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NOTES ON SOME BIRDS OF TROPICAL AFRICA, WITH  
DESCRIPTIONS OF THREE NEW FORMS<sup>1</sup>

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## THE SUBSPECIES OF THE NARINA TROGON

*Apaloderma æquatoriale* Sharpe, though repudiated by its own sponsor, has proved to be a species distinct from the Narina trogon of South Africa. My examination of Dr. Sharpe's type in the British Museum reveals that my *A. minus*<sup>2</sup> is a synonym of *æquatoriale*, earlier described from the forests of the Cameroon. Differences in our methods of measuring the wing led me to believe that *minus* had a shorter wing;

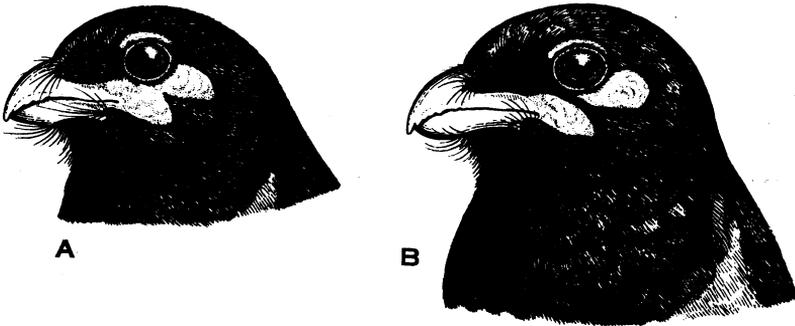


Fig. 1. Heads of two African Trogons, to show extent of bare cheek patches.

A, *Apaloderma æquatoriale*, adult male, from Ituri district. B, *A. narina brachyurum*, adult male, from Ituri district. From sketches of freshly killed examples, by the author. Three-fourths natural size.

but I now find that *æquatoriale* ranges from the Southern Cameroon eastward to the Ituri, with so little difference in size that not even a subspecific distinction is tenable. One of its salient characters has not yet been placed on record. The narrow line of green feathers which in *A. narina* crosses the cheeks, from lores to ear-coverts, and separates the two patches of bare green skin, is interrupted in *æquatoriale* so that the two bare patches—here yellow—are confluent. We thus have a ready means of distinguishing the two species.

<sup>1</sup>Scientific Results of the American Museum Congo Expedition. Ornithology, No. 8.  
<sup>2</sup>1915, Bull. Amer. Mus. Nat. Hist., XXXIV, p. 510.

When describing *minus* I called attention to the small size of representatives of *Apaloderma narina* in the Ituri Forest, and also (on page 510) to the gray breast of females of the latter species. The longer-tailed *narina* of South Africa and many other parts of the continent has in the adult female a cinnamon color on the breast and lores which is not very different from that in *æquatoriale*. Dr. V. G. L. van Someren has recently mentioned the grayer breasts of Uganda specimens,<sup>1</sup> as compared with typical females from South Africa; and now that I have gone over the series in many museums of Europe and America, I am able to show that the typical form of *Apaloderma narina* is a bird of woods and gallery forests in the savanna districts of East and South Africa. *A. narina constantia* is its representative race in Upper Guinea; and, although the rain forest of Lower Guinea is largely occupied by *A. æquatoriale*, it harbors also a short-tailed race of *narina*, with a gray breast in the female. The latter ranges from Southern Cameroon east to the Budongo Forest in Uganda.

The forest race of *narina* is therefore the form which still needs a name. Before proposing a new one, we must assure ourselves that *A. rufiventre* of Dubois<sup>2</sup> does not apply. His type was an adult male from "Tanganyika, 1884," collected by Storms, which fortunately is still preserved in the Brussels Museum. The dull reddish coloration for which it was named I found to have completely disappeared, so that the specimen looks like any old bleached skin of *narina*, save that the green of the upper back had been turned bronze, as though by some liquid. As Dubois stated, the line of feathers across the cheek is complete. According to my measurements the wing (straightened) measures 135 mm., the tail, 175; and, because of the length of tail especially, I assign it to *Apaloderma narina narina*. The dimensions given by Dubois are: wing, 132; tail, 170. A female specimen, also taken by Storms near Tanganyika, has a wing of 134 mm. and tail of 178.

