevent the adoption of *albus* as the specific name of the forms combined by Peters under the name *poliocephalus*. The name *albus* White, which was given to the white phase of the Lord Howe Island race, antedates *poliocephalus* by 11 years. Peters circumvented this difficulty, to which I had called attention in an earlier paper (1931, *Amer. Mus. Novit.*, No. 486, p. 8), by giving *albus* specific rank. He gives no reason for this action, which is quite untenable in view of the known facts. White phases (mutants) occur in several races from the islands east of Australia; in fact, the type specimen of the New Zealand race *stanleyi* is such an albino. Nobody has yet proposed to restrict the name *stanleyi* to the white individuals, and to give another name to the normal colored birds of the New Zealand race! In the case of the Lord Howe population of *Porphyrio*, it is known that both normally colored and white birds occurred on the island, as well as partly blue and partly white intermediates. There is no other alternative than to use the name *albus* for the Lord Howe Island race. A study of the normally colored specimens, of which there are, I believe, some in the Sydney museum, should reveal the true characters of this race.

I have been collecting notes on the genus *Porphyrio* for the last eight years and have examined the material of most of the European museums. In spite of this, I am not yet ready to write the long needed revision of the eastern forms of the genus, since I am expecting more material from several localities which are so far only weakly represented in our collections. One phenomenon occurs over a considerable part of the eastern range of *Porphyrio* which has prevented a better understanding of the forms, namely, the presence of two color phases. Typical *indicus* from the Greater Sunda Is. always have a bright blue breast shield (or better, throat patch) and typical *melanotus* always have the entire under parts of a uniform purplish blue. Both types of plumage occur, however, on most of the islands between the ranges of *indicus* and *melanotus*. Hartert has called attention to this in his review (*op. cit.*, p. 107), but I do not agree with his interpretation. He believes that only the birds

with the blue breast patch are the resident birds and that the birds with the plain under parts are migrant *melanotus*. This conclusion was accepted by several subsequent workers as, for example, by Siebers in his work on the birds of Buru (1930, Fauna Buruana, I, 3, p. 66-67). It is, however, not supported by any facts. Not only is there no evidence for any extensive migratory movements of *P. p. melanotus*, but the "*melanotus*" of the Moluccas and the New Guinea region are as small as the resident *melanopterus*. Six "plain breasted" birds from the Moluccas that I have examined have a wing-length of 223, 242, 246, 248, 250, 257, against 265-281 in Australian *melanotus*. Equally convincing is the fact that about a third of the birds which were collected in the Moluccas and in the New Guinea region, represent an intermediate condition. The result is, of course, an enormous variability, and it is evident that no revision of these birds will be conclusive which is not based on adequate series. Such are, up to the present, not yet available from most localities, where this rather secretive swamp bird occurs.

CHARADRIIDAE

The Papuan *Charadrius dubius*

The little plovers of the Papuan region have been listed as *jerdoni* for more than fifty years. It was rather improbable that the Indian bird and the Papuan bird should be the same, since there is a considerable gap (Borneo to New Guinea) between the two populations. However, the few specimens available to most students revealed no significant differences either in measurements or coloration (see Hartert, Vög. pal. Fauna, II, p. 1537). A new examination of considerable material showed that the two populations are clearly separable by the coloration of the tail, a character mentioned by Ramsay, as long ago as 1879 (Proc. Linn. Soc. New South Wales, IV, p. 93). I want to acknowledge gratefully the loan of a fine series of Indian *jerdoni* by the authorities of the British Museum.

Charadrius dubius papuanus, new subspecies

TYPE.—No. 736592, Amer. Mus. Nat. Hist. (Rothschild Collection); ♂ ad.; Upper Setekwa River, Sept. 13, 1910; A. S. Meek.

Similar to *Ch. d. jerdoni* Legge, but bill averaging longer; outermost tail-feather entirely white (6 adults) or just with a vaguely indicated brownish spot (3 adults) while there is a conspicuous bar in *jerdoni*; the brown on the other tail-feathers equally reduced; apparently more yellow on the lower mandible, even the upper mandible often with yellow; behind the black bar across the crown there is a narrow white bar, which in *jerdoni* is less distinct or missing.

Wing, 6 ♂ ad., 105–108 (106.4), 4 ♀ ad., 106, 110, 114.5; culmen, 6 ♂ ad., 14 (in all 6), 4 ♀ ad., 13, 14, 14.5, 15.

Specimens examined: 1 ♀, 1 imm., Astrolabe Bay; 1 ♂, Orangerie Bay; 1 ♂, Galley Reach; 2 ♂, upper Setekwa River; 1 ♀, Ifar, Sentani Lake; 2 ♂, 2 ♀, New Ireland. Compared with 19 adults from India and 2 adults from Borneo. Borneo birds have the broad tail-bar of *jerdoni*.

