

47. ERETMOCHELYS SQUAMATA (Girard).

One stuffed example also from Tulear. In using this name I follow Stejneger (Bull. 58, U. S. N. M., 1907, p. 511).

PELOMEDUSIDAE.

48. STERNOTHAERUS NIGRICANS CASTANEUS (Shaw).

A single adult, provisionally identified with this race, from Miandri-vazo on the Tsiribihina River, western central Madagascar.

3.—AVES. By OUTRAM BANGS.

The collection of birds made by Mr. F. R. Wulsin, and his assistants, numbers 1,065 skins, belonging to 122 species and subspecies, four of which are described as new. The species are arranged in the sequence of Sharpe's Hand list of the genera and species of birds.

No field-work was done in the eastern parts of the island, but a small series of skins from the Eastern Forest was bought of a local collector. This series includes twelve species, namely:—*Sarothrura insularis* Sharpe, *Atelornis squamigera* (Lafresnaye), *Corapitta pittoides* (Lafresnaye), *Cuculus rochii* Hartlaub, *Coua caerulea* (Linné), *Philepitta castanea* (Müller), *Tylas eduardi* Hartlaub, *Mystacornis crossleyi* Grandidier, *Nesobates madagascariensis* (Gmelin), *Vanga rufa* (Gmelin), *Nelicurvius nelicourvi* (Scopoli), and *Hartlaubius auratus* (Müller).

I am greatly indebted to Dr. C. W. Richmond, Assistant Curator of Birds, U. S. N. M., who most kindly compared the series of skins of several species with the ample African material now in Washington, and answered a number of questions relating to synonymy and nomenclature.

PHASIANIDAE.

1. MARGAROPERDIX MADAGASCARIENSIS (Scopoli).

One adult ♂ forty-five miles south of Berevo, July 15.



## NUMIDIDAE.

## 2. NUMIDA MITRATA Pallas.

Two males, one young, one adult, forty miles east of Miandrivazo, June 18, and Upper Siribihina River, July 4.

## TURNICIDAE.

## 3. TURNIX NIGRICOLLIS (Gmelin).

Six adults, both sexes, Morondava, Berevo, and Lake Tsimanampetsotsa, July and August.

## PTEROCLIDIDAE.

## 4. PTEROCLIS PERSONATUS Gould.

Nine specimens, adults of both sexes, twenty kilometers northeast of Tulear, Morondava River, and forty-five miles and thirty miles south of Berevo, July, and August.

## TRERONIDAE.

## 5. VINAGO AUSTRALIS (Linné).

Three adult females, Miandrivazo, June 23, Upper Siribihina River, July 6, and Maevatanana, September 9.

## 6. ALECTROENAS MADAGASCARIENSIS (Linné).

One adult ♀, Ambola, southwestern coast, August 7.

## PERISTERIDAE.

## 7. HOMOPELIA PICTURATA (Temminck).

Nineteen adult specimens, both sexes, Lake Tsimanampetsota, Ambola, twenty kilometers northeast of Tulear, Mahabo, and Miandrivazo, June, and August.



8. *OENA CAPENSIS ALIENA*, subsp. nov.

Twenty-six specimens, adults of both sexes, Miandrivazo, Morondava, Morondava River, Mahabo, Tulear, and Lake Tsimanampetsotsa, June, July, and August.

*Type*.—Adult ♂ M. C. Z. 77,895 Tulear, Madagascar, August 3, 1915. F. R. Wulsin.

*Characters*.—Similar to *Oena capensis capensis* (Linné) of South Africa and *Oe. capensis anonyma* Oberholser of British East Africa, but wing and tail averaging slightly longer; scapularis, mantle, and lower rump considerably darker; grey of head extended down to (or almost to) the mantle (in African birds the hind neck and nape are brown); the black bands bordering the white one on rump stronger (more apparent) and blacker; rufous on outer web of outermost primary less extensive.

*Measurements*, adult ♂, wing, 105–110, (107.08)<sup>1</sup>; tail, 130–143, (135.09).<sup>2</sup> Adult ♀, wing, 100–106, (103.06)<sup>3</sup>; tail, 125–135 (129.01).<sup>4</sup>

## RALLIDAE.

9. *RALLUS CUVIERI* Pucher.

Five specimens adults of both sexes, Maevatanana, Miandrivazo, Upper Siribihina River, Ambatondrazaka, June, July, and September.

10. *GALLINULA CHLOROPUS PYRRHORHOA* Newton.