For purposes of comparison I add a table of measurements which shows the size relations of the various forms of the present genus of trogons.

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<sup>1</sup>1922, *Novitates Zoologicae*, XXIX, p. 72.  
<sup>2</sup>1896, *Proc. Zool. Soc. London*, p. 999.

		WING (straightened)	TAIL
<i>Apaloderma narina narina</i>	35 males	129-145	160-200
<i>Apaloderma narina narina</i>	7 females	128-144	164-195
<i>Apaloderma narina constantia</i>	2 males	126-133	163-164
<i>Apaloderma narina brachyurum</i>	19 males	122-136	146-166
<i>Apaloderma narina brachyurum</i>	11 females	122-136	149-170
<i>Apaloderma æquatoriale</i>	27 males	115-126	136-161
<i>Apaloderma æquatoriale</i>	7 females	110-125	140-156

The average differences in measurements are well marked, but overlapping is considerable. With further aid from the color characters, almost every specimen of *narina* can be definitely referred to its proper subspecies. The interrupted feathering of the cheeks always betrays *Apaloderma æquatoriale*.

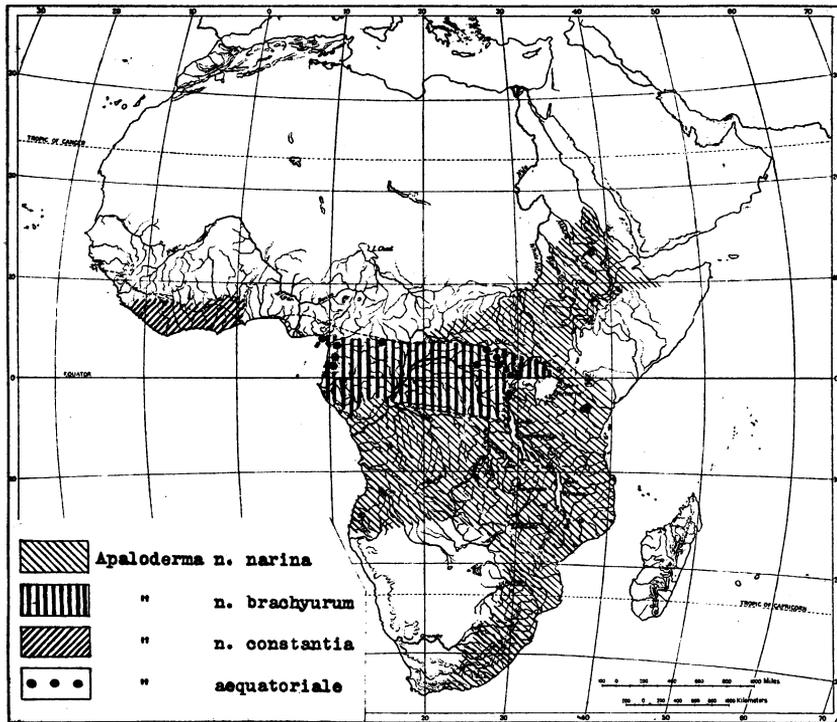


Fig. 2. Map of Africa, showing the ranges of all forms of *Apaloderma*.

Localities from which *A. æquatoriale* is known are indicated by dots; but its range is doubtless continuous, though a little more restricted than that of *A. n. brachyurum*.

**Apaloderma narina brachyurum**, new subspecies

**SUBSPECIFIC CHARACTERS.**—Similar to *A. narina narina* of southern Africa, but the wing averaging 8 mm. shorter, and the tail 23 mm. shorter. The adult female differs also from that sex of typical *narina* in having the chest and lores not washed with cinnamon, but clear gray with distinct metallic green reflections at the sides. Though agreeing more closely in size with *A. n. constantia*, the male of the present form differs in having the wing-coverts and secondaries of a darker color, the whitish vermiculations fewer and finer.

