

DESCRIPTIONS OF NEW AFRICAN BIRDS OF THE GENERA
FRANCOLINUS, CHALCOPELIA, CINNYRIS, CHALCOMI-
TRA, ANTHREPTES, ESTRILDA, HALCYON, MELITTO-
PHAGUS, AND COLIUS.

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Five of the fourteen forms of African birds here described are from the collection made by the Childs Frick African Expedition, 1911-12; three are from the Paul J. Rainey African Expedition, 1911-12; five are from the Smithsonian African Expedition, 1909-10 collection, made under the direction of Col. Theodore Roosevelt; and one is from the African collection made by Dr. W. L. Abbott in 1888 and 1889.

The names of special tints and shades of colors used in this paper conform to Mr. Robert Ridgway's Color Standards and Color Nomenclature, issued March 10, 1913.¹ All measurements are in millimeters.

FRANCOLINUS HILDEBRANDTI HELLERI, new subspecies.

HELLER'S FRANCOLIN.

Type-specimen.—Adult male, Cat. No. 217550, U. S. Nat. Mus.; collected in the juniper forest at the summit of Mount Lololokui, altitude 6,000 feet, British East Africa, September 21, 1911, by Edmund Heller. (Original number, 382.)

Characters.—Most closely related to *Francolinus hildebrandti hildebrandti* Cabanis, from Ndi, Teita, British East Africa, and *F. h. altumi* Fischer and Reichenow, from Lake Naivasha, British East Africa.² It is slightly larger than typical *hildebrandti*, and the male has a deeper, richer coloration above, and purer black and white on the middle under parts; and the female is of a darker, olivaceous, brown above, and a much darker cinnamon color below, unrelieved by whitish edging to the feathers. While the male is equally dark, it is much less grayish on the upper parts than *altumi*, in which the female is much paler cinnamon below. The differences in these three forms may be expressed as follows:

¹ The date on the title-page is 1912 (=January 16, 1913, when a few copies were distributed). The work was generally distributed March 10, 1913.

² In a recent letter Doctor Reichenow informed us that Lake Naivasha is the type-locality of *altumi*.

<p><i>Francolinus hildebrandti hildebrandti</i>.</p> <p>MALE.</p> <p>Upper parts paler, more yellowish, brown. Under parts duller, less pure black and white.</p> <p>Chin and upper throat dirty white, the feathers with small, central, dark spots. Flanks and crissum paler, with faint central markings and pale rusty borders to the feathers.</p> <p>Outer aspect of thigh saccado's olive. Measurements (average of three): Wing, 179; tail, 103; culmen, measured from anterior edge of frontal membrane, where the horny sheath begins, 20; tarsus, 53; longest spur, 13.5.</p> <p>FEMALE.</p> <p>General color paler; upper parts more rufescent, with coarser markings. Middle under parts cinnamon, the feathers with whitish terminal spots or edging. Measurements (average of two): Wing, 173; tail, 101; culmen (chord), 17.5; tarsus, 49.5; longest spur, 8.5.</p>	<p><i>Francolinus hildebrandti altuani</i>.</p> <p>MALE.</p> <p>Upper parts darker, more grayish, brown. Under parts brighter, with pure black spots and pure white borders to the feathers.</p> <p>Chin and upper throat whiter, with larger black central spots to the feathers. Flanks and crissum darker, with more distinct dark markings and pale olive-grayish borders to the feathers. Outer aspect of thigh buffy brown. Measurements (average of two topotypes): Wing, 190; tail, 105; culmen (chord), 20.3; tarsus, 54; longest spur, 13.5.</p> <p>FEMALE.</p> <p>General color darker; upper parts more grayish, with finer markings. Middle under parts pinkish cinnamon, with narrower, more grayish terminal edging. Measurements (average of two topotypes): Wing, 177; tail, 97; culmen (chord), 18.5; tarsus, 49; longest spur, 11.7.</p>	<p><i>Francolinus hildebrandti helleri</i>.</p> <p>MALE.</p> <p>Upper parts rufescent brown. Under parts with pure black spots, but broader white borders to the feathers of chest and flanks.</p> <p>Chin and upper throat white, with smaller black central spots to the feathers. Flanks and crissum sharply marked with brown, black-edged cross-bands and with buffy edges to the feathers. Outer aspect of thigh olive-brown. Measurements (two type and topotype): Wing, 188; tail, 110; culmen (chord), 19.5; tarsus, 49.5; longest spur, 12.</p> <p>FEMALE.</p> <p>General color of upper parts deeper, more olivaceous brown, with fine markings. Middle under parts uniform orange-cinnamon. Measurements (one topotype): Wing, 170; tail, 101; culmen (chord), 19; tarsus, 46; longest spur, 6.3.</p>
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Measurements of type (adult male).—Length of skin, 315; wing, 191; tail, 110; culmen, from anterior border of frontal membrane, chord, 20; tarsus, 50; longest spur, 12.