Fourteen specimens, adults of both sexes and young, southern end of Lake Alaotra, Maevatanana, Berevo, Ambatondrazaka, Miandrivazo, and Tulear, June, July, and September.

Every skin in this series, even of young birds, has the light portions of the under tail-coverts buffy or ruddy, but a close examination shows that the basal part of the feathers is pure white where the exposed ends are buff.

11. *FULICA CRISTATA* Gmelin.

Twelve adults both sexes, all taken at the southern end of Lake Alaotra, September 25.

<sup>1</sup> Thirteen specimens.

<sup>3</sup> Eight specimens.

<sup>2</sup> Eleven specimens.

<sup>4</sup> Eight specimens.



## COLYMBIDAE.

12. *PODICEPS PELZELNI* Hartlaub.

Five specimens, four adults in non-breeding plumage and one young in down, Sahabe River, Miandrivazo, and Mahabo, June, July, and September.

These skins have been carefully compared by Dr. Richmond with the series of *P. capensis* in the U. S. N. M. The four adults certainly are *P. pelzelni* which can be separated from *P. capensis* by the angle of the gonys being more lengthened, and the under mandible turning up rather less abruptly at the tip. There is also a tendency to a dusky spot near the tip of the outer secondaries in *P. pelzelni*.

## LARIDAE.

13. *HYDROCHELIDON LEUCOPAREIA DELALANDII* Mathews.

Four adults, both sexes, all in winter plumage, southern end of Lake Alaotra, September 25.

I follow Mathews in recognizing a South African form, to which I refer our birds, not having sufficient material to decide the question as to the recognition of a subspecific form.

14. *STERNA BENGALENSIS ARABICUS* (Mathews).

One male (adult in winter plumage?) mouth of the Onilahy River, August 4.

In this instance, also, I simply follow Mathews.

15. *LARUS DOMINICANUS* Lichtenstein.

Two adult males, Ambola, southwest coast, August 7, and Nosy Asatra to Beheloka, August 6.

Mathews and Iredale, in their Reference list of the birds of New Zealand (Ibis, 1913, 10, p. 248) use the name *Larus dominicanus antipodus* (Bruch) for the New Zealand bird without stating how it differs from the South American true *L. dominicanus*. I have carefully compared a number of specimens from each of the following localities:—southern South America, South Africa, and New Zealand and can find no tangible differences by which to separate them. I therefore consider them as belonging to one and the same subspecies.



## CHARADRIIDAE.

## 16. MORINELLA INTERPRES INTERPRES (Linné).

Six specimens, both sexes, all taken from Nosy Asatra to Beheloka, August 6.

## 17. CHARADRIUS BIFRONTATUS Cabanis.

Four adults, both sexes, Maevatanana, and Berevo, Siribihina River, July 10, September 9, and 12.

## 18. CHARADRIUS MARGINATUS PALLIDUS Strickland.

Thirty-one specimens, Tulear, Maevatanana, Lake Tsimanampetsotsa, Beheloka, Upper Siribihina River, Morondava, St. Augustin Bay, and Nosy Asatra to Beheloka, July, August, and September.

It is possible that the Madagascan bird may prove separable from the African, in which case *tenellus* Hartlaub would be available.

19. CHARADRIUS VARIUS Vieillot.<sup>1</sup>

Eleven specimens, Maevatanana, Tulear, and Begidro, Upper Siribihina River, August, and September.

## 20. CHARADRIUS THORACICUS Richmond.

Six specimens, both sexes, three adults and three young, Lake Tsimanampetsotsa, and Nosy Asatra to Beheloka, August.

This is a fine species, the young birds, not quite full grown, have a blackish ring around the foreneck much as in the adults.

## 21. HYPHIBATES HIMANTOPUS MINOR Natterer.

Thirteen specimens, adults of both sexes, and one, two thirds grown, young, Miandrivazo, Maevatanana, southern end of Lake Alaotra, Mahabo, Morondava River, and Upper Siribihina River, June, July, and September.

<sup>1</sup> Dr. C. W. Richmond cannot find that *varius* is preoccupied and advises its use instead of the later *pecuarius* of Temminck.



In the adults, irrespective of sex, the wing ranges from, 220–237 (226.63); the tarsus from 102–120 (112.4); the culmen from 60–62 (61.1). There is little doubt that females are smaller than males in this as in most, if not all the species and subspecies of Stilts. Some of the specimens unfortunately are almost certainly incorrectly labeled as to sex.

22. *NUMENIUS ARQUATUS MADAGASCARIENSIS* (Linné).