**TYPE.**—♂ adult, No. 158881, Amer. Mus. Nat. Hist.; Avakubi, Ituri District, Belgian Congo, September 27, 1913 (Lang and Chapin).

**MEASUREMENTS OF THE TYPE.**—Wing (straightened), 125 mm.; wing (chord), 120; tail, 148; exposed culmen, 17.5; metatarsus, 14.

**DISTRIBUTION.**—From the coast of Southern Cameroon and Spanish Guinea through the rain forest of the Congo basin to the Upper Ituri, occurring also in the heavier forests of Uganda (the Budongo Forest, for example) and eastward to Chagwe.

**SPECIMENS EXAMINED.**—Cameroon: Efulen, 1; Bipindi, 1. Spanish Guinea: Asseng, 1. Belgian Congo: Banalia, 1; Avakubi, 11; Gamangui, 3; Bafwabaka, 2; Pawa, 1; Medje, 1; Poko, 2; Ituri Forest near Kilo, 1; Forest north of Beni, 1. Uganda: Budongo Forest, 5; Kwa Kitola, 1.

**SWALLOWS OF THE GENUS *PSALIDOPROCNE* IN THE  
NORTHEASTERN CONGO**

In the forested parts of the Ituri and southern Uelle districts we found not only the eastern race of the short-tailed species, *Psalidoprocne nitens centralis* Neumann, but two other species with deeply forked tails, one having dark gray under wing-coverts, the other white ones. The two latter seem to occupy separate but adjacent territories, for the one darker beneath the wings was found at Avakubi and westward through the forest area at least as far as Stanleyville and the lower Aruwimi River. At Medje, a post which occupies a clearing near the northern edge of the Ituri Forest, its place is taken by the species with white beneath the wing, the latter extending out into the savannas of the Uelle drainage at least to Niangara, Nzoro, and Faradje. On the White Nile it must in turn be replaced by *P. albiceps*, which alone has been taken in the Lado Enclave. To the northward in the Bahr-el-Ghazal Province no species of the genus has as yet been reported.

The long-tailed *Psalidoprocne* of Avakubi, with dark-gray axillary plumage, has already been referred to *P. bamingui* Alexander by Bannerman,<sup>1</sup> who had specimens collected by Dr. C. Christy. That these birds of the Ituri do agree rather closely with Alexander's type I have con-

<sup>1</sup>1920, Revue Zool. Africaine, VII, p. 291.

vinced myself; but the agreement extends even further, to the type of *P. chalybea* Reichenow, from Victoria, Cameroon, which I have compared with one of our specimens. Though realizing what small differences in the tone of the gloss of the plumage, in the color of the under wing-coverts, or in the shape of the tail, may be of importance in this genus, I prefer to call all these specimens, from the western Cameroon to the Ituri, *P. chalybea* Reichenow. It may be added that in the broad area separating the Bamingui River and the Aruwimi, two adults of *chalybea*, identified by Professor Reichenow, were collected by Schubotz at Yakoma (on the upper Ubangi River) and are now in the Frankfort Museum,

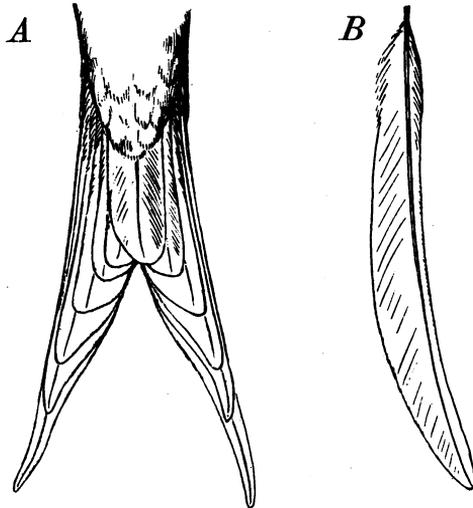


Fig. 3. Differences in the tails of two species of *Psalidoprocne*.