CHALCOPELIA AFRA KILIMENSIS, new subspecies.

MOUNT KILIMANJARO METALLIC-SPOTTED DOVE.

Type-specimen.—Adult male, Cat. No. 117864, U.S.N.M.; collected at 5,000 feet altitude on Mount Kilimanjaro, German East Africa, June 8, 1888, by Dr. W. L. Abbott.

Characters.—Most closely related to *Chalcopeelia afra* (Linnæus)¹ and to *C. a. abyssinica* (Sharpe)². In size, the three forms, *afra*, *abyssinica*, and *kilimensis*, are quite similar; but they differ considerably in coloration. The differences in color may be expressed as follows:

<i>Chalcopeelia afra afra.</i>	<i>Chalcopeelia afra abyssinica.</i>	<i>Chalcopeelia afra kilimensis.</i>
Bill dusky red, with only the apical portion yellow. Forehead narrowly grayish white.	Bill with basal half bright red, terminal half yellow. Forehead broadly grayish white.	Bill dusky red, with the terminal fifth yellow. Forehead narrowly grayish white.
Mantle and inner wing-feathers drab.	Mantle and inner wing-feathers hair brown.	Mantle and inner wing-feathers saccardo'sumber.
Chest light brownish drab. Abdomen pale pinkish buff.	Chest pale vinaceous-drab. Abdomen pinkish white.	Chest brownish drab. Abdomen pale pinkish cinnamon.

An immature female (Cat. No. 117862, U.S.N.M.) topotype has the abdomen more buffy and the feathers of the sides cross-banded with pale hair brown.

Measurements of type (adult male).—Length of skin, 197; wing, 111; tail, 88; culmen (chord), 14.5; tarsus, 19.5.

Average measurements of two adult males (including the type).—Wing, 108.5; tail, 91.5; culmen (chord), 14.5; tarsus, 19.3.

Measurements of adult female (Cat. No. 117863).—Length of skin, 180; wing, 88; culmen, 14.5; tarsus, 18.

Material.—Four topotypes from Mount Kilimanjaro, the only examples of this form seen by the author.

CHALCOPELIA CHALCOSPILA (Wagler).

SENEGAL METALLIC-SPOTTED DOVE.

This species, originally described from "Senegal," West Africa,³ is represented in the collection before me by five subspecies,⁴ four of

¹ Syst. Nat., Twelfth ed., vol. 1, 1766, p. 284 (Senegal).

² Bull. Brit. Orn. Club, vol. 12, 1902, No. 90, p. 83 (Kokai, Bogos Land, Abyssinia).

³ *Columba chalcospilos* Wagler, Syst. Avium, 1827 (*Columba*, sp. 83), p. [258] (Senegal).

⁴ Two additional subspecies have been named from South Africa, as follows:

Chalcopeelia chalcospila volkmanni Reichenow, Journ. f. Ornith., 1902, p. 134 (Damara Land).

Chalcopeelia chalcospila caffra Reichenow, Journ. f. Ornith., 1902, p. 134 (Southeastern Africa).

which occur in Northeast Africa, each represented by a series of specimens. Mr. H. C. Oberholser¹ has pointed out the distinctions between three previously recognized forms, *Chalcopectia chalcospila chalcospila* (Wagler) from Senegal, *C. c. somalica* Erlanger from Somali Land, and *C. c. acanthina* Oberholser from Mount Kilimanjaro, in German East Africa.

The two new subspecies described below may be readily distinguished from the three above-mentioned forms by their darker coloration. The West African forms, *chalcospila* and *volkmanni*, are somewhat smaller than those from East Africa, but the latter exhibit but slight variation in size.

The author agrees with Doctor Sharpe in considering *Chalcopectia delicatula* of the White Nile region to be a distinct species.

CHALCOPELIA CHALCOSPILA INTENSA, new subspecies.

HAWASH METALLIC-SPOTTED DOVE.

Type-specimen.—Adult male, Cat. No. 243506, U.S.N.M.; collected on the Hawash River, Abyssinia, February 11, 1912, by Edgar A. Mearns. (Original number, 20178.)

