

BIRDS COLLECTED BY DR. W. L. ABBOTT IN THE KILIMANJARO REGION, EAST AFRICA.

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The first collection of birds received by the United States National Museum from the well-known and generous traveler and collector, Dr. W. L. Abbott, was gathered by him on famous Mount Kilimanjaro and in the neighboring region east and south, chiefly during the years 1888 and 1889.

Doctor Abbott reached Kidudwe, 90 miles inland from Zanzibar, in December, 1887, journeying thence to Taveta, in southeastern British East Africa, which latter place formed, as it were, his base of operations for the two years that followed. Collecting was assiduously carried on at various places in the environs of Taveta, and trips were made to Lake Jipé, Lake Chala, Kahé, Aruscha-wa-chini, and the Useri River, while Mount Kilimanjaro itself was several times ascended and collections made at various altitudes up to 14,000 feet. Early in January of 1890 the Teita Hills were visited, and about the middle of the same month Mombasa on the coast was finally reached. The localities at which birds were obtained, together with the months in which the respective collecting was done, are given below:

Kidudwe.—In German East Africa, 90 miles inland from Zanzibar. December, 1887.

Mount Kilimanjaro.—On the boundary between German East Africa and British East Africa, but lying mostly in the former, about 250 miles from the coast, and some 450 miles southeast of Victoria Nyanza; altitude 19,780 feet. April, May, June, July, August, and November, 1888; August, September, November, and December, 1889; January, 1890.

Foot of Mount Kilimanjaro.—At the southeast side. April, 1888.

Mandara's, Mount Kilimanjaro.—On the mountain, at 5,000 feet. August and September, 1889.

Maranu, Mount Kilimanjaro.—On the southeastern slope of the mountain, at 5,000 feet. Possibly the same as Marangu. April and September, 1888.

Plains of Kilimanjaro.—*Plains near Mount Kilimanjaro*.—*Plains east of Mount Kilimanjaro*.—Near the east base of the mountain. August, September, October, December, 1888; January and July, 1889.

Useri, Kilimanjaro.—*Useri River*.—Near the east base of Mount Kilimanjaro. July, August, September, October, December, 1888; January and July, 1889.

Taveta.—In British East Africa, about 20 or 25 miles southeast of Mount Kilimanjaro. February, March, April, May, June, July, August, September, November, December, 1888; January, February, and April, 1889.

Plains of Taveta.—Near Taveta. June, July, and August, 1888.

Lumi River.—In the vicinity of Taveta. October and November, 1888.

Lake Jipé.—In German East Africa, 10 or 15 miles south of Taveta. May, 1888.

Plains of Lake Jipé.—Near Lake Jipé. May, 1888.

Lake Chala.—Between Taveta and the base of Mount Kilimanjaro, 10 or 15 miles northwest of the former. July and August, 1888.

Kahé.—South of Mount Kilimanjaro, and west of Taveta. May, September, November, 1888; August, 1889.

Plains southwest of Mount Kilimanjaro.—May, 1889.

Aruscha-wa-chini.—In German East Africa, southwest of Mount Kilimanjaro. October and November, 1888.

Teita Hills.—In British East Africa, about 75 miles east of Mount Kilimanjaro. January, 1890.

Mombasa.—On the coast of southern British East Africa, about 150 miles north of Zanzibar. January, 1890.

Mount Kilimanjaro is classic ground, ornithologically, and few localities in Africa are now better known. Situated, as it is, approximately midway between north and south, the Kilimanjaro district is part Abyssinian, part South African in its affinities, possessing at the same time, however, a considerable proportion of endemic forms. Strange to say a surprisingly small number of the mountain species are identical with those of Mount Kenia in British East Africa, some 200 miles to the northward, a fact to which attention has already been called.

Several collectors preceded Doctor Abbott in this region and many have followed him, but few have achieved more important results, and it is a matter of great regret that the published report on this material should have been so long delayed. Dr. Charles W. Richmond based the genus *Heterotrogon*^a on specimens from this collection, and described ten new forms,^b but little else concerning these birds of Doctor Abbott's has hitherto been printed, though many of them were

^a Proc. U. S. Nat. Mus., XVII, 1895, pp. 601-603.

^b Auk, XIV, 1897, pp. 154-164.

tentatively identified by Mr. Robert Ridgway, and later also by Doctor Richmond. The 684 specimens represent 256 species and subspecies belonging to 59 families. Most of the novelties have already been described, but a few will be found named for the first time in the succeeding pages, together with several new genera created for species first obtained by Doctor Abbott, as well as for some previously known. Aside from these, there are a number of rare birds such as *Francolinus uluensis*, *Caprimulgus donaldsoni*, *Micropus myoptilus*, *Melittophagus oreobates*, *Hyphantornis schillingsi*, *Nigrita diabolica*, *Pseudonigrita cabanisi*, *Pinarochroa hypospodia*, *Cisticola hunteri*, *Bradypterus barratti*, *Batis mixta*, *Parus thruppi barakæ*, and *Zosterops euryericota*; also others in plumages that are undescribed; and still other specimens that even at this late day extend the range of their respective species. The best idea, however, of the marvelous richness of this collection of Doctor Abbott's is probably furnished by the subjoined list of 62 species and subspecies that were undescribed when obtained by him, an exposition that is possibly of more than passing interest as indicative of the great progress in African ornithology that the past eighteen years have witnessed:

Struthio massaicus Neumann.

Astur sparsimfasciatus aceletus Oberholser.^a

Francolinus uluensis Grant.

Numida reichenowi Grant.

Numida intermedia Neumann.

Pterocles gutturalis saturator Hartert.

Turtur semitorquatus intermedius Erlanger.

Turtur capicola tropicus Reichenow.

Stigmatopelia senegalensis æquatorialis (Erlanger).

Ena capensis anonyma Oberholser.^a

Chalcopelia chalcospila acanthina Oberholser.^a

Eurystomus afer suahelicus Neumann.

Melittophagus oreobates Sharpe.

Lophoceros melanoleucos suahelicus Neumann.

Rhinopomastus cyanomelas schalowi (Neumann).

Asio maculosus amerimnus Oberholser.^a

Caprimulgus donaldsoni Sharpe.

Lybius abbotti Richmond.

Smilorhis kilimensis Shelley.

Viridibucco leucomystax (Sharpe).

Melignotheres exilis meliphilus Oberholser.^a

Dendropicus guineensis massaicus Neumann.

Hyphantornis jacksoni (Shelley).

^a New subspecies.

Hyphantornis schillingsi (Reichenow).

Estrilda cyanocephala Richmond.

Nigrita diabolica (Reichenow and Neumann).

Hypochoera amauropteryx Sharpe.

Coccyzygia dufresni kilimensis (Sharpe).

Arizelopsar femoralis (Richmond).

Stilbopsar stuhlmanni Reichenow.

Arizelocichla nigriceps (Shelley).

Arizelocichla striifacies (Reichenow and Neumann).

Pycnonotus layardi micrus Oberholser.^a

Phyllastrephus cerviniventris Shelley.

Phyllastrephus placidus (Shelley).

Argya saturata Sharpe.

Cossypha caffra iolæma Reichenow.

Cichladusa guttata rufipennis (Sharpe).

Cisticola hunteri Shelley.

Cisticola prinioides Neumann.

Bradypterus cinnamomeus salvadorii (Neumann).

Apalis thescela Oberholser.^b

Apalis griseiceps Reichenow and Neumann.

Sylvietta whytii jacksoni (Sharpe).

Muscicapa striata neumanni (Poche).

Chloropeta natalensis similis (Richmond).

Batis mixta (Shelley).

Platysteira cryptoleuca Oberholser.^b

^b New species.

Tchitrea suahelica (Reichenow).
Cryptolopha umbrorirens dorcadiroa
 (Reichenow and Neumann).
Parus thruppi barakæ (Jackson).
Laniarius abbotti Richmond.
Nilaus afer minor (Sharpe).
Prionops vinaceigularis Richmond.
Zosterops senegalensis flavilateralis (Reichenow).

Helionympha nectarinioides (Richmond).
Nectarinia tacaze unisplendens Neumann.
Psaldoprocne holomelas massaica Neumann.
Hirundo emini Reichenow.
Macronyx aurantiigulus Reichenow.
Crithagra albifrons Sharpe.
Crithagra striolata affinis Richmond.

The writer has to thank Dr. R. Bowdler Sharpe, of the British Museum, who, at Doctor Richmond's request, identified a number of the more obscure forms in the collection—a very acceptable service, since in these cases the United States National Museum possessed little or no material for comparison.

To the authorities of the Philadelphia Academy of Natural Sciences, through Mr. Witmer Stone, for access to the library and for the loan of specimens, as well as to Mr. Glover M. Allen for the verification of several important references from books not available in Washington, the writer's thanks are also due. But he is under particular obligation to Dr. Charles W. Richmond for freely placing at his disposal many manuscript notes on the species of the collection, and for timely assistance of many and various kinds too numerous to recount.

All matter between quotation marks, unless otherwise specifically stated, is to be credited to Doctor Abbott, whose field notes on the specimen labels have been almost invariably transcribed. All measurements are in millimeters.

Family STRUTHIONIDÆ.

STRUTHIO MASSAICUS Neumann.

Struthio massaicus NEUMANN, Journ. f. Ornith., 1898, p. 243 (Ukamba, British East Africa).

This recently described ostrich is represented in Doctor Abbott's collection by the skin of a head and neck, which was obtained somewhere in East Africa, probably in the neighborhood of Mount Kilimanjaro.

Family PHALACROCORACIDÆ.

PHALACROCORAX LUCIDUS LUGUBRIS (Rüppell).

Phalacrocorax lugubris RÜPPELL, Syst. Uebers. Vög. Nord-Ost-Afr., 1845, p. 134, pl. I (Shoa, Abyssinia).

One female, from Lake Chala, near Mount Kilimanjaro, July 2, 1888. This example is apparently quite typical of *Phalacrocorax l. lugubris*, the wing measuring 315 mm., the exposed culmen 65 mm. The upper breast is black mixed with white, exhibiting therefore a

condition intermediate between *P. l. lugubris* and Doctor Reichenow's *Phalacrocorax gutturalis*,^a and indicating strongly that the latter is, as it has been recently considered by its describer,^b merely an adventitious variation of the former.

PHALACROCORAX AFRICANUS (Gmelin).

Pelecanus africanus GMELIN, Syst. Nat., I, ii, 1788, p. 577 (Africa).

One specimen, from Taveta, February 5, 1889. "Length 20 inches [508 mm.]; iris red; bill orange yellow."

Family ARDEIDÆ.

ARDEA MELANOCEPHALA Vigors and Children.

Ardea melanocephala VIGORS and CHILDREN, in Denh. and Clapp. Narr. Trav. Afr., II, App., 1826, p. 201 (Lake Tchad, Bornou).

One adult female, from the plains east of Mount Kilimanjaro, December 11, 1888.

HERODIAS ALBA (Linnæus).

Ardea alba LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 144 (Europe [type locality, Sweden]).

One adult, from "East Africa."

NYCTICORAX NYCTICORAX (Linnæus).

Ardea nycticorax LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 142 (southern Europe).

One specimen, without data.

ARDEOLA RALLOIDES (Scopoli).

Ardea ralloides SCOPOLI, Ann. Hist. Nat., I, 1769, p. 88 (no locality given).

One specimen, a female, from the Useri River, near Mount Kilimanjaro, August 27, 1888.

Family CICONIIDÆ.

CICONIA CICONIA (Linnæus).

Ardea ciconia LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 142 (Europe, Asia, Africa [type locality, Sweden]).

One specimen, from eastern Africa.

^a Journ. f. Ornith., 1892, p. 5 (Bukoba, Victoria Nyanza, German East Africa).

^b Reichenow, Vögel Africas, I, 1900, p. 90.

Family IBIDIDÆ.

IBIS ÆTHIOPICA (Latham).

Tantalus æthiopicus LATHAM, Ind. Orn., II, 1790, p. 706 ("Æthiopia").

Two specimens, from Aruscha-wa-chini, south of Mount Kilimanjaro, October 25, 1889. "Iris brown; sclerotics red; head, neck, and feet black; bare skin under wings carmine."

HAGEDASHIA HAGEDASH (Latham).

Tantalus hagedash LATHAM, Ind. Orn., II, 1790, p. 709 (Cape of Good Hope, southern Africa).

One specimen, from East Africa, with no indication of more exact locality.

Family ANATIDÆ.

ALOPOCHEN ÆGYPTIACA (Linnæus).

Anas ægyptiaca LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 197 (Egypt).

One adult male, from the plains of Mount Kilimanjaro, August 22, 1888.

PÆCILONITTA ERYTHORRHYNCHA (Gmelin).

Anas erythrorhyncha GMELIN, Syst. Nat., I, ii, 1788, p. 517 (Cape of Good Hope, southern Africa).

One female, from the Useri River, on the Kilimanjaro plains, August 27, 1888.

The generic name of this duck has suffered much at the hands of purist emenders; the original and therefore proper form of the word, as written above, is rarely seen.

THALASSORNIS LEUCONOTA Eyton.

Thalassornis leuconotus EYTON, Mon. Anat., 1838, p. 168 (Cape of Good Hope, southern Africa).

Two specimens—male and female—from the plains southwest of Mount Kilimanjaro, May 10, 1889.

The bird described by Doctor Richmond as *Thalassornis insularis*,^a from specimens collected by Doctor Abbott in Madagascar, seems to be undoubtedly distinct, and differs from the continental species as he has indicated.^a

^aProc. U. S. Nat. Mus., XIX, 1897, p. 678 (River Sakalés).

Family FALCONIDÆ.

GYMNOGENYS ^a TYPICA (Smith).

Poloboroides [sic] *typicus* SMITH, S. Afr. Quar. Journ., II, 1830, p. 107 (eastern Cape Colony, South Africa).

One male, from Taveta, taken February 5, 1889. — It is not quite adult, some of the brown feathers of the juvenal plumage still persisting above and below; and the lower tail-coverts are mostly slate color barred with white. “Iris white; feet and the bare skin surrounding the eyes yellow.”

MICRONISUS GABAR (Daudin).

Falco gabar DAUDIN, Traité d'Orn., II, 1800, p. 87 (“près des rivières Swart-Kop et Sondag; Camdeboo; entre les montagnes de Neige et le Bock-Veld [type locality, Swart-Kop River, Cape Colony]).

One immature female, from Taveta, January 31, 1889. “Iris light yellow; feet straw yellow.”

ASTUR SPARSIMFASCIATUS ACELETUS, new subspecies.

Chars. subsp.—Resembling *Astur sparsimfasciatus sparsimfasciatus*,^b but bill smaller; the throat, middle of abdomen, and lower tail-coverts barred with brown.

Description.—Type, adult female, Cat. No. 117876, U.S.N.M.; Taveta, British East Africa, July 7, 1888; Dr. W. L. Abbott. Upper surface brownish slate color, almost clear slate on the nape; tail sepia brown with a narrow white tip and three or four broad rather light-brown bands which, on a few of the feathers, chiefly basally, become whitish along the inner edge of the interior webs, but the middle pair entirely without white; under surface of tail paler, the light spaces brownish gray and better defined than above; wing-quills sepia barred basally on their inner webs with white, which is, however, all concealed in the closed wing; wing-coverts brownish slate, like the upper parts; sides of head and neck slate color with a brownish tinge; entire lower surface buffy white, the chin, upper throat, middle of abdomen, and under tail-coverts with narrow, widely spaced bars of hair brown, the rest of the inferior surface with broad, dark, warm hair-brown bars that are often narrowly margined with tawny; thighs more closely barred with the same color, but the more conspicuous tawny margins produce a rufescent general appearance; lining of wing buffy white, with mottlings and irregular bars of sepia and bistre. Length of wing, 251; tail, 218; exposed culmen with cere, 25;

^a See Richmond, Auk, 1902, p. 92.

^b *Astur sparsimfasciatus* Reichenow, Ornith. Monatsber., 1895, p. 97 (Zanzibar, eastern Africa).

culmen without cere, 19; tarsus, 65; middle toe, 38; middle claw, 15; hind claw, 23 mm.

This evidently new form of an interesting yet rather difficult group differs from *Astur tachiro* and its various subspecies most noticeably in its much larger size, strikingly stouter feet and tarsi, lack of white markings on the middle tail-feathers, and rather wider white interspaces of the ventral surface. Doctor Reichenow has recently reduced *Astur sparsimfasciatus* to a subspecies of *Astur tachiro*,^a but he probably errs in so doing, since the former, by his own showing,^b occurs almost exclusively within the known range of the latter; the differences are such as would appear to be specific rather than subspecific; and furthermore, there is no evidence of intergradation. The discovery of the present new form, only a short distance across the mountain from Moschi, where Mr. Neumann found what he considered typical *A. tachiro*,^c is added proof of the distinctness of the two species.

Doctor Abbott obtained only the single specimen above described, and the bird appears to be rare. He notes the native name (Ki Taveta) as "Kinui."

BUTEO AUGUR (Rüppell).

Falco (Buteo) augur RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 38, pl. XVI (Abyssinia).

Four specimens from Mount Kilimanjaro, at 4,000 and 5,000 feet. The three adults all have the lower tail-coverts more or less tipped with tawny. "Iris brown; feet and cere yellow; bill horn blue; Native name 'giáhm'. Length (of male) 20¼ inches [514 mm.]." An immature female just passing into the adult plumage has still the brown, light-barred tail and the large spots on the breast, but many black feathers are appearing in the plumage of the upper parts, while the chin and throat are streaked with black as in the adult; the posterior lower surface is strongly tinged with tawny, the thighs and crissum somewhat mottled with the same; the wings are much less blackish than those of the adult, and most of their conspicuous grayish white markings are, particularly on the outer webs, either absent or obscured.

BUTEO DESERTORUM (Daudin).

Falco desertorum DAUDIN, Traité d'Orn., II, 1800, p. 162 (based on Levaillant; no locality given, but probably southern Africa).

One immature female from Mount Kilimanjaro, 5,000 feet, September 1, 1889. This individual is not pure white below, but is tinged with buff on breast, sides, and abdomen, and with ochraceous on flags and crissum. "Iris straw color; cere light green."

^a Vögel Africas, I, 1901, p. 554.

^b Idem, pp. 552-554.

^c Journ. f. Ornith., 1899, p. 42.

AQUILA RAPAX (Temminck).

Falco rapax TEMMINCK, Pl. Col., I, 1828, pl. CCCCLV (southern Africa).

Two rather worn specimens: an adult male from the plains east of Mount Kilimanjaro, September 21, 1888; and an immature female from the plains of Taveta, July 5, 1888. Both have the cervix lighter than the back—possibly a peculiarity of their abraded condition.

LOPHOAETUS OCCIPITALIS (Daudin).

Falco occipitalis DAUDIN, Traité d'Orn., II, 1800, p. 40 ("pays d'Auteniquoi et Caffrerie").

One adult female, from Mount Kilimanjaro, 5,000 feet, October 1, 1889.

KAUPIFALCO MONOGRAMMICUS MONOGRAMMICUS (Temminck).

Falco monogrammicus TEMMINCK, Pl. Col., I, 1824, pl. CCCXIV (Senegal, western Africa).

One adult female, from Taveta, January 31, 1889.

The generic name *Kaupifalco* Bonaparte,^a founded upon this species, is long anterior to the current *Asturina* Finsch and Hartlaub,^b and should be employed for the group.

CIRCAETUS CINEREUS Vieillot.

Circaetus cinereus VIEILLOT, Nouv. Dict. d'Hist. Nat., XXIII, 1818, p. 445 (Senegal).

One specimen, an apparently adult female, from Kahé, September 5, 1888. "Iris orange yellow; feet dirty greenish white."

PONTOAETUS VOCIFER (Daudin).

Falco vocifer DAUDIN, Traité d'Orn., II, 1800, p. 65 (type locality, Delagoa Bay, Portuguese East Africa).

Haliaeetus vocifer AUTHORS.

One fine old female of this magnificent eagle is in the collection. It was obtained at Taveta, April 29, 1888. "Iris and feet soiled white; cere yellow."

MILVUS AEGYPTIUS (Gmelin).

Falco aegyptius GMELIN, Syst. Nat., I, i, 1788, p. 261 (Egypt).

Five specimens: from Taveta; Mount Kilimanjaro at 5,000 feet; and the plains east of this mountain. An adult female, taken March 25, 1888, had the "bill and feet yellow." An adult male, November 14, 1889, measured in the flesh $22\frac{1}{2}$ inches (581 mm.) in length, and $53\frac{1}{2}$

^a Rev. et Mag. de Zool., 1854, p. 533.

^b Finsch and Hartlaub, Vög. Ost-Afr., 1870, p. 59.

inches (1,359 mm.) in extent; an immature male, December 23, 1889, was $21\frac{1}{4}$ inches (540 mm.) long: "Iris dark brown; bill black; cere and feet yellow." There is a conspicuous range of individual color variation in this species, even among adult birds.

POLIHIERAX SEMITORQUATUS (Smith).

Falco simitorquata [err. typ.] SMITH, Rep. Exped. Explor. Cent. Afr., 1836, p. 44 (near old Latakoo, Bechuana Land, South Africa).

Two specimens of this diminutive falcon are in the collection—an immature female from the plains east of Mount Kilimanjaro, October 3, 1888, and an adult male from the Teita Hills, January 11, 1890. "Feet and cere (of adult male) red; bare skin around eyes red; iris brown; bill very light slate blue, the tip black." In our immature female the white collar on the hind neck is deeply tinged with chestnut and ochraceous; the broad, light terminals of the secondaries are strongly rufescent; the primaries and rectrices are tipped with chestnut or tawny; and the feathers of the entire lower parts, except the chin and upper throat, have fine blackish shaft streaks.

Family **TURNICIDÆ**.

TURNIX SYLVATICA LEPURANA (Smith).

Ortygis lepurana SMITH, Rep. Exped. Explor. Cent. Afr., 1836, p. 55 (Kurri-chaine, Bechuana Land, South Africa.)

Two specimens: Aruscha-wa-chini, October 26, 1889; and Kahé, south side of Mount Kilimanjaro, May 4, 1888.

Family **PHASIANIDÆ**.

FRANCOLINUS SEPHÆNA GRANTII (Hartlaub).

Francolinus grantii HARTLAUB, Proc. Zool. Soc. Lond., 1865, p. 665, pl. XXXIX fig. 1 (Unyamwezi, German East Africa).

Five specimens, from Taveta. The female is smaller than the male, is without spurs, and somewhat paler, more grayish on the upper surface, though there seems to be no difference on the lower parts. A bird in juvenal plumage, taken March 21, 1888, is in color above very similar to the adult female, differing chiefly in being rather paler, with less black on the nape; there is also less chestnut spotting on the jugulum; the ground color of the posterior lower parts, excepting the crissum, is deeper buff, and only a very little streaked and barred with pale grayish, this confined mostly to the breast and sides.

FRANCOLINUS ULUENSIS Grant.

Francolinus uluensis GRANT, Ibis, 1892, p. 44 (Machako's, Ulu country, British East Africa).

Three specimens: one from Taveta; one from Lake Chala, near Mount Kilimanjaro; the other without data. All appear to be typical, bearing out the specific characters assigned by Mr. Grant. This species has hitherto been reported only from Ukamba and the Ulu country, south of Mount Kenia, so that Doctor Abbott's specimens extend its range some distance to the southward. Two of these examples are further interesting on account of being females. They are smaller than the male, and lack spurs, but are quite similar in plumage, except for being possibly a little more grayish on the upper parts. They measure as follows:

Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
		mm.	mm.	mm.	mm.	mm.
Lake Chala.....	Aug. 20, 1888	166	83	24	41	27
Taveta	Apr. 18, 1889	159	76	28	39	28

FRANCOLINUS HILDEBRANDTI HILDEBRANDTI Cabanis.

Francolinus (Scleroptera) hildebrandti CABANIS, Journ. f. Ornith., 1878, pp. 206, 243, pl. iv, fig. 2 (Ndi, Teita, British East Africa).

Six specimens, from Mount Kilimanjaro, at 5,000 feet. One of the two adult females differs from the other in having considerably paler lower parts, a conspicuous mottling of blackish on the feathers of the upper breast, and very broad dark-brown instead of rufous bars on the lower tail-coverts. An immature female corresponds very closely to the description of a similar specimen, the type of *Francolinus fischeri*, given by Reichenow,^a and in color differs from the adult of the same sex in being lighter, much more coarsely mottled above, the tertials particularly with large spear-shaped spots of deep brown; very much paler below—ochraceous buff in place of deep tawny, many of the feathers broadly margined with whitish, the chin and throat whitish, the jugulum, breast, and sides of neck heavily streaked and spotted with blackish brown, the sides of the body broadly streaked with the same color; lower tail-coverts with but small obsolete sub-terminal markings of dusky. The tarsal spur is not absent in the adult female, but is shorter, stouter, and not so sharp as in the male. Doctor Abbott reports this species “very common, to judge from the numbers of snared ones brought for sale by the natives.”

^a Vögel Africas, I, 1901, pp. 478–479.

FRANCOLINUS SCHUETTI SCHUETTI Cabanis.

Francolinus (Scleroptera) schuetti CABANIS, Journ. f. Ornith., 1880, p. 351 (Northern Lunda, Kongo Free State).

Five specimens from Mount Kilimanjaro, 5,000 and 7,000 feet. Of an adult male, obtained April 6, 1888, Doctor Abbott says: "Brought alive by natives; bill and feet red, iris dark brown." The female is smaller than the male, but not appreciably different in color.

As the juvenal plumage of this species seems to be unknown, the following description, taken from a specimen collected August 9, 1888, may be of interest: Pileum bistre brown, almost uniform; rest of upper parts, including the tail, rich vandyke brown, the feathers of the nape, back, and scapulars with large black subterminal markings, and furthermore varied with bars and small shaft streaks of buff, tawny, or ochraceous; rump and upper tail-coverts obscurely, irregularly, and narrowly barred with blackish and tawny; the tail barred narrowly with dusky; wings fuscous, the coverts and outer webs of the quills reddish brown, paler than the upper surface of the body, finely vermiculated and obsoletely barred with blackish, the coverts and the primaries in places with additional bars of ochraceous, the tertials marked with black like the feathers of the back; extreme forehead, lores, orbital region, and broad supercilium ochraceous buff; cheeks and auriculars dull brown, slightly mixed with grayish; chin plain buffy white; breast and jugulum, including the sides of the neck, mottled with blackish brown, ochraceous, buff, and whitish, chiefly in more or less irregular bars, the feathers with pale shaft lines; remainder of lower parts prout's brown, paler medially, rather more rufescent posteriorly, everywhere with various blackish, ochraceous, and whitish markings, all these most obscured on the crissum; sides and flanks with buffy shaft lines.

PTERNISTES LEUCOSCEPUS INFUSCATUS (Cabanis).

Pternistes infuscatus CABANIS, Journ. f. Ornith., 1868, p. 413 (Lake Jipé, German East Africa).

Three typical specimens without data, but presumably from the neighborhood of Mount Kilimanjaro.

Family PERDICIDÆ.

COTURNIX DELEGORGUEI Delegorgue.

Coturnix delegorguei DELEGORGUE, Voy. l'Afr. Austr., II, 1847, p. 615 (Limpopo River, southeastern Africa).

Six specimens, from Taveta, and Mount Kilimanjaro at 5,000 feet altitude. "Iris of adult male light brown; feet light straw color." An immature male, taken December 25, 1889, on Mount Kilimanjaro,

differs from the adult of the same sex in being appreciably paler, both above and below; the anchor-shaped mark on the white throat is more brownish; the black median area of the ventral surface is more restricted, posteriorly brownish, and with edgings of pale grayish; the streaks on sides and flanks are noticeably smaller; "iris light brown; feet pale flesh color." The single adult female, which contained eggs ready for extrusion, is apparently of exceptional size, being larger than any of the males: wing, 103; tail, 27; exposed culmen, 12; tarsus, 25; middle toe, 22 mm.

Family NUMIDIDÆ.

NUMIDA REICHENOWI Grant.

Numida reichenowi GRANT, Ibis, 1894, p. 536 (Makarungu, Ukambani District, British East Africa).

One apparently typical specimen, from East Africa, but without specific data.

NUMIDA INTERMEDIA (Neumann).

Numida marungensis intermedia NEUMANN, Ornith. Monatsber., 1898, p. 21 (west shore of Victoria Nyanza, German East Africa).

One adult male, from the plains of Taveta, July 2, 1888. This is a typical specimen, answering perfectly to the descriptions of *N. intermedia*, and considerably extends the range of the species which does not seem previously to have been recorded except from the vicinity of Lake Victoria Nyanza.

ACRYLLIUM VULTURINUM (Hardwicke).

Numida vulturina HARDWICKE, Proc. Zool. Soc. Lond., 1834, p. 52 (coast of western Africa).

Two specimens, from Mount Kilimanjaro, and the plains east of that mountain, respectively. Both are adults in fine plumage.

Family OTIDIDÆ.

LOPHOTIS GINDIANA (Oustalet).

Eupodotis gindiana OUSTALET, Bull. Soc. Philom. Paris, 1881, p. 164 (Somali Land).

One specimen from the plains east of Mount Kilimanjaro, September 22, 1888. This is an immature male, and seems to agree very well with the description of the adult female, though we have no proper specimens for comparison.

LISSOTIS MELANOASTRA (Rüppell).

Otis melanogaster RÜPPELL, Neue Wirb. Fauna Abyss., Vögel, 1835, p. 16, pl. VII (Zana Lake, Dembea, Abyssinia).

Otis melanogaster RÜPPELL, Mus. Senckenb., II, 1837, p. 240.

Lissotis locati GRANT, Bull. Brit. Orn. Club, X, 1900, p. xxxix (Bilo, Abyssinia).

Two specimens: an adult female from the plains east of Mount Kilimanjaro, September 19, 1888; and an adult male without data. "Iris of female yellow; legs and feet white." The wing pattern of the adult female in this species is very similar to that of the immature male.

Both of Doctor Abbott's birds belong to the species with much white on the wings, which was named *Lissotis locati*^a by Mr. Grant, but which is, unfortunately, also the true *Lissotis melanogaster* of Rüppell,^b as may easily be seen by consulting the original plate and descriptions.^b Rüppell clearly and at considerable length characterizes the bird with large white wing areas, and gives also a plate which unequivocally represents the same species. Furthermore, Rüppell's type came from Abyssinia, where, according to Mr. Grant,^c the black-winged bird is not found at all, but where the white-winged one is of regular and common occurrence. From these facts it appears that the form with wings largely black, found in Natal^d and elsewhere in southern Africa, figured by Mr. Grant,^e is without a name; and, as it seems to be a perfectly distinct species, may be called:

Lissotis notophila, new species.

The characters and geographical distribution of the two species have been so fully and so carefully marked out by Mr. Grant that repetition of these in the present connection is quite unnecessary, but for this information his various publications on the subject should be consulted.^f

EUPODOTIS KORI (Burchell).

Otis kori BURCHELL, Trav. S. Afr., I, 1822, pp. 393, 402 (mouth of Vaal River, Griqualand West, South Africa).

Two specimens, male and female, from the Useri River, east of Mount Kilimanjaro. The center of the crown is more brownish, less slaty in the female than in the male. "Iris of male light yellowish brown."

^a Bull. Brit. Orn. Club, X, 1900, p. xxxix.

^b Neue Wirb. Fauna Abyss., Vögel, 1835, p. 16, pl. VII; Mus. Senckenb., II, 1837, p. 240.

^c Ibis, 1902, pp. 456-457.

^d Durban, Natal, may be considered the type locality.

^e Ibis, 1902, p. 455, fig. 11.

^f Bull. Brit. Orn. Club, X, 1900, p. xxxix; Ibis, 1900, pp. 326-327; 1901, pp. 688-689; 1902, pp. 453-457, pl. XI.

Family HELIORNITHIDÆ.

PODICA SENEGALENSIS PETERSII (Hartlaub).

Podica petersii HARTLAUB, Abhandl. Nat. Ver. Hamburg, II, 1852, p. 62 (Mozambique, eastern Africa).

One specimen from the Lumi River, near Taveta, November 30, 1888. "Iris brown; feet red; bill red, excepting a black line along the culmen." It is of large size, and in this, as otherwise, bears out the characters accredited to *petersii* as distinguished from *senegalensis* proper.

Family JACANIDÆ.

ACTOPHILUS AFRICANUS (Gmelin).

Parra africana GMELIN, Syst. Nat., II, ii, 1788, p. 709 (Africa).

Three specimens—one adult, two immature—from Aruscha-wa-chini, south of Mount Kilimanjaro, October 26, 1889. The frontal shield is much larger in the adult than in the immature bird. "Iris of adult brown; frontal plate light blue; feet slate color. Iris of immature (male and female) brown; frontal plate light green; feet greenish-slate color."

Family CHARADRIIDÆ.

HOPLOPTERUS SPECIOSUS (Wagler).

Charadrius speciosus WAGLER, Isis, 1829, p. 649 (from Lichtenstein, in Mus. Berol.) (Kaffir Land, South Africa).

Three specimens: one from the Useri River, near Mount Kilimanjaro; the two others without data, but probably from the same or a neighboring locality. In one of these birds there is a broad band of pearl gray below and bordering the black of the breast; and in another there is an indication of the same.

STEPHANIBYX CORONATUS (Boddaert).

Charadrius coronatus BODDAERT, Tabl. Pl. Enlum., 1783, p. 49 (Cape of Good Hope, South Africa).

Two specimens, male and female, from the plains of Lake Jipé, taken May 19, 1888, agree with a specimen in the United States National Museum from Uitenhage, Cape Colony. "Numerous on the dry plain."

OCHTHODROMUS ASIATICUS (Pallas).

Charadrius asiaticus PALLAS, Reis. Russ. Reichs, II, 1773, p. 715 (southern Tartary).

Three specimens, from the plains east of Mount Kilimanjaro, September 30, 1888. All are immature, and in two of them the broad brownish breast band is rather obscurely defined. "Legs (of male) greenish."

Family SCOLOPACIDÆ.

RHYACOPHILUS GLAREOLA (Linnæus).

Tringa glareola LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 149 (Europe [type locality, Sweden]).

Two specimens: one from the plains of Mount Kilimanjaro, August 25, 1888; the other from the plains east of the same mountain, December 8, 1888. "Feet greenish." The former is not yet fully molted, this particularly noticeable on the anterior upper parts; and furthermore it has the breast and jugulum medially white with only faded brownish streaks.

The generic term *Rhyacophilus*^a is the proper one for the present species, whether or not *Helodromas*^b be held as distinct; for *Rhyacophilus*, though published in the same work, occurs on a previous page. Hence if *Helodromas* be united to *Rhyacophilus* the latter becomes the proper name for the whole group. There seems, however, to be sufficient reason for the generic separation of *Helodromas ochropus* from *Rhyacophilus glareola*, since in the former the tarsus is equal to the culmen, or less, and the middle toe is less than the culmen; while in the latter species the tarsus and middle toe each exceed the culmen. The characters that distinguish *Rhyacophilus* from *Totanus* are as follows: Tail about equal to combined length of tarsus and middle toe with claw, instead of much shorter; middle toe with claw but little shorter than tarsus, in place of being only about two-thirds as long; feet when extended reaching but little beyond the tail, instead of far beyond.