Two adult females, Morondava, July 22, and Ambola, August 7.

Van Oort (Notes from the Leyden museum, 1910, 32, p. 116), has already pointed out that the Siberian Curlew winters in Madagascar, and must bear the above name. Our two specimens are distinctly referable to this form. Whether the differences are sufficiently great or sufficiently constant to warrant subspecific recognition must be decided when sufficient material is available.

23. *NUMENIUS PHAEOPUS PHAEOPUS* (Linné).

Two adults, one female, Tulear, August, one unsexed, without date.

One of these, a very bleached out specimen, is referable to the western Whimbrel, the other is apparently an intermediate and might be referred to either *N. phaeopus phaeopus* or *N. phaeopus variegatus* (Scopoli) with equal chance of accuracy.

24. *CALIDRIS LEUCOPHAEA* (Pallas).

Two females, in winter plumage, on an island at Nosy Asatra, southwestern coast, August 5, and Morondava, July 23.

25. *EROLIA FERRUGINEA* (Brünnich).

Forty-eight specimens, Tulear, August 18.

This series includes young of the year and adult birds with mottled rufous and white under parts, in about equal numbers.



26. *ROSTRATULA BENGALENSIS MADAGASCARIENSIS* (Boddaert).

Two specimens, ♂ and ♀, Maevatanana, September 9.

The Madagascan form of the Painted Snipe is probably a good subspecies. Our two specimens, compared with African birds, are darker and more greyish.

## PARRIDAE.

27. *PHYLLOPEZUS ALBINUCHA* (Geoffroy St. Hilaire).

Fourteen specimens, both sexes, young and adults, Tulear, Berevo, Upper Siribihina River, Maevatanana, Miandrivazo, and southern end of Lake Alaotra, June, July, and September.

## CURSORIIDAE.

28. *GALACTOCHRYSEA OCULARIS* (Verreaux).

One adult ♀, Maevatanana, September 11.

## Family ?

29. *MONIAS BENSCHI* Oustalet and Grandidier.

Four adults, three males and a female, twenty kilometers northeast of Tulear, and Tulear, August.

Both the original describers and Hartert (Nov. zool., 1912, **19**, p. 373, pl. 1) suggest affinities to the Rallidae for this extraordinary species, whose systematic position is still unknown. The bird has powder-down patches somewhat different in detail, but on the whole not unlike those of Mesites.<sup>1</sup> Possibly the relationship of these two remarkable Madagascan types is not so very remote.

## IBIDIDAE.

30. *TRESKIORNIS BERNIERI* Bonaparte.

Two adult males, thirty miles south of Berevo, July 14.

<sup>1</sup> Dr. C. W. Richmond has some doubt as to the preoccupation of Mesites, but if preoccupied Mesitornis Bonaparte 1855, and not Mesoenas Reichenbach 1861 must be used.



31. *PLEGADIS FALCINELLUS* (Linné).

Fourteen specimens, both sexes, young and adult, Berevo, Tulear, southern end of Lake Alaotra, Morondava, Maevatanana, Mahabo, and Miandrivazo, June, July, and September.

Perhaps a very large series of specimens might reveal some characters by which the Glossy Ibis can be divided into subspecies. I, however, am unable to find any constant differences between skins from Madagascar and from Europe or even from America.

## CICONIIDAE.

32. *ANASTOMUS LAMELLIGERUS MADAGASCARIENSIS* Milne Edwards.

Seven specimens, both sexes, immature and adults, Sahabe River, Berevo, Morondava, and Mahabo, July.

This subspecies is easily separated from the African form by the character of the bill.

## SCOPIDAE.

33. *SCOPUS UMBRETTA BANNERMANI* Grant.

Five adult females, Morondava, Miandrivazo, Maevatanana, and twenty-five kilometers east of Tulear, July, August, and September.

## ARDEIDAE.

34. *ARDEA PURPUREA MADAGASCARIENSIS* Van Oort.

Seven specimens immature and adults of both sexes, Morondava River, Miandrivazo, Berevo, and thirty miles south of Berevo, and Upper Siribihina River, June, and July.

As pointed out by Van Oort the Purple Heron of Madagascar is a very distinct form, almost worthy of specific rank.

35. *ARDEA CINEREA JOHANNÆ* Gmelin.

Two females, one adult, one immature, Berevo, and Morondava River, July 10, and July 20.