Description of adult male and female.—An adult female, mated with the type, is indistinguishable from it except by its slightly smaller size. Crown gray (dark gull gray), paler on forehead and sides of head; upper side of neck, and mantle, hair brown; exposed portion of wing-coverts and inner secondaries superficially grayish drab, with darker bases and inner webs to the feathers; primaries kaiser brown at base, with broad dark brown tips, which are narrowly edged with whitish drab, and with black outer webs to the five outer quills; some of the inner median wing-coverts and some of the scapulars with metallic golden-green spots, some portions of which in certain lights appear dusky purple; lower back crossed by two broad black bands, and between them an avellaneous one; upper tail-coverts light drab, broadly edged with black at tip; central rectrices light drab, becoming black apically, the outer ones gray at base and broadly black terminally, the three outermost narrowly tipped with pale drab or pale gray; under side of rectrices black, with pale edging to the tips of some of the outer feathers and with pale gray outer webs to the basal third of the outer feather; under tail-coverts black centrally with considerable white laterally; chin pinkish white, deepening on the lower throat, chest, and upper abdomen to brownish vinaceous, this paling on the lower abdomen to grayish white; iris brown; bill dark olivaceous-brown; feet dull yellow.

Description of immature bird (Cat. No. 243504, U.S.N.M.; collected at Dire Daoua, Abyssinia, Dec. 6, 1911).—Paler throughout than

¹ Proc. U. S. Nat. Mus., vol. 28, July 8, 1905, pp. 845-847.

adult; feathers of occiput gray at base, edged with brown, thus restricting the pure gray to the anterior portion of the crown; feathers of back, scapulars, and wing-coverts edged with pale rusty or pure white; sides of head, chin, and upper throat nearly white; chest light vinaceous-drab; abdomen ecru-drab.

Measurements of type (adult male).—Length of skin, 195; wing, 110; tail, 79; culmen (chord), 15; tarsus, 19.

Average measurements of four adult males.—Wing, 108; tail, 80.6; culmen (chord), 14.25; tarsus, 18.8.

Average measurements of two adult females.—Wing, 104.8; tail, 77; culmen (chord), 14.7; tarsus, 18.5.

Material.—Seven specimens from Dire Daoua and the Hawash River, Abyssinia, collected by the Childs Frick African Expedition.

CHALCOPELIA CHALCOSPILA MEDIA, new subspecies.

GATO METALLIC-SPOTTED DOVE.

Type-specimen.—Adult male, Cat. No. 243515, U.S.N.M.; collected near the south end of South Lake Abaya, near Gardulla and the Gato River camp of the Childs Frick African Expedition, in Abyssinia, March 28, 1912, by Edgar A. Mearns. (Original number, 20885.)

Characters.—Most closely related to *Chalcopeelia chalcospila intensa*, described above, from which it differs in being paler throughout and in having more bluish purple in the wing-spots.

Description of adult male and female.—Crown gray (deep gull gray), paling to grayish white on forehead and sides of head; upper side of neck, and mantle, grayish drab; wing-coverts and inner secondaries paler drab; exposed portion of bastard wing black, concealed portion kaiser brown; some of the inner median wing-coverts and some of the scapulars, with golden-green and bluish purple spots; across the lower back are two broad black bands and between them one of pale grayish buff; upper tail-coverts light drab, each feather broadly edged with black at tip; central rectrices light drab, becoming black apically, the outer ones gray at base and broadly black terminally, the three outermost narrowly tipped with pale drab or pale gray; under side of tail black, with apical edging of pale gray to about three outer feathers and pale gray outer web to outer feather; under tail-coverts black mesially, considerably mixed with white laterally; chin pinkish white; lower throat, chest, and upper abdomen, light brownish vinaceous, passing into grayish white on lower abdomen; iris, brown; bill, dark vinaceous-brown; feet dull yellow.

Measurements of type (adult male).—Length of skin, 180; wing, 106; tail, 78; culmen (chord), 13.5; tarsus, 18.

Average measurements of seven adult males.—Wing, 108; tail, 79; culmen (chord), 14; tarsus, 18.8.

Average measurements of six adult females.—Wing, 104; tail, 74.1; culmen (chord), 14.2; tarsus, 18.3.

Material.—Thirteen adults from the south end of the Abaya lakes southward to Bodessa on the middle portion of the Sagan River, north of Lake Rudolf, all in southern Abyssinia.

CINNYRIS VENUSTA BLICKI, new subspecies.

BLICK'S BUFF-BREASTED SUNBIRD.

Type-specimen.—Adult male, Cat. No. 217964, U.S.N.M.; collected near the south shore of Lake Stefanie, in northern British East Africa, May 17, 1912, by J. C. Blick.

Characters.—Most closely related to *Cinnyris venusta albiventris* and *C. v. falkensteini*, differing from these in being smaller (see measurements below); and it also differs from *albiventris* in having a wash of pale yellow over the lower chest and upper abdomen posterior to the metallic violet of the lower throat, these parts being pure white in *albiventris*, which has the pectoral tufts orange-rufous instead of orange-chrome; from *falkensteini* it is readily distinguished by its white sides and crissum and the very pale yellow of the lower chest and upper abdomen.