But with *Rhyacophilus glareola* must be associated *Tringa solitaria* Wilson, for a careful comparison fails to reveal any structural difference, although the latter frequently has been considered congeneric with *Helodromas ochropus* and generically separable from *Rhyacophilus glareola*. Thus we shall have:

Helodromas ochropus (LINNÆUS).

Rhyacophilus glareola (LINNÆUS).

Rhyacophilus solitarius solitarius (WILSON).

Rhyacophilus solitarius cinnamomeus (BREWSTER).

ACTODROMAS MINUTA (Leisler).

Tringa minuta LEISLER, Nachtr. Bechsteins Naturg. Deutschl., I, 1812, p. 74 (Hanau, Germany).

One example, from the Useri River, on the plains of Mount Kilimanjaro, August 27, 1888. This is an adult female not yet completely molted into winter plumage.

^a Kaup, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 140 (type, *Tringa glareola* Linnæus).

^b Kaup, idem, p. 144 (type, *Tringa ochropus* Linnæus).

I am unable to discover any characters by which the so-called genera *Leimonites*^a (= *Actodromas*^b) and *Heteropygia*^c can be satisfactorily distinguished from each other, and they therefore must be united. For this combination the first name in nomenclatural precedence is *Leimonites*, which is several pages anterior to *Actodromas*; but it is untenable by reason of *Limonitis* Dalman,^d a genus of Lepidoptera, and consequently should give way to *Actodromas*.

GALLINAGO MEDIA (Latham).

Scolopax media LATHAM, Gen. Syn. Suppl., I, 1787, p. 292 (Kent, England).

Scolopax major GMELIN, Syst. Nat., I, ii, 1788, p. 661 (England).

One adult male, from Mount Kilimanjaro, at 8,000 feet, November 20, 1888.

The correct name for this species is, as already has been pointed out,^e *Gallinago media* (Latham), since this has one year's priority over *Scolopax major* Gmelin.

Family RECURVIROSTRIDÆ.

HIMANTOPUS HIMANTOPUS (Linnæus).

Charadrius himantopus LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 151 (southern Europe).

One specimen, from the plains east of Mount Kilimanjaro, December 8, 1888. It is an immature female with gray head and hind neck. "Iris orange; feet flesh color."

Family CURSORIIDÆ.

RHINOPTILUS BISIGNATUS (Hartlaub).

Cursorius bisignatus HARTLAUB, Proc. Zool. Soc. Lond., 1865, p. 87 (Benguela, southwestern Africa).

Two adults from Taveta are in the collection. The form described by Doctor Sharpe from Somali Land, *Rhinoptilus bisignatus hartingi*,^f is apparently an excellent race. An example of the latter in the United States National Museum has, in addition to the characters mentioned in descriptions, the throat and particularly the sides of the head paler, more whitish than in true *bisignatus*.

^a Kaup, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 37 (type, *Tringa temminckii* Leisler).

^b Kaup, idem, p. 55 (type, *Tringa minuta* Leisler).

^c Coues, Proc. Acad. Nat. Sci. Phila., 1861, p. 190 (type, *Tringa bonapartii* Schlegel = *Tringa fuscicollis* Vieillot).

^d Kgl. Vet.-Akad. Handl., 1816, p. 55.

^e Oberholser, Auk, 1899, p. 179.

^f *Rhinoptilus hartingi* SHARPE, Bull. Brit. Orn. Club, III, 1893, p. xiv (Somali Land).

RHINOPTILUS CHALCOPTERUS (Temminck).

Cursorius chalcopterus TEMMINCK, Pl. Col., V, 1824, pl. CCXCVIII (Senegal).

One specimen from Taveta, March 25, 1888. "Legs red; iris very dark brown."

RHINOPTILUS CINCTUS (Heuglin).

Hemerodromus cinctus HEUGLIN, Ibis, 1863, p. 31, pl. 1 (Gondokoro, White Nile, 5° N. Lat., British Equatorial Africa).

Two specimens, from Taveta, and the plains east of Mount Kilimanjaro, respectively. They apparently do not differ from a Somali Land example.

Family ŒDICNEMIDÆ.

ŒDICNEMUS CAPENSIS Lichtenstein.

Oedicnemus capensis LICHTENSTEIN, Verz. Doubl., 1823, p. 69 (Cape of Good Hope).

Two examples, from the plains east of Mount Kilimanjaro. One of these, a male, taken July 13, 1889, is much paler than the other and seems to be immature. "Iris (of adult female) yellow." "Common on the dry plains; almost always seen in pairs."

Whether or not Doctor Reichenow is correct in his contention that *Œdicnemus affinis* is inseparable from *Œdicnemus capensis*,^a there is no doubt that the specimens collected by Doctor Abbott are strictly referable to the latter.

Family PTEROCLIDÆ.

PTEROCLURUS EXUSTUS (Temminck).

Pterocles exustus TEMMINCK, Pl. Col., V, 1825, pls. CCCLIV, CCCLX (Senegal).

One apparently typical specimen, without data.

A specimen in the National Museum from Milmil, Somali Land, collected July 30, 1894, by Dr. A. Donaldson Smith, sustains the characters of Mr. Hartert's new subspecies, *Pteroclorus exustus somalicus*,^b except that it is not smaller than our examples of true *exustus*.

PTEROCLES DECORATUS Cabanis.

Pterocles decoratus CABANIS, Journ. f. Ornith., 1868, p. 413 (Lake Jipé, German East Africa).

One adult female, from the plains near Mount Kilimanjaro, August 29, 1888.

^a Vögel Africas, I, 1900, p. 199.

^b *Pterocles exustus somalicus* HARTERT, Novit. Zool., 1900, p. 28 (Milmil, Somali Land).

PTEROCLES GUTTURALIS SATURATIONIOR Hartert.

Pterocles gutturalis saturationior HARTERT, Novit. Zool., 1900, p. 29 (Campi-ya-Simba, British East Africa).

Two adult males: one from the plains east of Mount Kilimanjaro, September 23, 1888; the other from the plains of Kilimanjaro, August 21, 1888. The black bars on some of the lower tail-coverts, which are present in both these specimens, seem to be nothing more than an individual variation.

Family TRERONIDÆ.

VINAGO CALVA WAKEFIELDI (Sharpe).

Treron wakefieldi SHARPE, Proc. Zool. Soc. Lond., 1873, p. 715, pl. LVIII, fig. 2 (Mombasa, British East Africa).

Two specimens, adult male and female, from Mount Kilimanjaro, at 5,000 feet, September 1, 1889. "Iris (of both) white; bill whitish; cere light orange; feet dark red." The female is smaller than the male, also darker and duller colored, with a much less pronounced plumbeous hind-neck, and a grayish green instead of greenish slate-gray tail. These two birds are not typical of *wakefieldi*, being larger and having tails that incline to slate grayish; but they are apparently much nearer this form than to *Vinago calva nudirostris*; they furthermore present in their intermediate characters almost indisputable evidence that *wakefieldi* is but a subspecies of *V. calva*, and therefore its easternmost representative. There are thus four forms of *Vinago calva*, as follows:

Vinago calva calva (Temminck and Knip).—West Africa, from Sierra Leone to Angola.

Vinago calva nudirostris (Swainson).—Central Africa and the interior of East Africa, north of the Zambesi River; northwest to Senegal.

Vinago calva wakefieldi (Sharpe).—Coast region of East Africa, from southern British East Africa to the Zambesi River.

Vinago calva schalowi (Reichenow).—South Africa, from Matabele Land to Ovambo Land.

Family COLUMBIDÆ.

COLUMBA ARQUATRIX ARQUATRICULA (Bonaparte).

Columba arquatrix BONAPARTE, Consp. Avium, II, 1854, p. 50 (Abyssinia).

Two specimens, adult male and female, from Mount Kilimanjaro, at 6,000 and 5,000 feet, respectively. The male, taken November 10, 1888, is in nearly completed molt. "Iris white; bill and feet bright yellow."

These differ so much from true *Columba arquatrix* of southern Africa^a that they represent without apparent doubt a well character-

^a Temminck and Knip, Pigeons, I, 1808, fam. sec., p. 11, pl. v (Cape of Good Hope).

ized geographical race, to which Bonaparte's name *arquatrix* is probably applicable. This northern form may be distinguished by decidedly larger size, as well as by smaller, much less numerous spots on the lower surface, and these confined chiefly to the upper breast, whereas in *arquatrix* they are spread as thickly over also the lower breast and median portion of the abdomen. The following measurements of an adult female of each exhibit the dimensional difference between these two subspecies:

Name.	Locality.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
		mm.	mm.	mm.	mm.	mm.
<i>Columba arquatrix arquatrix</i> ...	Uitenhage, Cape Colony ..	203	135	19	28	30
<i>Columba arquatrix arquatrix</i> ..	Mount Kilimanjaro	238	152	18	28	30

TURTUR LUGENS (Rüppell).

Columba lugens RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 64, pl. xxii, fig. 2 (Taranta Mountains, Tigré; and province of Simen, Abyssinia.)

One adult male, from Mount Kilimanjaro, 5,000 feet, taken July 24, 1888. "Iris orange."

TURTUR SEMITORQUATUS INTERMEDIUS Erlanger.

Turtur semitorquatus intermedius ERLANGER, Journ. f. Ornith., 1905, p. 124 (Roba-Schalo, Lake region of southern Shoa, southern Abyssinia.)

Two adult males, from Taveta and Mount Kilimanjaro. "Iris orange." These belong apparently to this newly described form which seems, however, to be very close to *Turtur semitorquatus semitorquatus*.

TURTUR CAPICOLA TROPICUS Reichenow.

Turtur capicola tropica REICHENOW, Ornith. Monatsber., 1902, p. 139 (East Africa).

Two specimens, from Taveta, and the plains east of Mount Kilimanjaro, respectively. Doctor Abbott reported it abundant during April, 1888, on the plains near Taveta. The adult female collected by him is considerably smaller than the male, as well as decidedly paler, especially on the breast, cervix, and sides of the neck, which parts are more of a lavender hue; the forehead and crown are heavily overlaid with dull ochraceous buff; the chin is less purely white.

This appears to be a good race, differing from true *capicola* chiefly in its lighter general coloration, the pallor particularly noticeable on wings and lower parts. It was made a subspecies of *Turtur damarensis* Finsch and Hartlaub^a by Erlanger,^b but improperly so, as the conspecific *Turtur capicola* Sundevall^c was described long before.

^a Vög. Ost.-Afr., 1870, p. 550.

^b Journ. f. Ornith., 1905, p. 123.

^c Krit. om Levaill., 1857, p. 54.

The genus *Streptopelia* seems not to be sufficiently distinct for recognition, since aside from slight color distinctions it has no stable characters that we can discover.

STIGMATOPELIA SENEGALENSIS ÆQUATORIALIS (Erlanger).

Turtur senegalensis æquatorialis ERLANGER, Journ. f. Ornith., 1905, 117 (Menaballa, southern Abyssinia).

Three specimens, from Taveta, and the Useri River, Mount Kilimanjaro. These are all females, and are somewhat smaller than the male of the species, as well as decidedly duller in color, this difference greatest on the back and cervix.

The peculiar bifurcated feathers of the foreneck, and the greater graduation of the tail in this species appear to warrant recognition of the genus *Stigmatopelia*.

TYMPANISTRIA TYMPANISTRIA (Temminck and Knip).

Columba tympanistria TEMMINCK and KNIP, Pigeons, I, 1809, fam. sec., p. 80, pl. XXXVI (southern Africa, near Kaffir Land).

Two specimens, from Mount Kilimanjaro, at 5,000 feet. The immature bird differs as follows from the adult: Upper surface of the body more rufescent; forehead grayish, slightly tinged with tawny; crown washed, the back and rump barred, with rusty; wing-coverts and secondaries duller, as well as rather paler, with mottlings and some bars of dark brown and tawny, the secondaries with a dark subterminal bar; sides of the head shaded with ashy and brownish; anterior lower parts more or less barred with dark brown and ochraceous; lower tail-coverts with tips and sometimes bars of tawny.

ÆNA CAPENSIS ANONYMA, new subspecies.

Chars subsp.—Similar to *Æna capensis capensis*, but all the upper parts paler, decidedly more grayish, the whitish band (between the two blackish ones) on the rump less tinged with ochraceous; white on outer web of outermost tail feather not subterminally interrupted by black, but continuous; inferior wing-coverts lighter chestnut.

Description.—Type, adult male, Cat. No. 117868, U.S.N.M.; plains east of Mount Kilimanjaro, December 11, 1888; Dr. W. L. Abbott. Upper surface brownish gray, paler anteriorly, becoming pearl gray on the fore part of the crown; rump crossed by two blackish bands inclosing a rather wider one of grayish white washed with buffy; longest upper tail-coverts with broad blackish tips; tail black beneath; middle pair of rectrices brownish slate color above; the next two pairs slate color, with broad blackish terminal portions; remaining feathers slate color, with a subterminal band of black, the outermost pair with external webs largely white; wings chestnut, the primary coverts margined exteriorly and tipped with blackish, the quills with fuscous;

lesser and median coverts plumbeous, the inner ones of the latter series with metallic green or purple spots; greater coverts slate gray, with broad blackish tips; innermost secondaries (tertials) brownish gray; forehead, lores, chin, and throat black; sides of neck pale brownish gray; sides of jugulum pearl gray; rest of lower surface white, except the crissum, which is mostly black; lining of wing chestnut. Length of wing, 104; tail, 132; exposed culmen, 14; tarsus, 13; middle toe, 13 mm.

An adult female, taken at the same time and place as the type, has a dusky bill, and is rather paler, more brownish, both above and below, lacking, of course, all the black of head and throat, this being replaced on forehead and chin by pale buff, on the throat by grayish ochraceous. Compared with the female of the South African form it exhibits the same subspecific characters as the male, except that there is no difference in the distribution of the white on the outermost rectrices.

This northern race of *Æna capensis* has apparently hitherto remained unnoticed, since all the names applied to the species^a have been based on the bird from southern Africa. Its exact distribution remains yet to be determined, for the above comparison has been made with birds from Cape Colony alone, but in all probability *Æna c. anonyma* occupies the region to the southward as far as the neighborhood of the Zambesi River.

CHALCOPELIA AFRA (Linnæus).

Columba afra LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 284 (Senegal).

Four specimens, from Mount Kilimanjaro, at 5,000 feet altitude. One of them, an adult, taken April 20, 1888, is in molt. The sexes seem to be practically alike, the only observable difference being the barely paler color and slightly smaller size of the female. An immature bird, however, is more rufescent on the back, cervix, and scapulars; the secondaries, except the innermost, are paler, mottled with dusky on their exterior webs, tipped with tawny or ochraceous, and have a subterminal fuscous bar; the forehead is pale buff, the crown washed with the same color; the sides of head and neck, together with the entire lower surface, excepting the crissum, are strongly tinged with ochraceous; the lower parts, save the middle of the abdomen, have obsolete dusky bars, these most conspicuous on the sides and flanks; the edge of the wing is also barred with blackish.

Even so recent and discriminating an authority as Doctor Reichenow^b

^a These are:

Columba capensis Linnæus, Syst. Nat., 12th ed., I, 1766, p. 286 (Cape of Good Hope).

Columba atricollis Müller, Syst. Nat. Suppl., 1776, p. 135 (Cape of Good Hope).

Columba atrogularis Wagler, Syst. Avium, 1827 (*Columba*, sp. 108), p. 270 (new name for *Columba capensis*).

^b *Vögel Africas*, I, 1901, p. 426.

used to consider *Chalcopelia chalcospila* (Wagler)^a identical with the present species; but he has changed his mind,^b and now agrees that Erlanger is undoubtedly quite right in asserting their distinctness.^c As the latter says, their occurrence in the same locality precludes the possibility of their being but geographical races; and in connection with this it may be stated as further proof that there are no specimens that can be considered of an intermediate character. Aside from an interesting difference in habits noted by Mr. Erlanger—*chalcospila* living among the acacias on the plains, and *afra* more confined to the forests—these two species may be distinguished as follows: *Chalcopelia afra* is much larger; it has blue or purple instead of bright-green metallic spots on the inner wing-coverts; the bill is yellow instead of almost black; the brown area of the entire upper surface is decidedly more rufescent; and the chin, as well as the cheeks, flanks, and abdomen, are strongly tinged with buff.

None of the specimens collected by Doctor Abbott approach either of the forms recently described by Doctor Sharpe,^d but are all apparently typical *afra*.

CHALCOPELIA CHALCOSPILA ACANTHINA, new subspecies.

Chars. subsp.—Similar to *Chalcopelia chalcospila chalcospila*, but larger; very much paler below; somewhat lighter above, particularly on the wings.

Description.—Type, adult female, Cat. No. 119253, U.S.N.M.; Mount Kilimanjaro, German East Africa, 5,000 feet, December 6, 1889; Dr. W. L. Abbott. Forehead pale gray, laterally whitish, and passing posteriorly into the slate gray of the crown and occiput, both of which are paler laterally; orbital region pale gray; a narrow blackish line from eye to bill; cervix, back, and scapulars grayish brown; rump with two bands of black inclosing one of pale brownish; upper tail-coverts like the back, but slightly paler and more grayish, the feathers with broad black tips; tail black below, dull brownish gray above, with a broad black terminal band, the outermost feathers slate gray basally, with outer webs whitish, this succeeded distally by a broad zone of black which in turn gives place to a slate-colored tip, paler on exterior web; wing-quills chestnut, margined exteriorly and broadly tipped with dark brown, some of the inner secondaries entirely of this color; alula blackish brown; primary-coverts chestnut with wide outer margins of dark brown; remainder of wing-coverts,

^aSyst. Avium, 1827 (*Columba*, sp. 83), p. 258.

^bJourn. f. Ornith., 1902, p. 134.

^cOrnith. Monatsber., 1901, p. 183.

^d*Chalcopelia abyssinica* Sharpe, Bull. Brit. Orn. Club, XII, 1902, No. xc, p. 83 (Kokai, Bogos Land, Abyssinia). *Chalcopelia delicatula* Sharpe, idem, p. 84 (Goz-Abu-Gumar, White Nile).

together with the innermost secondaries, brownish gray, the latter and some of the inner greater coverts with large spots of rich metallic golden green; under surface vinaceous lavender, on the sides of neck shading into the brownish of the upper parts, and fading posteriorly into almost pure white on the anal region, the chin whitish, the flanks tinged with brownish, the longer under tail-coverts mostly black; lining of wing chestnut. "Iris brown; feet dark purple; bill dark horn blue, nearly black."

Measurements of the type compared with two specimens of true *chalcospila* from western Africa are as follows:

Sex.	Name.	Locality.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
Female..	<i>Chalcopelia acanthina. chalcospila</i>	Mount Kilimanjaro ..	mm. 104	mm. 75	mm. 13	mm. 18	mm. 16.5
?	<i>Chalcopelia chalcospila.</i>	Landana	99	72.5	13	18	15.5
?	.....do	Massabi	96.5	62	13	18	16

The original *Chalcopelia chalcospila*^a was based on "La Tourterelle du Sénégal (*Turtur senegalensis*)" of Brisson^b as is shown by Wagler's citations, and particularly his description which in all essential particulars is identical, except for its verbal construction, with that of Brisson;^c and the form of the species to bear the name *chalcospila* is therefore that from western Africa. The only other old name that needs mention here is *Peristera parallinostigma* Würtemberg,^d which, however, is but a renaming of *Chalcopelia chalcospila*, and therefore not available for any of its races.

The present comparison has been made with birds from near the mouth of the Kongo, which are probably the same as true *chalcospila* from Senegal, since in measurements and color characters they agree with the original account; and they are, moreover, doubtless identical with *Chalcopelia chalcospila erlangeri*^e from northern Angola, which Doctor Reichenow described under the supposition that the East African form was the typical one, in which he was, of course, mistaken, as above shown; so that unless *C. c. erlangeri* can be proved distinct from the Senegal bird it must be entered as a synonym. The Somali Land race, *Chalcopelia chalcospila somalica* Erlanger,^f is apparently

^a *Columba chalcospilos* Wagler, Syst. Avium, 1827 (*Columba*, sp. 83), p. 258 (Senegal).

^b Ornith., I, 1760, p. 122, pl. x, fig. 1 (Senegal).

^c It may be noted in this connection that Linnaeus (Syst. Nat., 12th ed., I, 1766, p. 284) quotes this same name of Brisson's under his *Columba afra*, though his diagnosis is perfectly clear and refers to the bird with blue or purple wing spots (*Chalcopelia afra*).

^d Naumannia, 1857, p. 434.

^e Reichenow, Journ. f. Ornith., 1902, p. 134.

^f Journ. f. Ornith., 1905, p. 134 (Salakle, southern Somali Land).

good, differing from *acanthina* of East Africa in its larger size, rather paler upper parts, and much darker, more pinkish lower surface.

There seem thus to be five forms of *Chalcopelia chalcospila*, as follows:

Chalcopelia chalcospila chalcospila (Wagler) (= *erlangeri* Reichenow).—West Africa from Senegal to Angola.

Chalcopelia chalcospila volkmanni Reichenow.^a—Damara Land.

Chalcopelia chalcospila caffra Reichenow.^b—Southeastern Africa.

Chalcopelia chalcospila acanthina Oberholser.—East and Northeast Africa, excepting Somali Land.

Chalcopelia chalcospila somalica Erlanger.—Somali Land.

APLOPELIA LARVATA LARVATA (Temminck and Knip).

Columba larvata TEMMINCK and KNIP, Pigeons, I, fam. sec., 1809, p. 71, pl. xxxi (Autiniquoi country, southern Africa).

Seven specimens from Mount Kilimanjaro, at altitudes of 5,000 and 6,000 feet. Those taken June 8–12, 1888, were just completing the molt. A young bird in the barred plumage bears date of June 10, 1888.

These examples are appreciably smaller than typical *A. larvata* from southern Africa, in this verging toward *Aplopelia larvata bronzina*, but they are still much too large for the latter. Size, however, seems to be the only particular in which these birds differ from true *larvata*, and this is so slight that the recognition of another subspecies (*kilimensis*)^c is apparently not desirable. The characters given in the original description of *kilimensis*^c are probably based on individual variation, for they are not borne out by Doctor Abbott's Kilimanjaro specimens. This is also the view taken by Doctor Reichenow,^d who synonymizes *kilimensis* with *larvata*, and states that South Africa specimens do not differ from those taken on Kilimanjaro. Furthermore Doctor Reichenow is apparently right in considering *Aplopelia johnstoni*^e a synonym of *A. larvata*.^f Our birds certainly do not exhibit the characters assigned to this supposed form.

Family CUCULIDÆ.

CLAMATOR CAFER (Lichtenstein.)

Cuculus cafer LICHTENSTEIN, Cat. rer. nat. Hamb., 1793, p. 14 (Kaffir Land).

Coccytes cafer AUTHORS.

One adult male, from Kidudwe, 90 miles inland from Zanzibar, December, 1887.

^a Journ. f. Ornith., 1902, p. 134 (Damara Land).

^b Idem, 1902, p. 134 (Caffraria, southeastern Africa).

^c *Haplopelia larvata kilimensis* Neumann, Journ. f. Ornith., 1898, p. 289 (Kiboscho, Mount Kilimanjaro).

^d Vögel Africas, I, 1901, pp. 420–421.

^e *Haplopelia johnstoni* Shelley, Ibis, 1893, p. 28, pl. iii (Milanji Plateau, Nyassa Land, British Central Africa).

^f Vögel Africas, I, 1901, p. 421.

The change in the generic name of this species is due to Dr. L. Stejneger,^a who has recently pointed out the untenability of *Coccytes* by reason of the prior *Clamator*.

CUCULUS CLAMOSUS Latham.

Cuculus clamosus LATHAM, Ind. Orn., Suppl., 1801, p. xxx (Cape of Good Hope).

One young female, with wings and tail not yet fully grown, from Mount Kilimanjaro (5,000 feet), November 19, 1889. This bird differs in appearance somewhat from the published accounts of young *Cuculus clamosus*, and may be described as follows:

General color above black, inclining to dark brown on the wings, the feathers slightly but distinctly margined with whitish, those of the wings with tawny ochraceous; chin, throat, fore breast, with sides of head and neck black, the feathers narrowly edged with whitish; feathers of the fore breast and sides of neck with more or less concealed bars of white; lower breast and abdomen buff with black bars, the latter becoming narrower on thighs and lower tail-coverts; under wing-coverts buff, mottled and barred with blackish; primaries mottled on inner webs with dull tawny white or ochraceous; rectrices black with a central white shaft spot toward the end of each feather, and with buffy white terminal markings. "Feet straw yellow."

CHRYSOCOCCYX KLAAS (Stephens).

Cuculus klaas STEPHENS, Shaw's Gen. Zool., IX, 1815, p. 128 (Senegal).

A single adult male, from Taveta, August 17, 1888. It is much smaller, and strikingly more bronzy green on the upper surface than an adult of the same sex from Cape Colony.

CENTROPUS SUPERCILIOSUS Hemprich and Ehrenberg.

Centropus superciliosus HEMPRICH and EHRENBURG, Symb. Phys., 1828, fol. r (Arabia and Æthiopia [type locality, southern Arabia]).

Three specimens, from Taveta and Mount Kilimanjaro (5,000 feet). "Iris of male red, of female dark carmine. Length of female, 16 $\frac{3}{4}$ inches [426 mm.]; extent, 20 inches [508 mm.]."

The two males are much smaller than the female, and have, moreover, dusky bars on the distal portion of all the wing-quills, an apparent indication of recent youth, though in all other respects they are precisely like the adult.

^a Proc. Biol. Soc. Wash., XV, 1902, p. 37.

Family MUSOPHAGIDÆ.

TURACUS HARTLAUBI (Fischer and Reichenow).

Corythaix hartlaubi FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 52 (base of Mount Meru, Masai Land, German East Africa).

Eight specimens, from Mount Kilimanjaro, at altitudes of from 4,000 to 7,000 feet. An immature bird differs from the adult in the somewhat duller and darker green of the plumage; brownish-black abdomen and crissum; smaller and less purely white loreal spot; dark brownish bill; and the paler, decidedly more restricted crimson of the wing-quills.

GALLIREX CHLOROCHLAMYS Shelley.

Gallirex chlorochlamys SHELLEY, Ibis, 1881, p. 118 (Ugogo, German East Africa).

One adult specimen from Kidudwe, 90 miles inland from Zanzibar, December, 1887.

CHIZÆRHIS LEUCOGASTRA Rüppell.

Chizærhis leucogaster RÜPPELL, Mus. Senckenb., III, 1842, p. 127 (tributaries of the Nile, Shoa, Abyssinia).

Two adult females: one from the plains of Taveta; the other from the Useri River, near Mount Kilimanjaro. "Bill yellowish green; iris brown."

Family PSITTACIDÆ.

POICEPHALUS FUSCICAPILLUS (Verreaux and Des Murs).

Pionus fuscicapillus VERREAUX and DES MURS, Rev. et Mag. de Zool., 1849, p. 58 (Zanzibar, eastern Africa).

Two specimens from Kidudwe, 90 miles inland from Zanzibar, taken in December, 1887. Both are immature, one having an olive green pileum and brown auriculars, the other a yellowish olive brown head, and auriculars just becoming grayish.

POICEPHALUS RUFIVENTRIS (Rüppell).

Pionus rufiventris RÜPPELL, Syst. Uebers. Vög. Nord-Ost-Afr., 1845, p. 83, pl. XXXII (Shoa, Abyssinia).

Four specimens—three adult males and an adult female—from Taveta, and the plains east of Mount Kilimanjaro. "Iris of both male and female red."

Family CORACIIDÆ.

CORACIAS GARRULUS Linnaeus.

Coracias garrulus LINNAEUS, Syst. Nat., 10th ed., I, 1758, p. 107 (Europe [type locality, Sweden]).

Seven specimens: two are without data; the others were taken at Taveta, March 25, 1888; Mount Kili-nanjaro, 5,000 feet altitude, October 20, 1889; and the Useri River, Mount Kilimanjaro, December 14 and 18, 1888. "Irides of young brown. Very common now (December 18, 1888), after an absence of seven months." One of the immature birds, taken December 18, is just completing a molt of the wing quills.

CORACIURA CAUDATA (Linnaeus).

Coracias caudata LINNAEUS, Syst. Nat., 12th ed., I, 1766, p. 160 (Angola).

Two specimens: an adult male from the plains east of Mount Kilimanjaro; and a female from the plains near Taveta.

The remarkable development of the tail in the male of this and several similar species seems to entitle them to the generic distinction founded by Bonaparte on *Coracias cyanogaster*.^a

EURYSTOMUS AFER SUAHELICUS Neumann.

Eurystomus afer suahelicus NEUMANN, Journ. f. Ornith., 1905, p. 186 (Tschara, Tana River, British East Africa).

Three adult specimens, all from Taveta. One of them, a female, measures as follows: Length of wing, 181; tail, 99; exposed culmen, 21; tarsus, 17; middle toe, 18 mm.

This recently described form differs from true *Eurystomus afer* in its decidedly larger size, and appreciably darker, more rufous lower surface. Doctor Sharpe long ago called attention^b to the dimensional discrepancy existing between specimens of *Eurystomus afer* from East and those from West Africa, while Mr. Neumann some time ago noticed^c their darker and more rufescent color. These differences now seem sufficient to warrant recognition in nomenclature; and if Doctor Reichenow's *Eurystomus rufobuccalis*^d is even subspecifically distinct, as appears to be the case, the form of *E. afer* inhabiting the eastern part of Africa should bear the name *suahelicus* Neumann, since

^a *Coraciura* Bonaparte, Consp. Voluer. Anisod., 1854, p. 7.

^b Cat. Birds Brit. Mus., XVII, 1892, p. 31.

^c Journ. f. Ornith., 1900, p. 209.

^d *Eurystomus afer* var. *rufobuccalis* Reichenow, Journ. f. Ornith., 1892, p. 27 (Manjono, Uganda, British East Africa).

all the synonyms of the species, as claimed by Neumann, apply without much doubt to the bird of the west coast.^a

Family ALCEDINIDÆ.

CERYLE RUDIS (Linnæus).

Alcedo rudis LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 116 (Persia).

A single adult, from the Useri River, Mount Kilimanjaro, December 15, 1888. This bird, though marked "male," has but one black pectoral band, a circumstance which, borne out as it is by our other specimens from various localities, serves to strengthen the doubt Doctor Reichenow has expressed^b with regard to this supposed sexual distinction.

ALCEDO SEMITORQUATA Swainson.

Alcedo semitorquata SWAINSON, Zool. Illustr., III, 1823, pl. CLI (Great Fish River, Cape Colony, South Africa).

Two specimens—adult male and female—from Taveta. "Feet (of male) red; bill black, with a red streak on the under side." The female of this pair is slightly larger than the male, also somewhat duller in color above, particularly on the wings, and appreciably darker on the posterior part of the lower surface; the appearance of the base of the maxilla in the skin indicates that this part was red in life.

ISPIDINA PICTA (Boddaert).

Todus pictus BODDAERT, Tabl. Pl. Enl., 1783, p. 49 (Juida, Africa.)

Three adult males, from Taveta, and Mount Kilimanjaro (5,000 feet). These are apparently identical with an example from Somali Land. "Bill and feet red."

HALCYON SEMICÆRULEUS SEMICÆRULEUS (Forskål).

Alcedo semicærulea FORSKÅL, Descr. Anim., 1775, p. 2 (Yemen, Turkey in Asia).

Three specimens, from the plains east of Mount Kilimanjaro. "Bill and feet red." These agree perfectly with birds from Somali Land, thus showing no approach to *Halcyon semicæruleus hyacinthinus* Reiche-

^a*Coracias afra* Latham, Ind. Orn., I, 1790, p. 172 (Africa).

Coracias africana Shaw and Nodder, Nat. Misc., XI, 1799, pl. cccci (new name for *E. afer*).

Eurystomus rubescens Vieillot, Nouv. Dict. d'Hist. Nat., XXIX, 1819, p. 426 (new name for *E. afer*).

Eurystomus purpurascens Vieillot, Nouv. Dict. d'Hist. Nat., XXIX, 1819, p. 427 (Senegal).

Colaris viridis Wagler, Syst. Avium, 1827 (*Colaris*, sp. 5), p. 107 (Senegambia).

^b Vögel Africas, II, 1903, p. 296.

now. If *Halcyon semicæruleus centralis* Neumann^a is anything more than an individual variation its range certainly does not include the Kilimanjaro region.

HALCYON ALBIVENTVIS ORIENTALIS (Peters).

Halcyon orientalis PETERS, Journ. f. Ornith., 1868, p. 134 (Inhambane, Portuguese East Africa).

Four specimens, from Taveta, and Mount Kilimanjaro (5,000 feet). Both male and female have the "iris dark brown; feet red; bill dark red." One adult male is strongly tinged with ochraceous on the cervical band and on the posterior lower parts. All these individuals have at least faint, dusky shaft streakings on the breast, which are much more conspicuous in the females.

Concerning a pair obtained on Mount Kilimanjaro, Doctor Abbott writes as follows: "These were brought to me alive by natives who had caught them in their nest hole. The stomach of the female was filled with Coleoptera. The nest was 3 feet from the entrance and contained three young birds just hatched."

HALCYON CHELICUTI CHELICUTI (Stanley).

Alaudo [sic] *chelicuti* STANLEY, in Salt's Voyage Abyss., App. IV, 1814,^b p. lvi (Chelicut, Abyssinia).

Four specimens: from Taveta; plains of Taveta; and plains of Mount Kilimanjaro. "Common in the dry plains (of Taveta), June 28, 1888." A young bird in first plumage differs from the adults in being more conspicuously tinged with ochraceous on the light portions of the plumage, particularly on the posterior lower surface.

Family MEROPIDÆ.

MELITTOPHAGUS PUSILLUS CYANOSTICTUS (Cabanis).

Merops cyanostictus CABANIS, von der Decken's Reisen, III, 1869, p. 34 (Mombasa, British East Africa; and Dschagga, German East Africa).

Melittophagus sharpei HARTERT, Bull. Brit. Orn. Club, X, 1899, p. xxvii (The Haud, Somali Land).

Six specimens, from the following localities: Mount Kilimanjaro, 5,000 feet; plains east of Mount Kilimanjaro; Kahé, south of Kilimanjaro; and plains of Taveta. There seems to be no plumage difference between the sexes. "Iris red."

Two of these birds—one from Kahé, the other from Mount Kilimanjaro—are perfectly typical *cyanostictus*; but the remainder are variously

^a Journ. f. Ornith., 1905, p. 189 (Bussissi, Victoria Nyanza).