Gmelin's name was based on a bird from Anjouan, one of the



Comoro Islands, and must undoubtedly be used for the resident Grey Heron of Madagascar, which is characterized by dark grey upper parts, very stout bill, and very short wing-tip—the primaries, exceeding the secondaries by only 35 mm. The bare parts in the adult, according to Wulsin's notes, were colored as follows:—feet and tarsus greyish yellow; bare tibia, bright pink (this still shows in the skin as a garter-like marking around the leg); bill light yellow, below, darker above; skin around eye, greenish.

36. *ARDEA HUMBLLOTI* Milne Edwards and Grandidier.

One fine adult ♂, Berevo, Siribihina River, July 9.

37. *EGRETTE ALBA* (Linné) sub. sp.?

Two adult males, southern end of Lake Alaotra, and Upper Siribihina River, July 5, and September 25.

The specimen taken September 25 at the southern end of Lake Alaotra, is in full breeding plumage, with a long train of dorsal plumes, extending 175 mm. beyond the tail. Its bill is black except at the base where it is yellowish; the bare tibia is black. The other specimen is apparently adult, or perhaps a bird of the previous year, but is not in breeding plumage, having no ornamental dorsal plumes. Its bill is wholly yellow. Both are small as compared with European skins, as the following measurements show; they differ but little in size from Australian specimens.

Mathews in *Birds of Australia* uses the name *Herodias alba symmatorphus* Gould for the Australian form, and comments on the difficulty of satisfactorily dividing the Great White Egret into geographical subspecies.

African examples are also small, but Reichenow, (*Die Vogel Afrikas*), says that all that he has examined have yellow bills at all seasons.

The name the Madagascan form should bear, must, I think, be decided when much more material is available. Our two skins afford the following measurements:—M. C. Z. 77,431 ♂ adult (in breeding plumage): wing, 380; tail, 142.; tarsus, 149.; culmen 108. M. C. Z. 77,430 ♂ (adult?), (in non-breeding plumage): wing, 365.; tail, 138; tarsus, 160; culmen 110.



## 38. EGRETTE DIMORPHA Hartert.

Seven specimens, both sexes, three in the grey phase of plumage, three in the white phase, and one partly grey and partly white, fifteen kilometers east of Tulear, Tulear, Miandrivazo, Ambola, southwestern coast, and Berevo, June, July, and August.

This very distinct species, lately described by Hartert, had previously been confounded with *Demigretta gularis* (Bosc). It is a common heron in southwestern Madagascar.

## 39. NYCTICORAX NYCTICORAX NYCTICORAX (Linné).

Two specimens, an immature ♀ and an unsexed adult, Tulear, and Miandrivazo, June.

So far as I can judge by two examples, there is nothing peculiar about the Madagascan Night Heron. It is a rather uncommon bird on the island.

## 40. BUTORIDES ATRICAPILLA RUTENBERGI (Hartlaub).

Six specimens, immature and adults of both sexes, Tulear, Morondava, and Maevatanana, July, August, and September.

## 41. ARDEOLA IDAE (Hartlaub).

Twenty-two specimens, immature and adults of both sexes, Miandrivazo, southern end of Lake Alaotra thirty miles south of Berevo, fifteen kilometers east of Tulear, Sahabe River, Mahabo, Maevatanana, and Berevo, June, July, and August.

One old ♂, taken September 25, M. C. Z. 77,438, has the black- and white-striped occipital plumes very long, 174 mm. in length. No other specimen, among those in apparently full nuptial plumage approaches this one in this respect.

## 42. BUBULCUS IBIS IBIS (Linné).

Thirty-one specimens, immature and adult of both sexes, Miandrivazo, Upper Siribihina River, Maevatanana, Morondava, Tulear,



Ambatondrazaka, sixty kilometers northwest of Antsirabe, fifteen miles south of Berevo, June, July, August, and September.

43. *IXOBRYCHUS MINUTUS PODICIPES* (Bonaparte).

Two adult males, Morondava, and Miandrivazo, June, and July.

ANATIDAE.

44. *SARCIDIORNIS MELANONOTA* (Pennant).

One adult female, southern end of Lake Alaotra, September 25.

45. *NETTOPUS AURITUS* (Böddaert).

Ten adults both sexes, Maevatanana, Tulear, Sahabe River, and southern end of Lake Alaotra, September.

46. *DENDROCYGNA VIDUATA* (Linné.).

Ten adults, both sexes, Upper Siribihina River, Miandrivazo, June, and July.

I have compared this series very carefully with both American and African specimens, and can find no real differences. The Madagascan birds are much stained on the white parts of the head and neck by bog iron.