Description of adult male.—Forehead, crown, lores, chin, and throat metallic cyanine blue, changing on lower throat and upper chest to hyacinth blue; side of head behind eye, upper side of neck, mantle, lesser upper wing-coverts, back, and rump metallic green largely mixed with violet-blue feathers; upper tail-coverts metallic dusky greenish blue; greater wing-coverts and quills dark brown, faintly edged externally with whitish olive; pectoral tufts orange-chrome anteriorly, lemon yellow posteriorly; tail dark blue; under parts, posterior to the dark throat, white washed with very pale yellow except on sides and crissum; thighs black; iris dark brown; bill, feet, and claws black.

Description of adult female.—Upper parts drab, becoming black on upper tail-coverts; tail blackish blue, its outer feather externally edged with pale gray; superciliary stripe soiled white; under parts white; in some specimens slightly grayish on the chin and throat, and always washed with a scarcely discernible tint of yellow; iris dark brown; bill purplish black, paler at base of mandible; feet and claws plumbeous-black.

Measurements of type (adult male).—Length of skin, 96; wing, 52; tail, 39; culmen (chord), 16; tarsus, 16.

Average measurements of six adult males of Cinnyris venusta blicki.—Wing, 52.7; tail, 36; culmen (chord), 16; tarsus, 16.

Average measurements of six adult females of Cinnyris venusta blicki.—Wing, 49; tail, 38.5; culmen (chord), 15.5; tarsus, 15.5.

Average measurements of adult males of Cinnyris venusta albiventris.—Length of skin, 110; wing, 57; tail, 42; culmen, (chord), 16; tarsus, 17.

Average measurements of adult males of Cinnyris venusta falkensteini.—Length of skin, 105; wing, 53; tail, 37.5; culmen (chord), 18; tarsus, 15.5.

Average measurements of adult males of Cinnyris venusta fazoqlensis.—Length of skin, 105; wing, 54; tail, 42.5; culmen (chord), 16; tarsus, 15.

Remarks.—The fifteen specimens on which this subspecies is based show no approach to *Cinnyris venusta fazoqlensis*, the form *blicki* being interposed between *C. v. albiventris* and *C. v. falkensteini*, and ranging from Gardulla, in southern Abyssinia, south to the Nyiro and Indunumara mountains, in British East Africa.

CINNYRIS MEDIOCRIS GARGUENSIS, new subspecies.

MOUNT GARGUES DOUBLE-COLLARED SUNBIRD.

Type-specimen.—Adult male, Cat. No. 217754, U.S.N.M.; collected at the summit of Mount Gargues (altitude 7,100 feet), north of the Guaso Nyiro River, in British East Africa, August 27, 1911, by Edmund Heller. (Original number, 249.)

Characters.—Males with under parts paler than in *Cinnyris medioeris keniensis* or *C. m. medioeris*; smaller than *keniensis*; about the size of *medioeris* from Mount Kilimanjaro; female much grayer than the above forms.

Description of adult male.—Head, neck, lesser wing-coverts, mantle, back, and rump golden-green; upper tail-coverts metallic violet-blue; wings dark brown, greater wing-coverts and quills narrowly edged with citrine-drab; tail bluish black; chest-collar coral red, separated from the green throat by a narrow collar of metallic blue; pectoral tufts citron yellow; under parts, posterior to the red pectoral band, light olive-gray; under wing-coverts and inner portion of quills grayish white.

Description of adult female topotype.—Upper parts deep olive-gray; tail blue-black, with two outer rectrices narrowly edged with white; chin and throat mouse gray, washed with olive; remaining under parts pale buffy brown.

Measurements of type (adult male).—Length of skin, 100; wing, 53; tail, 40; culmen (chord), 17.5; tarsus, 17.5.

Average measurements of three adult male topotypes.—Wing, 53.7; tail, 41; culmen (chord), 17.1; tarsus, 17.5.

Measurements of female topotype.—Wing, 52; tail, 40; culmen (chord), 17.5; tarsus, 17.¹

¹ For measurements of *Cinnyris medioeris medioeris* and *C. m. keniensis* see Smithsonian Miscellaneous Collections, vol. 56, No. 14, Dec. 23, 1910, p. 4.

Geographical range.—Known only from Mount Gargues, British East Africa.

CINNYRIS REICHENOWI KIKUYENSIS, new subspecies.

KIKUYU DOUBLE-COLLARED SUNBIRD.