^b Quoted as "1834" by Sharpe, Cat. Birds Brit. Mus., XVII, 1892, p. 239; Shelley, Birds of Africa, I, 1896, p. 117; and Hartert, Novit. Zool., VII, 1900, p. 34. Doctor Reichenow, however, Vögel Africas, II, 1903, p. 271, has it correct.

intermediate between *cyanostictus* and *meridionalis*, the blue line across the forehead being very narrow, in two cases all but obsolete. These differences, moreover, are quite surely not due to age, as the birds are all adults; nor to sex, as the same appear in both male and female. The series as a whole, however, is to be referred decidedly to *cyanostictus*; but, hailing as it does from an intermediate region, demonstrates with apparent conclusiveness that *Melittophagus cyanostictus* is only subspecifically related to *M. meridionalis*; and since *meridionalis* intergrades with *M. pusillus*, the Kilimanjaro form should stand as *Melittophagus pusillus cyanostictus*.

The original description of *Melittophagus cyanostictus*^a was based on specimens from Mombasa and Dschagga—the latter, it will be noticed, practically the same as the locality from which our series comes—both of them places where the green-fronted bird (*meridionalis* Sharpe=*cyanostictus* Hartert, not Cabanis), is not known to occur. Doctor Cabanis, not suspecting, of course, the existence of the two forms *cyanostictus* and *meridionalis*, compared his new species with *Melittophagus pusillus*, or, as he called it, *M. erythropterus*; therefore the fact that he did not specifically mention the presence of the blue frontal band is of comparatively little consequence in determining the identity of the form he was describing. In fact, considered apart, there is nothing at all in the description itself that does not apply equally well to both *cyanostictus* and *meridionalis*, as the following quotation will show:

“Entschiedeneres blaues Superciliarband, ein deutlicher ausgeprägtes schmales schön blaues Halsband als Abschluss der gelben Kehle, merklich breitere schwarze Binde am Flügel und vor der Schwanzspitze.”

Not until several years later^b does Cabanis mention having seen other birds of the same species from Natal and Loango, and that he considered these identical with his original specimens of *cyanostictus* can have little bearing on the case; nor, indeed, is it surprising in view of the great confusion which then existed among the names of birds of this genus, and still less remarkable—in truth, almost inevitable—if some of his examples from Dschagga were intermediate, as are those collected by Doctor Abbott. Doctor Sharpe was the first to do the service of extricating these birds from chaos, and he very properly named the green-fronted bird, until then always confounded with true *cyanostictus*, calling it *meridionalis*.^c

The ranges of these two forms are complimentary, as those of geographical races ought to be, and do not overlap, although intermediates of various kinds may be expected in the region of their inosculation,

^a *Merops cyanostictus* Cabanis, von der Decken's Reisen, III, 1869, p. 34.

^b Journ. für Ornith., 1875, p. 340.

^c Cat. Birds Brit. Mus., XVII, 1892, p. 45.

from Zanzibar to Uganda. The blue-fronted form, *Melittophagus pusillus cyanostictus*, extends from Zanzibar and Mount Kilimanjaro to Shoa and Somali Land; the green-fronted bird, *Melittophagus pusillus meridionalis*, occurs from Zanzibar, Uganda, and Loango to Angola and Natal. It is possible, furthermore, that the latter may prove to be separable into an eastern and a western race.

We are sorry to differ from Mr. Hartert in this matter, and thus to continue the already more than unfortunate shifting of names which has fallen to the lot of this much buffeted species, but the facts as we see them allow no other course. It should be mentioned, moreover, that Doctor Reichenow, who undoubtedly had access to the type of *cyanostictus*, has arrived at precisely the same result as above set forth, and gives at some length the reasons for his position.^a He, however, treats *meridionalis* and *cyanostictus* as distinct species.

MELITTOPHAGUS OREOBATES Sharpe.

Melittophagus oreobates SHARPE, Ibis, 1892, p. 320 (Mount Elgon, British East Africa).

A single adult male of this rare bee-eater was taken by Doctor Abbott at Maranu, at an altitude of 5,000 feet on Mount Kilimanjaro, April 23, 1888. As will be noticed this specimen was obtained almost two years before the type was collected by Mr. Jackson, so that although the fact has so long remained unannounced Doctor Abbott was in reality the discoverer of the species.

MEROPS APIASTER Linnæus.

Merops apiaster LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 117 (Southern Europe).

Six specimens, from the following localities: Mount Kilimanjaro, 5,000 feet, October 16, 17, 1889; Taveta, December 4, 1888; Lumi River, near Mount Kilimanjaro, October 9, 1888; Aruscha-wa-chini, southwest of Kilimanjaro, October 22, 1888. All are in the well-known immature plumage, but have a narrow dusky bar, though not always conspicuous, below the yellow throat. "Iris red." One, taken December 4, is in process of molt.

MEROPS PERSICUS Pallas.

Merops persica PALLAS, Reis. Russ. Reichs, II, 1773, p. 708 (Caspian Sea).

Three specimens: two from the plains east of Mount Kilimanjaro, December 11, 1888, and January 5, 1889; with one from Taveta, November 8, 1888. "Iris red." These are very much more greenish than specimens in ordinary plumage, differing further as detailed for similar examples by Doctor Reichenow,^b and seem, as he suggests,^b to represent the winter dress of the species.

^a Ornith. Monatsber., 1900, pp. 86-87.

^b Vögel Africas, II, 1902, p. 323.

MEROPS NUBICUS Gmelin.

Merops nubicus GMELIN, Syst. Nat., I, i, 1788, p. 464 (Nubia).

One adult male, from Mombasa, taken January 20, 1890. "Irides red."

Family BUCEROTIDÆ.

LOPHOCEROS MELANOLEUCOS SUAHELICUS Neumann.

Lophoceros melanoleucos suahelicus NEUMANN, Journ. f. Ornith., 1905, p. 187, (Morogoro, German East Africa).

Two specimens, from Taveta, taken, respectively, June 22 and August 16, 1888.

LOPHOCEROS DECKENI (Cabanis).

Buceros (Rhynchaceros) deckeni CABANIS, von der Decken's Reisen, III, 1869, p. 37, pl. vi (East Africa).

One specimen, from the plains of Taveta, June 28, 1888.

BYCANISTES CRISTATUS (Rüppell).

Buceros cristatus RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 3, pl. i, (Goraza, Zana Lake, Dembea, Abyssinia).

Five specimens, from Mount Kilimanjaro, Taveta, and Kahé.

Family IRRISORIDÆ.

IRRISOR ERYTHRORYNCHOS ERYTHRORYNCHOS (Latham).

Upupa erythrorynchos LATHAM, Ind. Orn., I, 1790, p. 280 (Africa and Asia).

One immature male, from Taveta, taken February 8, 1889.

Doctor Reichenow is apparently right in reducing *Irrisor viridis* to a subspecies and restricting its range to extreme southern Africa,^a for the color of the tail is not a satisfactory character, although the birds from the Cape region are, as he claims,^a distinguishable by reason of a shorter tail and less extensive white wing markings.

RHINOPOMASTUS CABANISI (De Filippi).

Irrisor cabanisi DE FILIPPI, Rev. et Mag. de Zool., 1853, p. 289 (Upper White Nile, British Equatorial Africa).

One adult male, from the plains east of Mount Kilimanjaro, taken October 1, 1888. "Bill orange."

RHINOPOMASTUS CYANOMELAS SCHALOWI (Neumann).

Rhinopomastus schalowi NEUMANN, Journ. f. Ornith., 1900, p. 221 (Usandawe, German East Africa).

One adult male, from Taveta, August 14, 1888.

^a Vögel Africas, II, 1903, p. 340.

Family UPUPIDÆ.

UPUPA AFRICANA Bechstein.

Upupa africana BECHSTEIN, Latham's Allgem. Uebers. Vögel, IV, 1811, p. 172 (type locality, Cape of Good Hope, South Africa).

A single specimen, from the Useri River, near Mount Kilimanjaro, January 22, 1889. It is marked female, is decidedly paler than the male, has the abdomen streaked, and the lower tail-coverts white, but lacks the black band across the middle of the white basal part of the secondaries, such as it ought to have, and as other females in the United States National Museum collection show.

Family ASIONIDÆ.

ASIO MACULOSUS AMERIMNUS, new subspecies.

Chars. subsp.—Resembling *Asio*^a *maculosus maculosus*, but much paler throughout, as well as generally more ochraceous; legs, feet, face, and crissum less heavily barred with dusky.

Geographical distribution.—Eastern Africa, from Natal to German East Africa.

Description.—Type, adult female, Cat. No. 86457, U.S.N.M.; Durban, Natal; Thomas Ayres. Upper parts bistre brown, much mottled with buff, light ochraceous, and whitish, the last most conspicuous in large roundish spots on the hind-neck and external webs of the scapulars; tail bistre with broad broken bars of buff; wings of the same color, the coverts mottled with buff and buffy white, some of the greater series with broad, ill-defined broken bars of buffy, and large terminal or subterminal spots of white on the exterior webs, the quills with wide, irregular, and more or less imperfect bars of buff; face dull brownish gray, with obsolete barrings of darker; chin and throat white, separated by a bar of brown and ochraceous feathers; remainder of lower surface dull white, tinged with buff, particularly on breast and sides, and everywhere marked thickly with narrow cross lines of bistre, these least numerous on the lower tail-coverts; the breast, abdomen, and sides with scattered splotches of the same color; feet and thighs dull white with a tinge of buff, the latter considerably, the former scarcely, barred narrowly with bistre; lining of wing white, mottled and narrowly barred with bistre. Length of wing, 330;^b tail, 200; exposed culmen, 36; culmen without cere, 23; tarsus, 68 mm.

This hitherto unrecognized race appears to be of the same size as true *Asio maculosus*. Its differences from the latter are, however, not such as appear to be attributable to individual variation, since the

^a For change of the generic name from *Bubo* to *Asio* see Stone, Auk, 1903, pp. 272-276.

^b Imperfect.

Natal specimens are all in the gray phase. It may be distinguished from *Asio maculosus cinerascens*,^a whose range it approaches to the northward, in greater size, heavily feathered toes, and larger, more conspicuous whitish spots on cervix and scapulars. It seems to be quite certainly without a name, for the original *Asio maculosus*,^b as well as its only synonym,^c were both based on specimens from the Cape of Good Hope.

The single example of *Asio maculosus amerimnus* secured by Doctor Abbott was taken on Mount Kilimanjaro, at an altitude of 5,000 feet, November 8, 1889. It is a young female, chiefly in the downy plumage, though with wings and tail nearly full grown. The face is tawny ochraceous, scarcely barred, thus quite similar in this respect to the specimen from Rehoboth, Damara Land, mentioned by Doctor Reichenow;^d the general tone of the plumage is much more ochraceous than that of our specimens from Natal, and this, in connection with what Doctor Reichenow says of a bird from Songea, near Lake Nyassa,^d is added evidence of what has been intimated by a recent writer,^e that there exists in this species a kind of dichromatism, like that in the American forms of the genus.^f It is noteworthy that even in such a young bird the iris as reported by the collector is "straw yellow."

ASIO LACTEUS (Temminck).

Strix lactea TEMMINCK, Pl. Col., II, 1820, pl. iv (Senegal).

Bubo lacteus AUTHORS.

One apparently typical specimen, from the plains east of Mount Kilimanjaro, October 7, 1888. "Iris brown."

Family CAPRIMULGIDÆ.

CAPRIMULGUS FOSSII FOSSII Hartlaub.

Caprimulgus fossii HARTLAUB, Orn. Westafr., 1857, p. 23 (Verreaux, manuscript) (Gabun, western Africa).

Five specimens: one without data; the others from Kahé, south of Mount Kilimanjaro, May 8, 1888, September 5, 1888, and August 4, 1889. They appear to be typical *fossii*, though rather small. Aside from the sexual distinctions pointed out by Doctors Sharpe^g and Reichenow,^h our single adult female differs from the male in being more closely and evenly barred with dark brown or blackish on the

^a *Bubo cinerascens* Guérin, Rev. Zool., 1843, p. 321 (Abyssinia).

^b *Strix maculosa* Vieillot, Nouv. Dict. d'Hist. Nat., VII, 1817, p. 44.

^c *Strix africana* Temminck, Pl. Col., II, 1821, pl. L.

^d *Vögel Africas*, I, 1901, p. 655.

^e Sharpe, *Ibis*, 1904, p. 24.

^f Oberholser, Proc. U. S. Nat. Mus., XXVII, 1904, pp. 177 et seq.

^g Cat. Birds Brit. Mus., XVI, 1892, p. 551.

^h *Vögel Africas*, II, 1903, p. 365.

lower surface, this being particularly noticeable on the thighs, flanks, crissum, and lower abdomen.

Two immature birds—male and female—are paler and more grayish both above and below than the adults; both resemble the adult *male* in the barring of the posterior lower parts; otherwise the immature female is like the adult of that sex; while the immature male differs from the young female in having whitish instead of ochraceous tips to the innermost secondaries, nearly pure white in place of partly tawny spots on the primaries, and paler buff external webs of the outermost tail-feathers.

CAPRIMULGUS DONALDSONI Sharpe.

Caprimulgus donaldsoni SHARPE, Bull. Brit. Orn. Club, IV, No. XXV, 1895, p. xxix (Hargeisa, Somali Land).

A single specimen of this pretty as well as uncommon goatsucker was secured by Doctor Abbott. It is a female, not quite adult, from Taveta, August 18, 1888. This is quite an extension of its range, for the southernmost previous record of its occurrence appears to be Lake Baringo, British East Africa.^a It will be noted, also, that this is another of the many species of which Doctor Abbott was the real discoverer, but which, through unfortunate delay in publication, have fallen to the credit of others.

In view of the rarity of the species and the meagerness of most published accounts, the following description of Doctor Abbott's specimen may be of interest:

Forehead and crown chestnut, the feathers with irregularly shaped black shaft marks; nape like the crown, with but slight traces of black, these in the form of small, subterminal, triangular or tear-shaped spots, the feathers tipped with yellowish buff; back, rump, and upper tail-coverts paler—between hazel brown and chestnut—most of the feathers with narrow, brownish black shaft lines, broadest on the back; feathers of the rump, and to a less degree those of the upper tail-coverts, with very narrow, subterminal bars of blackish, immediately succeeded by broader, buffy white tips; scapulars chestnut, most of them with irregular black markings, terminating in bold, somewhat triangular, spots, and bordered distally, mostly on the outer webs, with buff; primaries brownish black, the three outer ones very sparsely mottled at the tip with chestnut; inner ones heavily mottled with pale chestnut; first primary with a small, roundish, pure white spot on the inner web, not reaching the shaft; second with a larger, less rounded white spot; third with a white bar on the inner web, touching the shaft, and a more narrow buffy white spot on the outer web; fourth with a pale cinnamon rufous bar on both webs; secondaries brownish black, with heavy, broken bars of

^a Sharpe, *Ibis*, 1902, p. 111.

pale chestnut, the innermost feathers almost entirely of this color; wing-coverts chestnut, deeper on the bend of the wing, and mottled with blackish; middle and greater coverts broadly tipped with buffy white, most of the feathers with subterminal blackish bars; primary-coverts blackish, with broad hazel bars, the feathers mainly blackish at tips; under wing-coverts, bend of wing, and axillaries buff, with blackish and rufous bars on outer border of the under wing-coverts; first three primaries without hazel edging on inner webs, the remainder of the series conspicuously edged with this color; tail light hazel, much paler on the two middle feathers, which are finely, irregularly, and indistinctly freckled with dusky, the outer feathers more heavily marked and barred with blackish, the two outermost rectrices with a white tip that, on the inner web of the last feather, is 13.8 mm. long; lores, sides of head including ear-coverts, sides of neck and breast chestnut, some of the feathers on sides of neck tipped with buffy like nape, those of the middle of breast terminated with buffy white, most of them having also narrow, black shaft marks; chin and upper throat cinnamon rufous; lower throat with two white spots, separated by a narrow line of black-tipped rufous feathers, the lower border of these white spots also with black-tipped feathers; cheeks mixed cinnamon rufous and buffy white; abdomen and under tail-coverts buff, the former more or less obsoletely barred with brownish and rufous; feet and tarsi light brown in the dried skin. Length of wing, 130; tail, 92; tarsus, 19; culmen, 10.5 mm.

In the above description no mention is made of certain feathers of the plumage that are apparently those of the immature stage, from which the bird has recently emerged. These consist of a number of buffy gray feathers with fine darker vermiculations, that are scattered over the forehead and sides of the crown; and several similar feathers with blackish shaft lines, changing terminally to chestnut, that are to be found among the inner scapulars. The buffy under tail-coverts are probably also of the immature dress, as the feathers are of the characteristic, fluffy kind common to young birds.

In order that there should be as little chance as possible for an error in identification, Doctor Richmond compared the Abbott specimen with that collected by Mr. D. G. Elliot at The Haud in Somali Land, and has furnished the following result:

Our bird is so very similar that there can be no possible doubt regarding its identity. The Somali Land specimen has more vermiculated gray feathers on the head, back, and wings, while the rump and middle tail-feathers are largely of this color, and the other rectrices have more black; the white spot in the wing occupies the first four primaries instead of three as in our bird; also the white tip of the tail is more extensive than in ours.

In measurements the wings are almost exactly alike; the tail in our bird is 92 mm., in the other 97 mm.; the tarsus in both is the same, but the middle toe is nearly 2.5 mm. longer in our bird.

Family MICROPODIDÆ.

TACHYNAUTES,^a new genus.

Cypsiurus LESSON, Echo du Monde Savant, ann. 10, ser. 2, VIII, 1843, p. 134 (type, *Cypselus ambrosiacus* Temminck=*Cypselus parvus* Lichtenstein) (not *Cypsilurus* Swainson, 1839 [Pisces]).

Chars. gen.—Similar to *Tachornis* Gosse, but tail very long—about three-fourths the length of the wing, and forked for nearly two-thirds its length, the outer feathers distally very narrow and much attenuated.

Type.—*Cypselus parvus* Lichtenstein.

The type and sole species of this genus is quite remarkable for the development of the tail which is actually, and excepting *Claudia squamata*, relatively longer than in any other member of the subfamily Micropodinae, also with the single exception of *Panyptila sanctihieronymi* more deeply forficte. All the other species of the genus *Tachornis* Gosse,^b with which *parvus* has commonly been associated, have the tail barely more than half as long as the wing, or less, and forked for less than half its own length.

Although *Tachynautes parvus* has apparently not before been formally separated from its associates in the genus *Tachornis*, it formed the type of Lesson's *Cypsiurus*, a name now unavailable by reason of *Cypsilurus*, employed by Swainson^c for a genus of fishes.

TACHYNAUTES PARVUS PARVUS (Lichtenstein).

Cypselus parvus LICHTENSTEIN, Verz. Doubl. Zool. Mus. Berlin, 1823, p. 58 (Nubia, Africa).

Two specimens: one from Kahé, south of Mount Kilimanjaro, September 7, 1888; the other from the Lumi River, near Taveta, December 1, 1888. So far as it is possible to determine without examples of typical *Tachynautes parvus* for comparison, Doctor Abbott's birds seem to belong to this form. Their wing measurement is 127 and 125 mm., respectively, thus below the minimum given by Reichenow^d for even *parvus*; and in color also they answer better to the description of *parvus* than to that of *myochrous*, the form to be expected in this locality, though they are evidently to some degree intermediate in this respect. Assuming this identification to be correct, the range of *parvus* is thereby extended considerably to the southward.

Although Hartert in his recent review of this group recognizes but two forms of *parvus*,^e there seem to be at least four that are worthy of designation by name,^f as follows:

^a ταχύς, rapidus; ναύτης, nauta.

^b Birds Jamaica, 1847, p. 58, pl. ix (type, *Tachornis phœnicobia* Gosse).

^c Nat. Hist. Fishes, Amphib., and Rept., I, 1838, p. 299.

^d Vogel Africas, II, 1903, p. 384.

^e Tierreich, I, 1897, p. 81.

^f See Reichenow, Vogel Africas, II, 1903, pp. 383-386.

Tachynautes parvus parvus (Lichtenstein).—Northeastern and northwestern Africa, from Nubia to Senegal and the Kilimanjaro region.

Tachynautes parvus myochrous (Reichenow).—Eastern Africa, from German East Africa to the Zambesi River.

Tachynautes parvus brachypterus (Reichenow)^a.—Western Africa, from Gambia to Damara Land.

Tachynautes parvus gracilis (Sharpe).—Madagascar.

MICROPUS MELBA AFRICANUS (Temminck).

Cypselus alpinus africanus TEMMINCK, Man. d'Orn., 1815, p. 270 (southern Africa).

Two specimens from Mount Kilimanjaro, taken at 5,000 and 10,000 feet, respectively. These are darker on the upper parts than examples from Europe and Asia in the United States National Museum, but that this is, as it seems to be, an additional character separating *Micropus m. africanus* from true *melba*, our series is unfortunately not extensive enough to determine.

If the generic term *Apus* Scopoli,^b applied to the swifts of this group, be refused as identical with the prior *Apos* Scopoli,^c the name to be used is not *Cypselus* Illiger,^d but *Micropus* Wolf,^e which latter Doctor Sharpe rejects^f apparently because of a supposed earlier *Micropus* Linnæus. So far as we are aware no such generic term was ever used by Linnæus.

MICROPUS HORUS (Heuglin).

Cypselus affinis var. *horus* HEUGLIN, Ornith. Nordost-Afr., I, 1869, p. 147 (Hartlaub, manuscript) (South Africa).^g

One adult female from Kahé, south of Mount Kilimanjaro, taken May 3, 1888.

MICROPUS MYOPTILUS (Salvadori).

Cypselus myoptilus SALVADORI, Ann. Mus. Civ. Genova, XXVI, 1888, p. 228 (Let Marefia, Shoa, Abyssinia).

A single adult male of this rare species was obtained by Doctor Abbott at an altitude of 5,000 feet, on Mount Kilimanjaro, January 2, 1890. This apparently is the second known specimen, as well as the first adult bird, the original description having been based on the immature plumage, and, furthermore, greatly extends the known range of the species. It may be described as follows:

Upper parts dark grayish brown, rather deeper on the interscapulum,

^a *Tachornis parvus brachypterus* REICHENOW, Vögel Africas, II, 1893, p. 386 (Gambia to Damara Land, western Africa).

^b Introd. Hist. Nat., 1777, p. 483 (type, *Hirundo apus* Linnæus).

^c Idem, 1777, p. 404 (Crustacea).

^d Prod. Syst. Mam. et Avium, 1811, p. 229.

^e Meyer and Wolf, Taschenb. deutsch. Vögelk., I, 1810, p. 280.

^f Hand-List Gen. and Spec. Birds, II, 1900, p. 95.

^g This is not a *nomen nudum* as stated by Reichenow (Vögel Africas, II, 1903, p. 381).

and noticeably paler on the forehead, particularly the lateral portions, the pileum, rump, and upper tail-coverts with slightly paler margins, producing an obsoletely squamate effect; tail of the same color as the back, and deeply forked, the outer feathers conspicuously narrowed terminally, as in *Micropus caffer*, but more extensively; wings like the upper surface, but the outer webs of the quills darker, the inner ones lighter than the back; a blackish spot in front of the eye; sides of head and neck rather paler than the pileum; chin and upper throat pale grayish brown, merging insensibly into the darker color of the surrounding parts; rest of ventral surface grayish brown, somewhat lighter than that of the upper parts; the feathers of lower abdomen and inferior tail-coverts with obsoletely paler tips; under wing-coverts grayish brown like the lower parts, but lighter along the edge of the wing. Length of wing, 127; outermost tail-feathers, 79; middle tail-feathers, 41; exposed culmen, 5.5; tarsus, 8.5; middle toe, 7.5 mm.

Family COLIIDÆ.

COLIUS LEUCOTIS AFFINIS Shelley.

Colius leucotis affinis SHELLEY, Ibis, 1885, p. 312 (Dar-es-Salaam, German East Africa^a).

Five specimens: from Taveta; Mount Kilimanjaro, 5,000 feet; Maranu, Kilimanjaro; and Kahé, south of Kilimanjaro. "Iris red; feet dark pink, sometimes red." These are apparently typical *affinis*; they vary much in color individually, as do others mentioned by Doctor Reichenow.^b

UROCOLIUS MACROURUS MACROURUS (Linnæus).

Lanius macrourus LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 134 (Senegal, western Africa).

Colius macrourus pulcher NEUMANN, Journ. f. Ornith., 1900, p. 190 (Teita, British East Africa).

One adult male, from the plains east of Mount Kilimanjaro, September 21, 1888. So far as we can discover it does not differ, except in slightly larger size, from an example taken in Somali Land.

Mr. Oscar Neumann has recently separated the German and British East Africa bird from that of Abyssinia, under the name *Colius macrourus pulcher*;^c at the same time suggesting that the bird from Senegal might be different, and if so, should be called *Colius macrourus senegalensis* (Gmelin). The Senegal bird, not that from Abyssinia as supposed by Mr. Neumann, is, however, the true *macrourus*, for Linnæus' description^d was founded on the "Coliou

^a Captain Shelley, in letter.

^b Vögel Africas, II, 1903, p. 205.

^c Journ. f. Ornith., 1900, p. 190.

^d Syst. Nat., 12th ed., I, 1766, p. 134.

hupé du Sénégal" of Brisson;^a of which Gmelin's *Colius senegalensis*,^b based primarily on the same description and figure, is of course a pure synonym. Neumann gives no characters to distinguish from typical *macrourus* of western Africa the form which he calls *pulcher*, as a consequence of which the status of this race must for the present be held in abeyance. The subspecies from Abyssinia is thus left without a name, and should it prove sufficiently different, as Neumann asserts, by reason of its paler head, yellowish forehead, and lack of bluish wash on the crown, it may be known as *Urocolius macrourus syntactus*.

There seems to be excellent reason for recognizing at least two genera of Coliidae, instead of the single one currently considered coextensive with the family. The two species, *macrourus* and *indicus* (= *erythromelon* Authors), including of course their various subspecies, are both very much in contrast to all the others by reason of their peculiar, narrow tail-feathers, comparatively long outermost primary, red basal portion of the maxilla, and other details of coloration. The type of *Colius*^c is *C. colius*, so that this name must be restricted to the broad-tailed species; while for the others the term *Urocolius*,^d type *C. macrourus*, is available.

The following forms of *Urocolius* seem to be recognizable:

- Urocolius macrourus macrourus* (LINNÆUS).
- Urocolius macrourus syntactus* OBERHOLSER.
- Urocolius indicus indicus* (LATHAM).
- Urocolius indicus mossambicus* (REICHENOW).
- Urocolius indicus lacteifrons* (SHARPE).
- Urocolius indicus pallidus* (REICHENOW).
- Urocolius indicus angolensis* (REICHENOW).

Family TROGONTIDÆ.

APALODERMA NARINA NARINA (Stephens).

Trogon narina STEPHENS, Shaw's Gen. Zool., IX, 1815, p. 14 (Caffraria; Auteniquoi country to the Gamtoo River [type locality, Kaffir Land]).

One adult male, taken at Taveta, July 6, 1888.

HETEROTROGON VITTATUS (Shelley).

Hapaloderma vittatum SHELLEY, Proc. Zool. Soc. Lond., 1882, p. 306 (Mamboio, German East Africa).

Four specimens of this rare trogon were collected by Doctor Abbott on Mount Kilimanjaro, at altitudes of 6,000 and 7,000 feet. Two of these are females and have been already fully described by Dr. Charles W. Richmond.^e

^a *Colius senegalensis cristatus* Brisson, Ornith., III, 1760, p. 306, pl. xvi, fig. 3.

^b Syst. Nat., I, ii, 1788, p. 842.

^c Brisson, Ornith., III, 1760, p. 304.

^d Bonaparte, Consp. Volucr. Anisod., 1854, p. 3.

^e Proc. U. S. Nat. Mus., XVII, 1895, pp. 602-603.

Family CAPITONIDÆ.

LYBIUS MELANOPTERUS (Peters).

Pogonias (Laimodon) melanopterus PETERS, Bericht Verhandl. Kgl. Akad. Wiss. Berlin, 1854, p. 134 (Mozambique).

One specimen, from eastern Africa.

LYBIUS ABBOTTI (Richmond).

Melanobucco abbotti RICHMOND, Auk, XIV, 1897, p. 164 (Plains of Taveta, British East Africa).

One specimen, an adult female, was obtained by Doctor Abbott on the plains of Taveta, July 22, 1888. This is the type of the species, to Doctor Richmond's original description of which there is little to add. Doctor Reichenow has synonymized *Lybius abbotti* with *Lybius albicaudus*^a, giving the intimation that he considers it simply an older individual of that species. If this be really the case, then *Lybius senex* is also undoubtedly the same, a possibility that Doctor Reichenow has already suggested, though he keeps the two birds separate.^b It is indeed somewhat strange that three species so closely allied should occupy so nearly the same general region; but the changes of plumage in this genus are so imperfectly known, the differences characterizing *albicaudus*, *abbotti*, and *senex*, so well marked, and so little appear to be due to age, that without actual intermediates it seems preferable, under the circumstances, to consider them distinct species until positive proof to the contrary be forthcoming. The three may be distinguished chiefly as follows:

Lybius albicaudus.—Breast and abdomen dark brown, the feathers with white tips.

Lybius abbotti.—Breast and upper abdomen pure white, only the sides, flanks, and lower abdomen dark brown mixed with white.

Lybius senex.—Entire lower surface pure white.

TRICHOLÆMA LACRYMOSUM Cabanis.

Tricholaema lacrymosa CABANIS, Journ. f. Ornith., 1878, p. 205 (Kitui, and Adi River, British East Africa).

One adult male from Taveta, August 15, 1888.

TRICHOLÆMA STIGMATOTHORAX Cabanis.

Tricholaema stigmatothorax CABANIS, Journ. f. Ornith., 1878, p. 205 (Ndi, Teita, British East Africa).

One adult female from the Useri River, near Mount Kilimanjaro, January 17, 1889.

^a Vögel Africas, II, 1903, pp. 122-123.

^b Idem, II, 1903, p. 123.

SMILORHIS KILIMENSIS Shelley.

Smilorhis Kilimensis SHELLEY, Ibis, 1889, p. 477 (Kilimanjaro district, eastern Africa).

Three specimens: one from Taveta, August 14, 1888, the two others without date. One of these is evidently immature, and has the rump chiefly brownish black with an admixture of white; but the ridge-like crest on the base of the culmen is fairly well developed.

VIRIDIBUCCO,^a new genus.

Chars. gen.—Similar to *Xylobucco* (*Barbatula* of authors), but bill smaller, weaker, less turgid, the culmen perfectly straight instead of decidedly curved, and rounded, with scarcely a perceptible ridge; no naked space surrounding the eye; secondaries not so long, falling short of the primary tips by almost the length of the exposed culmen.

Type.—*Barbatula leucomystax* Sharpe.

The type of this new genus has been usually included among the forms of *Xylobucco*, but, as will be readily seen by the above diagnosis, it is quite out of place in such company. Captain Shelley referred it to *Stactolæma* Marshall,^b but it differs radically from the members of that group, as follows: Bill smaller, weaker, much less turgid, the culmen straight; rictal and frontal bristles numerous and well developed; secondaries shorter; length of first toe less than half the fourth. Apparently the only other congeneric species is *Barbatula simplex* Fischer and Reichenow.^c This group will therefore comprise *Viridibucco leucomystax* (Sharpe) and *Viridibucco simplex* (Fischer and Reichenow).

Several changes appear to be necessary in Doctor Reichenow's recent arrangement^d of the species belonging to the current genera *Barbatula*, *Smilorhis*, and *Stactolæma*. Dr. C. W. Richmond has called my attention to the fact that the name *Barbatula* Lesson^e is preoccupied in ichthyology by *Barbatula* Linck;^f and it must therefore be rejected in favor of *Xylobucco* Bonaparte,^g since *Xylobucco scolopaceus* Bonaparte, the type of the last, is strictly congeneric with *Bucco erythronotus* Cuvier, the type of *Barbatula* Lesson. Doctor Reichenow's *Lignobucco*,^h based on *X. scolopaceus*, is of course synonymous. The same author has attemptedⁱ to separate *Barbatula duchaillui* Cassin

^a *Viridis* + *bucco*.

^b Birds of Africa, I, 1896, p. 129.

^c Journ. f. Ornith., 1884, p. 180 (Pangani, German East Africa).

^d Vögel Africas, II, 1903, pp. 139–153.

^e Compl. Buffon, IX, 1837, p. 292.

^f Mag. Neuste Phys. u. Nat., VI (3), 1790, p. 38.

^g Consp. Avium, I, 1850, p. 141.

^h Journ. f. Ornith., 1887, p. 299.

ⁱ Vögel Africas, II, 1903, pp. 142–143.

from its associates in the genus *Xylobucco* (= *Barbatula*), and to unite it generically with the species of the genera *Stactolæma* and *Smilorhis* under the name *Buccanodon* Hartlaub.^a He bases this separation of *B. duchaillui* from *Xylobucco* apparently on the supposition that this species has the proportion of the toes different from that obtaining among the species of *Xylobucco*, and like that found in *Smilorhis* and *Stactolæma*, i. e., the first toe about equal to the half of the fourth; but in all the *fully adult* and otherwise perfect specimens of *duchaillui* examined by us the length of the first toe is decidedly less than half the fourth, and thus exactly as in *Xylobucco*, though curiously enough in one or two examples that are apparently immature the proportions of the first and fourth toes are as in *Smilorhis* and *Stactolæma*. As there are absolutely no other characters to separate *duchaillui* from *Xylobucco*, it must be replaced in that group, and the two generic names founded upon it, *Buccanodon* Hartlaub^a and *Cladurus* Reichenow,^b be entered as synonyms under *Xylobucco*. Both *Smilorhis* and *Stactolæma* are perfectly good genera, as Doctor Sharpe has always consistently claimed, and there seems to be no good reason for uniting them as Doctor Reichenow has done. Their characters, as well as those of the two other genera here involved, will appear in the following diagnoses:

1. *Stactolæma*.

Stactolæma MARSHALL, Proc. Zool. Soc. Lond., 1870, p. 118 (type, *Buccanodon anchietæ* Bocage).

Bill large and swollen, the culmen curved, with no conspicuous ridge; rictal and frontal bristles few or none, and, if present, very weak; no naked space surrounding the eye; secondaries falling short of the primaries by not more than two-thirds of exposed culmen; first toe about equal to half the fourth.

The species of this genus are:

Stactolæma anchietæ (Bocage).
Stactolæma olivaceum (Shelley).
Stactolæma woodwardi Shelley.

2. *Smilorhis*.

Smilorhis SUNDEVALL, Meth. Av. Tent. 1873, p. 75 (type, *Megalæma leucotis* Sundevall).