47. *DENDROCYGNA BICOLOR* (Vieillot).

Six adults, both sexes, Tulear, and southern end of Lake Alaotra, September.

These examples also I am unable to distinguish from American specimens. The throat is usually darker and more reddish in our Madagascan skins, wholly due, I believe, to staining from bog iron, as the feathers underneath the very tips are of the same color as in specimens from other localities.



48. *ANAS MELLERI* Sclater.

Nine adults, both sexes, southern end of Lake Alaotra, and Sahabe River, September.

49. *NETTION PUNCTATUM MADAGASCARIENSIS* Grandidier.

Nine specimens, adults of both sexes, southern end of Lake Alaotra, Tulear, Berevo, and Miandrivazo, June, July, and September.

Madagascan examples are a little smaller, and shorter winged, than African specimens, and are perhaps rather paler, more reddish brown, less dusky below.

50. *MARILA INNOTATA* (Salvadori).

Five adults, both sexes, southern end of Lake Alaotra, and Sahabe River, September.

51. *THALASSORNIS INSULARIS* Richmond.

Three adults, ♂, ♀ ♀, Berevo, and near Ambatondrazaka, July, and September.

## PHALACROCORACIDAE.

52. *PHALACROCORAX AFRICANUS PICTILIS*, subsp. nov.

Twenty specimens, adults, and immature of both sexes, Miandrivazo, Maevatanana, Tulear, Berevo, Morondava, and Upper Siribihina River, June, July, August, and September.

*Type*.—Adult ♂, M. C. Z. 77,555. Miandrivazo, Madagascar, June 26, 1915. F. R. Wulsin.

*Characters*.—Similar to *P. africanus africanus* (Gmelin) but larger; rectrices broader; spots on wings and scapulars larger, and rather differently shaped, extending straight across the tips of the feathers (in the African form the spot is usually deeper on the mid-rib than on the edges of the feathers).

*Measurements*.—Wing, of adults (both sexes included), 218–230; tail 163–171. In seven African skins of *P. africanus africanus* (Gmelin) the wing varies from 200–215, the tail 142–154.



## 53. ANHINGA VULSINI, sp. nov.

Six specimens, adults of both sexes, and two immature females with wholly buffy under parts, Maevatanana, Miandrivazo, and Tulear, June, and September.

*Type*.—Adult ♂. M. C. Z. 77,550. Maevatanana, Madagascar, September 9, 1915. F. R. Wulsin.

*Characters*.—Similar to *A. rufus* (Daudin) of Africa, but all the middle wing-coverts striped white (normal) or buff (stained with limonite) and black, exactly as in *A. melanogaster* (Gmelin), entirely lacking the broad brown band across the wing of the African species; under side of neck paler, more buff or sayal-brown, less chestnut. Similar also to *A. melanogaster* (Gmelin) of the Indo-Malayan region, and with exactly similar pattern of wing-coverts, but differing in lacking the white, brown-spotted throat and dark brown neck of that form; these parts being as in *A. rufus* except paler.

*Measurements.*

No.	Sex	Wing	Tail	Tarsus	Exposed culmen
77,549	♂ad.	350	268	44	80
77,550	♂ad.	335	252	40	78
77,554	♂ad.	337	250	39	79
77,552	♀ad.	346	261	43	77

*Remarks*.—I can find no name for the Madagascan Anhinga, which has by some authors been referred to *A. rufus*, by others to *A. melanogaster*. Its characters are curiously intermediate, and it is a very well-marked form.

I think that all the paler stripings of the wing-coverts, scapulars, and long tertials are normally white. In most specimens they are buff or clay color or even almost ferruginous, on the exposed portion of the feather, but white on the concealed basal part. This, I consider, is wholly due to staining from limonite, especially as in every specimen in the series some feathers can be found in the lesser coverts, middle coverts, or scapulars that are striped with silvery white; such white-striped feathers, moreover, always appear as if newly acquired.

Such staining is very prevalent among the Madagascan swimming, diving, and wading birds, on any part of the plumage white enough to show it.



## FALCONIDAE.

54. *POLYBOROIDES RADIATUS* (Scopoli).

Eighteen specimens, adults and immature of both sexes, Berevo, Miandrivazo, Tulear, and Upper Siribihina River, June, July, and August.

55. *ASTUR FRANCESII* (Smith).

Eight specimens, adults and immature, both sexes, Morondava, Miandrivazo, and Berevo, June, and July.