Type-specimen.—Adult male, Cat. No. 246001, U.S.N.M.; collected at Escarpment Station (altitude 7,390 feet) on the Uganda Railway in the Kikuyu Mountains, British East Africa, September 6, 1912, by Edgar A. Mearns. (Original number, 24076.)

Characters.—Smaller than *Cinnyris reichenowi reichenowi* Sharpe from Sotik, northeast of Victoria Nyanza,¹ and more grayish, less ochraceous, on the under parts posterior to the red pectoral collar.

Description of adult male.—Head, neck, mantle, lesser wing-coverts, and back metallic golden-green; upper tail-coverts, and a narrow collar separating the green of the throat from the red chest, metallic blue-violet; greater wing-coverts and quills dark brown, the feathers externally edged with dark citrine; tail blue-black; chest broadly banded with nopal red (20 millimeters in width); posterior under parts dark olive-gray anteriorly, changing to citrine-drab on crissum; pectoral tufts lemon yellow; under wing-coverts neutral gray; inner border of quills pale neutral gray; iris dark brown; bill, feet, and claws black.

Comparative measurements of males.

Name.	Length of skin.	Wing.	Tail.	Culmen (chord).	Tarsus.
<i>Cinnyris reichenowi reichenowi</i> , from original description.....	102	53.3	35.6	16.5	16.5
<i>Cinnyris reichenowi reichenowi</i> , from Reichenow's Vogel Afrikas, vol. 3, 1905, p. 491.....	110-115	51-53	36-40	15-16	16-17
<i>Cinnyris reichenowi reichenowi</i> , from Mount Ruwenzori.....	112	54	42	15	16
<i>Cinnyris ansorgei</i> , from original description.....	95	53	40	18.3	20
<i>Cinnyris reichenowi kikuyensis</i> , type.....	95	53	40	13	15

¹ Reichenow, Vogel Afrikas, vol. 3, 1905, p. 491, states that this is an error, and that the culmen measures 15 millimeters.

CHALCOMITRA SENEGALENSIS ATRA, new subspecies.

BLACK SCARLET-BREASTED SUNBIRD.

Type-specimen.—Adult male, Cat. No. 246077, U.S.N.M.; collected on the Thika River, at Camp No. 2 of the Childs Frick African Expedition, 20 miles above its junction with the Tana River, in British East Africa, August 27, 1912, by Edgar A. Mearns. (Original number, 23912.)

Characters.—The blackest form of the *Chalcomitra senegalensis* group. Most closely related to *Chalcomitra senegalensis æquatorialis* (Reichenow) from Victoria Nyanza, from which it differs in being

¹ *Cinnyris ansorgei* Hartert, from Nandi Station, is considered to be a synonym of *C. r. reichenowi*.

slightly smaller and very much darker in color; larger and darker than *C. s. acik* or *C. s. senegalensis*; no metallic colors on wings, back, or upper tail-coverts; female darker, less yellowish brown than in other forms of *senegalensis*.

Description of adult male.—Forehead and crown metallic green, sometimes bluish; chin and upper throat metallic golden-green; mustachial band bluish green; sides of head, occiput, upper side of neck, and mantle black, becoming slightly brownish on lower back, rump, and upper tail-coverts; wings and tail blackish mummy brown; lower throat and chest nopal red, with a narrow subterminal metallic blue bar to each feather; abdomen, sides, under wing-coverts, flanks, thighs, and under tail-coverts jet black; iris very dark brown; bill feet, and claws black.

Description of adult female.—Upper parts dark hair brown; lores and ear-coverts chaetura black; upper wing-coverts edged externally with white; mustachial band yellowish white, the feathers chaetura black at base; chin, throat, and breast chaetura drab, the feathers narrowly edged with pale yellowish olive; abdomen hair brown, much obscured by yellowish edging to the feathers; sides and flanks light grayish olive, the feathers edged with whitish; under wing-coverts olive-buff, with dark bases to the feathers; under tail-coverts pale olive-gray, with dark bases to the feathers; iris dark brown; bill, feet, and claws black.

Four immature males, in which the red-and-blue pectoral band is appearing, have the feathers of the under parts broadly bordered with pale olive-yellow. In all ages and both sexes this form is darker than any other form of the *senegalensis* group.

Measurements of type (adult male).—Length of skin, 132; wing, 74; tail, 52.5; culmen (chord), 28.5; tarsus, 17.5.

Average measurements of two adult males (including the type).—Wing, 75; tail, 52; culmen (chord), 28.7; tarsus, 17.2.

Average measurements of two adult females.—Wing, 67.5; tail, 44.2; culmen (chord), 27; tarsus, 16.5.