Bill large and turgid, the culmen curved throughout, with a conspicuous crest on its basal portion; rictal and frontal bristles fairly well developed; an unfeathered space around the eye; secondaries short, the difference between their tips and those of the primaries more than the length of exposed culmen; first toe about equal to the fourth.

^a Orn. Westafr., 1857, p. 171.

^b Journ. f. Ornith., 1877, p. 17.

The following species appear to be referable here:

Smilorhis whyti Shelley.
Smilorhis sowerbyi (Sharpe).
Smilorhis bocagei (Sousa).
Smilorhis leucotis (Sundevall).
Smilorhis kilimensis Shelley.

3. Viridibucco.

Viridibucco OBERHOLSER, p. 865 (type, *Barbatula leucomystax* Sharpe).

Bill small, weak, not swollen, the culmen straight, rounded, with scarcely a perceptible ridge; rictal and frontal bristles well developed; no bare space around the eye; secondaries falling short of the primaries by almost the length of the exposed culmen; first toe less than half the length of the fourth.

Two species are to be included:

Viridibucco leucomystax (Sharpe).
Viridibucco simplex (Fischer and Reichenow).

4. Xylobucco.

Barbatula LESSON, Compl. Buffon, IX, 1837, p. 292 (not Gmelin) (type, *Bucco erythronotus* Cuvier).
Xylobucco BONAPARTE, Consp. Avium, I, 1850, p. 141 (type, *Xylobucco scolopaceus* Bonaparte).
Buccanodon HARTLAUB, Orn. Westaf., 1857, p. 171 (type, *Barbatula duchaillui* Cassin).
Cladurus REICHENOW, Journ. f. Ornith, 1877, p. 17 (type, *Barbatula duchaillui* Cassin).
Lignobucco REICHENOW, Journ. f. Ornith, 1887, p. 299 (type, *Xylobucco scolopaceus* Bonaparte).

Bill comparatively large and turgid, the culmen curved, with a well-defined ridge on its basal portion; rictal and frontal bristles well developed; a naked space surrounding the eye; secondaries falling short of primaries by less than half of exposed culmen; first toe less than half of fourth.

This genus comprises the following species:

Xylobucco scolopaceus scolopaceus Bonaparte.
Xylobucco scolopaceus stellatus (Jardine and Fraser).
Xylobucco scolopaceus flavisquamatus (Verreaux).
Xylobucco scolopaceus consobrinus (Reichenow).
Xylobucco erythronotus (Cuvier).
Xylobucco leucolaimus (Verreaux).
Xylobucco bilineatus (Sundevall).
Xylobucco fischeri (Reichenow).
Xylobucco kandti (Reichenow).
Xylobucco jacksoni (Sharpe).
Xylobucco chrysopygus (Shelley).
Xylobucco subsulphureus (Fraser).
Xylobucco chrysocomus chrysocomus (Temminck).
Xylobucco chrysocomus guineensis (Reichenow).
Xylobucco chrysocomus xanthostictus (Blundell and Lovat).
Xylobucco chrysocomus schoanus (Neumann).
Xylobucco chrysocomus centralis (Reichenow).
Xylobucco chrysocomus extoni (Layard).
Xylobucco duchaillui duchaillui (Cassin).
Xylobucco duchaillui ugandæ (Reichenow).
Xylobucco pusillus (Dumont).
Xylobucco minutus (Bonaparte).
Xylobucco affinis (Reichenow).
Xylobucco uropygialis (Heuglin).
Xylobucco coryphæus (Reichenow).

A key to the four genera above treated would read somewhat as follows:

- a. Bill weak; culmen straight *Viridibucco*
- a.' Bill stout; culmen curved.
- b. No naked space around eye; bristles of bill few or absent.....*Stactolæma*
- b.' A naked space around eye; bristles of bill well developed.
- c. First toe about equal to half of fourth; secondaries falling short of primaries by more than exposed culmen.....*Smilorhis*
- c.' First toe decidedly less than half of fourth; secondaries falling short of primaries by less than half of exposed culmen.....*Xylobucco*

VIRIDIBUCCO LEUCOMYSTAX (Sharpe).

Barbatula leucomystax SHARPE, Ibis, 1892, p. 310 (Sotik, British East Africa).

Two specimens: an adult male, from Mount Kilimanjaro, at 5,000 feet, September 1, 1889; and an adult female, from Mount Kilimanjaro, at 6,000 feet, November 10, 1888. The male is a little brighter in color above than the female, but in other respects appears to be identical.

Family INDICATORIDÆ.

INDICATOR INDICATOR (Sparrman).

Cuculus indicator SPARRMAN, Philos. Trans., 1777, p. 43 ("Groot Vaders Bosch," near Swellendam, vicinity of Cape of Good Hope, South Africa).

Cuculus indicator GMELIN, Syst. Nat., I, i, 1788, p. 418 (interior of Africa).

Two specimens: an adult male, from the plains east of Mount Kilimanjaro, October 5, 1888; and an immature male, from the Useri River, Mount Kilimanjaro, December 13, 1888. The latter is in the plumage which so closely and puzzlingly resembles *Indicator maior*, the short median upper tail-coverts being pure white, the jugulum and throat tinged with yellow, the chin faintly washed with the same, the flanks without brown streaks, the feathers of the forehead and crown margined with yellowish brown; but the chin and upper throat are mottled with brownish black and the bill is pale brownish, both of which are distinguishing marks.

MELIGNOTHES MINOR DIADEMATUS (Rüppell).

Indicator diadematus RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 61 (wooded region of Abyssinia).

Indicator minor teitensis NEUMANN, Journ. f. Ornith., 1900, p. 195 (Bura, Teita, British East Africa).

A single female was obtained by Doctor Abbott at Taveta, July 7, 1888. "Skin extremely tough." Its measurements are: Wing, 82; tail, 51; exposed culmen, 9.5; tarsus, 14; middle toe, 12 mm.

That two species of small honey-guides inhabit most of Abyssinia was suspected by Rüppell, who distinguished them and named the paler one *diadematus*;^a by mistake, however, considering the darker

^a Neue Wirb. Faun. Abyss., Vögel., 1835, p. 61.

bird true *minor*. The latter (*minor* of Rüppell) is in reality identical with *pachyrhynchus* of Heuglin,^a which is specifically distinct from *minor*, as hereinafter shown. The bird named *diadematus* by Rüppell, though closely related to *minor*, appears to be subspecifically separable. Neumann, missing the point that there are two distinct species found together in northeastern Africa, also failing to discover Rüppell's error in identification of *minor*, thereby identified *diadematus* Rüppell with *pachyrhynchus* Heuglin. Then, as a natural consequence, he thought the northern form of *minor* (*diadematus*) undescribed, and renamed it *teitensis*.^b The latter name must therefore give way to *diadematus*, unless future investigation prove the bird from the Kilimanjaro region different from both the South African *minor* and the Abyssinian *diadematus*.

MELIGNOTHES EXILIS MELIPHILUS, new subspecies.

Chars. subsp.—Similar to *Melignotheres exilis exilis*,^c but decidedly larger; white area on tail less extensive; crown and cervix much more tinged with yellowish olive green; upper parts less streaked with dark brown—almost uniform.

Description.—Type, adult male, Cat. No. 117965, U.S.N.M.; Taveta, British East Africa, August 15, 1888; Dr. W. L. Abbott. Pileum and nape dull grayish olive green, the extreme forehead blackish, with a very small white spot behind the nostrils, the feathers of the fore part of the crown with blackish shafts; back, scapulars, rump, and upper tail-coverts golden olive green, the centers of the feathers narrowly and obscurely brownish, this barely noticeable when the plumage is undisturbed; four middle tail-feathers blackish brown, edged with olive green; remaining rectrices white, with restricted tips of dark brown, and similarly colored basal areas that on the two outer pairs of feathers are barely visible, but on the others occupy diagonally nearly two-thirds of the length; wings fuscous, the quills edged externally with golden olive green, the greater and median coverts more broadly margined with the same, the lesser coverts almost uniform olive; sides of head and neck brownish gray with a wash of greenish; chin whitish, broadly streaked with dark brownish gray; throat plain brownish ashy; breast, sides, and flanks dull buffy gray with a greenish tinge, the flanks paler and broadly streaked with dark brown; abdomen and crissum brownish white; under wing-coverts brownish gray, the axillars paler, the edge of wing whitish olive yellow; bill brownish black, the base of mandible decidedly paler. Length of wing, 73; tail, 47.5; exposed culmen, 7.5; tarsus, 12.5; middle toe, 11 mm.

^a *Melignotheres pachyrhynchus* Heuglin, Journ. f. Ornith., 1864, p. 266.

^b Journ. f. Ornith., 1900, p. 195.

^c Type compared.

Doctor Abbott secured only the single specimen above described, but this is an adult in fresh plumage, and demonstrates clearly its specific distinctness from *Melignother minor diadematus* (Rüppell) (= *teitensis* Neumann) obtained at the same locality, proving thus the existence of two entirely distinct species in this part of Africa. From *diadematus* this new form differs as follows: Size smaller, particularly the wing and bill; upper parts darker, less yellowish, the head more greenish; chin and throat darker, the former conspicuously streaked; breast with more of a greenish wash, inferior wing-coverts brownish gray instead of dull white. From *Melignother exilis pachyrhynchus* (Heuglin) it may be distinguished by its decidedly smaller size and the lack of blackish shaft streaks on the upper parts. Considerable hesitation preceded the determination to describe *meliphilus* as new, but a very careful investigation, involving all the known forms of the smaller honey-guides seems to permit no other logical course. As this study has revealed the apparent necessity of some readjustment of previously entertained views of the relationships of the species, the results may be here set forth as a slight contribution to our knowledge of these difficult birds.

The genus *Indicator*, as at present regarded, comprises two well-defined groups—one of generally larger species, with longer, more slender bills, typified by *Indicator indicator*; the other of smaller forms, with relatively short, stout beaks, represented by *I. conirostris*. The structural differences characterizing the latter, as below detailed, seem quite sufficient for its recognition as a separate genus, to which the name *Melignother* Cassin,^a based on *I. conirostris*, therefore becomes applicable. Doctor Reichenow admits only five forms of this group,^b all of which he treats as distinct species; while Mr. Neumann,^c going to the other extreme, holds them all for subspecies of *minor*, with the addition of *diadematus*, and excepting *lorati* which was at that time not yet described. There seem to be, however, at least three specific types—*minor*, *exilis*, and *conirostris*—with possibly a fourth in *lorati*; and all the other admissible forms appear to be but geographical races of these. To judge from the characters—osteological and other—given by Stoliczka,^d the Indian *Pseudofringilla xanthonota* (Blyth) is generically very distinct from both *Indicator* and *Melignother*. Other pertinent notes are set forth in the following review of the

Genus *Melignother* Cassin.

Melignother CASSIN, Proc. Acad. Nat. Sci. Phila., 1856, p. 156 (type, *Melignother conirostris* Cassin).

Melignostes HEINE, Journ. f. Ornith., 1860, p. 102 (nom. emend. pro *Melignother*) (type, *Melignother conirostris* Cassin).

^a Proc. Acad. Nat. Sci. Phila., 1856, p. 156.

^b Vogel Africas, II, 1903, pp. 110–113.

^c Journ. f. Ornith., 1900, p. 195.

^d Stray Feathers, I, 1873, p. 426.

Chars. gen.—Similar to *Indicator Vieillot*,^a but bill shorter, stouter, more conoid, its height at base not decidedly less than length of culmen from anterior edge of nasal fossa, nor less than length of gonys; gonydeal angle much more prominent, the gonys much more ascending; nares more rounded, provided with a more prominent tubular membrane, and set at a greater posteriorly divergent angle to the axis of the culmen, lying thus parallel to the lateral outlines of the bill instead of to the sides of its central ridge.

Geographical distribution.—All of Africa, except the northwestern portion.

ANALYTICAL KEY TO THE SPECIES AND SUBSPECIES OF MELIGNOTHES.

- A. Bill entirely black; under surface darker—slate gray.
 - a. Crown like the back *ussheri*
 - a'. Crown conspicuously different from back.
 - b. Head and neck more slaty; yellowish edgings of back and wings brighter *conirostris*
 - b'. Head and neck more brownish; yellowish edgings of back and wings duller *lovati*
- B. Bill with base of mandible pale; under surface lighter—dull pale brownish gray, or whitish.
 - a. Lighter; upper parts more yellowish; under wing-coverts white or nearly so; bill usually larger.
 - b. Larger—wing generally over 85 mm *minor*
 - b'. Smaller—wing generally under 85 mm *diadematus*
 - a'. Darker; upper parts less yellowish; under wing-coverts dull grayish or brownish; bill smaller.
 - b. Wing over 75 mm *pachyrhynchus*
 - b'. Wing under 75 mm.
 - c. Back not conspicuously streaked with blackish or dark brown *meliphilus*
 - c'. Back conspicuously streaked with blackish or dark brown.
 - d. Pileum chiefly yellowish olive *willcocksii*
 - d'. Pileum chiefly gray or brown.
 - e. Crown uniform cinereous *poensis*
 - e'. Crown brownish gray, with darker shaft-streaks, and slightly washed with olive yellow *exilis*

1. *Melignotheres conirostris conirostris* Cassin.

Melignotheres conirostris CASSIN, Proc. Acad. Nat. Sci. Phila., 1856, p. 156 (Munda River, Gabun, western Africa).

Indicator occidentalis HARTLAUB, Orn. Westafr., 1857, p. 185, in text (Verreaux, manuscript) (Gabun, western Africa).

Geographical distribution.—Gabun to Kamerun, western Africa.

This large, dark-colored species is very distinct from both *M. exilis* and *M. minor*, occupying practically the same region as the former, and it can by no means be considered only a subspecies of the latter, as proposed by Mr. Neumann.^b The type is still in the collection of the Academy of Natural Sciences of Philadelphia, and still in a good state of preservation. Through the kindness of Mr. Witmer Stone it has been examined, and the following measurements taken: Wing, 83; tail, 53; exposed culmen, 9.5; tarsus, 16; middle toe, 13.5 mm.

^a Analyse Ornith., 1816, p. 28 (type, *Cuculus indicator* Sparrman).

^b Journ. f. Ornith., 1900, p. 195.

2. *Melignothes conirostris ussheri* (Sharpe).

Indicator ussheri SHARPE, Bull. Brit. Orn. Club, XII, 1902, p. 80 (Fantee, western Africa).

Geographical distribution.—Gold Coast, western Africa.

This recently described form is the northern representative of *conirostris*, and apparently only a subspecies. It differs chiefly in the more golden olive cast of the pileum and the rather paler lower parts. The wing length given by Doctor Sharpe^a—4.65 inches (117 mm.)—is evidently a mistake, possibly a slip for 3.65 inches, as this dimension as given would make *ussheri* larger in length of wing than any other honey-guide, with other measurements disproportionately small.

3. *Melignothes lovati* (Grant).

Indicator lovati GRANT, Bull. Brit. Orn. Club, X, 1900, p. xxxix (Gelongol, southern Abyssinia).

Geographical distribution.—Southern Abyssinia.

Apparently most nearly related to *M. conirostris*, possibly only subspecifically distinct, and distinguishable by its grayish brown head and cervix, together with the decidedly duller yellowish edgings of back and wing-coverts. Mr. Neumann is probably wrong in treating *lovati* as a subspecies of *minor*.^b

4. *Melignothes minor minor* (Stephens).

Indicator minor STEPHENS, Shaw's Gen. Zool., IX, 1815, p. 140 (Cape of Good Hope).

Indicator minimus TEMMINCK, Pl. Col., III, 1822, pl. DXLII, fig. 1 (southern Africa).

Indicator buphagoides LEADBEATER, Trans. Linn. Soc. Lond., XVI, 1829, p. 91 (interior of Africa).

Indicator apivorus LICHTENSTEIN, Nomencl. Av., 1854, p. 78 (*nomen nudum*).

Geographical distribution.—Southern Africa, north to Damara Land and probably at least the Zambesi River.

The much paler, less variegated upper parts, light basal portion of the mandible, much paler, more brownish lower parts, and white or brownish white lower wing-coverts easily distinguish this species from *Melignothes conirostris*. The northern limit of its distribution in eastern Africa, as well as the area of its inosculation with *M. minor diadematus*, remain to be determined. The name *Indicator buphagoides*^c apparently is, as commonly regarded, a synonym of *minor*, though it is based on a bird with a bill somewhat too small, if there be no mistake in the measurement as recorded in the original description.

5. *Melignothes minor diadematus* (Rüppell).

Indicator diadematus RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 61 (wooded region of Abyssinia).

Indicator minor teitensis NAUMANN, Journ. f. Ornith., 1900, p. 195 (Bura, Teita, British East Africa).

Geographical distribution.—German East Africa north to Somali Land, Abyssinia, and Bongo in the southeastern Sudan.

^aBull. Brit. Orn. Club, XII, 1902, p. 80.

^bJourn. f. Ornith., 1904, p. 384.

^cLeadbeater, Trans. Linn. Soc. Lond., XVI, 1829, p. 91.

This northern form seems to differ from *minor* principally in its smaller size, a character, however, which is quite decided enough for purposes of subspecific separation. The application of the names *diadematus* and *teitensis* has been discussed above.^a

6. *Melignothres exilis exilis* Cassin.

Melignothres exilis CASSIN, Proc. Acad. Nat. Sci. Phila., 1856, p. 157 (Munda River, Gabun, western Africa).

Geographical distribution.—Loango to Kamerun, western Africa.

This species, including its various forms, is, as held by Doctor Reichenow,^b specifically distinct from *minor*. It differs as a whole from the latter in its usually darker, less yellowish upper parts; darker anterior lower surface; smaller bill; and dull grayish or brownish, instead of white or whitish under wing-coverts. Races of the two species—*minor* and *exilis*—occur together in northeastern Africa as far south, at least, as the Kilimanjaro district, but elsewhere occupy separate geographical areas.

The type of *exilis* is a bird somewhat immature, and has for many years been exposed as a mounted specimen, therefore is rather duller than fresh adult examples. Its entire lower surface, excepting the paler crissum and median portion of the lower abdomen, is dull greenish gray. Its measurements are: Wing, 62.5; tail, 40; exposed culmen, 7; tarsus, 13; middle toe, 11.5 mm.

7. *Melignothres exilis willcocksii* (Alexander).

Indicator willcocksii ALEXANDER, Bull. Brit. Orn. Club, XII, 1901, p. 11 (Prahou, Gold Coast Colony, western Africa).

Geographical distribution.—Gold Coast, western Africa.

A northern form of *exilis* in which the crown is more conspicuously and chiefly yellowish olive instead of olive brown; there also seems to be a less distinct dusky band below the cheeks and auriculars. There is not the material difference in the size of the two forms claimed by Mr. Alexander,^c but *willcocksii* is apparently entitled to stand as a subspecies, although Doctor Reichenow has synonymized it with *exilis*.^d

8. *Melignothres exilis poensis* (Alexander).

Indicator poensis ALEXANDER, Bull. Brit. Orn. Club, XIII, 1903, p. 33 (Bakaki, Fernando Po).

Geographical distribution.—Fernando Po, western Africa.

An island race of *exilis*, which differs principally in its uniform cinereous crown. As may be seen by comparison of the original measurements of *poensis*^e with the above given dimensions of the type of *exilis*, the present form is not mentionably smaller.

9. *Melignothres exilis pachyrhynchus* (Heuglin).

Melignothres pachyrhynchus HEUGLIN, Journ. f. Ornith., 1864, p. 266 (Bongo, south-eastern Sudan, central Africa).

Indicator pygmaeus REICHENOW, Journ. f. Ornith., 1892, p. 24 (Bukoba, Victoria Nyanza, German East Africa).

^a See pp. 868–869.

^d Vögel Africas, II, 1903, p. 113.

^b Vögel Africas, II, 1903, p. 113.

^e Bull. Brit. Orn. Club, XIII, 1903, p. 33.

^c Bull. Brit. Orn. Club, XII, 1901, p. 11.

Geographical distribution.—Abyssinia and Bongo, south to Victoria Nyanza.

This form appears to be easily separable from *exilis*, though chiefly on account of its much larger size and rather more greenish pileum and cervix.

The name *Melignotheres pachyrhynchus* of Heuglin^a undoubtedly applies to a bird of the *exilis* type, as an examination of his descriptions and his accompanying comments clearly shows. Doctor Reichenow's *Indicator pygmæus*,^b from the same general region, a little farther to the southward, appears to be quite certainly the same, as indicated by its almost identical dimensions and blackish-striped mantle. The bird from Sotik recorded as true *exilis* by Doctor Sharpe^c is probably also *pachyrhynchus*.

10. *Melignotheres exilis meliphilus* Oberholser.

Melignotheres exilis meliphilus OBERHOLSER, p. 869.

Geographical distribution.—Kilimanjaro region, eastern Africa.

Family PICIDÆ.

CAMPETHERA NUBICA (Boddaert).

Picus nubicus BODDAERT, Tabl. Plan. Enlum., 1783, p. 41 (Nubia).

Two adult females: one from Taveta, the other from the plains east of Mount Kilimanjaro. "Irides pink." Both are apparently typical, showing no approach to *pallida* or *neumanni*.

Misled by an incorrect quotation of Captain Shelley's,^d which inadvertently was not verified at the time, the present writer was unfortunately induced to enter a plea^e for the retention of the generic name *Dendromus* for the group to which the above species belongs. The proper name, however, is undoubtedly *Campethera* Gray, since *Dendromus* Swainson, 1837, is preoccupied by *Dendromus* Smith,^f which latter proves to be identical in orthography.

DENDROPICOS GUINEENSIS MASSAICUS Neumann.

Dendropicus guineensis massaicus NEUMANN, Journ. f. Ornith., 1900, p. 206 (Ndalani, Nguruman Lake, Masai Land, German East Africa).

Two adult females from Taveta. These both are apparently typical of the small-sized form with red upper tail-coverts and distinctly barred back, which Neumann has named as above, and which seems to be an excellent race, although Doctor Reichenow is inclined to deny it recognition.^g

^a Journ. f. Ornith., 1864, p. 266; Ornith. Nordost-Afr., I, 1871, p. 773.

^b Idem, 1892, p. 24.

^c Ibis, 1892, p. 309.

^d Birds of Africa, I, 1896, p. 131, footnote.

^e Proc. U. S. Nat. Mus., XXII, 1899, p. 14.

^f Smith, Zool. Journ., IV, 1829, p. 439.

^g Vögel Africas, II, 1902, p. 194.

MESOPICOS SPODOCEPHALUS RHODEOGASTER (Fischer and Reichenow).

Picus (Mesopicus) rhodeogaster FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 180 (Aruscha, Masai Land, German East Africa).

A single adult male, from Aruscha-wa-chini, southwest of Mount Kilimanjaro, seems to be typical of this form, as of course it should be, from so near the type locality. It was taken on October 29, and is molting some of the tail-feathers, though otherwise apparently in perfect plumage.

Family ALAUDIDÆ.

MIRAFRA PÆCILOSTERNA (Reichenow).

Alauda poecilosterna REICHENOW, Ornith. Centralblatt, 1879, p. 155 (Kibaradja, British East Africa).

Three specimens: two from the plains east of Mount Kilimanjaro; and one from Kahé, south of the same mountain. "Iris brown." The last of these, taken September 7, 1888, is much less rufescent throughout than the others, this due apparently to its more freshly molted, possibly immature, condition.

PYRRHULAUDA LEUCOPAREIA (Fischer and Reichenow).

Coraphites leucopareia FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 55 (Nguruman, Masai Land, German East Africa).

One female, from the plains east of Mount Kilimanjaro, January 6, 1889. It still retains some traces of unfinished molt.

Family PLOCEIDÆ.

TEXTOR NIGER INTERMEDIUS (Cabanis).

Textor intermedius CABANIS, von der Decken's Reisen, III, 1869, p. 32, pl. xi (Kisnani, German East Africa).

One specimen, an adult male, from Taveta, April 26, 1888. "Building nests at this time."

Doctor Reichenow^a and Mr. Neumann^b consider this bird a subspecies of *Textor albirostris* (Vieillot), but, by reason of its red bill and the white on the inner webs of the primaries, it is evidently much more closely related to *Textor niger* (Smith), which latter seems to be specifically distinct from *Textor albirostris*.

DINEMELLIA DINEMELLI (Gray).

Textor dinemelli GRAY, Genera Birds, II, 1844, pl. LXXXVII, fig. 2; idem, 1849, p. 350; RÜPPELL, Syst. Uebers. Vög. Nord-Ost-Afr., 1845, p. 72, pl. xxx (Horsfield, manuscript) (Shoa, Abyssinia).

Three specimens: two from the Useri River, near Mount Kilimanjaro; and one from the plains east of this mountain. "Irides dark

^a Vögel Africas, III, 1904, p. 4.

^b Journ. f. Ornith., 1905, p. 335.

brown. Common, frequenting the scattered *Mimosa* trees in flocks of 8 or 10 individuals."

The specific name of this species is usually attributed to Rüppell, but the latter states in his first published account^a that the plate in Gray's Genera of Birds, on which this bird was labeled "*Textor dinemelli* Horsf.," was previously published;^b and the name therefore must be credited to Gray. The text belonging to this plate, however, seems not to have appeared until 1849, and in it Gray cites Rüppell's plate.^c

AMBLYOSPIZA UNICOLOR (Fischer and Reichenow).

Pyrenestes unicolor FISCHER and REICHENOW, Ornith. Centralblatt, 1878, p. 88 (Mombasa, British East Africa; and Zanzibar).

The single specimen, an adult female, from Taveta, May 25, 1888, apparently agrees with the original description.

HYPHANTORNIS RUBIGINOSUS (Rüppell).

Ploceus rubiginosus RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 93, pl. XXXIII, fig. 1 (Temben, Abyssinia).

One specimen, from the plains east of Mount Kilimanjaro, October 1, 1888. It is an immature male, and corresponds perfectly with Doctor Sharpe's description of the adult female.^d The bill is dull brown above, paler below.

We can discover no satisfactory characters to separate this species generically from *Hyphantornis*.

HYPHANTORNIS CABANISII Peters.

Hyphantornis cabanisii PETERS, Journ. f. Ornith., 1868, p. 133 (Inhambane, Portuguese East Africa).

Five specimens—three adult males and two females—all from Taveta. The bill of the female is not black, as is that of the male, but is dull brown above, dull whitish below. One of the females seems to agree minutely with Doctor Sharpe's description,^e but the other differs in a more yellowish tone above, particularly on the head; in having a clear yellow throat and breast, the latter with no saffron tinge; the lower breast yellow like the throat; the abdomen laterally tinged with the same color; and the under tail-coverts distinctly yellow. "Abundant in the plain, where it breeds in large colonies in the *Mimosa* trees, building a globular hanging nest with a hole in the side."

^aSyst. Uebers. Vög. Nord-Ost-Afr., 1845, p. 72, pl. xxx.

^b"Während ich mich mit der Herausgabe gegenwärtigen Werkchens beschäftigte, hat Herr G. R. Gray eine Abbildung von diesem schönen Webervogel in dem ersten Heft seiner Genera of Birds unter vorstehendem Namen [*Textor dinemelli* Horsf.] veröffentlicht, nach einem von Major Harris vor Kurzem aus Schoa nach England überbrachten Exemplare." Rüppell, *loc. cit.*

^cGenera Birds, II, 1849, p. 350.

^dCat. Birds Brit. Mus., XIII, 1890, p. 474.

^eIdem, p. 461.

HYPHANTORNIS JACKSONI (Shelley).

Ploceus jacksoni SHELLEY, Ibis, 1888, p. 293, pl. VII (Taveta, British East Africa^a).

Three adult males and one female, all from Taveta. The males of this species may be readily distinguished from those of *Hyphantornis dimidiatus* Salvadori, its nearest ally, by the much greater posterior extent of the chestnut on the lower surface. The female resembles that of *Hyphantornis cabanisii*, but the upper parts, including the wings and tail, are more yellowish, the dusky centers of the feathers less conspicuous; the wings are lighter brown, with edgings broader, those of the superior coverts, secondaries, and tertials being olive yellow, like the color of the back, instead of very pale yellowish, these differences combining to impart to the wings a more uniform appearance; throat, breast, and sides of head more deeply suffused with yellow; under wing-coverts and broad inner margins of the wing-quills rich yellow instead of brownish or yellowish white; feet flesh color instead of dusky.

HYPHANTORNIS NIGRICEPS Layard.

Hyphantornis nigriceps LAYARD, Birds S. Africa, 1867, p. 180 (Kuruman, Bechuana Land, South Africa).

Five specimens (three males, two females), from Taveta.^b "Iris (of male) red."

HYPHANTORNIS BOJERI Cabanis.

Hyphantornis bojeri CABANIS, von der Decken's Reisen, III, 1869, p. 32 (Hartlaub and Finsch, manuscript) (Mombasa, British East Africa).

Three specimens, from Taveta, collected in March, 1888. An immature male differs from the adult of the same sex in having the cheeks, auriculars, throat, and remainder of the lower parts almost uniform yellow, without any decided orange tinge; the upper parts from forehead to tail, including the wings, darker, duller, and more greenish; the head concolor with the back; the bill dull brown. A female that is possibly immature is olive brown above, with a mixture of yellowish and olive green, the back streaked broadly with darker brown, yellowish, and buff; tail greenish olive, edged with yellowish; wings sepia, margined with yellow and olive green; a yellow superciliary stripe; lores dark brown; sides of head and neck mixed yellowish and brownish; lower surface pale yellow, rather darker and duller across the breast, somewhat paler on the abdomen; lining of wing pale yellow; maxilla dark brown; mandible yellowish white.

^a This is the type locality as given by Captain Shelley in the original description which occurs in the account of a collection made by Mr. F. J. Jackson in the vicinity of Mount Kilimanjaro; and the collector says that the only specimen was brought to him by a little Taveta boy. Doctor Sharpe, however (Cat. Birds Brit. Mus., XIII, 1890, p. 459), gives Manda Island as the type locality.

^b Two are without data, but are presumably from this locality.

HYPHANTORNIS SCHILLINGSI (Reichenow).

Ploceus schillingsi REICHENOW, Ornith. Monatsber., 1902, p. 158 (Rufu River, German East Africa).

Four specimens of this recently described weaver-bird were obtained by Doctor Abbott. In view of the rarity of the species, the following somewhat detailed descriptions may be of interest.

In general appearance this bird is similar to *Hyphantornis castaneiceps*, but the hind neck is yellow, in conspicuous contrast to the olive-green back; the crown is rich yellow, with a broad occipital band of bay; and there is a narrow collar of orange rufous on the foreneck.

An adult male, Cat. No. 118302, U.S.N.M., from Lake Jipé (south-east of Mount Kilimanjaro), May 20, 1888, may be described as follows: Back and rump uniform yellowish olive green; upper tail-coverts olive yellow; tail like the back, but somewhat brownish, and margined with olive yellow; wings fuscous, the inner webs of the quills basally pale yellow, and distally with broad edgings of the same color; outer vanes of quills margined with golden olive green and olive yellow; lesser coverts wholly olive green, the median coverts broadly edged with golden yellow, the greater series with golden olive; forehead and crown rich golden yellow; hind neck and sides of head and neck gamboge yellow, sharply defined posteriorly against the olive green of the back; occiput with a broad (8 mm.) well-defined band of bay, which is produced as a narrow necklace of orange rufous down the sides of the neck behind the auriculars and across the jugulum, where it widens; with this exception all the under parts, including bend and lining of wing, are rich gamboge yellow; bill black.

Another adult male, from Taveta, has the rufous collar on the foreneck rather obsolete, but is otherwise identical. Still another specimen, from the Useri River, Mount Kilimanjaro, is rather paler on the back; the occipital band is not so deeply bay; and the jugular crescent of orange rufous is broader and more conspicuous.

An immature male, from Taveta, may be described as follows: Upper parts brownish olive green, the rump more brownish, the upper tail-coverts more greenish, the back broadly streaked with dark brown; tail like the upper surface, and edged with yellowish; wings fuscous, with olive green and olive yellow edgings, the quills with pale yellow inner margins; a pale yellow superciliary stripe; a dusky stripe through the eye; sides of head and neck, together with the entire lower surface, including bend and lining of wing, light yellow, somewhat shaded with brownish laterally; maxilla dark horn brown; mandible whitish.

Measurements of three adult males are as below:

Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
		<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
Taveta	Mar. 27, 1888	77	54	16	22.5	16
Lake Jipé	May 20, 1888	76	53	17	22.5	16
Useri River	Dec. 13, 1888	79	56.5	17.5	24.5	15.5
Average		77.3	54.5	16.8	23.2	15.8

Doctor Abbott writes that at the time of his visit (May, 1888) the species was breeding in great numbers among the reeds bordering Lake Jipé.

SITAGRA OCULARIA CROCATA (Hartlaub).

Hyphantornis crocata HARTLAUB, Abhandl. nat. Ver. Bremen, VII, 1881, p. 100 (Magungo, British East Africa).

Four specimens: one from Taveta; one from Maranu, Mount Kilimanjaro, 5,000 feet; two without data. An immature bird has the bill pale brownish. "Irides of male straw yellow." This form differs from true *ocularia* of South Africa as indicated by Doctor Sharpe.^a

HETERHYPHANTES REICHENOWI (Fischer).

Sycobrotus reichenowi FISCHER, Journ. f. Ornith., 1884, p. 180 (Lake Naivasha, British East Africa).

Three specimens, from Mount Kilimanjaro, at 5,000 feet altitude, June 13 and December 9. "Irides light straw yellow; bill black; feet pinkish flesh color (adult male and female)." An immature male resembles the adult female, but has the upper parts brownish black and much mixed with yellowish olive, particularly on the nape; the bill dull brown, paler below.

GRANATINA IANTHINOASTRA (Reichenow).

Uraeginthus ianthinogaster REICHENOW, Ornith. Centralblatt, 1879, p. 114 (Massa, British East Africa).

Two specimens, an adult and an immature male, of this rare weaver-bird were taken by Doctor Abbott on the plains east of Mount Kilimanjaro. "Bill, irides, and the bare skin encircling the eyes, red (in adult male)." The immature male differs considerably from the adult, and may be described as follows:

Head and cervix cinnamon rufous; back and rump dull cinnamon; wings fuscous, margined with dull reddish cinnamon; upper tail-coverts bright blue; tail brownish black, the outer feathers narrowly edged with dark cinnamon brown; orbital region bright blue; sides of neck like the crown; auriculars the same, but darker; lower surface cinnamon rufous, much paler posteriorly.

^a Cat. Birds Brit. Mus., XIII, 1890, p. 428.

ESTRILDA RHODOPYGA Sundevall.

Estrilda rhodopyga SUNDEVALL, Öfv. K. Vet.-Akad. Förh. Stockholm, 1850, p. 126 (Eastern Africa).