A, Tail of *P. mangbettorum* (adult male, type specimen) seen from above. B, Right outermost tail-feather of *P. oleaginea* (drawn from the type, an adult male, in the Museum of Lord Rothschild at Tring). Both figures three-fourths natural size.

where I have examined them. According to Professor Reichenow,<sup>1</sup> the species also ranges westward to Liberia. He had compared an adult bird from Sekondi (Gold Coast) with his type, but I feel uncertain as to the Liberian record.

Even greater difficulty was experienced in naming the species from the Uelle with white axillaries, for its nearest ally has proved to be *P. oleaginea* Neumann,<sup>2</sup> which Professor Reichenow swept inconsiderately into the synonymy of *P. petiti orientalis*.<sup>3</sup> Since examining the type and

<sup>1</sup>1903, 'Die Vögel Afrikas,' II, p. 428.

<sup>2</sup>1904, Orn. Monatsber., XII, p. 144 (Kaffa, in S. Abyssinia).

<sup>3</sup>1905, 'Die Vögel Afrikas,' III, p. 829.

two other males of *oleaginea* in the museum at Tring I am convinced of their distinctness from *orientalis*, because of differences in body color and the shape of the outer rectrices. I should not regard *oleaginea* as a subspecies of *orientalis*, though its describer did; nor would I follow Professor Reichenow in calling *orientalis* a race of *petiti*. Many of these saw-winged swallows, despite their slight characters, seem to be stable forms and worthy of binomial designation as long as actual intergradation cannot be proved.

With regard to *P. blanfordi* Blundell and Lovat,<sup>1</sup> from Southern Abyssinia, Neumann had seen the type in London<sup>2</sup> before describing *oleaginea* as new. He thought that *blanfordi* would not prove separable from *pristoptera*.



Fig. 4. Map to illustrate the ranges of three species of *Psalidoprocne*: *chalybea*, *mangbettorum*, and *oleaginea*, as known at present.

<sup>1</sup>1899, Bull. British Orn. Club, No. LXVI, November.

<sup>2</sup>1905, Journal f. Orn., LIII, p. 203.

*Psalidoprocne orientalis* Reichenow of East Africa differs from the allied species of the Uelle in having both wings and tail longer, the green gloss of the body plumage duller, and the under wing-coverts grayer in places. *P. oleaginea* Neumann is closer, but still differs in that the oily-green gloss of its body is slightly browner, when viewed in a good light. Its wings are longer, the outermost rectrices taper less, or are broader toward the tip; but the best distinction of all is seen in the under wing-coverts. The "axillaries" and under wing-coverts are white in *oleaginea*, with the exception of the greater under primary-coverts, which are almost wholly fuscous. These, the longest of the under wing-coverts, are white like the others in the bird of the Uelle, which I propose to name as follows.

***Psalidoprocne mangbettorum*, new species<sup>1</sup>**

TYPE.—♂ adult, No. 159746, Amer. Mus. Nat. Hist.; Medje, Ituri district, Belgian Congo, March 20, 1910 (Lang and Chapin).

DESCRIPTION OF TYPE.—Head and body, above and below, black with a rich oily-green gloss. Quills of wings and tail similar but with less luster. Under wing-coverts entirely pure white, including the lengthened marginal coverts commonly termed "axillaries." Outermost primary in this sex has of course a pronounced saw edge; and the tail is deeply forked, with broad middle feathers, the long outermost ones tapering narrowly at the tip.

MEASUREMENTS OF THE TYPE.—Wing, 97 mm.; tail, 89 (middle pair of rectrices 45); exposed culmen, 5; metatarsus, 9.5. Four other males measure as follows: wing, 97.5–100.5; tails, 85–92.5 (middle feathers 43–46).