Geographical range.—Upper Tana and Thika rivers, and Tharaka District between the Tana and Guaso Nyiro rivers, in British East Africa.

ANTHREPTES COLLARIS GARGUENSIS, new subspecies.

MOUNT GARGUES COLLARED SUNBIRD.

Type-specimen.—Adult male, Cat. No. 217750, U.S.N.M.; collected on Mount Gargues, at 7,100 feet, British East Africa, August 25, 1911, by Edmund Heller. (Original number, 244.)

Characters.—Most closely related to *Anthreptes collaris zambesiana* and *A. c. hypodila*. From the former it differs in being slightly larger, darker (less golden) green above, and more olivaceous yellow below;

from *hypodila* (type from Fernando Po) it differs in being much larger, of a slightly paler shade of green above, and lemon yellow instead of lemon chrome below.

Description of adult male.—Head, neck, mantle, back, rump, and lesser wing-coverts metallic green with a slight golden luster; wings dark brown, with quills bordered externally with citrine; rectrices deep blue edged with metallic green; under parts lemon yellow, washed with olive on sides; pectoral tufts pure lemon yellow; a collar of metallic violet separates the green throat from the yellow under parts; edge of wing pale yellow; under wing-coverts yellowish white; iris brown; bill, feet, and claws black.

Description of adult female.—Above similar to adult male; below lacking the metallic green chin and throat and the metallic violet collar, the entire under parts being olive-yellow, darkest on the chest, sides, and crissum and yellowest on the abdomen.

Description of young male in first plumage.—Yellower on under parts than adult female, with darker olive throat and upper chest.

Measurements of type (adult male).—Length of skin, 103; wing, 55; tail, 39; culmen (chord), 15; tarsus, 16.

Average measurements of five adult males (including the type).—Wing, 53.8; tail, 39; culmen (chord), 14.4; tarsus, 15.8.

Measurements of adult female (Cat. No. 245979, U.S.N.M.; from Meru Forest, British East Africa).—Wing, 52; tail, 34; culmen (chord), 14; tarsus, 15.

*Average measurements of two adult males of *Anthreptes collaris hypodila* from West Africa.*—Wing, 49; tail, 35; culmen (chord), 13.3; tarsus, 15.

*Average measurements of two adult females of *Anthreptes collaris hypodila* from West Africa.*—Wing, 46.5; tail, 32.5; culmen (chord), 12.8; tarsus, 14.3.¹

Remarks.—Specimens from the upper Athi River (Juja Farm) are intermediate between *zambesiana* and *garguensis*; those from around Mount Kenia are more olivaceous on the under parts than any others.

Geographical distribution.—Upper Athi River, Mount Kenia region, and Mount Gargues, in British East Africa.

ESTRILDA ATRICAPILLA KENIENSIS, new subspecies.

MOUNT KENIA BLACK-CROWNED WAXBILL.

Type-specimen.—Adult male, Cat. No. 214622, U.S.N.M.; collected at Fey's Farm, altitude 8,000 feet, in the Aberdare Mountains, near Mount Kenia and Lake Naivasha, British East Africa, August 11, 1909, by Edgar A. Mearns. (Original number, 16540.)

Characters.—Most closely related to *Estrilda atricapilla graueri* Neumann from Mount Sabjingo, Western Kivu Volcanoes, Central

¹ For measurements of *Anthreptes collaris zambesiana* and *A. c. elachior*, see Smithsonian Miscellaneous Collections, vol. 56, No. 14, Dec. 23, 1910, p. 5.

Africa, but slightly smaller, with throat and sides of head grayish instead of being white. From *Estrilda atricapilla atricapilla* Verreaux, from Camaroon and Gaboon, it differs in being considerably paler below, with the mantle brownish instead of grayish and much less heavily cross-banded with black; and the black of the head includes the eye.

Description of adult male and female.—Top of head, including lores and orbital region, black; mantle grayish brown, finely and somewhat obscurely cross-banded with black; rump and upper tail-coverts pompeian red; wings brownish slate with outer wing-coverts and inner secondaries cross-banded with black; tail slaty black, very obscurely cross-banded with black; chest and upper abdomen neutral gray, gradually deepening to black on lower abdomen and crissum, and paling to pale neutral gray on throat and sides of head; sides and flanks pompeian red; axillars, under wing-coverts, and inner border of quills grayish white; bill, feet, and claws entirely black.

Measurements of type (adult male).—Length of skin, 100; wing, 46; tail, 48; culmen (chord), 8.5; tarsus, 15.

Average measurements of two adult males (including the type).—Wing, 46; tail, 48; culmen (chord), 8.5; tarsus, 15.