Four specimens from Taveta, three of them immature. The adult female, which is the only adult we have for comparison, has the lower tail-coverts deep buff, much mottled with brown, and with scarcely a tinge of reddish; the cheeks, chin, and upper throat are buff instead of white. The young birds (both sexes) lack the crimson line through the eye, and the vermiculations of the adult, and have the crissum only slightly suffused with reddish. The cheeks, chin, and throat are buffy, like those of the adult female.

ESTRILDA ASTRILD MINOR (Cabanis).

Habropygia minor CABANIS, Journ. f. Ornith., 1878, p. 229 (Voi River, British East Africa).

Four specimens, from Maranu, Mount Kilimanjaro, 5,000 feet. "Very common everywhere on the mountain up to 6,000 feet." The females of this well differentiated race are duller and more brownish throughout than the males.

ESTRILDA BENGALUS (Linnæus).

Fringilla bengalus LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 323 ("Bengala;" locality erroneous; probably from Senegal).

Estrela phœnicotis SWAINSON, Birds West Afr., I, 1837, p. 192, pl. xiv (Senegal).

A single young male, from Taveta, August 14, 1888. It is almost adult: The cheeks and ear-coverts are blue—the latter mixed with brown and crimson.

The specific name *phœnicotis*, by which this bird has been commonly known, is long antedated by *bengalus* of Linnæus, and there appears to be no valid reason why the latter should not be employed.

There seem to be no structural characters by which the genus *Uræginthus* can be distinguished from *Estrilda*. Doctor Reichenow's separation^a is based on color.

ESTRILDA CYANOCEPHALA Richmond.

Estrilda cyanocéphala RICHMOND, Auk, XIV, 1897, p. 157 (Useri River, near Mount Kilimanjaro, East Africa).

Two adult males, one from the Useri River, near Mount Kilimanjaro, the other from the plains east of the same mountain. "Bill and irides red." The characters of this very distinct species, one of Doctor Abbott's most interesting discoveries in Africa, have been already sufficiently detailed by Doctor Richmond,^b rendering unnecessary their repetition here.

^a Vögel Africas, III, 1904, pp. 105, 206.

^b Auk, XIV, 1897, pp. 157-158.

ESTRILDA SUBFLAVA (Vieillot).

Fringilla subflava VIEILLOT, Nouv. Dict. d'Hist. Nat., XXX, 1819, p. 575 (Senegal).

Three specimens—two males and a female—from Aruscha-wa-chini, southwest of Kilimanjaro, taken November, 1, 1888.

It seems hardly advisable to recognize a genus *Sporæginthus*, for the supposed differences, at most slight, are apparently all obliterated by intermediate species.

NIGRITA DIABOLICA (Reichenow and Neumann).

Atopornis diabolicus REICHENOW and NEUMANN, Ornith. Monatsber., 1895, p. 74 (Kifinika, 3,000 m., Mount Kilimanjaro, German East Africa).

One adult female of this rare species was taken by Doctor Abbott, on Mount Kilimanjaro, at 9,000 feet, July 30, 1888.

HYPOCHERA AMAUOPTERYX Sharpe.

Hypochæra amauropteryx SHARPE, Cat. Birds Brit. Mus., XIII, 1890, p. 309 (South Africa to the Zambesi River, Mozambique, and Ovambo Land).

One adult male, from Taveta, April 18, 1889.

COCCOPYGIA DUFRESNI KILIMENSIS (Sharpe).

Coccopygia quartinia subsp. a. *kilimensis* SHARPE, Cat. Birds Brit. Mus., XIII, 1890, p. 307 (Mount Kilimanjaro, East Africa).

Five specimens, from Mount Kilimanjaro, at 5,000 feet. Three of them have the back finely, but distinctly, vermiculated with dusky.

The name *Neisna* Bonaparte^a has been used for this genus by Doctor Reichenow;^b but the type of *Neisna* is the first species mentioned, *Fringilla subflava* Vieillot, as fixed by Doctor Sharpe.^c This makes *Neisna* a synonym of *Estrilda*; and *Coccopygia* Reichenbach therefore becomes the correct name for the present group.

AMADINA FASCIATA (Gmelin).

Loxia fasciata GMELIN, Syst. Nat., I, ii, 1788, p. 859 (Africa).

Two adult females, from the plains east of Mount Kilimanjaro, taken December 11, 1888. There are pronounced traces of chestnut on the abdomen in both these specimens.

^a Consp. Avium, I, 1850, p. 460.

^b Vögel Africas, III, 1904, p. 203.

^c Cat. Birds Brit. Mus., XIII, 1890, p. 305.

HYPARGOS NIVEOGUTTATUS (Peters).

Spermophaga niveoguttata PETERS, Journ. f. Ornith., 1868, p. 133 (Inhambane, Portuguese East Africa).

Ten specimens: four without labels; the rest from Mount Kilimanjaro (5,000 feet); Taveta; and Kahé, south of Kilimanjaro. In none of these is the *rump* crimson,^a but it is brown, like the back, the crimson being restricted to the upper tail-coverts. The adult females differ from the males in their lighter upper parts; the sides of the head are brownish gray instead of crimson; the crimson on the breast, throat, and sides of neck is paler and diluted with tawny; the chin is tawny without any crimson; and the black of the posterior lower surface is replaced by brownish slate. The immature female resembles the adult, but has less of crimson on throat, breast, and sides of neck. A young male is in general like the adult female, but is darker throughout, particularly on the throat and breast; the abdomen is also more blackish; and only a few of the crimson feathers of the head and the anterior lower parts have made their appearance. "Iris (of adult male) dark brown; feet dark flesh color; bare skin around eyes light blue. Iris (of adult female) brown; bill blue, black at tip; feet slate blue; bare skin around eyes light blue."

SPERMESTES CUCULLATUS SCUTATUS (Heuglin).

Spermestes scutatus HEUGLIN, Journ. f. Ornith., 1863, p. 18 (Dembea, Abyssinia).

Two specimens: an adult female from Mount Kilimanjaro (5,000 feet), December 29, 1889; and an immature bird without data. "Bill (of adult female) black above, slate blue below."

LEPIDOPYGIA NIGRICEPS (Cassin).

Spermestes nigriceps CASSIN, Proc. Acad. Nat. Sci. Phila., 1852, p. 185 (Zanzibar East Africa).

Four specimens, all adults: two without labels; the others from Taveta, March 22, 1888.

The genus *Spermestes*,^b as commonly constituted, contains two well differentiated types of structure which are quite deserving of generic separation. True *Spermestes* should be restricted to *Spermestes cucullatus* Swainson and *Spermestes cucullatus scutatus* (Heuglin), and the other species be called *Lepidopygia*.^c The latter differs from *Spermestes* in having the second primary of about the same width as the

^a See Sharpe, Cat. Birds Brit. Mus., XIII, 1890, p. 274.

^b Swainson, Birds West Afr., I, 1837, p. 201 (type, *Spermestes cucullata* Swainson).

^c Reichenbach, Singvögel, 1863, p. 48 (type, *Pyrrhula nana* Pucheran).

third, whereas in *Spermestes* it is much narrowed, particularly toward the tip; the cutting edge of the maxilla much more lobed or festooned basally, which makes its outline very like an elongated *S*, while in *Spermestes* it is almost a regular though rather slight concave curve; and the tertials much shorter, *not* reaching, as in *Spermestes*, very nearly or quite to the ends of the primaries.

The species to be referred to *Lepidopygia* are as follows:

Lepidopygia bicolor bicolor (Fraser).

Lepidopygia bicolor punctata (Heuglin).

Lepidopygia poensis poensis (Fraser).

Lepidopygia poensis stigmatophora (Reichenow).

Lepidopygia nigriceps nigriceps (Cassin).

Lepidopygia nigriceps minor (Erlanger).

ODONTOSPIZA, ^a new genus.

Chars. gen.—Similar to *Spermestes* Swainson, but bill more turgid and more conical; the maxillar tomium with a well-defined obtusely angular tooth-like lobe near the middle; the mandibular tomium with a sharply defined basal angle, the edge straight from the gape to this point, and straight or even slightly concave thence to the tip, whereas in *Spermestes* the cutting edge of the mandible is a more or less regular convex curve from gape to tip, the basal angle being much rounded and comparatively inconspicuous; nostrils not set into the corneous base of the maxilla, as in *Spermestes*, but wholly posterior, so that their anterior margin, as well as the rest of the latero-basal outline of the maxilla, is much less concave; nasal fossæ quite filled with short feathers which completely cover the nares; tail longer, about three-fourths instead of two-thirds the length of wing; tertials much shorter.

Type.—*Pitylia caniceps* Reichenow.

This peculiar species was placed by Doctor Sharpe in the oriental genus *Uroloncha*,^b but it is manifestly out of place in such company, for it differs from the members of that group in its shorter, more turgid and more conical bill; toothed maxillar tomium; feather-hidden nostrils which do not open in the horny sheath of the bill; less concave latero-basal outline of maxilla; moderately rounded tail without much projecting narrowed central feathers; and a much narrowed second primary. From *Lepidopygia* it may be distinguished by the same various peculiarities of bill and nostrils that separate it from *Spermestes*, and as well by the laterally much reduced second primary. The type is the only species referable to this new genus.

^a ὀδούς, dens; σπιζα, fringilla.

^b Cat. Birds Brit. Mus., XIII, 1890, p. 356.

ODONTOSPIZA CANICEPS (Reichenow).

Pitylia caniceps REICHENOW, Ornith. Centralblatt, 1879, p. 139 (Massa, British East Africa).

One specimen, an adult female, from the plains east of Mount Kilimanjaro, August 25, 1888. It apparently does not differ from the adult male.

QUELEA CARDINALIS (Hartlaub).

Hyphantica cardinalis HARTLAUB, Journ. f. Ornith., 1880, p. 325 (Lado, Upper White Nile, British Equatorial Africa).

Two adult males, both from Taveta.

QUELEA SANGUINIROSTRIS ÆTHIOPICA (Sundevall).

Ploceus sanguinirostris var. major (*Pl[oceus]æthiopicus*) SUNDEVALL Öfv. k. Vet.-Akad. Förh. Stockholm, 1850, p. 126 (Sennaar, Egyptian Sudan).

Six specimens, from Taveta and the plains east of Mount Kilimanjaro. At the latter place Doctor Abbott found them in very large flocks, September 22, 1888. The immature male seems to be quite the same as the adult female, except for rather paler upper parts.

PSEUDONIGRITA CABANISI CABANISI (Fischer and Reichenow).

Nigrita cabanisi FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 54 (Pare Mountains, Masai Land, German East Africa).

One specimen, an adult male, of this rare and interesting species, from the plains east of Mount Kilimanjaro, October 3, 1888. "Nesting at the present time, in colonies of 20 to 30; building a globular, hanging nest." Mr. F. J. Jackson found a colony nest building in March.^a

HYPERANTHUS CAPENSIS XANTHOMELAS (Rüppell).

Euplectes xanthomelas RÜPPELL, Nene Wirb. Faun. Abyss., Vögel, 1835, p. 94 (Temben and Simen, Abyssinia).

Two specimens, an adult and an immature male, from the foot of Mount Kilimanjaro, at 3,000 feet. This immature male closely resembles the adult female.

Doctor Reichenow^b is quite right in separating this species and *Hyperanthus capensis* (Linnæus) from *Pyromelana*; for the lengthened, rounded tail, which is from two-thirds to three-fourths the length of the wing, is very different from the truncate tail of *Pyromelana*, scarcely more than half as long as the wing.

^a Shelley, Ibis, 1888, p. 292.

^b Vögel Africas, III, 1904, p. 125.

The name *Euplectes* Swainson,^a employed by Doctor Reichenow^b for this group, is preoccupied in Coleoptera by *Euplectus* Leach,^c for which reason it was long ago rejected by Doctor Sharpe.^d It should be replaced by *Hyperanthus* Gistel.^e

PYROMELANA FLAMMICEPS (Swainson).

Euplectes flammiceps SWAINSON, Birds West Afr., 1837, I, p. 186, pl. XIII (Senegal).

Six specimens, all in winter plumage: from Mount Kilimanjaro, at 5,000 feet altitude, November 10 and 21, 1888; and Taveta, September, 1888. In the individuals of this series there is a great deal of difference in the depth of the ochraceous suffusion both on the upper and lower parts, and this does not appear to be due to sex.

COLIUSPASSER EQUES (Hartlaub).

Vidua eques HARTLAUB, Proc. Zool. Soc. Lond., 1863, p. 106, pl. xv (Kazeh, Victoria Nyanza, German East Africa).

One specimen, an adult male, from Taveta, April 26, 1888.

LINURA FISCHERI Reichenow.

Linura fischeri REICHENOW, Ornith. Centralblatt, 1882, p. 91 (Usegua, German East Africa).

A single adult female, from Taveta, November 8, 1888. This differs from the female of *Vidua macroura* (= *principalis*) in having the tawny of the vertex and post-superciliary stripe replaced by buff or whitish; the dark parts of the plumage everywhere brown, not black, though the pattern of coloration is practically the same; and the breast of a duller ochraceous.

VIDUA MACROURA (Pallas).

Fringilla macroura PALLAS, in Vroeg's Catal., 1764, Adumbrat., p. 3 ("East Indies;" locality erroneous; should be Africa).

Emberiza serena LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 312 (no locality given).

Vidua principalis AUTHORS.

Five specimens, from Taveta and Mount Kilimanjaro (Maranu, 5,000 feet). An immature male just acquiring its lengthened tail-feathers is, in color, quite like the adult female, though more extensively black above and with the rump partly white.

^a Birds West Afr., I, 1837, p. 180 (type, *Loxia capensis* Linnæus).

^b Vögel Africas, III, 1904, p. 125.

^c Zool. Miscell., III, 1817, pp. 80, 82.

^d Cat. Birds Brit. Mus., XIII, 1890, p. 227.

^e Naturg. Thierr. höh. Schul., 1848, p. IX (nom. emend. pro. *Euplectes*).

The specific name *principalis*,^a by which this bird has been generally known, should give place to *macroura*,^b as already clearly shown by Dr. C. W. Richmond.^c

Family STURNIDÆ.

BUPHAGUS AFRICANUS Linnæus.

Buphaga africana LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 154 (Senegal).

One adult male, from the Useri River, Mount Kilimanjaro, July 10, 1889. Another specimen in the U. S. National Museum, from the Transvaal, is apparently immature, as the bill lacks the red spot; the rump is duller; the other upper parts less rufescent brown; and the lower surface more grayish, most of the posterior portion, including the inferior tail-coverts, being light brownish gray instead of bright ochraceous.

The name of this genus is usually spelled *Buphaga*, and credited to Linnæus;^d but the *Buphagus* of Brisson^e is of identical application and earlier date. Doctor Reichenow has made this change,^f and should be followed by all who accept Brissonian genera.

SPREO SUPERBUS (Rüppell).

Lamprotornis superbus RÜPPELL, Syst. Uebers. Vög. Nord.-Ost.-Afr., 1845, p. 65, pl. xxvi (Shoa, Abyssinia).

Three specimens, from the plains of Kilimanjaro, August 25, 1888, and the plains east of Mount Kilimanjaro, October 3 and 6, 1888. An immature male differs from the adult in having the throat, breast, and entire upper parts, excepting the wings and tail, dull blackish, with only slight metallic reflections; the superior wing-coverts without velvety black spots; the white breast-band barely indicated; and the posterior lower parts paler rufous.

SPREO HILDEBRANDTI (Cabanis).

Notauges hildebrandti CABANIS, Journ. f. Ornith., 1878, p. 233, pl. iii, fig. 1 (Ukamba, British East Africa).

One immature specimen from the plains of Taveta, July 1, 1888, which differs from the adult in having the upper parts dull black with comparatively inconsiderable metallic sheen; the wings and tail duller; and the entire lower surface rufous, the throat and breast darker and more grayish than the abdomen. Doctor Abbott reported the species common at Taveta in July, 1888.

^a *Emberiza principalis* Linnæus, Syst. Nat., 12th ed., I, 1766, p. 313.

^b Pallas in Vroeg's Catal., 1764, Adumbrat., p. 3.

^c Smithson. Quart., II, 1905, p. 345.

^d Syst. Nat., 12th ed., I, 1766, p. 154.

^e Ornith., II, 1760, p. 437.

^f Vögel Africas, II, 1903, p. 665.

The generic name *Spreo* has commonly been credited to Lesson,^a but he used it only in a vernacular sense. In his "Traité" he sets out the group headings, corresponding to our generic or subgeneric divisions, with the vernacular name in capitals, followed by the technical term in small italic letters—for example:

IV^e. Sous-genre. MERLE; *Merula*.

In the case of *Spreo*, however, the Latin name is omitted, thus:

III^e. Sous-genre. SPRÉO.

Under such circumstances this term, at least as dating from Lesson, can, of course, not be accepted. Bonaparte was apparently the first author to employ *Spreo* in a correct nomenclatural form,^b and the name thus fortunately continues prior to *Notauges* Cabanis.^c

ARIZELOPSAR,^d new genus.

Chars. gen.—Similar to *Spreo* Lesson, but bill relatively much broader; feet falling much short of the end of tail, the combined length of tarsus and middle toe with claw only about two-thirds the length of the tail; tail emarginate and nearly three-fourths the length of the wing.

Type.—*Pholidauges femoralis* Richmond.

From *Cinnyricinclus* (= *Pholidauges*), in which the type and sole species of this new genus was placed by its describer,^e *Arizelopsar* differs chiefly as follows: Feathers of forehead not extending to distal end of nasal fossæ; outermost (spurious) primary broad, and longer than primary coverts; tarsus decidedly longer than middle toe and claw; tail about three-fourths of wing; and four primaries sinuate on their outer webs. Doctor Reichenow has referred *Pholidauges femoralis* to *Spreo*,^f but that it is almost as much out of place in that genus as in *Cinnyricinclus* the above diagnosis indicates. An additional differential character is the absence of the rounded notch on the distal third of the inner webs of several of the outer primaries, which is present in *Spreo*.

The *Spreo albicapillus* of Blyth,^g which has been referred to *Heteropsar* by Doctor Sharpe,^h seems not to belong to either of these groups, being in many of its characters very much nearer *Arizelopsar*, from which, however, it so much differs in its long, much rounded, almost graduated tail, not to mention its peculiar coloration, that its generic separation seems advisable.

^a Traité d'Orn., 1831, p. 407.

^b Consp. Avium, I, 1850, p. 416.

^c Mus. Hein., I, 1851, p. 198 (type, *Turdus bicolor* Gmelin).

^d ἀρίζηλος, evidens; ψάρ, sturnus.

^e Richmond, Auk, XIV, 1897, p. 160.

^f Vogel Africas, II, 1903, p. 678.

^g Journ. As. Soc. Bengal, XXIV, 1856, p. 301 (Somali Land).

^h Cat. Birds Brit. Mus., XIII, 1890, p. 186.

From *Spreo* it differs most conspicuously in its long tail and abbreviated feet. Its characters are more fully shown in the following comparative diagnoses:

1. *Poneropsar*,^a new genus.^b

Bill rather broad, the feathering of forehead not extending to anterior end of nasal fossæ; outermost (first) primary broad, and longer than primary coverts; tail much rounded, about three-fourths the length of wing; feet not reaching to end of tail; tarsus decidedly longer than middle toe and claw; hind toe longer than middle toe; metallic plumage of upper surface not stiffened and scale-like.

Species:

Poneropsar albicapillus (Blyth).

2. *Arizelopsar* Oberholser.^c

Bill broad, the feathering of forehead not extending to anterior end of nasal fossæ; four primaries sinuate on outer webs, no notch on inner webs; first primary broad, and longer than primary coverts; tail emarginate, and about three-fourths of wing; feet falling much short of end of tail, the tarsus, middle toe, and middle claw combined not over two-thirds the length of tail; tarsus decidedly longer than middle toe with claw; hind toe longer than middle toe; metallic plumage of upper parts not stiffened and scale-like.

Species:

Arizelopsar femoralis (Richmond).

3. *Spreo* Bonaparte.^d

Bill comparatively narrow, the frontal feathering not extending to anterior end of nasal fossæ; four primaries sinuate on outer webs, with also a conspicuous notch on inner webs; first primary broad, and longer than the primary coverts; tail rounded, less than two-thirds the length of wing; feet reaching nearly or quite to end of tail, the combined length of tarsus, middle toe, and middle claw about three-fourths the length of tail; tarsus decidedly longer than middle toe and claw; hind toe longer than middle toe; metallic plumage of upper parts not stiffened and scale-like.

Species:

Spreo bicolor (Gmelin).

Spreo superbus (Rüppell).

Spreo pulcher (Müller).

Spreo hildebrandti hildebrandti (Cabanis).

Spreo hildebrandti shelleyi (Sharpe).

Spreo fischeri (Reichenow).

4. *Heteropsar* Sharpe.^e

Bill rather narrow, the frontal feathering not extending to anterior end of nasal fossæ; first primary narrow, and not longer than

^a πονηρός, difficilis; ψάρ, sturnus.

^b Type, *Spreo albicapillus* Blyth.

^c See p. 887.

^d Consp. Avium, I, 1850, p. 416 (type, *Turdus bicolor* Gmelin).

^e Cat. Birds Brit. Mus., XIII, 1890, p. 185 (type, *Lamprocolius acuticaudus* Bocage).

primary coverts; tail graduated, about four-fifths the length of wing; feet not reaching to end of tail; tarsus decidedly longer than middle toe and claw; hind toe longer than middle toe; metallic feathers of upper surface not stiffened or scale-like.

Species:

Heteropsar acuticaudus (Bocage).

5. *Cinnyricinclus* Lesson.^a

Bill rather broad, the frontal feathering extending along the upper sides of the nasal fossæ to their anterior ends; three primaries sinuate on their outer webs, no notch on inner webs; outermost primary narrow, and not longer than primary coverts; tail emarginate, and less than two-thirds the length of wing; feet falling much short of end of tail, the tarsus and middle toe with claw combined not over two-thirds the length of tail; tarsus not decidedly longer than middle toe and claw; hind toe not longer than middle toe; metallic feathers of upper parts and breast stiffened and scale-like.

Species:

Cinnyricinclus leucogaster leucogaster (Gmelin).

Cinnyricinclus leucogaster verreauxi (Finsch and Hartlaub).

The subjoined key to these five genera may serve more clearly to exhibit some of their most prominent characteristics:

- A. Outermost (first) primary not longer than primary coverts.
 - a. Tarsus not decidedly longer than middle toe and claw; tail emarginate, less than two-thirds the length of wing.....*Cinnyricinclus*
 - a'. Tarsus decidedly longer than middle toe and claw; tail much rounded and more than two-thirds the length of wing.....*Heteropsar*
- B. Outermost (first) primary longer than primary coverts.
 - a. Tail less than two-thirds of wing; feet reaching to about end of tail.....*Spreo*
 - a'. Tail more than two-thirds of wing; feet not reaching to end of tail.
 - b. Tail emarginate.....*Arizelopsar*
 - b'. Tail strongly rounded.....*Poneropsar*

ARIZELOPSAR FEMORALIS (Richmond).

Pholidauges femoralis RICHMOND, Auk, XIV, 1897, p. 160 (Mount Kilimanjaro, East Africa).

A single adult male, the type of this very distinct species, was taken by Doctor Abbott on Mount Kilimanjaro, at 6,000 feet, June 12, 1888.

AMYDRUS MORIO RUPPELLII (Verreaux).

Amydrus ruppellii VERREAUX, in Chenu., Encycl. Méth., V, 1856, p. 166 (Abyssinia).

Two specimens—female and male—from Mount Kilimanjaro, and Mandara's, Mount Kilimanjaro, 5,000 feet, respectively. These belong without doubt to the well-differentiated subspecies *ruppellii* of north-eastern Africa, which differs from true *A. morio* in longer wing and

^aRev. Zool., 1840, p. 272 (type, *Turdus leucogaster* Gmelin).

tail, stouter bill, and less purplish sheen of the metallic portions of the plumage. So far as our material indicates, the birds from British and German East Africa are not different enough from *ruppellii* to warrant the recognition of another and intermediate subspecies *shelleyi*.^a

PYRRHOICHEIRA WALLERI WALLERI (Shelley).

Amydrus walleri SHELLEY, Ibis, 1880, p. 335, pl. VIII (Usambara Mts., German East Africa).

A single adult female, from Mount Kilimanjaro, 5,000 feet, September, 1889. It has broad terminal shaft streaks of metallic greenish black on the dark gray feathers of the hind neck; otherwise it does not differ from descriptions.

This species is out of place in the genus *Amydrus*, and belongs without doubt in *Pyrrhocheira*, where it has been placed by Doctor Reichenow.^b

STILBOPSAR STUHLMANNI Reichenow.

Stilbopsar stuhlmanni REICHENOW, Ornith. Monatsber., 1893, p. 31 (Badjua, Albert Nyanza, British East Africa).

Amydrus? dubius RICHMOND, Auk, 1897, p. 158 (Taveta, British East Africa).

Pœoptera greyi JACKSON, Bull. Brit. Orn. Club, VIII, 1899, No. LXIII, p. 1 (Nandi, British East Africa).

One adult female, from Taveta, August 17, 1888. "Iris light yellow." Doctor Richmond's *Amydrus dubius*,^c based on this specimen, is apparently the same as *Stilbopsar stuhlmanni* Reichenow,^d as is also *Pœoptera greyi* Jackson; and *Stilbopsar kenricki* (Shelley)^e is dubiously distinct.

COSMOPSARUS REGIUS Reichenow.

Cosmopsarus regius REICHENOW, Ornith. Centralblatt, 1879, p. 108 (Massa, British East Africa).

Three specimens of this beautiful starling were obtained by Doctor Abbott on the plains east of Mount Kilimanjaro, October 5, 1888. One of these has just molted into the adult plumage, and has still some brown feathers among the metallic ones of the under wing-coverts. There are also fine black spots on the tips of some of the greater and median wing-coverts, though whether or not this is an evidence of immaturity there is nothing to determine; but these spots are not present in the two other specimens. "Iris white." The female apparently does not differ in color from the male, but is evidently smaller, as our birds, which are all females, measure, respectively, 117, 119, and 126 millimeters in length of wing.

^a *Amydrus morio shelleyi* Hartert, Cat. Vogelsamml. Mus. Senckenb., 1891, p. 75.

^b Vögel Africas, II, 1903, p. 697.

^c Auk, XIV, 1897, p. 158.

^d Ornith. Monatsber., 1893, p. 31.

^e *Pœoptera kenricki* SHELLEY, Bull. Brit. Orn. Club, III, 1894, No. XVIII, p. xlii (Usambara Mts., German East Africa).

Family PYCNONOTIDÆ.

ARIZELOCICHLA ^a NIGRICEPS (Shelley)

Xenocichla nigriceps SHELLEY, Proc. Zool. Soc. Lond., 1889, p. 362 (Mount Kilimanjaro, East Africa).

Arizelocichla nigriceps OBERHOLSER, Smithson. Quart., III, 1905, p. 164.

Eight specimens, all from Mount Kilimanjaro, at altitudes of 6,000, 7,000, and 10,000 feet, collected in April, May, June, and August, 1888. The females are much smaller than the males, but in other respects are indistinguishable.

ARIZELOCICHLA STRIIFACIES (Reichenow and Neumann).

Xenocichla striifacies REICHENOW and NEUMANN, Ornith. Monatsber., 1895, p. 74 (Marangu, Mount Kilimanjaro).

Arizelocichla striifacies OBERHOLSER, Smithson. Quart., III, 1905, p. 164.

One adult female of this rare species was obtained by Doctor Abbott at an altitude of 5,000 feet on Mount Kilimanjaro, October 16, 1889. It agrees perfectly with Doctor Reichenow's descriptions,^b except for the lack of most of the fine white streaking on the chin, this part being instead narrowly barred with whitish.

PYCNONOTUS LAYARDI MICRUS, new subspecies.

Chars. subsp.—Similar to *Pycnonotus layardi layardi*, but very much smaller.

Description.—Type, adult male, Cat. No. 117995, U.S.N.M.; Taveta, British East Africa, March 22, 1888; Dr. W. L. Abbott. Pileum, chin, and sides of head brownish black; throat, breast, sides of neck, and remainder of upper parts, including wings and tail, fuscous brown, the breast rather lighter, the tail darker, and the feathers nearly everywhere with paler tips which on the breast and outer tail-feathers become whitish; lower breast and abdomen white, the sides and flanks washed with brownish; crissum bright yellow; under wing-coverts brownish white, washed with yellow along the edge of the wing.

Doctor Sharpe long ago called attention to the difference characterizing the birds of this species found in East Africa,^c but no name appears yet to have been bestowed upon this race. Although practically the same in color, the birds from East Africa exhibit such a wide and apparently quite constant discrepancy in size from those of the southern part of the continent that their subspecific separation seems justified. This may be seen from the subjoined measurements.

^a See Oberholser, Smithson. Quart., III, 1905, p. 163.

^b Ornith. Monatsber., 1895, p. 74; Vögel Africas, III, 1904, p. 391.

^c Cat. Birds Brit. Mus., VI, 1881, p. 133.

Pycnonotus layardi layardi.

Sex.	Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
			mm.	mm.	mm.	mm.	mm.
Male ..	Pretoria, Transvaal	July —, 1895	101	90	17.5	21	16
Male ..	Umzila's Kingdom, South Africa.....	.....	97	85	16.5	22.5	15.5
Male ..	Natal .....	.....	99	90	17	24.5	16
Male ..	Grahamstown, Cape Colony.....	May —, 1895	98	91	18.5	23.5	16
Male ..	.....do	— —, 1896	100	93	17	23	16
	Average .....	.....	99	89.8	17.3	22.9	15.9

Pycnonotus layardi micrus.

			mm.	mm.	mm.	mm.	mm.
Male ..	Taveta, British East Africa.....	May 25, 1888	89	77	15	22	14
Male ..	.....do. ^a	Mar. 22, 1888	91.5	80	14	19	13
Male ..	Maranu, Mount Kilimanjaro, East Africa.	Apr. 13, 1888	84	73	14.5	22	14.5
Male ..	.....do	Apr. 19, 1888	94	83	15	21.5	14.5
Male ..	Mount Kilimanjaro, East Africa...	June 8, 1888	85	80	14	21	14
	Average .....	.....	88.7	78.6	14.5	21.1	14

^a Type.

The type of *Pycnonotus layardi layardi* came from Rustenburg, Transvaal,^a and examples from this region are like those from Cape Colony. The range of *Pycnonotus layardi micrus* extends from south-eastern British East Africa (Mombasa) south through German East Africa, and probably to the Zambesi River, though no specimens are at hand to determine the exact limits of its range in this direction.

Ten specimens in all were obtained by Doctor Abbott, at the following localities: Kidudwe, 90 miles inland from Zanzibar; Taveta; and Maranu, Mount Kilimanjaro, 5,000 feet, where the collector reports it common. These examples are very uniform in coloration, the chief essential difference observable being in the extent of blackish on the chin and sides of the head, a variation apparently not influenced by sex, age, or season. Much worn birds are rather more rufescent; and an immature, taken April 13, 1888, differs similarly, particularly on the cervix, rump, and superior wing coverts, as well as additionally in the much less blackish pileum.

PHYLLASTREPHUS STREPITANS (Reichenow).

Criniger strepitans REICHENOW, Ornith. Centralblatt, 1879, p. 139 (Malindi, British East Africa).

One specimen, without more definite locality than "East Africa," but probably from the Kilimanjaro region. This example has been identified as *Phyllastrephus pauper* by Dr. R. B. Sharpe, but it seems to agree better with *P. strepitans*. If *Phyllastrephus pauper*,^b by

^a Ayres, Ibis, 1879, p. 390.

^b *Phyllostrophus pauper* Sharpe, Proc. Zool. Soc. Lond., 1895, p. 489 (Shebeli, western Somali Land).

reason of its smaller size, differs from *P. strepitans*, it is at most only a subspecies and should be called *Phyllastrephus strepitans rufescens* (Hartlaub),^a which name applies quite certainly to the same bird and is of earlier date. Another synonym is probably *P. parvus* Fischer and Reichenow.^b

PHYLLASTREPHUS CERVINIVENTRIS Shelley.

Phyllostrophus cerviniventris SHELLEY, Ibis, 1894, p. 10, pl. II, fig. 1 (Zomba and Tschirromo, Nyassa Land, British Central Africa).

One adult female, from Taveta, taken August 14, 1888.

PHYLLASTREPHUS PLACIDUS (Shelley).

Xenocichla placida SHELLEY, Proc. Zool. Soc. Lond., 1889, p. 363 (Mount Kilimanjaro, East Africa).

Five adults, from Taveta, and from Mount Kilimanjaro at 6,000 feet; taken in April, May, and August, 1888. These exhibit little individual color variation; the females are considerably smaller than the males, but appear to be otherwise identical.

Family TIMALIIDÆ.

ARGYA SATURATA Sharpe.

Argya saturata SHARPE, Proc. Zool. Soc. Lond., 1895, p. 488 (Zanzibar, East Africa).

Two specimens—male and female—from Taveta, September 11, 1888. "Bill and feet white; iris yellowish white."

COSSYPHA NATALENSIS Smith.

Cossypha natalensis SMITH, Ill. Zool. S. Afr., 1840, pl. LX, (Port Natal [Durban], Natal, South Africa).

Five specimens: from Mount Kilimanjaro, 5,000 feet; Taveta; and the Useri River. The three in adult plumage vary but slightly except in the amount of fulvous on the back and of blackish cross lines on the pileum, though one has ochraceous tips to the tertials and some of the wing coverts, evidently retained from the juvenal plumage. "Bill black; iris brown; feet dark brown." The two young birds, taken respectively October 5, 1888, and December 7, 1889, are in a plumage apparently undescribed and differ from the adult as follows: Top and sides of head and neck brownish black with broad shaft markings of deep ochraceous and tawny; most feathers of rump and upper tail-coverts narrowly tipped with blackish; tertials, scapulars,

^a *Phyllastrephus rufescens* Hartlaub, Ornith. Centralblatt, 1882, p. 91 (Central Africa, collected by Emin Bey).

^b *Phyllostrophus parvus* Fischer and Reichenow, Journ. f. Ornith., 1884, p. 262 (Murentât, near Lake Naivascha, British East Africa).

greater and median coverts with terminal spots of ochraceous; chin and upper throat pale buff with fine, irregular streaks of blackish; jugulum and breast buff with coarsely squamate markings of brownish black; sides of breast deep ochraceous, similarly mottled; a few scattered blackish squamations on the rest of the lower surface; middle of abdomen pale ochraceous or even whitish.

COSSYPHA CAFFRA IOLÆMA Reichenow.

Cossypha caffra iolæma REICHENOW, Ornith. Monatsber., 1900, p. 5 (Nyassa Land to Mount Kilimanjaro).

Five specimens from Mount Kilimanjaro, at altitudes of 5,000 and 6,000 feet. "Common in bushy places." Compared with a series of South African specimens of true *Cossypha caffra*, these bear out the characters claimed by Doctor Reichenow for *Cossypha c. iolæma*,^a and moreover show it to be an excellent race.