The wings of Indian birds measure: 105, 106, 107, 107, 107, 107.5, 109, 110, 110, 110, 111, 111, 112, 113, 113, 114, 115; culmen, 12–14 (av. 12.6).

Lobibyx miles (Boddaert)

Peters accepts (Check-list II (1934), p. 239) Mathews' division of this species in two races, one (*personatus* Gould) for the Australian birds, and one (*miles*) for the birds from New Guinea, the Moluccas, etc. I have compared 11 Australian specimens with 17 birds from the islands and I have been unable to find the slightest difference of size or coloration. The type of *harterti* (from Inkerman, Queensland) has a wing of 236, which is slightly longer than that of any other Australian specimen examined by me, but culmen and tarsus measurements fall well within the range of other Australian birds, and a male from Tapa, Babber Is., has a wing, which is even longer (237 mm.). It is obvious that *personatus* and *harterti* are synonymous of *miles*.

RECURVIROSTRIDAE

Himantopus himantopus leucocephalus Gould

Mathews separated two races from the east Australian *leucocephalus*, one to include the birds from northwestern Australia (*assimilis*) and one for the birds of Timor and Celebes (*timorensis*), both based on supposedly smaller size. No characters are given by which *assimilis* could be separated from *timorensis*; in fact, almost identical measurements are given for both forms. I have measured 17 specimens from the Moluccas and Lesser Sunda Islands, 11 birds from northwestern Australia, and 8 birds from eastern Australia, and I have been unable to find any differences of subspecific value. In fact, a male from Celebes (tarsus 126) and one from Derby, northwestern Australia (tarsus 131), have longer tarsi than the largest bird from eastern Australia (124). The wings measure as follows: males, island range, 224, 231, 232, 236, 236, 239, 240, northwestern Australia, 224, 228, 229, 235, eastern Australia (South Australia, Victoria, New South Wales), 233, 235, 236, 242. Tarsus, males, island range, 106, 111, 115, 116, 118, 120, 121, 123, 126, northwestern Australia, 114, 118, 122, 131, eastern Australia, 106, 115, 119, 124. There are no color differences between birds from the various lo-

calities and the quoted measurements show clearly that neither *timorensis* nor *assimilis* can be maintained.

There are no definite breeding records of this species from the New Guinea region, so far as I know, but the Whitney South Sea Expedition (H. Hamlin) collected some specimens on Fergusson Island in January, during the Australian breeding seasons, and the gonads were recorded as "large" on the labels. It is, however, doubtful whether all the birds that were collected outside of Australia are really resident of those regions. There is some evidence for migratory movements and for the sudden appearance of a flock of birds on a locality where they had never been seen before. It is probable that such birds are winter visitors from Australia.

BURHINIDAE

Esacus magnirostris (Vieillot)

In the years 1912 and 1913 Mathews described 3 Australian subspecies of this species, all of which are clear synonyms of *magnirostris*. In 1920, Oberholser (Proc. U. S. Nat. Museum, LV, p. 133) described a form from the China Sea, as *scommophorus*, to include all the birds of the East Indies. The new race is said to have "upper and lower parts paler" than Australian birds. I have compared a large series of specimens from the Sunda Islands, the Philippines, Moluccas, the Papuan region and Australia and fail to see any differences in coloration. Fresh birds are dark, but worn and bleached birds are pale. Neither are there any differences in size between Australian and Malaysian birds, as my own measurements and those of A. Meinertzhagen (Ibis, 1924, p. 354) show. Birds from the Andaman Islands, although I cannot see any color differences, average very slightly smaller than birds from the rest of the range. Although I consider the difference much too slight to be of subspecific value, I want to point out (against the opinion of A. Meinertzhagen) that Oberholser's name is not available for this population, since birds from Malaysia are large, as is shown by the measurements of the type of *scommophorus* and by my own measurements.

The generic name *Orthorhamphus*, based on the slight difference in the shape of the bill, is quite untenable, as has been pointed out by several authors. In fact, the two species *recurvirostris* and *magnirostris* are so similar that one is strongly tempted to unite them into one. They certainly form one superspecies. *E. magnirostris* is a bird of coral reefs and sea beaches, while *E. recurvirostris* is primarily a river bird. This difference of habitat induces apparently different feeding habits

and this in turn is correlated with the shape of the bill, as has already been suggested by Rensch (1931, Mitt. Zool. Mus. Berlin, XVII, pp. 495-496).