56. *BUTEO BRACHYPTERUS* Hartlaub.

Twenty-six specimens, adults and immature, Upper Siribihina River, Antsoa, Morondava, Miandrivazo, near Ambatondrazaka, Berevo, and the Tulear region, June, July, and August.

57. *MILVUS MIGRANS PARASITUS* (Daudin).

Twelve specimens, adults and immature of both sexes, Miandrivazo, Morondava, Maevatanana, Begidro, and from forty kilometers N. N. W. of Antsirabe, June, July, and September.

These skins, upon comparison, prove to be quite the same as African examples.

58. *BAZA MADAGASCARIENSIS* (Smith).

One adult male Miandrivazo, June 23.

59. *FALCO PEREGRINUS RADAMA* Hartlaub.

One adult male Miandrivazo, June 21.

60. *FALCO CONCOLOR* Temminck.

One, unsexed, adult, Tulear.



## 61. CERCHNEIS NEWTONI (Gurney).

Thirty-five specimens, adults and immature of both sexes, Tulear, Morondava, Berevo, near Antsirabe, Nosy Asatra, thirty miles south of Ambatondrazaka, mouth of Onilahy River, Ambola, Lake Tsimanampetsotsa, Maevatanana, and Miandrivazo, June, July, August, and September.

As pointed out by Dr. C. W. Richmond, this species is dicromatic, having an erythristic phase, very similar to the erythristic phase of the Cuban Kestrel, *Cerchneis sparveroides* (Vigors).

## 62. DISSODECTES ZONIVENTRIS (Peters).

Five adult females, Tulear, Morondava, and Maevatanana, July, August, and September.

## PSITTACIDAE.

## 63. CORACOPSIS VAZA (Shaw).

Ten adults, both sexes, Miandrivazo, June.

## 64. CORACOPSIS NIGRA (Linné).

Three adults, ♂, ♀ ♀, Miandrivazo, June.

## 65. AGAPORNIS MADAGASCARIENSIS MADAGASCARIENSIS (Boddaert).

Fourteen specimens, adults and immature of both sexes, all from Miandrivazo, June.

## 66. AGAPORNIS MADAGASCARIENSIS ABLECTANEA, subsp. nov.

Three specimens, two adult males and one immature ♀, from the Morondava Delta, southwestern Madagascar, July.

*Type*.—Adult ♂, M. C. Z. 78,302. Morondava Delta, southwestern Madagascar, July 24, 1915. F. R. Wulsin.



*Characters*.— Similar to *A. madagascariensis madagascariensis* (Boddaert) of eastern, northern, and central Madagascar, but slightly larger; the green parts of plumage much bluer less yellowish green, the rump about cobalt-green, some of the feathers and the upper tail-coverts tipped with benzol-green; wings (except primaries which of course are dusky) and back, about zinc-green; belly and under tail-coverts, turtle-green; throat and breast purer grey due to the almost total absence of yellowish on the bases of the feathers of these parts.

*Measurements*.— Adult male (two specimens) wing, 91–95; tail, 55–56; tarsus, 12–13; culmen from cere, 11.

*Remarks*.— This very bluish form is in all probability confined to extreme southwestern Madagascar. It was referred to by Salvadori (B. M. Cat., 20, p. 508) from Ankafana, s. Betsileo, and from Rodrigues (introduced). There are two specimens in the U. S. N. M. received from the Paris Museum collected by Besson in 1889. but labeled simply Madagascar.

#### LEPTOSOMATIDAE.

##### 67. LEPTOSOMUS DISCOLOR (Hermann).

Eleven adults, both sexes, Tulear Region, Berevo, Upper Siribihina River, Miandrivazo, and Morondava, June, July, and August.

#### CORACIIDAE.

##### 68. URATELORNIS CHIMAERA Rothschild.

Two adults, ♂ and ♀, twenty kilometers northeast of Tulear, taken together August 15.

#### ALCEDINIDAE.

##### 69. CORYTHORNIS CRISTATA (Linné.).

Fourteen specimens, both sexes, Morondava, Upper Siribihina River, and Miandrivazo, June, and July.



70. *ISPIDINA MADAGASCARIENSIS* (Linné).

One adult ♂, Upper Siribihina River, July 3.

## UPUPIDAE.

71. *UPUPA MARGINATA* Bonaparte.

Twenty-two specimens, immature and adult of both sexes, Miandrivazo, Berevo, Morondava, Upper Siribihina River, Maevatanana, Tulear Region, and Lake Tsimanampetsotsa, June, July, August, and September.