COSSYPHA HEUGLINI INTERMEDIA (Cabanis).

Bessornis intermedia CABANIS, von der Decken's Reisen, III, 1869, Pt. 1, p. 22, pl. XII (coast of East Africa).

One adult male from Mount Kilimanjaro, at 5,000 feet, July 22, 1888. This appears to be typical of the southern race *intermedia* which differs from true *heuglini* chiefly in much smaller size and darker lower surface.

The genus *Cossypha*, though commonly considered to belong to the Timaliidae, has been recently placed in the Turdidæ by Doctor Sharpe,^b where, however, by reason of its scutellate tarsi it seems not satisfactorily located.

Family TURDIDÆ.

MERULA DECKENI (Cabanis).

Turdus deckeni CABANIS, Journ. f. Ornith., 1868, p. 412 (type locality not known; probably somewhere in East Africa).

Three specimens, two adults and one young, from Mount Kilimanjaro, at 5,000 feet. One of the adults is paler throughout than the other, this particularly conspicuous on abdomen and crissum, and may be the female, though marked male. The juvenal example, taken August 4, 1888, is rather more rufescent brown above, especially on the wings, the back with scarcely noticeable darker edgings; darker, more rufescent on the throat and breast; paler on abdomen; and has most of the lower surface spotted or barred with blackish.

^a Ornith. Monatsber., 1900, p. 5.

^b Hand-List Gen. and Spec. Birds, IV, 1903, p. 162.

The two adult males measure as follows:

Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
	mm.	mm.	mm.	mm.	mm.
Oct. 18, 1889.....	117	101	21.5	34	23.5
Do.....	123	101	20.5	34.5	23

LUSCINIA MEGARHYNCHA Brehm.

Luscinia megarhynchos BREHM, Handb. Naturg. Vög. Deutschl., 1831, p. 356 (Germany).

Daulias luscinia AUTHORS (not Linnæus).

Aëdon megarhyncha SHARPE, Hand-List Gen. and Spec. Birds, IV, 1903, p. 153.

One adult female, from Mount Kilimanjaro, at 5,000 feet, November 23, 1889. "Iris brown; feet dark brownish flesh color. Length 178 mm."

Dr. C. W. Richmond has called the writer's attention to the fact that the generic name *Aëdon* Forster,^a recently employed for this group, is posterior to *Luscinia* Forster,^b and the latter should therefore be adopted—a return to the name so much used for the group, and a fortunate circumstance if change must be made in this much-changed genus.

CICHLADUSA GUTTATA RUFIPENNIS (Sharpe).

Cichladusa rufipennis SHARPE, Bull. Brit. Orn. Club, XII, 1901, p. 35 (Lamu, British East Africa).

One adult male from Kahé, taken September 5, 1888. In its reduced size (wing 81 mm.) this specimen agrees with Doctor Sharpe's *Cichladusa rufipennis* which is undoubtedly not more than a subspecies of *Cichladusa guttata*, and a form whose characters are apparently so slight that without specimens for comparison a satisfactory determination is necessarily difficult. Possibly, however, all the birds from east and south of Victoria Nyanza ought to be referred to *Cichladusa guttata rufipennis*.

This genus appears to be much more properly placed in the Turdidæ, as recently done by Doctor Sharpe,^c than in the Timaliidæ, as ordinarily treated by authors, for its tarsi are conspicuously booted.

PRATINCOLA AXILLARIS Shelley.

Pratincola axillaris SHELLEY, Proc. Zool. Soc. Lond., 1884, p. 556 (Mount Kilimanjaro, East Africa).

Twelve specimens, from Mount Kilimanjaro, at 5,000, 8,000, and 10,000 feet. Freshly molted specimens taken in April have much

^a Synopt. Cat. Brit. Birds, 1817, p. 53 (type, *Sylvia luscinia* Forster, not Linnæus).

^b Idem, p. 14 (type, *Luscinia aëdon* Forster=*Sylvia luscinia* Forster [not Linnæus]=*Luscinia megarhynchos* Brehm).

^c Hand-List Gen. and Spec. Birds, IV, 1903, p. 166.

wood brown or dull tawny buff on the upper parts, principally on the tips of the feathers; but later in the season, in July or August, this wears off, leaving these parts almost solid black. Some males, probably young of the previous year, have whitish or buffy tips to the feathers of the throat; more brownish wing-quills with more conspicuous pale tawny edgings on tertials and wing-coverts; and a suffusion of buff, more or less strong, on the abdomen. Not so much summer change appears to take place in the streaked upper plumage of the adult female, though one killed December 15, 1889, is almost uniform brownish black above, all but narrow lateral traces of the buffy, brownish, or ochraceous edgings of the feathers having disappeared, and those that remain of these are principally on the back. Immature females quite closely resemble the adults, their chief difference lying in the more blended appearance of the upper parts. One specimen that is evidently an immature male is darker above, including wings, tail, sides of head, and sides of neck, with a black throat somewhat overlaid by pale brown. The wing measurement in adult males of our series ranges from 67 to 74 mm.

In *Pratincola sibilla* from Madagascar the inner webs of the wing-quills have pure white edgings, which increase inwardly until the whole of the inner webs of the secondaries is white, while in *Pratincola axillaris* these edgings are less extensive and pale brown. This affords a ready means of distinguishing the two species, especially in fresh plumage, when the black axillars and under wing-coverts of *Pratincola axillaris* are broadly tipped with white. In size *P. sibilla* is about the same as *P. axillaris*. From *Pratincola salax* of western Africa the present species differs much as it does from *P. sibilla*, and in addition is of larger size, the wing of *P. salax* measuring only about 60 to 65 mm.

PINAROCHROA HYPOSPODIA Shelley.

Pinarochroa hypospodia SHELLEY, Proc. Zool. Soc. Lond., 1885, p. 226, pl. XIII.
(Mount Kilimanjaro, East Africa).

Six specimens from Mount Kilimanjaro, at 10,000, 11,000, and 14,000 feet. Two of these in much worn plumage, taken November 15 and December 14, respectively, differ from two others in freshly molted condition, shot April 15, in the more grayish tint of their brown color, particularly on rump, upper tail-coverts, breast, sides, flanks, and crissum. Two young birds, taken November 15, 1888, in a plumage that appears to be undescribed, contrast with the fresh plumaged adult in being rather lighter, more rufescent above, posteriorly with broad obsolete blackish terminal bars; and somewhat duller below, with obsolete irregular dusky bars and squamate markings.

This is another genus recently removed from the Timaliidae to the Turdidæ by Doctor Sharpe,^a and apparently with good reason, for its affinities are thoroughly turdine.

TARSIGER CUCULLATUS Blyth.

Tarsiger cucullatus BLYTH, Ibis, 1867, p. 16 (Gould, manuscript) ("Africa or India;" undoubtedly the former).

Tarsiger orientalis FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 57 (Pangani, German East Africa).

Five specimens, all taken on Mount Kilimanjaro, at from 7,000 to 10,000 feet altitude.

The *Tarsiger cucullatus* of Blyth,^b although always without question synonymized with *T. stellatus*, is quite certainly identical with the northern bird subsequently by Fischer and Reichenow named *Tarsiger orientalis*,^c as clearly shown by Blyth's description, in which the yellow upper tail-coverts are mentioned.

This genus, by reason of its booted tarsi and other turdine characteristics, seems more at home in the Turdidæ than where usually placed, in the Muscicapidæ.

Family SYLVIIDÆ.

ACROCEPHALUS SCHÆNOBÆNUS (Linnæus).

Motacilla schænobænus LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 184 (Europe; [type locality, Sweden]).

Acrocephalus phragmitis AUTHORS.

One specimen, from Taveta, taken May 1, 1888. "Extremely fat."

The name by which this species is commonly known—*Acrocephalus phragmitis*^d—is much antedated by the Linnæan designation above adopted, which, furthermore, rests on a basis quite firm enough to warrant its acceptance.

The determination of the generic name properly applicable to the present species has led incidentally to an examination of the entire group at present comprised under the name *Acrocephalus*, and the results of this investigation may be briefly outlined here. After segregating the species belonging to *Tatare*, which seems to be a sufficiently well characterized genus, though by a number of authors recently merged with *Acrocephalus*, those that remain in *Acrocephalus* should apparently be divided into at least three generic groups, though by far the greater number of species still are to be ranged under the original name.

^a Hand-List Gen. and Spec. Birds, IV, 1903, p. 173.

^b Ibis, 1867, p. 16.

^c Journ. f. Ornith., 1884, p. 57.

^d *Sylvia phragmitis* Bechstein, Orn. Taschenb. Deutschl., 1803, p. 186.

1. *Acrocephalus*.Subgenus *Acrocephalus*.

- Acrocephalus* NAUMANN, Nat. Land.-u. Wass.-Vög. nördl. Deutschl., Nachtr. IV, 1811, p. 199 (type, *Acrocephalus lacustris* Naumann = *Turdus arundinaceus* Linnæus,^a [= *Sylvia turdoides* Meyer^b]).
- Calamoherpe* BOIE, Isis, 1822, p. 552 (type, *Sylvia turdoides* Meyer = *Turdus arundinaceus* Linnæus).
- Hydrocopsichus* KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 121 (type, *Sylvia turdoides* Meyer = *Turdus arundinaceus* Linnæus).
- Arundinaceus* LESSON, Traité d'Orn., 1831, p. 419 (type, *Sylvia turdoides* Meyer = *Turdus arundinaceus* Linnæus).
- Salicaria* SELBY, Ill. Brit. Orn., I, 1833, pp. 196, 197 (type, *Sylvia turdoides* Meyer = *Turdus arundinaceus* Linnæus).
- Junco* REICHENBACH, Av. Syst. Nat., 1850, pl. LXI (type, *Turdus arundinaceus* Linnæus).

Subgenus *Muscipeta*.

- Muscipeta* KOCH, Syst. baier. Zool., 1816, p. 162 (type, *Sylvia phragmitis* Bechstein = *Motacilla schænobænus* Linnæus^c).
- Calamodus* KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 117 (type, *Sylvia phragmitis* Bechstein = *Motacilla schænobænus* Linnæus).
- Calamodyta* KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 118 (type, *Sylvia aquatica* Temminck = *Sylvia paludicola* Vieillot).
- Caricicola* BREHM, Isis, 1835, p. 245 (type, *Sylvia paludicola* Vieillot).
- Caricicola* BREHM, Naumannia, 1855, p. 284 (type, *Sylvia phragmitis* Bechstein = *Motacilla schænobænus* Linnæus).

Bill of moderate length; feet not large; secondaries not lengthened, falling short of primaries by more than the exposed culmen; outermost primary narrow, more or less acuminate, shorter than primary coverts, and less than one-third the second primary; second primary longer than the seventh.

Although at first sight there seems to be a great structural difference among some members of this genus as here constituted, this difference lies wholly in the bill, and even here the gap existing between the rather stout turdine beak of *Acrocephalus stentoreus*, with its curved culmen, and the shorter, more slender bill of *A. schænobænus*, with culmen straight except at the tip, is quite perfectly bridged by *A. arundinaceus* and *A. palustris*, together with their related forms. There is, consequently, no choice but to place all under the name *Acrocephalus*, though two subgenera may with propriety be recognized: *Acrocephalus*, to include the Great Reed Warblers—*A. arundinaceus*

^a Syst. Nat., 10th ed., I, 1758, p. 170.

^b Vög. Liv.-und Esthl., 1815, p. 116. There seems to be little or no reason for not accepting the name *arundinaceus* Linnæus for the bird now commonly called *Acrocephalus turdoides*, since the Linnæan name is of unquestioned pertinency and far earlier date. The species should therefore be known as *Acrocephalus arundinaceus* (Linnæus).

^c The type of this genus is ordinarily given as *turdoides* (= *arundinaceus*), but quite certainly in mistake, for the figure of the characteristic bill given by Koch is apparently that of *A. schænobænus*, which is also the first species mentioned.

and its allies; and *Muscipeta*, for *A. schænobænus* and *A. aquaticus*, which represent the extreme differentiation, together with all the other forms, such as *A. palustris* and *A. streperus*, not referable to *Tatare* or to either of the two new genera proposed below.

The current names of two other species of *Acrocephalus* appear to require change. The Aquatic Warbler is at present usually called *Acrocephalus aquaticus* (Temminck);^a but an examination of the work in which this appears at once shows that Temminck here does not propose a new name, but merely refers his bird to the *Motacilla aquatica* of Gmelin.^b Therefore if the term *aquatica* be used at all for this warbler it must be credited to Gmelin; but, since Gmelin's description is so very doubtfully identifiable, it is probably best to leave it altogether out of consideration. Following this course, and taking up the first untainted name, the designation of this bird becomes *Acrocephalus paludicola* Vieillot.^c

The name of the bird now known as *Acrocephalus macrorhynchus* Hume,^d is rendered untenable by reason of *Calamoherpe macrorhyncha* von Müller,^e a synonym of *Acrocephalus stentoreus*, so long as the species is retained in the genus *Acrocephalus*, and since this appears to be its proper position it may be called

Acrocephalus orinus, new name.

There seems to be no doubt of the subspecific relationship of *Acrocephalus arundinaceus orientalis* (Temminck and Schlegel) with *Acrocephalus arundinaceus* (Linnæus), since there is perfect intergradation between the two; but *Acrocephalus stentoreus* (Hemprich and Ehrenberg) appears on the other hand to be a separate species, for aside from other differences of proportion, that of the primaries is, in a large series of specimens, constantly distinctive.

The species of this genus are as follows:

(Subgenus *Acrocephalus*.)

- Acrocephalus inexpectatus* Berezowski and Bianchi.
- Acrocephalus stentoreus* (Hemprich and Ehrenberg).
- Acrocephalus arundinaceus arundinaceus* (Linnæus).

(Subgenus *Muscipeta*.)

- Acrocephalus palustris* (Bechstein).
- Acrocephalus streperus* (Vieillot).
- Acrocephalus obsoletus* (Heuglin).
- Acrocephalus arundinaceus orientalis* (Temminck and Schlegel).
- Acrocephalus dumetorum dumetorum* Blyth.

^a *Sylvia aquatica* Temminck, Man. d'Orn., 1815, p. 131.

^b Syst. Nat., I, ii, 1788, p. 953.

^c *Sylvia paludicola* Vieillot, Nouv. Dict. d'Hist. Nat., XI, 1817, p. 202 (Lorraine, Germany).

^d *Phyllopneuste macrorhyncha* Hume, Ibis, 1869, p. 357 (Rampur, Sutlej Valley, Himalaya Mountains, northwestern India).

^e *Calamoherpe macrorhyncha* von Müller, Beitr. Ornith. Africas, 1853, pl. ix (Fua, Lower Egypt).

Acrocephalus dumetorum affinis Zarudny.

Acrocephalus orinus Oberholser.

Acrocephalus sorgophilus (Swinhoe).

Acrocephalus paludicola (Vieillot).

Acrocephalus schœnobæus (Linnæus).

2. *Tatare*.

Tatare LESSON, *Traité d'Orn.*, 1831, p. 317 (type, *Tatare otaitensis* Lesson = *Sitta caffra* Sparrman [= *Turdus longirostris* Gmelin]).

Eparnetes REICHENBACH, *Av. Syst. Nat.*, 1850, pl. LVII (type, *Sylvia syrix* Kittlitz).

Bill long; feet not proportionately large; secondaries lengthened, falling short of primaries by less than the exposed culmen; outermost primary narrow, more or less acuminate, shorter than primary coverts, and less than one-third the second primary; second primary not longer than the seventh.

The long bill, the relatively short second primary, together with the long secondaries reaching to within the length of the culmen of the tips of the primaries, separate this group sufficiently well from *Acrocephalus*. Among the species to be included here is *Tatare familiaris* Rothschild^a from Laysan Island, Pacific Ocean.

The bird commonly known as *Tatare longirostris* (Gmelin)^b should be called *Tatare caffer* (Sparrman),^c for the latter name undoubtedly applies to the same bird, as well shown by Sundevall,^d and is of earlier date.

The species of *Tatare* are:

Tatare celebensis (Heinroth).

Tatare gouldi (Dubois).

Tatare australis (Gould).

Tatare cervinus (De Vis).

Tatare caffer (Sparrman).

Tatare mendanæ (Tristram).

Tatare pistor (Tristram).

Tatare syrix (Kittlitz).

Tatare rehsei (Finsch).

Tatare lusciniæ Quoy and Gaimard.

Tatare vauhani (Sharpe).

Tatare æquinoctialis (Latham).

Tatare familiaris Rothschild.

3. *Notiocichla*, ^e new genus.

Type.—*Sylvia bæticata* Vieillot.

Bill long; feet large, with long claws, particularly on middle and

^a *Tatare familiaris* Rothschild, *Ann. and Mag. Nat. Hist.*, 6th ser., X, 1892, p. 109.

^b *Turdus longirostris* Gmelin, *Syst. Nat.*, I, ii, 1788, p. 823 (Eimeo and York Islands).

^c *Sitta caffra* Sparrman, *Mus. Carlson.*, I, 1786, pl. iv (no locality given; probably from the Society Islands).

^d *Krit. om Sparrman's Mus. Carlson.*, 1857, p. 4.

^e *νότιος*, meridianus; *κίχλη*, *turdus*.

hind toes; secondaries long, falling short of primaries by less than the exposed culmen; outermost primary broad, not acuminate, much longer than primary coverts and about one-half the length of the second primary; second primary not longer than the seventh.

The type and apparently sole species of this genus, *Notiocichla bæticata* (Vieillot), differs so greatly from typical members of the genus *Acrocephalus* that its generic separation seems desirable, if indeed not inevitable. Its principal points of structural distinction from that group are its very long, broad first primary, long secondaries, long bill, large feet with long claws, and more rounded wing, the second primary about equal to the seventh, or even shorter. In some of these characters *Notiocichla* agrees with *Tatare*, but may be distinguished by its long, broad first primary, relatively large feet, with long middle and hind claws.

4. *Anteliocichla*,^a new genus.

Type.—*Acrocephalus bistrigiceps* Swinhoe.

Bill short, feet rather slender; secondaries falling short of primary tips by more than the length of exposed culmen; outermost primary rather narrow, somewhat acuminate, longer than primary coverts, though less than one-third the length of the second primary; second primary not longer than the seventh, usually about equal.

This group differs from *Acrocephalus* chiefly in its longer first primary, which decidedly exceeds the primary coverts; in its relatively shorter second primary; and in its shorter bill, though in this respect it agrees with some forms of the subgenus *Muscipeta*. In *Acrocephalus* (*Muscipeta*) *dumetorum* birds of the year sometimes appear to have the first primary slightly longer than the primary coverts, which is probably due to the imperfect development of the latter, and should not be held to invalidate the generic distinction above set forth, since adults have the first primary always shorter than the primary coverts. From *Tatare* the present group differs principally by reason of its shorter secondaries, comparatively longer first primary, and shorter bill; from *Notiocichla* in its less lengthened secondaries, shorter, more acuminate first primary, more abbreviated bill, and much more slender feet.

Apparently the only species to be placed in this genus are:

Anteliocichla bistrigiceps (Swinhoe).

Anteliocichla agricola (Jerdon).

CISTICOLA HUNTERI Shelley.

Cisticola hunteri SHELLEY, Proc. Zool. Soc. Lond., 1889, p. 364 (Mount Kilimanjaro, East Africa).

One specimen from Mount Kilimanjaro, at 10,000 feet, April 15, 1888. "Abundant in low bushes at 10,000 feet."

^a ἀντήλιος, orientalis; κίχλη, turdus.

CISTICOLA PRINIOIDES Neumann.

Cisticola prinioides NEUMANN, Journ. f. Ornith., 1900, p. 304 (Mau Mountain, British East Africa).

Six specimens, from Mount Kilimanjaro, at 5,000, 6,000, and 8,000 feet, April 3 to 11, 1888. Some of them have not entirely completed the molt. "Abundant in low bushes from 4,000 to 8,000 feet."

These examples exhibit considerable purely individual difference in the streaking on the back, this being in some almost obsolete, in others very broad and conspicuous. Young birds are darker, duller, more uniform on the lower surface, with a heavier wash of ochraceous; also rather darker and duller on the upper parts, with less contrast between pileum and back.

This species differs from its ally *Cisticola hunteri*^a in its lighter, much more rufescent upper surface, including wings and tail, the pileum being dull rufous in conspicuous contrast to the other upper parts; less blackish (more brownish) streaks on the back; and decidedly paler lower surface, the median portion lighter than the rest and dull yellowish white. Both *C. hunteri* and *C. prinioides*, with the intermediate *Cisticola neumanni*,^b seem to be closely related, and differ so much from *Cisticola subruficapilla* in their deeply colored lores and orbital region, as well as lack of light superciliary, not to mention their darker lower surface, together with much duller upper parts, that they should not be easily confused with the last-mentioned species. This record of *Cisticola prinioides* is apparently the first for Mount Kilimanjaro, and is, furthermore, a considerable extension of range. It appears to take the place of *Cisticola hunteri* on the lower slopes of the mountain, at least up to 8,000 feet, which fact taken together with the lack of intermediate specimens indicates that *C. prinioides* is a distinct species, not, as Mr. Hartert has suggested,^c a subspecies of *C. hunteri*.

CISTICOLA ERYTHROPS (Hartlaub).

Drymoeca erythrope HARTLAUB, Orn. Westafr., 1857, p. 58 (Calabar, Southern Nigeria, Western Africa).

Two adult males, from Maranu, Mount Kilimanjaro, 5,000 feet, taken April 3 and 22, respectively. "Iris light yellowish brown; feet white."

^a Proc. Zool. Soc. Lond., 1889, p. 364.

^b Hartert, Bull. Brit. Orn. Club, XII, 1901, p. 13 (Mount Kenia, British East Africa).

^c Bull. Brit. Orn. Club, XII, 1901, p. 13.

CISTICOLA LUGUBRIS (Rüppell).

Sylvia (*Cisticola*) *lugubris* RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 111 (Gondar, Abyssinia).

One adult male, from Taveta, April 29, 1888.

CISTICOLA CHINIANA (Smith).

Drymoica chiniana SMITH, Ill. Zool. S. Afr., 1843, pl. LXXIX (North of Kurri-chaine, Bechuana Land, South Africa).

One adult specimen, from Kahé, south of Mount Kilimanjaro, September 5, 1888. This large edition of *Cisticola subruficapilla* is sometimes with difficulty to be distinguished from the latter, especially as both appear to occur in the same localities. More light on their relationships is needed. The original spelling of the specific name is not *cheniana*, as often written, but *chiniana*.^a

BRADYPTERUS CINNAMOMEUS SALVADORII (Neumann).

Bradypterus salvadorii NEUMANN, Journ. f. Ornith., 1900, p. 304 (Mount Gurui, German East Africa).

One molting female, from Mount Kilimanjaro, at 10,000 feet, April 16, 1888. Without specimens for comparison this example appears to agree with the characters given by Mr. Neumann for the southern form of *Bradypterus cinnamomeus* recently described by him.^b

BRADYPTERUS BARRATTI Sharpe.

Bradypterus barratti SHARPE, Ibis, 1876, p. 53 (Pilgrim's Rest, Lydenburg District, Transvaal).

Bradypterus rufoflavus REICHENOW and NEUMANN, Ornith. Monatsber., 1895, p. 75 (Mount Kilimanjaro, East Africa).

Four specimens, from Maranu, Mount Kilimanjaro, 6,000 feet. The adult male agrees very closely with the original description of the species, as does also the adult female, though the latter is slightly paler above than the male, rather darker, more rufescent across the breast, less broadly and therefore less conspicuously streaked on the jugulum. A male in juvenal plumage, taken April 4, 1888, is like the adult above, but is darker, duller below, the throat and breast being grayish olive green streaked with yellowish, while the entire lower surface, superciliary stripe, sides of head and neck are strongly suffused with yellowish. A young female, secured April 3, 1888, is very similar but somewhat paler throughout, with less olivaceous on throat and breast. "Abundant in any low bushes, and very restless, continually uttering a short, sharp 'chirrup.'"

^aSmith, Ill. Zool. S. Afr., 1843, pl. LXXIX.

^bJourn. f. Ornith., 1900, p. 304.

This species appears not to have been recorded from Mount Kilimanjaro under the name *Bradypterus barratti*, but a careful examination of the description of *Bradypterus rufoflavus* Reichenow and Neumann,^a from Mount Kilimanjaro, seem to leave little doubt that the latter is but the juvenal plumage of *B. barratti* described above. The range of *B. barratti* is thus extended from Natal and the Transvaal to Mount Kilimanjaro.

CALAMONASTES SIMPLEX (Cabanis).

Thamnobia simplex CABANIS, Journ. f. Ornith., 1878, pp. 205, 221 (Ndi, Teita, British East Africa).

One adult male, from Taveta, August 15, 1888.

APALIS THESCELA, new species.

Chars. sp.—Resembling *Apalis griseiceps*, but occiput and cervix brown without a slaty tinge; back, rump, together with edgings of upper wing-coverts and wing-quills, slate color with but a slight wash of olive green; sides of breast brown with scarcely any olive green; lining of wing pure white; abdomen white, with only a faint tinge of yellow; four outer tail-feathers tipped with white.

Description.—Type, adult male, Cat. No. 118074, U.S.N.M.; Mount Kilimanjaro, East Africa, 6,000 feet, August 4, 1888; Dr. W. L. Abbott. Whole head and cervix broccoli brown, paler on forehead, cheeks, and auriculars; back, rump, and upper tail-coverts slate color with a wash of olive green, this most conspicuous on the middle of the back; tail blackish slate color, the central feathers margined with lighter, the two outer pairs with their terminal half white, the next pair with the terminal third of the inner vane white, the fourth pair with white tips; wing-quills and superior coverts sepia brown, all edged exteriorly with slightly greenish slate color, the quills with paler brown inner margins; chin, throat, and breast white, with a black band across the jugulum; sides of breast grayish brown, with a very slight wash of olive green; remainder of under surface yellowish white, the flanks tinged with ashy; lining of wing white; thighs pale brown. Length of wing, 53; tail, 50; exposed culmen, 11; tarsus, 20.5; middle toe, 11.5 mm.

Doctor Abbott obtained only the single specimen above described, but its differences from *Apalis griseiceps*,^b with which alone it needs comparison, are so marked, and so improbably those of either sex, age, or season, that it appears to represent a species hitherto undescribed. In *Apalis griseiceps*, which was also first discovered on Mount

^aOrnith. Monatsber., 1895, p. 75. See also Neumann, Journ. f. Ornith., 1900, p. 305.

^bReichenow and Neumann, Ornith. Monatsber., 1895, p. 75.

Kilimanjaro, though since recorded from the Uluguru Mountains, German East Africa, southwest of Zanzibar,^a the occiput and cervix have a noticeably slaty shade, in contrast to the clear brown of crown and forehead; the back, sides of breast, and edgings of wing-quills and wing-coverts are almost clear olive green; the lining of the wing is distinctly yellowish; there are only three outer tail-feathers tipped with white; the abdomen is much deeper yellow than in *Apalis thescela*; and the thighs are much darker brown, with a considerable admixture of yellowish olive green, which is almost entirely absent in this new species. There seems to be little, if any, difference in size between *A. griseiceps* and *A. thescela*. The type of the latter, as well as the specimens of *A. griseiceps* obtained by Doctor Abbott, were taken at about the same season, and are in fresh perfect plumage, excellent for purposes of comparison. The original examples of *A. griseiceps* came from an altitude of about 10,000 feet, and it seems probable that from what is now known of its distribution the species does not occur much lower down than this, its place on the lower slopes of the mountain being taken by *Apalis thescela*.

APALIS GRISEICEPS Reichenow and Neumann.

Apalis griseiceps REICHENOW and NEUMANN, Ornith. Monatsber., 1895, p. 75 (Mount Kilimanjaro, East Africa).

Two specimens from Mount Kilimanjaro: one, a male, taken July 31, 1888, at 10,000 feet; the other, with sex undetermined, obtained at 9,000 feet, July 30, 1888. The latter seems to be adult, and in most respects is just like the other, but has a rather paler head and only a narrow, incomplete, black jugular band. It appears thus to be in immature plumage, but if so is hardly a bird of the year. Can it be an adult female?

EUPRINODES GOLZI Fischer and Reichenow.

Euprinodes golzi FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 182 (Great Aruscha, German East Africa).

One adult from Kahé, south of Mount Kilimanjaro, September 7, 1888. "Iris light brown." This example is marked female, though possessing the small black breast spot which Doctor Reichenow states is found only in the male.^b So far as may be determined from descriptions Doctor Abbott's specimen is quite different from *Euprinodes flavocinctus*^c from Ukambani and agrees perfectly with *E. golzi*, which seems to take the place of *E. flavocinctus* in Masai Land. The back and rump are clear yellowish olive green; the head slate gray,

^a Neumann, Journ. f. Ornith., 1900, p. 307.

^b Vogel Deutsch Ost-Afr., 1894, p. 224.

^c Sharpe, Journ. f. Ornith., 1882, p. 346 (Athi River, Ukambani, British East Africa).

with but a slight wash of greenish; lores dull grayish white; orbital region dull grayish.

There seems to be not sufficient reason for merging the genus *Euprinodes* with *Apalis*, as has been done by Doctor Reichenow,^a and more recently by Mr. Neumann,^b for the relatively much smaller size of the feet in the former is a satisfactory distinction in so far at least as it concerns the species we have examined.

SYLVIETTA MICRURA (Rüppell).

Troglodytes micrurus RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 109, pl. XLI, fig. 2 (Kordofan, Sennaar, and all Abyssinia).

One adult female, from the plains of Taveta, August 13, 1888. This is true *S. micrura*, with white chin, cheeks, and superciliary stripe.

It is probably worth while to call attention to the fact that the original and therefore proper spelling of the genus to which this species belongs is *Sylvietta*,^c not *Sylviella*, as commonly written, the latter being simply an emended form.

SYLVIETTA WHYTII JACKSONI (Sharpe).

Sylviella jacksoni SHARPE, Bull. Brit. Orn. Club, VII, 1897, p. vii (Kamassia, British East Africa).

One molting female, from Taveta, July 6, 1888.

Mr. Grant synonymized^d this form with *Sylvietta whytii*,^e but Doctor Sharpe, with additional material at his disposal, has since asserted its distinctness.^f It seems to be larger and darker than *S. whytii*,^g and, though closely allied, is doubtless separable as a subspecies, the northern representative of true *Sylvietta whytii* from Nyassa Land.

The measurements of Doctor Abbott's specimen are: Wing, 57; tail, 26; exposed culmen, 10.5; tarsus, 18; middle toe, 10.5 mm.

EREMOMELA SCOTOPS Sundevall.

Eremomela scotops SUNDEVALL, Öfv. K. Vet.-Akad. Förh. Stockholm, 1850, p. 103 ("Caffraria superiore," 25° S. Lat.).

One adult, from Kidudwe, 90 miles inland from Zanzibar, December, 1887. This agrees perfectly with descriptions of specimens from

^a Vögel Deutsch Ost-Afr., 1894, p. 224.

^b Journ. f. Ornith., 1900, p. 306.

^c Lafresnaye, Rev. Zool., 1839, p. 258.

^d Ibis, 1900, p. 155.

^e *Sylviella whytii* Shelley, Ibis, 1894, p. 13 (Zomba, Nyassa Land).

^f Ibis, 1901, p. 70.

^g In the original description of *Sylvietta whytii* (Ibis, 1894, p. 13) the length of wing is given as 3.15 inches, which is manifestly an error, probably for 2.15, as the wing of *Sylvietta rufescens*, a larger species, is only about 2.50 inches.

Transvaal and Mashona Land; and furthermore Dr. R. B. Sharpe, to whom it was submitted for examination, professed his inability to separate it from South African examples. The species has previously not been recorded from north of Mashona Land, so its range is hereby greatly extended.

CAMAROPTERA BREVICAUDATA (Cretzschmar).

Sylvia brevicaudata CRETZSCHMAR, in Rüppell's Atlas Reis. Nördl. Afr., Vög., 1826, p. 53, pl. xxxvb (Kordofan, northern Africa).

Six specimens, from Taveta and Mount Kilimanjaro, at 5,000 feet. "Iris light brown." Immature birds, taken in May, are more brownish above than the adults, and are strongly tinged with ochraceous across the breast. One still younger is olive brown above except on rump and scapulars—the latter being olive green, the former slate gray—and has some light yellow on abdomen, breast, chin, throat, and sides of head. In all these examples, adult as well as young, but more conspicuous in the latter, there are on the breast, and sometimes on upper abdomen and sides as well, obsolete pale grayish vermiculations.

PRINIA MISTACEA Rüppell.

Prinia mistacea RÜPPELL, Neue Wirb. Faun. Abyss., Vögel, 1835, p. 110 (Gondar, Abyssinia).

Two males, from Taveta, taken March 23, 1888. One is in the lighter, more rufescent plumage of the immature.

Family MUSCICAPIDÆ.

MELÆNORNIS ATER TROPICALIS (Cabanis).

Melanopepla tropicalis CABANIS, Journ. f. Ornith., 1884, p. 241 (Ukamba, British East Africa).

One example, from Taveta, August 18, 1888. This is a female in the black plumage, but small tips of ochraceous on the greater wing-coverts and the innermost secondaries, together with a few ochraceous-barred feathers on the breast and abdomen, indicate its immaturity.

MUSCICAPA STRIATA NEUMANNI (Poche).

Muscicapa grisola sibirica NEUMANN (not Gmelin), Journ. f. Ornith., 1900, p. 259 (Loita Mountain, northwestern Masai Land, German East Africa, winter).
Muscicapa grisola neumanni POCHÉ, Ornith. Monatsber., 1904, p. 26 (nom. emend.).

Two specimens: one from "East Africa," the other from the Useri River near Mount Kilimanjaro, August 30, 1888. Though rather darker than one from the Thian Shan Mountains, central Asia, these two specimens belong without doubt to the apparently recognizable form *sibirica* recently described by Mr. Neumann. Its principal

character is the much paler color of the upper surface; for the less conspicuous streaking of the lower parts, given by Neumann as an additional distinction, appears not to be constant enough to be of value.

Unfortunately Mr. Neumann's term *sibirica* is preoccupied by *Muscicapa sibirica* Gmelin,^a which is now *Hemichelidon sibirica* (Gmelin), and another name is therefore necessary for the central Asian form of *Muscicapa striata* he distinguished. This has been recently supplied by Poche,^b and the bird should accordingly be called *Muscicapa striata neumanni*, as above. The *Muscicapa grisola* of Linnæus,^c of which this form is a subspecies, must give place to the earlier *Motacilla striata* of Pallas,^d as already pointed out by Dr. C. W. Richmond.^e

ALSEONAX MURINUS MURINUS Fischer and Reichenow.

Alseonax murina FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 54 (Mount Meru, Masai Land, German East Africa).