Average measurements of two adult females.—Wing, 44; tail, 45.5; culmen (chord), 8.5; tarsus, 15.

Geographical range.—Aberdare and Kenia mountains, 8,000 to 8,500 feet, in British East Africa.

Remarks.—The range of *Estrilda nonnula* Hartlaub, described from Kudurma, almost meets that of *E. a. keniensis* in western British East Africa, having been collected by Mr. Edmund Heller at Kaimosi, 25 miles northeast of Kisumu.

HALCYON SENEGALENSIS CINEREICAPILLUS, new subspecies.

UPPER NILE KINGFISHER.

Type-specimen.—Adult male, Cat. No. 216577, U.S.N.M.; collected at Kisingo, between Kutwi and Kigomma, Uganda, Africa, December 29, 1909, by Edgar A. Mearns. (Original number, 17859.)

Characters.—Most closely related to *Halcyon senegalensis senegalensis* (Linnæus) and *H. s. fuscopileus* Reichenow, the former from Senegal, the latter from Jaunde and Bipindi, in the Kamerun District. It differs from *senegalensis* in being slightly larger, with paler (more ashen) crown, and more whitish under parts; and from *fuscopileus* it differs in the much paler blue of the upper parts, the much paler and less brownish pileum, the paler and more finely vermiculated under parts, and also in its larger size.

Description of type (adult male).—Upper side of head and neck light neutral gray, sometimes washed with pale blue; lores and a narrow ring around the eye black; a white superciliary band begins

behind the nostril, encircling the eye to the black lores, and blending outwardly into the grayish color of the top and sides of the head; exposed portion of wing-quills, mantle, back, rump, and upper tail-coverts cendre blue, slightly palest on the rump and upper tail-coverts; upper wing-coverts and tips of quills black, inner webs of wing-quills white at base; exposed portion of tail-feathers italian blue above; under side, and concealed outer edge of upper side of rectrices black; chin, upper throat, and crissum white; remainder of under parts grayish white, very finely and abundantly vermiculated with gray, and sometimes faintly washed with blue on chest and sides of head and neck; iris very dark brown; upper mandible vermilion, sometimes dusky at tip; lower mandible entirely jet black, or, occasionally, with a streak of orange on its side; feet purplish black; claws, black.

Measurements of type (adult male).—Length of skin, 218; wing, 106; tail, 69; culmen (chord), 48; tarsus, 14.5.

Average measurements of four adult males (type included).—Wing, 106; tail, 68; culmen (chord), 46.5; tarsus, 14.6.

Average measurements of three adult females.—Wing, 105.2; tail, 68.7; culmen (chord), 46.7; tarsus, 13.

Geographical distribution.—Lakes Victoria and Albert, and the Upper White Nile (Bahr el Jebel).

Remarks.—The forms of *Halcyon senegalensis* quite closely resemble *Halcyon cyanoleucus* (Vieillot), but may be readily distinguished by the absence of a black band extending through and *behind* the eye.

HALCYON MALIMBICUS PRENTICEI, new subspecies.

LAKE VICTORIA ASH-FRONTED KINGFISHER.

Type-specimen.—Adult [male?], Cat. No. 217407, U.S.N.M.; collected on the Sesse Islands, in Lake Victoria, Uganda, East Africa, by Father Prentice, of the French Mission, Uganda. Not sexed by the collector, but, from its large size, supposed to be a male.

Characters.—Most closely related to *Halcyon malimbicus malimbicus* (Shaw) from West Africa, from which it differs in being slightly larger, with the blue parts of the plumage purer and paler, and the under parts pure white.

Description of type (and only specimen).—Head above deep bluish gray-green, tinged with brown around base of maxilla; a narrow line of white extends from the base of the bill at nostril over the eye; a broad band of black extends backwards from the bill, surrounding the eye, and extending posteriorly over the ear-coverts nearly to the back of the head; chin and throat pure white; sides of head, neck all round, upper chest, and edge of wing bremen blue; back from nape to rump Nile blue; scapulars and wing-coverts jet black; quills black, the inner web white at base, the basal half of the external web of the primaries, and nearly the entire outer web of the secondaries capri

blue; tail, china blue above, black below; entire under parts pure white, with a black spot on under wing-coverts at base of primaries; bill with maxilla peach red, becoming dusky brown at apex and on sides of basal half, and with mandible jet black; feet, in dry skin, blackish brown.

Measurements of type.—Wing, 112; tail, 74; culmen (chord), 54; tarsus, 17.

Measurements of adult male of Halcyon malimbicus malimbicus (Shaw) from Efulen, Kamerun, West Africa (Cat. No. 159986, U. S. Nat. Mus.).—Wing, 106; tail, 74; culmen (chord), 53; tarsus, 15.5.