DISTRIBUTION.—Extends, so far as known, from the neighborhood of the Nepoko River northward and northeastward to the Congo-Nile divide, possibly a little way into the Bahr-el-Ghazal.

**THE LARGEST SUBSPECIES OF *PYRENESTES OSTRINUS***

Professor Neumann,<sup>2</sup> Mr. Bannerman,<sup>3</sup> and other writers, have applied the name *ostrinus* Vieillot to the largest form of this extremely variable weaver-finch, such as occurs in Northern Nigeria. Vieillot's type, however, is still preserved in the Paris Museum of Natural History, where Monsieur J. Berlioz kindly showed it to me. It is not so large a bird, but resembles more closely in dimensions the specimens from the Eastern Ituri district which Neumann<sup>4</sup> referred to *P. o. centralis*. My measurements of the type of *ostrinus* (an adult male) are: wing, 64 mm.; tail, 48; bill (from nostril), 10; width of lower mandible at base, 15;

<sup>1</sup>From the Mangbetu tribe, inhabiting a part of the same country.

<sup>2</sup>1910, Journ. f. Orn., LVIII, p. 527.

<sup>3</sup>1922, Rev. Zool. Africaine, IX, p. 308.

<sup>4</sup>1910, Journ. f. Orn., LVIII, p. 529.

metatarsus, 20. It is labelled "Afrique Occidentale," and came presumably from either Lower Nigeria or the Gaboon Coast, in both of which places individuals of similar size have since been collected.

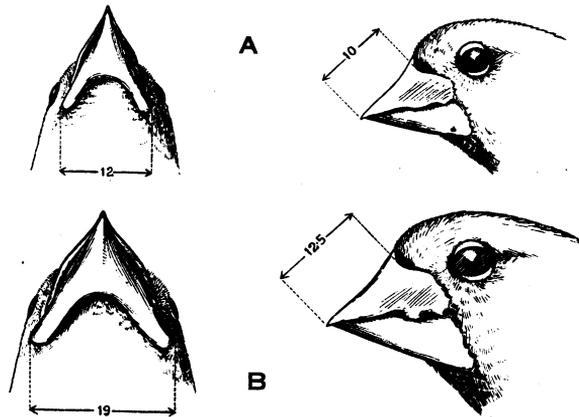


Fig. 5. Beaks of the large and small races of *Pyrenestes ostrinus*, to show the degree of difference in size, as well as the method of measuring.

A, *P. o. rothschildi*, adult male from Avakubi, Ituri District, Belgian Congo. B, *P. o. maximus* adult male from Faradje, Upper Uelle District. Natural size.

The larger form, with the mandible from 17.5 to 20 mm. wide, besides inhabiting Northern Nigeria, has been collected by Dr. V. G. L. van Someren in parts of Uganda, and by the Congo Expedition of the American Museum at Faradje in the Upper Uelle district and at Stanleyville on the Upper Congo. It apparently lacks a subspecific name, and I therefore designate it as follows.

#### ***Pyrenestes ostrinus maximus*, new subspecies**

SUBSPECIFIC CHARACTERS.—Like *P. ostrinus ostrinus* Vieillot, but both sexes much larger, the beak especially far stouter.

TYPE.—♂ adult, No. 162176, Amer. Mus. Nat. Hist.; Faradje, Upper Uelle District, Belgian Congo, April 14, 1911 (Lang and Chapin).

DESCRIPTION OF TYPE.—Coloration the same as in the typical race: body mostly black, with head, chest, and stripes down sides of breast bright scarlet; upper tail-coverts of same color, and upper surface of tail darker red. Under tail-coverts faintly spotted with red, but mostly black. Wing, 73 mm.; tail, 55.5; bill (from nostril), 12; width of mandible at base, 20.1; metatarsus, 22.5.

A paper dealing in full with all the species and races of the genus *Pyrenestes*, and their distribution, has been submitted to the Editor of the Bulletin of the American Museum of Natural History for publication in a forthcoming volume.