Four specimens, from Mount Kilimanjaro, at 5,000 and 10,000 feet. Two of these, male and female, taken respectively June 8 and July 23, 1888, are in fresh plumage, and are much more buffy on the lower surface than a worn female obtained April 16, 1888.

The fourth example, secured April 19, 1888, is a male in the unrecorded juvenal plumage, and may be described as follows: Upper parts grayish brown, becoming more rufescent posteriorly, everywhere with hastate spots of buffy or ochraceous, these palest on crown and darkest on upper tail-coverts, least numerous on head, smallest on nape; wings and tail fuscous, the tertials, inner secondaries, median and greater coverts margined with ochraceous buff; lores, eye ring, and extreme forehead ochraceous, much mixed with blackish; sides of head and neck, with entire lower surface, buff, thickly streaked with brownish black, except on lower abdomen and crissum, which are immaculate; lining of wing ochraceous buff mixed with brownish.

CICHLOMYIA,^f new genus.

Chars. gen.—Similar to *Muscicapa* Brisson, but tail longer (about three-fourths of wing); second primary shorter than sixth; four primaries sinuate on their outer webs; spurious primary very much longer than primary coverts.

Type.—*Butalis cærulescens* Hartlaub.

By most authors this genus has been included, at least partly, in

^aSyst. Nat., I, ii, 1788, p. 936.

^bOrnith. Monatsber., 1904, p. 26.

^cSyst. Nat., 12th ed., I, 1766, p. 328.

^dIn Vroeg's. Catal., 1764, Adumbrat., p. 3.

^eSmithson. Quart., II, 1905, p. 345.

^fκίχλη, turdus; μυῖα, musca.

Muscicapa, and by Doctor Reichenow in *Alseonax*,^a but it is sufficiently different from either to have a name of its own.

From *Alseonax* it may be distinguished by its much narrower, more compressed bill, very similar to *Dioptrornis*, the culmen more arched, more curved, and the terminal portion more strongly unguulate; also the rictal bristles are usually less well developed. The segregation of this group makes necessary a rearrangement of some of the closely allied genera, and accordingly there will be found below a statement of the characters that distinguish these, together with enumeration of the species that appear to belong to each.

1. *Muscicapa*.

Muscicapa BRISSON, Ornith., II, 1760, p. 357 (type, *Muscicapa grisola* Linnæus=*Motacilla striata* Pallas).

Butalis BOIE, Isis, 1826, p. 973 (type, *Muscicapa grisola* Linnæus=*Motacilla striata* Pallas).

Bill somewhat depressed, the culmen almost straight except at the decurved tip; rictal bristles moderately developed; exposed culmen about equal to middle toe without claw; tail about two-thirds the length of wing; wing much pointed, the second primary longer than the fifth; three primaries sinuate on their outer webs; spurious primary about equal to primary coverts.

Typical *Muscicapa* as above defined becomes restricted to the following forms:

Muscicapa striata striata (Pallas).

Muscicapa striata neumanni (Poche).

? *Muscicapa finschi* Bocage.

2. *Ficedula*.

Ficedula BRISSON, Ornith., III, 1760, p. 369 (type, *Motacilla ficedula* Linnæus^b).

Hedymela SUNDEVALL, Öfv. K. Vet. Ak. Förh. Stockholm, 1846 (1847), p. 225 (type, *Motacilla atricapilla* Linnæus=*Motacilla ficedula* Linnæus).

Bill slightly parine, only a little depressed, the culmen almost straight except at the decurved tip; rictal bristles weak; exposed culmen decidedly less than middle toe without claw; tail about two-thirds the length of wing; wing much pointed, the second primary shorter than the fifth, but longer than the sixth; three primaries sinuate on outer webs; outermost primary barely if at all longer than primary coverts.

This genus, commonly merged with *Muscicapa*, has been recently and very justly separated by Doctor Sharpe under the antedated name *Hedymela*.^c Its forms are:

Ficedula ficedula ficedula (Linnæus).

Ficedula ficedula speculigera (Bonaparte).

Ficedula semitorquata (Homeyer).

Ficedula albicollis (Temminck) (= *collaris* Bechstein^d).

^a Vögel Africas, II, 1903, pp. 452-460.

^b *Motacilla ficedula* Linnæus, Syst. Nat., 10th ed., I, 1758, p. 185. This is undoubtedly the same as *Motacilla atricapilla* Linnæus, Syst. Nat., 10th ed., I, 1758, p. 187, and as it stands first should be adopted.

^c Hand-List Gen. and Spec. Birds, III, 1901, p. 213.

^d See Oberholser, Smithson. Quart., III, 1905, p. 65.

3. *Arizelomyia*,^a new genus.

Type.—*Muscicapa latirostris* Raffles.

Bill depressed, the culmen nearly straight except at the ungulate tip; rictal bristles moderately developed; exposed culmen equal to middle toe without claw; tail about three-fourths of wing; wing pointed, the second primary longer than the sixth; three primaries sinuate on their outer webs; first (outermost) primary decidedly (at least 5 mm.) longer than primary coverts.

This genus differs from *Alseonax*, with which it has been commonly associated, in the following particulars: Bill narrower; rictal bristles usually not so well developed; only three primaries sinuate on their outer vanes; wing more pointed, the second primary longer than the sixth. From *Muscicapa* it may be distinguished by its relatively longer tail, long outermost primary, and broader bill.

The type species, *Arizelomyia latirostris* (Raffles), is the only one now certainly referable to this genus, though *Alseonax muttui* (Layard) may prove to belong here; *Muscicapa ruficauda* of Swainson, which has been examined, is not congeneric with *Arizelomyia latirostris*.

4. *Alseonax*.

Alseonax CABANIS, Mus. Hein, I, 1850, p. 52 (type, *Butalis adusta* Boie).

Bill broad, much depressed, the culmen almost straight except at the decurved tip; rictal bristles strongly developed; exposed culmen about equal to middle toe without claw; tail about three-fourths the length of wing; wing rounded, the second primary about equal to the seventh; four primaries sinuate on their outer webs; outermost primary decidedly (more than 5 mm.) longer than primary coverts.

The following species are to be referred to this genus:

Alseonax adustus (Boie).

Alseonax subadustus Shelley.

Alseonax angolensis Reichenow.

Alseonax murinus murinus Fischer and Reichenow.

Alseonax murinus pumilus (Reichenow).

Alseonax murinus djamdjamensis Neumann.^b

Alseonax murinus obscurus (Sjöstedt).

Alseonax murinus poensis (Alexander).

Alseonax gambagæ Alexander.

Alseonax comitatus (Cassin).^c

Alseonax epulatus epulatus (Cassin).

Alseonax epulatus fantisiensis (Sharpe).

Alseonax infulatus (Hartlaub).

Alseonax aquaticus (Heuglin).

5. *Cichlomyia*.

Cichlomyia OBERHOLSER, p. 908 (type, *Butalis cærulescens* Hartlaub).

Bill somewhat compressed, rather vireonine, the culmen more or less curved throughout most of its length, the tip strongly ungulate; rictal bristles moderately developed; exposed culmen about equal to middle toe without claw; tail about three-fourths the length of wing;

^a ἀρίζηλος, evidens; μύια, musca.

^b Journ. f. Ornith., 1905, p. 206.

^c An examination of Cassin's type shows this species to be a true *Alseonax*, though placed in *Pedilorhynchus* by Doctor Reichenow (Vögel Africas, II, 1903, p. 461).

wing pointed, second primary about equal to the seventh; four primaries sinuate on outer webs; outermost primary much (more than 5 mm.) longer than primary coverts.

The species that appear to belong to this genus are as follows:

Cichlomyia cærulescens cærulescens (Hartlaub).

Cichlomyia cærulescens cinerascens (Sharpe).

Cichlomyia toruensis (Hartert).

Cichlomyia lugens (Hartlaub).

Cichlomyia modesta (Hartlaub).

Cichlomyia minima (Heuglin).

6. *Dioptrornis*.

Dioptrornis FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 53 (type, *Dioptrornis fischeri* Reichenow).

Bill somewhat compressed, rather vireonine, the culmen more or less curved throughout most of its length, the tip strongly unguate; rictal bristles strongly developed; exposed culmen shorter than middle toe without claw; tail long, about four-fifths the length of the wing; wing rounded, the second primary shorter than the ninth; four primaries sinuate on their outer webs; outermost primary more than 5 mm. longer than primary coverts.

This genus appears to be more closely allied to *Cichlomyia* than to any of the others above diagnosed, but is readily distinguishable from that group. The following species are current:

Dioptrornis brunneus Cabanis.

Dioptrornis fischeri Reichenow.

Dioptrornis nyikensis (Shelley).

Dioptrornis chocolatinus (Rüppell).

Dioptrornis reichenowi (Neumann).

The following key to the six genera of Muscicapidæ above involved may be of some assistance in identification as well as in further comparison of characters:

- A. Three primaries sinuate on outer webs; second primary longer than sixth.
 - a. Tail longer—about three-fourths of wing; bill broader; first primary exceeding primary coverts by at least 5 mm *Arizelomyia*
 - a'. Tail shorter—about two-thirds of wing; bill more narrow; first primary exceeding primary coverts by less than 5 mm.
 - b. Bill not shorter than middle toe without claw; rictal bristles well developed; second primary longer than fifth *Muscicapa*
 - b'. Bill shorter than middle toe without claw; rictal bristles weak; second primary shorter than fifth *Ficedula*
- B. Four primaries sinuate on outer webs; second primary shorter than sixth.
 - a. Bill broad and flat *Alseonax*
 - a'. Bill narrow and arched.
 - b. Rictal bristles reaching beyond middle of bill; second primary shorter than ninth; bill shorter than middle toe without claw .. *Dioptrornis*
 - b'. Rictal bristles not reaching to middle of bill; second primary longer than eighth; bill about equal to middle toe without claw .. *Cichlomyia*

CICHLOMYIA CÆRULESCENS (Hartlaub).

Butalis cærulescens HARTLAUB, Ibis, 1865, p. 267 (Natal).

Two adults, from Taveta, March 23 and July 22, 1888.

DIOPTROORNIS FISCHERI Reichenow.

Dioptrornis fischeri REICHENOW, Journ. f. Ornith., 1884, p. 53 (Mount Meru, Masai Land, German East Africa).

Two adult females from Mount Kilimanjaro, at 5,000 feet, October 18 and November 23, 1889. "Iris dark brown."

CHLOROPETA NATALENSIS SIMILIS (Richmond).

Chloropeta similis RICHMOND, Auk, XIV, 1897, p. 163 (Mount Kilimanjaro, East Africa).

Chloropeta kenya SHARPE, Bull. Brit. Orn. Club, XII, 1901, p. 35 (Mount Kenia, British East Africa).

Four specimens, from Mount Kilimanjaro, at 8,000 and 10,000 feet, June 10 and July 29, 1888.

There can be little doubt of the identity of Doctor Richmond's *Chloropeta similis* and Doctor Sharpe's *Chloropeta kenya*, for the original specimens of the former differ from *Chloropeta natalensis natalensis* exactly as mentioned for the latter by Doctor Sharpe,^a as well as in some other particulars which were not noted by him. Doctor Sharpe apparently overlooked the description of *Chloropeta similis*, and Doctor Reichenow, curiously enough, appears to have done the same, since this name is not to be found in his recent treatment of the genus.^b From *Chloropeta natalensis natalensis* this northern form *C. n. similis* may readily be distinguished by its more greenish (less yellowish), olive-green upper parts, this particularly evident on the back and upper tail-coverts; darker auricular and orbital regions, these being nearly like the crown; more greenish, less buffy yellow of lower surface; more olivaceous thighs, flanks, sides of neck and of body. Mount Kenia and Mount Kilimanjaro seem to be the only localities at which this race of *natalensis* has yet been discovered.

BATIS SENEGALENSIS ORIENTALIS (Heuglin).

Platystira orientalis HEUGLIN, Ornith. Nordost-Afr., I, 1871, p. 449 (Abyssinia).

One adult female, from Taveta, August 17, 1888. In this example the white of the cervix and the upper part of the sides of the neck is strongly tinged with ochraceous, a vergence toward *Batis senegalensis*, from which form *orientalis* appears to be but subspecifically separable.

BATIS MIXTA (Shelley).

Pachyprora mixta SHELLEY, Proc. Zool. Soc. Lond., 1889, p. 359 (Mount Kilimanjaro, 6,000-7,000 feet, East Africa).

Three adults—two males and a female—from Mount Kilimanjaro, at 6,000 feet, collected June 12, August 11, and August 8, 1888.

^a Bull. Brit. Orn. Club, XII, 1901, p. 35.

^b Vögel Africas, II, 1903, pp. 464-466.

respectively. In all these specimens, the female included, the upper tail-coverts are glossy black, not gray, as given by Captain Shelley;^a and the rump has large concealed spots of white. In one of the males the white nuchal spot is very indistinct. In the female the rufous of the breast is quite deep in color, though overlaid to some extent by white unworn tips of the feathers, and is much darker than that of the throat, from which it is separated medially by a pure white spot some 10 millimeters wide, both of which are characters that look toward *Batis dimorpha* Shelley,^b and, together with what Doctor Reichenow has pointed out,^c indicate that *B. dimorpha*, if really distinct from *B. mixta*, is but a subspecies, and should stand as *Batis mixta dimorpha*.

It will be noted by reference to the above-given dates of collection that Doctor Abbott's specimens of *Batis mixta* were the first of the species taken; and, furthermore, with the exception of the two obtained by Mr. H. C. V. Hunter, from which the species was described by Captain Shelley,^a they seem to be the only ones thus far known. Our three specimens exhibit the following measurements:

Sex.	Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
			mm.	mm.	mm.	mm.	mm.
Male	Mount Kilimanjaro, East Africa.	June 12, 1888	62	36	12	16	10
Male	do	Aug. 11, 1888	62	37.5	11.5	17.5	10
Female	do	Aug. 8, 1888	63	36	12	17.5	10

PLATYSTEIRA CRYPTOLEUCA, new species.

Chars. sp.—Like *Platysteira peltata*, but cervix with a large concealed patch of pure white, and the feathers of the rump entirely without white markings.

Description.—Type, adult male, Cat. No. 118133, U.S.N.M.; Useri River, plains of Mount Kilimanjaro, August 29, 1888; Dr. W. L. Abbott. Pileum, cervix, and upper tail-coverts black with a steel-green gloss; the cervix with bases of its feathers pure white, forming a large concealed patch; back and rump greenish slate color with considerable metallic gloss, especially on the former, the latter without either white concealed spots or white tips on the feathers; tail blackish with steel green metallic sheen, the feathers margined externally with grayish and tipped ever so slightly with whitish; wings blackish brown, the lesser and median coverts, together with broad margins of greater coverts and tertials, black with metallic green gloss like the crown,

^a Proc. Zool. Soc. Lond., 1889, p. 359.

^b *Pachyprora dimorpha* Shelley, Ibis, 1893, p. 18 (Milanji Plateau, Nyassa Land, eastern Africa).

^c Vögel Africas, II, 1903, pp. 478-479.

the primaries and secondaries edged externally with grayish; sides of head and neck, with a broad pectoral band, metallic greenish like the pileum; rest of lower surface white; thighs blackish mixed with white; lining of wing white interiorly, then brown, and finally metallic green along the edge of the wing. Length of wing, 65; tail, 52; exposed culmen, 13; tarsus, 18.5; middle toe, 10 mm.

Two other specimens were obtained by Doctor Abbott: an immature male at Taveta, August 14, 1888; and an immature female at Kahé, south of Mount Kilimanjaro, September 6, 1888. These birds both have a large concealed white nuchal spot, though it is less pronounced than in the adult.

The immature male is mostly brownish slate color, slightly glossy on the upper surface, mixed with metallic greenish or bluish black feathers on head and sides of neck; tail sepia brown, except one metallic greenish middle feather which belongs to the adult stage, the outer webs of rectrices with grayish buff edges; outermost pair of feathers bordered on both webs with buffy white at tip, forming a V-shaped terminal mark; second pair with only inner web white at end; wing-quills fuscous, the feathers edged with dull ochraceous; greater wing-coverts broadly, and primary coverts somewhat, margined and tipped with tawny ochraceous; lesser and middle coverts tawny olive; under wing-coverts partly brown, partly white; axillars white; inner webs of wing-quills broadly edged with buffy white; the metallic greenish black pectoral band is making its appearance and displacing some wood brown feathers which preceded it; throat and chest buffy white, mixed with dusky; rest of lower surface yellowish white.

The immature female is very much like the immature male just described, but lacks the greenish black feathers of pectoral band and head; the lores are mixed with whitish; there is a patch of cinnamon on each side of the breast, which extends to the side of the neck; the wing-quills and greater wing-coverts have paler ochraceous edges, the lesser and middle coverts are wood brown; the tail-feathers are edged with grayish white instead of grayish buff, the outer web of the outermost feather margined with pure white for most of its exposed portion; and the under parts are more purely white. In both of these immature birds the eye wattle is, in the dried skin, ochraceous buff; in the adult male in life it is red, but in the skin yellow, though of much deeper shade than that of the immature.

None of the descriptions of *Platysteira peltata* make any mention of a concealed white spot on the hind neck, and it seems incredible that a character so conspicuous on the slightest disturbance of the overlying feathers should, if present, have so uniformly been overlooked, particularly since the same is carefully noticed in other species. In size *Platysteira cryptoleuca* seems not to differ from *P. peltata*.

TROCHOCERCUS BIVITTATUS Reichenow.

Trochocercus bivittatus REICHENOW, Ornith. Centralblatt, 1879, p. 108 (Muniuni, British East Africa).

Three specimens of this rare species: one adult male from Taveta, July 6, 1888; and two immature males from Mount Kilimanjaro, at 6,000 feet, June 12 and August 8, 1888.

The immature males may be described as follows: Upper parts brownish slate, rather clearer on the upper tail-coverts and the somewhat crested pileum, the latter with a slight metallic gloss; tail-feathers grayish brown with slate-colored outer margins; wings fuscous, the quills with paler outer edges, the lesser coverts slate-color, the tertials and the primary coverts narrowly margined with ochraceous, the greater coverts with broad ochraceous tips that form a conspicuous wing-band; sides of head and neck slate-gray, the auriculars rather brownish, the lores, orbital ring, and cheeks mixed with white; throat, breast, and sides slate gray, the last streaked, the others spotted, with white; abdomen and crissum white; inferior wing-coverts brownish slate with some white; axillars white.

TCHITREA SUAHELICA (Reichenow).

Terpsiphone perspicillata suahelica REICHENOW, Werth. Mittl. Hochl. deutsch Ost-Afr., 1898, p. 275 (East Africa).

Five specimens, from Taveta, and Mount Kilimanjaro at 5,000 feet. All are in the chestnut-backed plumage, and two of the males have fully developed long tail-feathers. Another male is just like these except for a short tail. The two others, one a male, the other not marked for sex, are quite young, and aside from having short tails, differ further in being paler above, the head dull slaty with little metallic sheen and this confined to the top; wings dull brown with rufous but no white edgings; lower parts paler, the throat slate color like the breast, the under tail-coverts more strongly rufescent; sides of head and neck slate color. "Iris (of older males) brown; feet slaty blue; bill light blue, black at tip, light green inside; bare skin around eyes and at angle of mouth light blue."

As Mr. Oscar Neumann has aptly intimated,^a the relationships of *Tchitrea suahelica*, *T. viridis*, and *T. perspicillata* are by no means satisfactorily demonstrated. The first mentioned is apparently a distinct species, as formerly maintained by Neumann,^a but in many characters it is intermediate between *T. perspicillata* and *T. viridis*, on the whole scarcely nearer one than the other. Its more blackish primaries and primary coverts (both of which have white outer edgings), more bluish head, and possession of a white-backed adult plumage point strongly its affinity toward *T. viridis*; while the much paler,

^a Journ. f. Ornith., 1900, p. 228.

more grayish, lower parts, with whitish crissum and under wing-coverts, and metallic color of the throat but little if at all extended back over the breast, are characters shared by *T. perspicillata*. Two birds in white-backed plumage, from Somali Land, collected by Dr. A. Donaldson Smith, are in the United States National Museum, and are clearly referable to *Tchitreia viridis*, or, if Mr. Neumann's recently proposed separation be accepted,^a *Tchitreia viridis ferreti* (Guérin), although from this region we might naturally expect *T. suahelica*.

CRYPTOLOPHA UMBROVIRENS DORCADICHROA (Reichenow and Neumann).

Camaroptera dorcadichroa REICHENOW and NEUMANN, Ornith. Monatsber., 1895, p. 76 (Mount Kilimanjaro, East Africa).

Seven specimens from Mount Kilimanjaro, at altitudes of 6,000, 7,000, and 10,000 feet. "Abundant in the forest zone."

This fine series appears to establish the validity of Doctor Reichenow's *Cryptolopha dorcadichroa*, as distinct from *C. u. mackenziana*, a view already expressed by Dr. Sharpe.^b Despite a considerable individual variation these specimens do not agree well with either the original description^c or the plate^d of *Cryptolopha u. mackenziana*, particularly on the lower surface, but do agree, as they should from geographical considerations, with the description of *C. u. dorcadichroa*,^e barring the single unimportant exception that the lesser wing-coverts are like the others, not of the same color as the back. The six adults—males and females—are very uniform on the upper parts, but differ considerably below. Most of them have the chin and upper throat dull ochraceous buff, mixed to some degree with yellowish; the jugulum rather paler and more grayish; the breast almost like the upper throat; but no two specimens are exactly alike in these respects. One has the whole anterior lower surface almost uniformly pale dull grayish ochraceous mixed with yellowish; another has the chin and upper throat principally dull yellow with a slight wash of ochraceous buff, the breast and jugulum ochraceous buff mingled with yellow. In some examples the central portion of the abdomen is almost pure white, in others strongly tinged with yellow; there is also a very appreciable variation in the shade of the cinnamon brown on flanks and sides; while the crissum ranges in different individuals from almost pure pale yellow to light cinnamon color. Thus *Cryptolopha u. dorcadichroa* differs chiefly from *C. u. mackenziana* in that the fore parts below are as a rule much more yellowish, and the chin with the upper throat dull

^a Journ. f. Ornith., 1905, p. 211.

^b Ibis, 1901, p. 91.

^c Sharpe, Ibis, 1892, p. 153.

^d Ibis, 1901, pl. III, fig. 1.

^e Reichenow and Neumann, Ornith. Monatsber., 1895, p. 76.

ochraceous buff or pale tawny instead of grayish white. An immature bird, a female, is like the adults above, but has the superciliary stripe and the entire lower surface deeply tinged with yellow, the latter being almost uniform, save that the abdomen is rather paler, the flanks and sides cinnamomeous, the throat and breast somewhat though inconspicuously washed with ochraceous.

Family PARIDÆ.

PARUS THRUPPI BARAKÆ (Jackson).

Parus barakae JACKSON, Ibis, 1899, p. 639 (Njemps, British East Africa).

One adult female, from the plains east of Mount Kilimanjaro, October 3, 1888. The type, and the example recorded by Neumann^a seem to be the only ones besides this Abbott specimen that have thus far been taken. This last agrees well with the original description, and seems to indicate the validity of *barakae*, at least as a subspecies.

ANTHOSCOPUS MUSCULUS (Hartlaub).

Aegithalus musculus HARTLAUB, Ornith. Centralblatt, 1882, p. 91 (Iado, Upper White Nile, British Equatorial Africa).

One female, from Taveta, August 18, 1888. This appears to be the southernmost locality for the species and considerably extends its range. The records of Captain Shelley^b and Doctor Sharpe^c for the vicinity of Mount Kilimanjaro were both based on this example.

Family CORVIDÆ.

CORVULUR ALBICOLLIS (Latham).

Corvus albicollis LATHAM, Ind. Orn., I, 1790, p. 151 (Africa).

Two specimens: an adult female from Maranu, Mount Kilimanjaro, 5,000 feet, April 5, 1888; and a male from Kahé, south of the same mountain, May 8, 1888. "Length of male, 22 inches."

CORVUS SCAPULATUS Daudin.

Corvus scapulatus DAUDIN, Traité d'Orn., II, 1800, p. 232 (type locality, Cape of Good Hope).

Two specimens from Mount Kilimanjaro, at 5,000 feet altitude, December 6, 1889. These appear to be absolutely identical with birds from Madagascar and Aldabra Island.

^a Journ. f. Ornith., 1900, p. 301.

^b Birds of Africa, II, 1900, p. 255.

^c Hand-List Gen. and Spec. Birds, IV, 1903, p. 341.

Family ORIOLIDÆ.

ORIOLUS LARVATUS ROLLETI (Salvadori).

Oriolus rolleti SALVADORI, Atti Soc. Ital. Sci. Nat., VII, 1864, p. 161 (White Nile, eastern Africa).

Three males, two of them adult, the other immature, from Taveta, seem to be typical of this form. Dr. Abbott writes that it was taken also on Mount Kilimanjaro, but no specimens were sent from this locality.

The characters separating *Oriolus rolleti* from *O. larvatus* are such that a trinomial best expresses their relationship.

ORIOLUS NOTATUS Peters.

Oriolus notatus PETERS, Journ. f. Ornith., 1868, p. 132 (Tete, Portuguese East Africa).

Two specimens, adult male and female, from Taveta.

ORIOLUS ORIOLUS Linnæus.

Coracias oriolus LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 107 (Europe and Asia).

Two females, from the plains east of Mount Kilimanjaro, taken October 3, 1888. "Iris red."

If Linnæus be taken at 1758, the proper name for the present species is *Oriolus oriolus*, as above given, instead of the current *Oriolus galbula*.^a

Family DICRURIDÆ.

DICRURUS ADSIMILIS DIVARICATUS (Lichtenstein).

Muscicapa divaricata LICHTENSTEIN, Verz. Doubl. Zool. Mus. Berlin, 1823, p. 52 (Senegambia, western Africa).

Two specimens: one from Kidudwe, 90 miles inland from Zanzibar, December, 1887; the other from the plains east of Mount Kilimanjaro, October 6, 1888. "Iris red."

There seem to be absolutely no trenchant structural characters by which the so-called genus *Bhuchanga* can be separated from *Dicrurus*. The chief, if indeed not the only, distinction claimed is the difference in the emargination of the tail; but this is subject to such variation in the different species, and withal presents so many intermediate phases, that its generic value is quite obliterated.

In treating the present species Doctor Reichenow^b recognizes by

^a See Reichenow, Vögel Deutsch Ost-Afr., 1894, p. 168.

^b Vögel Africas, II, 1903, pp. 646-650.

name only a single form, although he admits that there are other recognizable races, and that they occupy definite geographic areas. His reason for refusing them recognition in nomenclature—" . . . gehen indessen derartig ineinander über"^a—is hardly sufficient, particularly from a modern standpoint! At least three subspecies of *Dicrurus adsimilis* may readily be distinguished, as follows:

1. *Dicrurus adsimilis adsimilis* (Bechstein).

Corvus afer LICHTENSTEIN, Cat. Rer. Nat. Rar. Hamburg, 1793, p. 10 (not Linnæus) (South Africa).

Corvus adsimilis BECHSTEIN, Latham's Allgem. Uebers. Vögel, II, 1794, p. 362 (South Africa).

Dicrurus musicus VIEILLOT, Nouv. Dict. d'Hist. Nat., IX, 1817, p. 586 (Cape of Good Hope).

Muscicapa emarginata LICHTENSTEIN, Verz. Doubl. Zool. Mus. Berlin, 1823, p. 52 (Caffraria).

Size largest, the wing measuring 133–146 mm.; wing-quills brown or blackish brown, paler on the inner webs.

Cape Colony, north probably to Transvaal and German Southwest Africa.

Doctor Reichenow has used the specific name *afer* of Lichtenstein^b for this species,^c and in this he has been followed by some other authorities; but aside from the fact that *Corvus afer* Lichtenstein^b is preoccupied by *Corvus afer* Linnæus,^d and thus of course untenable, this name of Lichtenstein's is not, as has apparently been supposed, a new name at all, but as may easily be seen by reference to the original,^e indicates merely a doubtful identification of the specimen in hand with the *Corvus afer* of Linnæus. All of Lichtenstein's novelties in the "Catalogus" are followed by the word "nobis," but in the present instance he writes only "99 *Corvus afer* ? Linn. spec. 12," preferring to use this name with a query instead of describing his bird as new, though he goes on to point out the fact that it does not agree entirely with the species to which he refers it, and is probably undescribed. There are a large number of similar cases in this work, and it is perfectly evident that Lichtenstein did not even intend any of these citations as new names. The proper designation for the species, after *afer* is disposed of, seems to be undoubtedly *Corvus adsimilis* Bechstein,^e which rests upon a firm basis, being adequately described, and furthermore a renaming of Lichtenstein's *Corvus afer*. Doctor Sharpe quotes and uses this name,^f though he cites the wrong page, which mistake may possibly account for the apparent inability of Doctor Reichenow to verify the reference, the latter giving it only on Doctor Sharpe's authority.^a

^a Vögel Africas, II, 1903, p. 647.

^b Cat. Rer. Nat. Rar. Hamburg, 1793, p. 10.

^c Vögel Africas, II, 1903, p. 646.

^d Syst. Nat., 12th ed., I, 1766, p. 157 (= *Cryptorhina afra*).

^e Latham's Allgem. Uebers. Vögel, II, 1794, p. 362.

^f Cat. Birds Brit. Mus., III, 1877, p. 247.

2. *Dicrurus adsimilis divaricatus* (Lichtenstein).

Muscicapa divaricata LICHTENSTEIN, Verz. Doubl. Zool. Mus. Berlin, 1823, p. 52 (Senegambia).

Edolius lugubris HEMPRICH and EHRENBERG, Symb. Phys., Aves, 1828, fol. s., pl. VIII, fig. 3 (Ambukol, Dongola, Nubia).

Dicrurus canipennis SWAINSON, Birds West Afr., I, 1837, p. 254 (Senegal).

Dicrurus aculeatus CASSIN, Proc. Acad. Nat. Sci. Phila., 1851, p. 348 (Fazogl, Abyssinia).

Dicrourus erythrophthalmus HEUGLIN, Journ. f. Ornith., 1867, p. 294 (Württemberg, manuscript) (Senhaar, Egyptian Sudan; and Fazogl, Abyssinia).

Dicrurus fugax PETERS, Journ. f. Ornith., 1868, p. 132 (Tete and Inhambane, Portuguese East Africa).

Similar to *Dicrurus adsimilis adsimilis*, but very much smaller, the wing measuring only 118–130 mm.

Central and northern Africa, from Angola and Mashona Land to Somali Land, Nubia, the Sudan, and Senegal.

Examples from Angola are larger than those from more northern localities, and show in this a vergence toward true *adsimilis*, but they appear to be undoubtedly nearer *divaricatus*. So far as we have been able to determine from specimens examined, the birds from Senegal, Senegambia, Nubia, and Somali Land seem to be the same as those from German East Africa and the Zambesi River, so that the name *divaricatus* Lichtenstein, based on specimens from Senegambia, becomes available for this race. Mr. Oscar Neumann has recently shown the great difference in size which exists between *adsimilis* and *divaricatus*,^a but he employs for the latter the subspecific term *fugax* Peters,^b apparently overlooking the five prior names.

3. *Dicrurus adsimilis atactus* (Oberholser).

Dicrurus modestus atactus OBERHOLSER, Proc. U. S. Nat. Mus., XXII, 1899, p. 35 (Fantee, western Africa).

Like *Dicrurus adsimilis divaricatus* in size; but the wing-quills darker, more blackish; the plumage of upper and lower parts more velvety in appearance, with more of a bluish than a greenish metallic sheen. Coast region of central western Africa, from Liberia to the Niger River.

This form differs so much from both *adsimilis* and *divaricatus* in the velvety bluish color of the upper parts that Doctor Sharpe was induced to consider it the same as *Dicrurus modestus* [= *coracinus*], to which he referred his specimens from the Gold Coast.^c Misled by this the present writer described *atactus* as a subspecies of *modestus*,^d whereas there is now no doubt at all of its correct position as a subspecies of *D. adsimilis*. These differences, moreover, are not, as Captain Shelley infers,^e simply adventitious, but have a definite geographical significance.

^a Journ. f. Ornith., 1900, p. 277.

^b *Dicrurus fugax* PETERS, Journ. f. Ornith., 1868, p. 132.

^c Cat. Birds Brit. Mus., III, 1877, p. 233.

^d Proc. U. S. Nat. Mus., XXII, 1899, p. 35.

^e Ibis, 1901, p. 589.

Family CAMPEPHAGIDÆ.

CAMPEPHAGA FLAVA Vieillot.

Campephaga flava VIEILLOT, Nouv. Dict. d'Hist. Nat., X, 1817, p. 49 (female)
(southern Africa).

Campephaga nigra VIEILLÔT, Nouv. Dict. d'Hist. Nat., X, 1817, p. 50 (male)
(southern Africa).

Four specimens: three from Taveta; and one from Mount Kilimanjaro, at 5,000 feet. A freshly molted female that seems to be immature, taken August 15, 1888, differs from an adult of the same sex in being a little more grayish on the anterior upper parts; rather paler on the sides of the head, particularly the auriculars; in having the black barring of scapulars, lower back, rump, and upper tail-coverts obsolescent (not simply obscured by the brown tips of the feathers), the upper surface consequently much more uniform in appearance; the yellow edgings of the wings paler, those of the tertials whitish; the upper throat almost immaculate; the lower throat and breast with more yellow; the flanks and crissum with a heavier wash of buff; the yellow margins of the tail-feathers lighter and duller; the lining of the wings paler yellow. There seems to be little or no difference in size between the sexes.

Although this species commonly passes as *Campephaga nigra*,^a the name *flava*, based on the female, occurs on the previous page,^b and should be used instead.

Family LANIIDÆ.

LANIUS CAUDATUS Cabanis.

Lanius caudatus CABANIS, Journ. f. Ornith., 1868, p. 412 (Mombasa, British East Africa).

Two specimens, both immature. One of these, a female taken June 28, 1888, on the plains near Taveta, is in almost completed molt, only a few of the feathers of the juvenal plumage remaining, and these chiefly on the back. The other example, a male from Lake Chala, near Mount Kilimanjaro, August 20, 1888, still has almost all of its juvenal plumage on the upper parts, though nearly pure white below.

The careful examination of a large number of species of *Lanius* has failed to reveal the presence of any satisfactory characters by which the so-called genera *Phoneus*, *Fiscus*, *Enneoctonus*, *Cephalophoneus*, and *Otomela* can be distinguished. It is true that there are some differences in the proportions of wing and tail, in the length and breadth of the outermost primary, in the graduation of the tail, and in the number of primaries sinuate on the outer web; but these all so closely

^aVieillot, Nouv. Dict. d'Hist. Nat., X, 1817, p. 50.

^bIdem, p. 49.

and complicatedly interdigitate that it seems impossible to draw any lines of generic division. Even color, on which some writers rely to separate these groups, fails as a character. The proper course appears to be the mergence of all into the genus *Lanius*.