## MEROPIDAE.

72. *MEROPS SUPERCILIOSUS* Linné.

Thirty-three specimens, immature and adults of both sexes, Maevatanana, Miandrivazo, Berevo, Tulear, and one hundred kilometers west northwest of Antockaba, June, July, August, and September.

## MICROPODIDAE.

73. *TACHORNIS GRACILIS* Sharpe.

Three adults, ♂; ♀ ♀, Miandrivazo and forty-five miles south of Berevo, June, and July.

## CUCULIDAE.

74. *CENTROPUS TOULOU* (Müller).

Fifty-one specimens, immature and adults of both sexes, including many males in the black breeding plumage, Miandrivazo, Berevo, Morondava, Mahabo, Lake Tsimanampetsotsa, Tulear Region, and Maevatanana, July, August, and September.

75. *COUA CRISTATA* (Linné).

Fourteen specimens, both sexes, Morondava, Maevatanana, Morondava River, Upper Siribihina River, Berevo, and up to forty-five miles south of Berevo, July, and September.



76. *COUA PYROPYGA* Grandidier.

Seven specimens, both sexes, Morondava River, and Tulear Region, July, and August.

77. *COUA VERREAUXI* Grandidier.

Four adults, both sexes, Lake Tsimanampetsotsa, and six miles east of Tulear, August.

78. *COUA OLIVACEICEPS* (Sharpe).

Six adults, both sexes, Tulear Region, and Lake Tsimanampetsotsa, August.

79. *COUA CURSOR* Grandidier.

Seven adults, both sexes, Tulear Region, and Lake Tsimanampetsotsa, August.

80. *COUA COQUERELLI* Grandidier.

Four adults, both sexes, Berevo, and Upper Siribihina River, July.

81. *COUA GIGAS* (Boddaert).

One adult male, Begidro, Upper Siribihina River, July 5.

## HIRUNDINIDAE.

82. *PHEDINA MADAGASCARIENSIS* Hartlaub.

Four adults, both sexes, Upper Siribihina River, July 4.

## MUSCICAPIDAE.

83. *NEWTONIA AMPHICHROA* Reichenow.

Three adults, ♂♂, ♀, Tulear, and Lake Tsimanampetsotsa, August.



84. *TCHITREA MUTATA* (Linné).

Eleven specimens, both sexes, Tulear Region, Maevatanana, Miandrivazo, and Upper Siribihina River, July.

## CAMPOPHAGIDAE.

85. *GRAUCALUS CINEREUS* (Müller).

Two adults, ♂ and ♀, Tulear, and Berevo, July 7, and August 12.

## PYCNONOTIDAE.

86. *HYPSIPETES MADAGASCARIENSIS* (Müller).

Fifty specimens, both sexes, Berevo, Morondava, Tulear, Begidro, Lake Tsimanampetsotsa, Miandrivazo, and Beheloka, July, and August.

## TIMELIIDAE.

87. *BERNIERIA MADAGASCARIENSIS* (Gmelin).

Five adults, both sexes, Miandrivazo, and Upper Siribihina River, June, and July.

## TURDIDAE.

88. *GERVAISIA PICA* (Pelzeln).

Seventeen specimens, both sexes, Tulear, and Lake Tsimanampetsotsa, August.

89. *COSSYPHA IMERINA* Hartlaub.

Fifteen specimens, both sexes, Lake Tsimanampetsotsa, St. Augustin Bay, Beheloka, Anakao, and Nosy Asatra, August.



90. *SAXICOLA SYBILLA* (Linné).

Eight specimens, both sexes, Tulear Region, Miandrivazo, Ambaton-drazaka, and Andaingo, June, August, and September.

## SYLVIIDAE.

91. *CISTICOLA CHERINA* (Smith).

Four adults, both sexes, Tulear, and Morondava, July, and August.

92. *NESILLAS LANTZI* Grandidier.

Five adults, both sexes, Tulear, and Lake Tsimanampetsotsa, August.

93. *CALAMOCICHLA NEWTONI* (Hartlaub).

One adult ♂, Sahabe River, September 25.

94. *NEOMIXIS TENELLA* Hartlaub.

Fifteen specimens, both sexes, Tulear, Lake Tsimanampetsotsa, and Upper Siribihina River, July, August, and September.

## VANGIDAE.

95. *XENOPIROSTRIS XENOPIROSTRIS* (Lafresnaye).

Seven specimens, adults of both sexes, and one immature ♂, Tulear Region, and Lake Tsimanampetsotsa, August.