Remarks.—This subspecies most closely resembles a Cameroon specimen of *malimbicus*, and is not closely related to the forms *forbesi* and *torquatus* from northwest Africa—Cameroons to Senegambia.¹

MELITTOPHAGUS VARIEGATUS LORINGI, new subspecies.

NYANZA BEE-EATER.

Type-specimen.—Adult male, Cat. No. 216565, U.S.N.M.; collected at Butiaba, Lake Albert, Uganda, Africa, January 6, 1910, by J. Alden Loring. (Original number, 674.)

Characters.—Most closely related to *Melittophagus variegatus variegatus* (Vieillot), but larger and much paler and purer yellow on the under parts.

Description of type (adult male).—Upper side of head and neck, mantle, back, rump, and upper tail-coverts calla green; outer wing-coverts and scapulars calla green; primaries yellowish oil green with subterminal blackish spots and orange-citrine bases to the inner webs; secondaries ochraceous-tawny at base, subterminally broadly banded with black, and narrowly tipped with pale gray; elongated innermost secondaries green, marked with turquoise-blue apically; tail with middle pair of feathers cedar green, becoming bluish on distal portion, and tipped with pale gray, the remaining rectrices ochraceous-buff tinged with green on outer webs, broadly black subterminally, and narrowly tipped with grayish white; a narrow eyebrow pale cerulean blue; eyelid beryl blue; a broad black band passes through and behind the eye; chin and throat light cadmium, below which is a double collar of antwerp blue anteriorly and hessian brown posteriorly; abdomen, sides, flanks, thighs, and crissum olive-ocher; edge of wing honey yellow; axillars, lining of wings, and bases of quills cinnamon-buff. Iris red; bill and feet black.

Measurements of type (adult male).—Wing, 89; tail, 69; culmen (chord), 35; tarsus, 11.

Measurements of one adult of Melittophagus variegatus variegatus (Vieillot) from West Africa.—Wing, 84; tail, 66; culmen (chord), 28; tarsus, 9.

¹ Oberholser, Proc. U. S. Nat. Mus., vol. 22, No. 1180, p. 12, 1899.

COLIUS STRIATUS JEBELENSIS, new subspecies.

RIVER JEBEL COLY.

Type-specimen.—Adult male, Cat. No. 216489, U.S.N.M.; collected at Gondokoro, Uganda, Africa, February 23, 1910, by J. Alden Loring. (Original number, 868.)

Characters.—Of the twelve accepted races of *Colius striatus* Gmelin the subspecies *jebelensis* is much more closely related to the subspecies *berlepschi* (Hartert) than to any of the others. It differs only in its smaller size, barred instead of plain nape and upper mantle, paler and browner coloration above, and more rufescent (less olivaceous) under parts.

Description of adult male and female.—Orbital region and lores black, very finely dotted with grayish white; forehead black; crown and crest light drab-gray; cheeks and ear-coverts silky grayish white; upper side of neck, mantle, and outer surface of wings grayish drab, the nape and upper mantle, only, finely and faintly cross-banded with darker; back and upper tail-coverts drab; upper surface of tail benzo brown; chin and throat blackish, each feather with a small grayish-white spot; sides of neck and sides of upper chest grayish brown, very finely cross-banded with dusky; chest, sides, abdomen, and crissum buckthorn brown; under surface of tail buffy citrine, shafts pale yellow except at tip, which is brown.

Measurements of type (adult male).—Length of skin, 285; wing, 94; tail, 194; culmen (chord), 13; tarsus, 21.5.

Average measurements of ten adult males.—Wing, 93.2; tail, 204.3; culmen (chord), 12.9; tarsus, 21.

Average measurements of six adult females.—Wing, 93.5; tail, 206.3; culmen (chord), 13.2; tarsus, 21.4.

Geographical range.—Upper Nile (Bahr el Jebel) from Gondokoro to Lake Albert and eastward across Uganda to Lake Victoria.

Remarks.—There is little possibility of mistaking this mousebird for any of the three forms from northeastern Africa, as Von Zedlitz has given excellent colored figures of *Colius striatus leucotis*, *C. s. erlangeri*, and *C. s. hulgerti*, in the *Journal für Ornithologie* for 1910, plate 10. *Colius striatus affinis* Shelley has been restricted to the coast region of East Africa from German East Africa to Southern Somaliland. From *Colius striatus berlepschi* Hartert, which occupies the interior equatorial region from Mount Kilimanjaro and New Heligoland west to Victoria Nyanza, it is readily distinguishable by its smaller size; and *berlepschi* from nearly all of its range may be known by the absence of cross-bars from the upper side of the neck and upper mantle.