LANIUS COLLURIO Linnæus.

Lanius collurio LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 94 (Europe [type locality, Sweden]).

One specimen, an adult female in perfect plumage, from Maranu, Mount Kilimanjaro, at 5,000 feet, April 4, 1888.

LANIUS ISABELLINUS Hemprich and Ehrenberg.

Lanius isabellinus HEMPRICH and EHRENBURG, Symb. Phys., I, 1828, fol. e, note (Gumfudam, Arabia).

One adult male from Mount Kilimanjaro, 5,000 feet, December 29, 1889. It seems to be identical with birds from central Asia. "Bill dark horn-brown above, lower mandible white, black at tip; feet black."

LANIARIUS ABBOTTI Richmond.

Laniarius abboti RICHMOND, Auk, XIV, 1897, p. 161 (Mount Kilimanjaro, East Africa).

Malaconotus manningi SHELLEY, Bull. Brit. Orn. Club, VIII, No. LX, February, 1899, p. xxxv (Mambwe district, British Central Africa).

The only specimen obtained by Doctor Abbott is the one from which Doctor Richmond described this pretty species. It is an adult male, from Mount Kilimanjaro, at 5,000 feet, October 18, 1889. "Iris red."

There seems to be little doubt that the present species is identical with *Malaconotus manningi* Shelley, as Doctor Reichenow has already indicated.^a It differs from *Laniarius nigrifrons* Reichenow^b in its orange instead of yellow throat; its orange in place of golden brownish breast; and in the greater extent of the black band on the sides of the head, which in *abboti* involves the entire orbital and auricular regions.

The genus *Chlorophoneus* Cabanis^c appears to be inseparable from *Laniarius* unless quite arbitrary color characters be requisitioned, for there are no obvious structural differences, nor, indeed, does Doctor Reichenow adduce any save the clearly invalid one of a stouter bill for *Laniarius*.^d Mr. Neumann's *Cosmophoneus*^e is still less tenable, being simply a further refinement of *Chlorophoneus* purely on grounds of coloration.

^a Vögel Africas, II, 1903, p. 560.

^b Ornith. Monatsber., 1896, p. 95 (Marangu, Mount Kilimanjaro).

^c Mus. Hein., I, 1850, p. 70.

^d Vögel Africas, II, 1903, p. 571.

^e Journ. f. Ornith., 1899, p. 392 (type, *Lanius multicolor* Gray).

LANIARIUS SUBLACTEUS (Cassin).

Dryoscopus sublacteus CASSIN, Proc. Acad. Nat. Sci. Phila., V, 1851, p. 246 (eastern Africa?).

Three adults from Mount Kilimanjaro, at 5,000 feet. One of these, taken April 5, 1888, was molting the wing and tail-feathers. "Feet (of female) slate blue; bill black." The female of this species seems to be just like the male, except for rather darker feet and tarsi. All of these specimens have some white spots on the scapulars.

The slight difference in pattern of coloration, which alone appears to distinguish the so-called genus *Dryoscopus* from *Laniarius*, is hardly sufficient reason for the recognition of the former.

LANIARIUS FUNEBRIS (Hartlaub).

Dryoscopus funebris HARTLAUB, Proc. Zool. Soc. Lond., 1863, p. 105 (Meninga, Unyamwezi, German East Africa).

One specimen, a female, from Taveta, August 14, 1888. It is not quite mature, as is indicated by the narrow ochraceous edgings on the upper wing-coverts and by the yellowish barred feathers of the center of the abdomen.

LANIARIUS CUBLA HAMATUS (Hartlaub).

Dryoscopus hamatus HARTLAUB, Proc. Zool. Soc. Lond., 1863, p. 106 (Kazeh, Victoria Nyanza, German East Africa).

Dryoscopus cubla suahelicus NEUMANN, Journ. f. Ornith., 1899, p. 414 (Kakoma, German East Africa).

Three adult males from Taveta. The wing-feathers of one, taken March 23, 1888, are in process of molt. "Iris (of male) red."

POMATORHYNCHUS SENEGALUS SENEGALUS (Linnæus).

Lanius senegalus LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 137 (Senegal).

Two males: one from Taveta, May 1, 1888, the other from the plains of Taveta, June 28, 1888.

POMATORHYNCHUS AUSTRALIS MINOR (Reichenow).

Telephonus minor REICHENOW, Journ. f. Ornith., 1887, p. 64 (Kagehi, Victoria Nyanza, German East Africa).

Three specimens, from Mount Kilimanjaro, 4,000 feet, and Maranu, Kilimanjaro, 5,000 feet. One of these is apparently immature, to judge from its brown bill, and has the crown of a deeper brown, the lower parts more suffused with ochraceous than the two others.

Family PRIONOPIDÆ.

NILAUS AFER MINOR (Sharpe).

Nilaus minor SHARPE, Proc. Zool. Soc. Lond., 1895, p. 479 (Milmil, Sibbe, The Haud, and Okoto, western Somali Land).

One specimen from the Useri River, near Mount Kilimanjaro, August 30, 1888. It is a female, in which the black of the upper parts is replaced by brown, except on the rump and upper tail-coverts, and the white portions of the upper surface and tail are more buffy than in the adult male. This is the plumage supposed to characterize the immature bird, but the present example is apparently adult.

The most satisfactory difference between the Laniidæ and the Prionopidæ consists in the scutellation of the posterior portion of the lateral face of the tarsus in the forms of the latter family, whereas in Laniidæ this part is entire. Using this character as a criterion, *Nilaus* belongs in the Prionopidæ.

EUROCEPHALUS ANGUITIMENS RUPPELLI (Bonaparte).

Eurocephalus ruppelli BONAPARTE, Rev. et Mag. Zool., 1853, p. 440 (White Nile, and Shoa, Abyssinia).

One adult male, from Taveta, August 14, 1888. It is decidedly smaller than a female from Somali Land, as well as much less brownish on the breast and sides. Its measurements are: Wing, 121; tail, 88; exposed culmen, 16.5; tarsus, 21; middle toe, 15.5 mm. As Neumann contends,^a this species is much better placed in the Prionopidæ than in the Laniidæ.

PRIONOPS VINACEIGULARIS Richmond.

Prionops vinaceigularis RICHMOND, Auk, XIV, 1897, p. 162 (plains east of Mount Kilimanjaro, British East Africa).

Three specimens, from which this very distinct species was originally described, were taken by Doctor Abbott on the plains east of Mount Kilimanjaro. "Feet (of male) red; iris yellow; bare skin around eyes green. Feet (of female) red; iris and skin around eyes yellowish green." The females lack the white edgings of the superior wing-coverts, a difference additional to those mentioned by Doctor Richmond.^b Measurements of these birds are as follows:

Sex.	Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
			mm.	mm.	mm.	mm.	mm.
Male	Plains east of Mount Kilimanjaro..	Oct. 1, 1888	103	84	17	21	14.5
Female . . . .	.....do	Oct. 6, 1888	106	87	18	22.5	15
Do . . . . .	.....do .....	.....do	108	91	20	22	14.5

^aJourn. f. Ornith., 1900, p. 273.

^bAuk, XIV, 1897, p. 163.

SIGMODUS RETZII GRACULINUS (Cabanis).

Prionops graculinus CABANIS, Journ. f. Ornith., 1868, p. 412, pl. III (Mombasa, British East Africa).

One specimen from Kahé, south of Mount Kilimanjaro, taken September 5, 1888. It has a slight indication of a white bar on the under side of the wing, but this is confined to small areas on the edges of the inner webs of some of the primaries; and there seems to be no doubt of the correctness of the above identification.

Family ZOSTEROPIDÆ.

ZOSTEROPS SENEGALENSIS FLAVILATERALIS (Reichenow).

Zosterops flavilateralis REICHENOW, Journ. f. Ornith., 1892, pp. 192, 193 (East Africa).

Four specimens, from Taveta, and from Mount Kilimanjaro at 5,000 feet, belong to this form of *Zosterops senegalensis*. Captain Shelley is probably wrong in citing^a *flavilateralis* as a synonym of *Zosterops pallescens* Heuglin^b (= *Zosterops heuglini* Hartlaub^c), for the latter is much more probably the same as *Z. stuhlmanni* Reichenow^d or *Z. superciliosa* Reichenow,^e if indeed the last two are not also identical.

ZOSTEROPS EURYCRICOTA Fischer and Reichenow.

Zosterops eurycricotus FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 55 (base of Meru Mountains, Great Aruscha, Masai Land, German East Africa).

Zosterops perspicillata SHELLEY, Proc. Zool. Soc. Lond., 1889 p. 366, pl. XLI, fig. 1 (Mount Kilimanjaro).

Eight specimens, all from Mount Kilimanjaro, at altitudes of 5,000, 6,000, and 10,000 feet. With the exception of the type, two specimens in the British Museum, and two recorded from Mount Kilimanjaro by Neumann,^f these appear to be the only ones of this rare species known. They generally agree very closely with published descriptions, but in one bird, taken at 10,000 feet in April, the forehead is almost as yellow as the throat, though darker, and the under parts are somewhat lighter yellow than in any of the rest of our series, while the upper surface has more of an olive tinge. The yellowish forehead can hardly be considered sufficient for the reference of this bird to *Zosterops stuhlmanni*,^g because other individuals are intermediate in this respect.

^a Birds of Africa, II, 1900, p. 176.

^b Journ. f. Ornith., 1864, p. 260 (Bongo).

^c Idem, 1865, p. 11 (Bongo).

^d Idem, 1892, p. 54 (Bukoba, German East Africa).

^e Idem, 1892, p. 193 (Wadelai, British Equatorial Africa).

^f Idem, 1900, p. 295.

^g Reichenow, Journ. f. Ornith., 1892, p. 192 (Bukoba, German East Africa).

The only other example collected by Doctor Abbott at the same altitude is a female, in which the forehead is similar to the remainder of the upper surface—a yellowish green with scarcely a trace of olive—and the yellow of the inferior surface is no lighter than usual. In one specimen the chin and two or three feathers of the throat are black—apparently a tendency toward melanism. An immature female is duller above than the adult, and paler, conspicuously less yellowish below, but otherwise is apparently not different. Male and female are seemingly just alike in color.

Family NECTARINIIDÆ.

ANTHREPTES ORIENTALIS Hartlaub.

Anthreptes orientalis HARTLAUB, Journ. f. Ornith, 1880, p. 213 (Lado, Upper White Nile, British Equatorial Africa).

One adult male, taken August 30, 1888, on the Useri River, near Mount Kilimanjaro.

It is quite probable that *Anthreptes orientalis* may prove to be but a subspecies of *Anthreptes longuemarii*, for though we have no series of either species, the variations noted by Captain Shelley^a point significantly in this direction.

ANTHREPTES COLLARIS ZAMBESIANUS (Sharpe).

Anthodiata zambesiana SHARPE, Layard's Birds S. Afr., 1876, p. 321 (Shupanga, Zambesi River near mouth of Shiré River, Portuguese East Africa).

Ten specimens, probably all from Taveta, though several have no locality indicated on the label.

Taking these specimens as a basis for comparison, *Anthreptes c. zambesianus* is a perfectly good race. It differs from *Anthreptes collaris collaris* as does *A. c. hypodilus*—in the golden olive instead of metallic green edgings of the secondaries, greater and primary coverts;^b and still further in its larger size and much paler posterior lower parts. From *Anthreptes collaris hypodilus*, with which of course it is most nearly allied, it may readily be distinguished by the decidedly paler yellow of the under surface; by the rather lighter shade of the golden olive quill margins; and by somewhat larger size.

Among the adult males there is quite a noticeable variation in the color above, some specimens showing much more golden green than others. The adult females are not uniformly yellow below, but are shaded anteriorly with a considerable admixture of grayish, this coincident in extent with the metallic throat colors of the adult male. An immature male is similar.

^a Birds of Africa, II, 1900, p. 146.

^b In stating this distinction on a previous occasion (Proc. U. S. Nat. Mus., XXII, 1899, p. 33) I inadvertently transposed the terms "golden olive" and "metallic green."

CINNYRIS OLIVACEA RAGAZZII (Salvadori).

Eleocerthia ragazzii SALVADORI, Ann. Mus. Stor. Nat. Genova, Ser. 2^a, VI (XXVI) 1888, p. 247 (Fekerie Ghem forest, Shoa, Abyssinia).

Six specimens, from Mount Kilimanjaro (5,000, and 6,000 feet) and Taveta. There appears to be little, if any, color contrast between the sexes, though our single adult female is rather paler than the males, particularly below. A female in juvenal plumage, taken March 23, however, differs from the adult of the same sex in the total lack of pectoral tufts, and in the much more conspicuous yellow suffusion on the under surface, the throat being particularly bright.

This species, though superficially close to *Cinnyris obscura*, may easily be distinguished by its darker, more yellowish green lower parts, especially the throat, where the difference is striking; and particularly by the *entirely* black or brownish black bill—in *obscura* the base of the mandible being yellowish or brownish white. There is apparently no difference in dimensions between *obscura* and *ragazzii*; and the males of the latter in Doctor Abbott's collection measure, respectively, 65, 63, 62, and 60 mm. Young birds of *ragazzii* are much brighter than the corresponding plumage of *obscura*, particularly on the sides of neck and head, and on the lower surface, which last is much more deeply yellowish, especially on the throat.

Altogether there does not seem to be the slightest reason for synonymizing *Cinnyris ragazzii* with *C. obscura*, as has been done by Captain Shelley;^a since, in fact, the former is probably really more closely allied to *Cinnyris olivacea* from South Africa, of which it is apparently but a northern subspecies, and from which it differs in smaller size, particularly the bill, and in paler, duller coloration of the lower parts. With *Cinnyris obscura neglecta*^b from East Africa our specimens do not agree, being more greenish below than *obscura*, while *neglecta* is described as less so. Since both *Cinnyris obscura neglecta* and *Cinnyris olivacea ragazzii* occur over the same areas in at least parts of East Africa and possibly Abyssinia, they must be regarded as distinct species. Thus we have altogether four forms, with geographical distribution approximately as follows:^c

Cinnyris olivacea olivacea SMITH. South Africa.

Cinnyris olivacea ragazzii (SALVADORI). East Africa to Abyssinia.

Cinnyris obscura obscura (JARDINE). West Africa, from Liberia to the Kongo; and Central Africa.

Cinnyris obscura neglecta (NEUMANN). East Africa.

There seem to be no characters sufficient for the separation of *Cyanomitra* from *Cinnyris* proper.

^a Birds of Africa, II, 1900, pp. 125, 127.

^b *Cyanomitra obscura neglecta* Neumann, Journ. f. Ornith., 1900, p. 297 (Kibuesi, Ukamba, British East Africa).

^c *Nectarinia olivacea* Peters, Journ. f. Ornith., 1881, p. 50, from Inhambane, Portuguese East Africa, is doubtfully distinct.

CINNYRIS AFFINIS FALKENSTEINI (Fischer and Reichenow).

Cinnyris falkensteini FISCHER and REICHENOW, Journ. f. Ornith., 1884, p. 56 (Lake Naivasha, British East Africa).

Ten specimens, eight of them adult males, from Mount Kilimanjaro, at 4,000 and 5,000 feet, collected in April, June, September, and November. Doctor Abbott reports this bird abundant at the latter elevation.

The West African *Cinnyris venusta* seems to be a distinct species; but the above series indicates that *Cinnyris falkensteini* is but a subspecies of *C. affinis*. Every character adduced to separate *C. falkensteini* from *C. affinis* our adult males show to be more or less inconstant. The throat sometimes is noticeably greenish entirely across its middle portion; the abdomen and lower breast are light yellow; the upper parts, except the crown and superior tail-coverts, show scarcely a tinge of bluish; and the brown of the under wing-coverts is mixed with ashy.

An adult female is olive brown above, the tail and its upper coverts black with dull metallic green edgings; wings fuscous, inconspicuously paler margined; a poorly defined light brownish superciliary stripe; sides of head and neck like the back; lower surface pale yellow, shaded with olive on the throat and upper breast; lining of wing pale yellow.

An immature male differs from the adult female in the possession of orange pectoral tufts; rather darker upper parts, with some admixture of the new metallic feathers; more deeply yellow posterior lower parts; and metallic feathers on the median portion of the throat. Probably in the entire first plumage, before the molt has begun, the young male is quite like the adult female.

CINNYRIS MEDIOCRIS Shelley.

Cinnyris mediocris SHELLEY, Proc. Zool. Soc. Lond., 1885, p. 228 (Mount Kilimanjaro, 12,000 feet, East Africa).

Twelve specimens, all but one adult males, from Mount Kilimanjaro, at 5,000 and 6,000 feet altitude. Some of the males have the upper parts much less golden green than others, and one has the lower tail-coverts tipped with reddish.

CINNYRIS KIRKII Shelley.

Cinnyris kirkii SHELLEY, Mon. Nect., 1876, p. 273, pl. LXXXV (Shupanga, Zambesi River near mouth of Shiré River, Portuguese East Africa).

Eleven specimens: from Taveta; Mount Kilimanjaro (5,000 feet); Kahé, south of Mount Kilimanjaro; and Aruscha-wa-chini. An immature male, taken December 6, 1889, has the dark-brown body plumage curiously mottled with buffy and pale-brownish tipped feathers.

We fail to discover any satisfactory characters to serve for the recognition of the genus *Chalcomitra*.

HELIONYMPHA,^a new genus.

Chars. gen.—Similar to *Cinnyris*, but tail very much longer than wing, the central feathers narrow and elongated, projecting nearly 20 millimeters beyond the others.

Type.—*Cinnyris nectarinioides* Richmond.

The above-presented characters so trenchantly separate this form from all the others of this intricate group that there seems little question of the propriety of instituting this new genus. From *Æthopyga* it may be distinguished by the more strongly curved bill, and by the shape of the tail, which is, with the exception of the long middle feathers, rounded instead of wedge-shaped. It is so widely different from *Nectarinia* and *Hedydipna* that no formal comparison is necessary.

HELIONYMPHA NECTARINIOIDES (Richmond).

Cinnyris nectarinioides RICHMOND, Auk, XIV, 1897, p. 158 (plains east of Mount Kilimanjaro, East Africa).

Two adult males—one the type of the species, the other from Aruscha-wa-chini, southwest of Mount Kilimanjaro. To the remarks of Doctor Richmond^b there is nothing to be added, except that the broad pectoral band of the second specimen is deep reddish orange instead of vermilion.

NECTARINIA CUPREONITENS Shelley.

Nectarinia cupreonitens SHELLEY, Mon. Nect., 1876, p. 17, pl. vi, fig. 1 (Abyssinia).

One specimen, an immature male, from Mount Kilimanjaro, 5,000 feet, December 14, 1889. It is in process of acquiring the full green plumage. If *Nectarinia æneigularis* Sharpe^c is really even subspecifically distinct from *N. cupreonitens*, of which we are not at all assured, our bird of course belongs to the former. This species is indeed very close to *N. famosa*, and were it not for the peculiar shape of the slender bill we should be inclined to consider it but a subspecies of the latter.

NECTARINIA JOHNSTONI Shelley.

Nectarinia johnstoni SHELLEY, Proc. Zool. Soc. Lond., 1885, p. 227 (Mount Kilimanjaro, 11,000 feet, East Africa).

Of this rare, beautiful, and interesting sunbird Doctor Abbott obtained a fine series of ten adult males in perfect plumage, together with two adult females. They were collected in November and Decem-

^a ἥλιος, sol; νύμφη, nympha.

^b Auk, XIV, 1897, p. 158.

^c Ibis, 1891, p. 444 (Sotik, British East Africa).

ber, at altitudes of 10,000 and 11,000 feet on Mount Kilimanjaro. Doctor Abbott writes that they live in the scattered, stunted trees above the forest zone, and that they were very common at an elevation of 11,000 feet, in November, 1888.

This is a species certainly very distinct from *Nectarinia famosa*, the male differing from the same sex of the latter, as indicated by its describer, in possessing bright scarlet instead of yellow pectoral tufts, and in having much longer central tail-feathers which in fully developed condition exceed those of *N. famosa* by 30 to 50 millimeters. Other distinctions, two of them quite as marked as those already noted, and to which little if any attention seems to have been called, are the somewhat shorter bill of *johnstoni*; the very decidedly more glittering or shining appearance of the entire body plumage, and the total lack of metallic green on the lower abdomen and under tail-coverts, which parts are dull bluish black, with scarce a hint of metallic reflections, often some of the feathers even tipped with pale brownish. Among all the males there is very little individual color variation, such as there is consisting in a more golden cast to the metallic green of the upper and lower parts, most noticeable anteriorly.

The female, which seems never to have been described, is much smaller than the male, and differs from the female of *Nectarinia famosa* in being decidedly darker both above and below, with the pileum appreciably more deeply colored than the back, instead of concolor; the exterior tail-feathers lack the white outer webs and the conspicuous white tips of the inner vanes; reddish orange pectoral tufts are present; there is no decided yellow on the cheeks or chin and very little on the abdomen; the bill is slightly shorter. The following description of one of these specimens may prove of interest:

Adult female, Cat. No. 119193, U. S. Nat. Mus.; Mount Kilimanjaro (10,000 feet), December 15, 1889. Upper parts sepia brown, the pileum, wings, and tail darker than the rest, and with slight bluish and greenish metallic reflections, most noticeable on the tail; superciliary stripe, cheeks, and chin dull brownish buff; remainder of lower surface sepia brown, rather lighter than that of the upper parts, the center of the abdomen pale yellowish, the under tail-coverts broadly margined with yellowish white, a small reddish orange tuft on each side of the breast; lining of wing yellowish white mixed with brownish. Length of wing, 72; tail, 49; exposed culmen, 29; tarsus, 18; middle toe, 12 mm.

NECTARINIA TACAZZE UNISPLENDENS Neumann.

Nectarinia takazze unisplendens NEUMANN, Journ. f. Ornith., 1900, p. 300 (Kifinika, Mount Kilimanjaro, East Africa).

A single adult male from Mount Kilimanjaro, 6,000 feet, December 16, 1889, does not, so far as we can discover, differ much from the descriptions of typical *Nectarinia tacazze* from Abyssinia,^a but no specimens of the latter are available. *Nectarinia jacksoni*^b is a very dubious form, probably nothing more than an individual variation of *N. tacazze*; and the same is possibly true of *unisplendens*.

DREPANORHYNCHUS KILIMENSIS (Shelley).

Nectarinia kilimensis SHELLEY, Proc. Zool. Soc. Lond., 1884, p. 555 (Mount Kilimanjaro—5,000 feet—East Africa).

Seven adult males, from Mount Kilimanjaro, at 5,000 feet altitude, taken in April, June, and August. Doctor Abbott writes that the species is common at 5,000 feet on the mountain, but is not found at a much greater elevation.

This species differs very markedly from *Nectarinia tacazze* in the shorter, much more curved bill, and in the presence of a narrow naked median line on the forehead—in these characters agreeing much more closely with *Drepanorhynchus reichenowi*, although in neither respect quite so extreme.

DREPANORHYNCHUS REICHENOWI Fischer.

Drepanorhynchus reichenowi FISCHER, Journ. f. Ornith., 1884, p. 56 (Lake Naivasha, British East Africa).

Of this magnificent species Doctor Abbott secured a fine series of 13 adults—10 males and 3 females—on Mount Kilimanjaro, at altitudes of 5,000 and 6,000 feet, in April, August, and December. The four males taken in December are much tinged with golden green above, which difference from all the others is very possibly due to season and to the abrasion of the feathers.

This species has a very strongly curved bill, and in both male and female a narrow naked median line parting the feathers of the forehead—characters shared by *Nectarinia kilimensis*, and which seem of generic significance. In every one of the other species of *Nectarinia* examined, and we have seen all except *N. melanogastra* and *N. bocagii*, the frontal feathers form almost a straight line across the base of the culmen.

^a *Certhia tacazze* Stanley, in Salt's Voyage Abyss., 1814, App. iv, p. lviii (Tacazze River, Tigré, Abyssinia).

^b *Nectarinia jacksoni* Neumann, Ornith. Monatsber., 1899, p. 24 (Mau, British East Africa).

Family HIRUNDINIDÆ.

PSALIDOPROCNE HOLOMELAS MASSAICA Neumann.

Psalidoprocne holomelæna massaica NEUMANN, Ornith. Monatsber., 1904, p. 144
(Kikuyu, British East Africa).

This recently described form is similar to *Psalidoprocne holomelas holomelas*, but much larger; the inferior wing-coverts and axillars are paler brown, and the greenish metallic sheen of the plumage is more pronounced.

The description of an adult male, Cat. No. 118125, U. S. Nat. Mus., collected by Doctor Abbott at Maranu on Mount Kilimanjaro, 5,000 feet, April 23, 1888, is as follows: Entire upper and lower parts black with a decided greenish gloss; wings and tail deep blackish brown, exteriorly with the same greenish tinge, the wing-quills lighter brownish on at least the basal portion of the inner webs; under wing-coverts and axillars still paler grayish brown. Four adult males, including the one above described, measure as below:

Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.
		mm.	mm.	mm.	mm.
Maranu, Mount Kilimanjaro, 5,000 feet ..	Apr. 23, 1888	114	94	5.5	10
Do.....do.....do.....	.....do.....	111	94	5.5	9
Do.....do.....do.....	.....do.....	112.5	92	5	9
Foot of Mount Kilimanjaro, 3,000 feet ...	Apr. 25, 1888	113.5	104	5.5	11
Average .....	.....	112.8	96	5.4	9.8

A specimen of true *holomelas*, of about average size, from Pinetown, Natal, measures: Wing, 104; tail, 80; exposed culmen, 5; tarsus, 9 mm.

Mr. Neumann failed to mention the much greater size, which is one of the best characters distinguishing this new form from the South African *holomelas*. The range of *massaica* probably includes the greater part, if not all, of German East Africa, and extends northward to Mount Kenia, and to Mount Elgon whence it has been recorded as *Psalidoprocne orientalis* by Mr. Jackson.^a

True *Psalidoprocne holomelas* was described by Sundevall^b from specimens collected at Port Natal, Natal, and is therefore the small South African race, to which also clearly apply both the other synonyms of the species.^c

Besides the four specimens listed above, Doctor Abbott obtained a single immature male at Taveta, August 19, 1888, which differs from

^a Ibis, 1901, p. 95. See Shelley, Ibis, 1901, pp. 171-172.

^b *Hirundo holomelas* Sundevall, Öfv. K. Vet.-Akad. Förh. Stockholm, 1850, p. 108.

^c *Atticora hamigera* Cassin, Proc. Acad. Nat. Sci. Phila., 1850, p. 57, pl. XII (Port Natal, Natal).

Psalidoprocne cypselina Cabanis, Mus. Hein., I, 1850, p. 48 (South Africa).

the adult in its noticeably more brownish plumage, particularly on the rump and abdomen, and in its darker brown inferior wing-coverts and axillars.

HIRUNDO MONTEIRI Hartlaub.

Hirundo monteiri HARTLAUB, Ibis, 1862, p. 340, pl. XI (Massangano and Cambambe, Angola).

Four specimens, from Kahé, south of Mount Kilimanjaro. The female is rather duller on the upper surface than the male, and is smaller, with less well-developed lateral tail feathers. Both female and immature have the innermost secondaries tipped with buff.

HIRUNDO PUELLA ABYSSINICA (Guérin).

Hirundo abyssinica GUÉRIN, Rev. Zool., 1843, p. 322 (Abyssinia).

Two adult specimens, male and female, from Taveta.

There are undoubtedly at least two easily distinguishable races of *Hirundo puella*: one confined to western Africa, the other to the eastern part of the continent but ranging from Cape Colony to Abyssinia. The first description of *Hirundo puella*^a was based on the bird from the coast of Guinea, and consequently is applicable to the west African form; and of this *Hirundo korthalsi* Bonaparte,^b from an unknown locality, is apparently a synonym. For the eastern bird there is available *Hirundo abyssinica* Guérin,^c described from Abyssinia, and shortly afterwards renamed by Rüppell *Cecropis striolata*^d on specimens from the same region. The eastern bird stands, therefore, as *Hirundo puella abyssinica*, and differs from *Hirundo puella puella* in larger size; much more broadly streaked lower parts, particularly on sides and abdomen; more whitish (less rufescent) crissum, sides, flanks, and lining of wing; rather paler rump and pileum. The table of measurements in Sharpe and Wyatt's Monograph of the Hirundinidæ (pages 342-343) so well exhibits the difference in size between the two forms that further measurements are really not necessary.

The dimensions of Doctor Abbott's examples, however, are as follows:

U. S. N. M. No.	Sex.	Locality.	Date.	Wing.	Tail.	Exposed culmen.	Tarsus.
118122	Male	Taveta	Feb. 7, 1889	mm. 110	mm. a 95	mm. 6.5	mm. 14
118123	Female....	.....do .....	.....do	107	89	6.5	13

a Imperfect.

^a Temminck and Schlegel, Fauna Japonica, Aves, 1842, p. 34.

^b Consp. Avium, I, 1850, p. 340.

^c Rev. Zool., 1843, p. 322.

^d Syst. Uebers. Vög. Nord.-Ost.-Afr., 1845, p. 18, pl. vi.

HIRUNDO EMINI Reichenow.

Hirundo emini REICHENOW, Journ. f. Ornith., 1892, pp. 30, 215 (Bussisi and Bukoba, Victoria Nyanza, German East Africa).

Two specimens, from Lake Chala, and from Maranu, Mount Kilimanjaro, at 5,000 feet, respectively. The former is an immature female, taken July 1, 1888, and differs from the adult male in smaller size; broader, less lengthened lateral tail-feathers; paler abdomen; duller upper parts; ochraceous rump, in which chestnut feathers are just making their appearance; secondaries and inner primaries either very narrowly tipped, or edged on distal portion of inner webs with cream white; and tertials rather conspicuously tipped with buff. This species, it will be noted, is another of those that were undescribed when Doctor Abbott's specimens were collected.

HIRUNDO RUSTICA Linnæus.

Hirundo rustica LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 191 (Europe [type locality, Sweden]).

Three specimens: one adult female from Kahé, south of Mount Kilimanjaro, September 6, 1888; and two immature males from Mount Kilimanjaro, one of these taken November 15, 1888, at 8,000 feet, the other November 20, at 10,000 feet.

Family **MOTACILLIDÆ**.**MACRONYX AURANTIIGULUS** Reichenow.

Macronyx aurantiigula REICHENOW, Journ. f. Ornith., 1891, p. 222 (Pangani River, German East Africa).

Three apparently typical specimens, from the plains near Mount Kilimanjaro, and Aruscha-wa-chini, southwest of Kilimanjaro. There is no observable difference between the sexes.

MOTACILLA VIDUA Sundevall.

Motacilla vidua SUNDEVALL, Öfv. K. Vet.-Akad. Förh. Stockholm, 1850, p. 128 (Kaffir Land, South Africa).

Three specimens, from Taveta, March 27 and 28, 1888. One of these is an adult in perfect black-backed plumage; the two others are immature birds with dark grayish brown upper parts, and some narrow white edgings to the black feathers of the pectoral crescent.

BUDYTES CAMPESTRIS (Pallas).

Motacilla campestris PALLAS, Reis. Russ. Reichs, III, 1776, p. 696 (Russian Empire).

One female, from the plains east of Mount Kilimanjaro, January, 1889. It is an immature bird with yellowish olive green upper parts, and lower surface posteriorly much mixed with white.

Family FRINGILLIDÆ.

EMBERIZA FLAVIVENTRIS (Vieillot).

Passerina flaviventris VIEILLOT, Encyc. Méth., III, 1823, p. 929 (Cape of Good Hope, South Africa).

One immature male, with wing-quills in process of molt, from the plains east of Mount Kilimanjaro, October 5, 1888.

CRITHAGRA ALBIFRONS Sharpe.

Crithagra albifrons SHARPE, Ibis, 1891, p. 118 (Kikuyu, British East Africa).

Crithagra kilimensis RICHMOND, Auk, XIV, 1897, p. 155 (Mount Kilimanjaro, East Africa).

Two specimens, from Mount Kilimanjaro, at 6,000 and 7,000 feet, respectively. One taken April 16, 1888, is evidently immature and is much more rufescent or ochraceous—less grayish—both above and below than the other, but is not otherwise importantly different. These examples formed the basis of Doctor Richmond's *Crithagra kilimensis*, which seems now to be identical with *Crithagra albifrons* of Sharpe.

There appears to be no good reason for not recognizing the genus *Crithagra* as different from *Serinus*, since the large, turgid bill and relatively short wings of the former group are alone sufficient to maintain its distinctness.

CRITHAGRA STRIOLATA AFFINIS Richmond.

Crithagra striolata affinis RICHMOND, Auk, XIV, 1897, p. 156 (Mount Kilimanjaro, East Africa).

Five specimens, from Mount Kilimanjaro, at 5,000, 6,000, and 7,000 feet. These, by reason of their yellowish chins, dark colors, and small size, seem to indicate that the southern examples of *Crithagra striolata* are subspecifically separable from those of Abyssinia. An immature bird taken at Maranu, 5,000 feet, on Mount Kilimanjaro, April 17, 1888, is rather paler, more ochraceous above than the adults.

SERINUS FLAVIVERTEX (Blanford).

Crithagra flavivertex BLANFORD, Ann. and Mag. Nat. Hist., 4th ser., VI, 1869, p. 330 (Adigrat, Tigré, Abyssinia).

Two specimens, from Mount Kilimanjaro, 10,000 feet, December 15, 1889. One of these is an immature bird still partially in juvenal plumage, and differs from the adult in being duller and more greenish on the upper parts, the pileum yellowish olive green streaked with dark brown, on the hind neck some brown and buffy streaked feathers of the earlier plumage persisting; yellow edgings of wings and tail paler, those of the greater and median wing-coverts particularly so;

lower surface much paler throughout, the breast and jugulum buffy mixed with a little yellow and streaked with dark brown, this streaking extending also to the flanks, the crissum yellowish white; lining of wing grayish and whitish, with but little wash of yellow.

PETRONIA PYRGITA (Heuglin).

Xanthodina pyrgita HEUGLIN, Journ. f. Ornith., 1862, p. 30 (Bogos Mountains, Abyssinia).

Two specimens: plains east of Mount Kilimanjaro, October 3, 1888; and Useri River, near Mount Kilimanjaro, August 30, 1888. One of these is immature, and has an evident though not conspicuous light brown superciliary stripe; the yellow throat patch is smaller and much paler than in the adult; the rest of the lower surface is also lighter; otherwise it does not differ. Two specimens of this species from Somali Land are decidedly more grayish both above and below than those obtained by Doctor Abbott, but whether this is geographical or individual our material is not sufficient to determine.



Oberholser, Harry C. 1905. "Birds collected by Dr W. L. Abbott in the Kilimanjaro region, East Africa." *Proceedings of the United States National Museum* 28, 823–936. <https://doi.org/10.5479/si.00963801.1411.823>.

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