96. *ARTAMIA LEUCOCEPHALA* (Gmelin).

Seven specimens, adults, and immature, both sexes, Miandrivazo, Morondava, Berevo, and Upper Siribihina River, June, and July.



97. *ARTAMIA BICOLOR* (Linné).

One adult ♂, Upper Siribihina River, July 3.

98. *ABBOTTORNIS CHABERT* (Müller).

Ten specimens, both sexes, Tulear, Maevatanana, Miandrivazo, Morondava, Berevo, and Anakao to Nosy Asatra, June, July, August, and September.

99. *VANGA CURVIROSTRIS* (Gmelin).

One adult, unsexed, near Tulear, August.

ZOSTEROPIDAE.

100. *ZOSTEROPS MADERASPATANA* (Linné).

One adult ♂ Miandrivazo, June 28.

NECTARINIIDAE.

101. *CINNYRIS NOTATUS* (Müller).

One adult ♂ Miandrivazo, June 24.

102. *CINNYRIS SOVI-MANGA* (Gmelin).

Ten specimens, adults, and immature, both sexes, Miandrivazo, Ambola, Upper Siribihina River, and Tulear, June, July, and August.

MOTACILLIDAE.

103. *MOTACILLA FLAVIVENTRIS* Hartlaub.

Two adult females, Miandrivazo, and twenty miles south of Ambatondrazaka, June 21, and September 21.



## ALAUDIDAE.

104. *MIRAFRA HOVA* Hartlaub.

Fifty-five specimens, both sexes, Tulear, Lake Tsimanampetsotsa, Morondava, and eight miles north of Andaingo, June, July, August, and September.

## PLOCEIDAE.

105. *SPERMESTES NANA* (Pucher).

Seven specimens, both sexes, Morondava, Morondava River, and Tulear, July, and August.

106. *FOUDIA MADAGASCARIENSIS* (Linné).

Twenty-six specimens, both sexes, only two males in scarlet breeding plumage, Morondava, Morondava River, Berevo, Anakao to Nosy Asatra, Maevatanana, Tulear, and Miandrivazo, June, July, August, and September.

107. *FOUDIA SAKALAVA* (Hartlaub).

Five specimens, all males in post-nuptial plumage, Morondava, July.

## EULABETIDAE.

108. *FALCULIA PALLIATA* Geoffroy St. Hilaire.

Seven specimens, both sexes, Morondava River, Miandrivazo, and Tulear, June, July, and August.

## DICRURIDAE.

109. *EDOLIUS FORFICATUS* (Linné).

Thirty-three specimens, adults, and immature of both sexes, Tulear, Miandrivazo, Beheloka, Morondava River, Berevo, Lake Tsimanampetsotsa, Morondava, and Upper Siribihina River, June, July, August, and September.



## CORVIDAE.

## 110. CORVUS SCAPULATUS Daudin.

Nine adults, both sexes, Tulear, Morondava, Lake Tsimanampet-sotsa, and the neighborhood of Miandrivazo, June, and August.

## 4.—MAMMALIA. By GLOVER M. ALLEN.

Specimens representing twenty-four species were obtained by Mr. Wulsin and of these three, the Musk-Shrew, the Rasse, and the Roof Rat, are introduced from the East. Of the rest there are twelve lemuroids, four insectivores, three bats, the Cryptoprocta, and the native River Hog. The Eastern Forest, as might be expected, proved most rich in species, and here most of the lemuroids and insectivores were secured. In the dry country of the southwest part of the island, the Verreaux's Sifaka and the Red-fronted Lemur were the common species. No success attended the efforts to trap the small native rodents or carnivores. Two skins of a free-tailed bat (*Chaerephon*), here named as new, represent the group with a white belly and axillary spot, replaced on the mainland of Africa by *C. emini*.

## CENTETIDAE.

## 1. CENTETES ECAUDATUS (Schreber). TENREC.

A single specimen from Ambatondrazaka differs greatly from the three others previously in the Museum's collection, in its much less spiny pelage, which is nearly uniform dark reddish brown. It is unfortunate that the three specimens are without indication of exact locality, for their uniformly pale coloration suggests that more than one geographic race may be found to occur.

## 2. ERICULUS SETOSUS (Schreber). HEDGEHOG TENREC.

Seven specimens from Didy, Eastern Forest.





1918. "Aves: in Vertebrata from Madagascar." *Bulletin of the Museum of Comparative Zoology at Harvard College* 61, 489–511.

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