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MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS XXI

by

P. A. CLANCEY

(Director, Durban Museum, Durban)

GEOGRAPHICAL VARIATION IN THE GOAWAY BIRD *CORYTHAIXOIDES CONCOLOR* (SMITH)

The Goaway Bird was first introduced to science by Dr. Andrew Smith as *Corythaix concolor* in the *South African Quarterly Journal*, 2nd series, Oct.-Dec. 1833, p. 48, and was stated to "inhabit South Africa, inland of Port Natal". Overlooking his prior description, Dr. Smith redescribed the species in his *Report of the Expedition for Exploring Central Africa*, 1836, p. 54, under the name *Coliphimus concolor*, the species then stated to "inhabit the country from Kurrichaine to the Tropic" at about 25° 24' S. lat. The Goaway Bird does not occur in Natal, and must have been encountered by Smith during the course of his political visit to Zululand in 1832, and the Umfolozi R. may be fixed as the restricted type-locality.

In addition to the nominate race, several other subspecific divisions of the species have been proposed by workers over the years, these being in chronological order: *C.c.pallidiceps* Neumann, 1899: Angola and Benguela; *C.c.bechuanae* Roberts, 1932: Gaberones, south-eastern Bechuanaland Protectorate; *C.c.chobiensis* Roberts, 1932: Kabulabula, Chobe R., northern Bechuanaland Protectorate; and *C.c.cuanhamae* Rosa Pinto, 1962: Pereira d'Eça, Huila, Angola. There is no measure of agreement among workers on the number of races to be admitted in our formal subspecific arrangement of the

populations, and most workers only admit *C.c.concolor*, which is generally erroneously assumed to have no olive suffusion on the upper breast, and *C.c.pallidiceps*, with a whitish face and much green on the breast.

A critical study of the variation exhibited by this species recently carried out in the Durban Museum, utilizing the pooled specimen resources of several museums, shows that four races must be admitted. Variation in this species affects the general shade of the grey plumage and the colouration of the face, the extent to which the breast is overlaid with olive-green, and the physical proportions, including the length of the decomposed coronal crest. For the loan of material I am grateful to the Directors of the following museums: Natal Museum, Pietermaritzburg; the Transvaal Museum, Pretoria; and the National Museum of Southern Rhodesia, Bulawayo.

The variation exhibited by the Goaway Bird is largely clinal, though sufficiently stepped as to permit of the naming of races, using for this purpose combinations of colour and mensural variables. The arrangement of the species into two racial groups of populations on the presence or absence of a green wash on the upper breast, as advocated by many workers, is fundamentally wrong, as the topotypical population found in Zululand, eastern Swaziland and the Maputo district of Sul do Save, Moçambique, consists of birds showing a moderate overlay of olive-green to the breast, though admittedly not as much as in those of the arid interior and west of sub-continental South Africa. The rather pale and bluer grey birds found to the north of the Zambesi, which quite lack any olive-green wash to the breast, are definitely not *C.c.concolor*, and are considered to represent a new race, which is formally described below in the absence of a suitable name in synonymy. In assessing the geographical variation of *C.concolor* care must be taken to see that material is free from soil and vegetable contamination. Some specimens studied are quite pinkish through the birds having dusted in red soils, and most birds not in fresh dress are much stained about the face and throat by vegetable juices. In dealing with size variation it should be borne in mind that sub-adult birds carry juvenile flight- and tail-feathers for some time following the completion of the body moult, and small-sized specimens from within the range of populations of big birds are almost invariably found to be sub-adults with juvenile remiges and rectrices.

The populations of *C.concolor* can be arranged in four races, the nomenclature, characters and ranges of which are given below:

(a) **Corythaixoides concolor concolor** (Smith)

Corythaix concolor A. Smith, *South African Quarterly Journal*, 2nd series, 1833, p. 48: "Inhabits South Africa, inland of Port Natal". Type-locality restricted to the Umfolozi R., Zululand.

Upper-parts light bluish smoke grey. On under-parts, upper breast with a light wash of Grayish Olive (pl. xlvi), and with the lower breast and abdomen about Light Grayish Olive (same pl.). Decomposed crest short — 60-65 mm. long.

Wings of 10 ♂♀ 198-212 (206.4), tails 223-245 (230.8) mm.

Range: Eastern Zululand, eastern Swaziland, eastern Transvaal (slightly intermediate towards *C.c.bechuanae* in north-east) and southern Portuguese East Africa, northwards to southern Nyasaland and parts of northern Moçambique.

Specimens examined: 20.

Remarks: Roberts, *Annals Transvaal Museum*, vol. xvi, 1, 1935, p. 90 gives the wings of *C.c.concolor* in the Transvaal Museum collection as ♂♂ 202-210, ♀♀ 205-214 mm., which measurements agree closely with those given above.

The colours employed in this report are those of Ridgway, *Color Standards and Color Nomenclature*, 1912.

(b) **Corythaixoides concolor bechuanae** Roberts

Corythaixoides concolor bechuanae Roberts, *Annals of the Transvaal Museum*, vol. xv, 1, 1932, p. 25: Gaberones, south-eastern Bechuanaland Protectorate.

Synonyms: *Corythaixoides concolor chobiensis* Roberts, *Annals of the Transvaal Museum*, vol. xv, 1, 1932, p. 25: Kabulubula, Chobe R., northern Bechuanaland Protectorate.

? *Corythaixoides concolor cuanhamae* Rosa Pinto, *Bol.Inst.Invest. Cient.Ang.* (Luanda), vol. i, 1962, p. 23: Pereira d'Éça, Huila, southern Angola. Not seen (see comments below).

Slightly darker smoke grey throughout than the nominate race, and rather more dusky over the face, especially distally; chin and upper throat also averaging darker. Olive-green overlay on upper breast darker and more extensively distributed, and terminal surfaces of the outer rectrices blacker, less bronzy green, ventrally. Larger in size, and crest averaging longer — 60-70 mm.

Wings of 10 ♂♀ 215-222.5 (219.5), tails 234-251 (242.4) mm.

Range: Northern and western Transvaal, the plateau of Southern Rhodesia (showing influence of the smaller *C.c.concolor* in the mid-

Limpopo R. drainage), Bechuanaland, the Caprivi Strip and adjacent north-eastern South-West Africa, southern and south-eastern Angola and south-western Northern Rhodesia (slightly intermediate towards *C.c.molybdophanes*).

Specimens examined: 30.

Remarks: Roberts, *loc.cit.* (1935), gives the wings of paratypical *C.c.bechuanae* as ♂♂ 218-224, ♀♀ 210-218 mm.

Topotypes of *C.c.cuanhamae* Rosa Pinto, recently proposed from Huila in southern Angola, have not been available to me, but judging by the nature of the characters outlined in the original description, which is in Portuguese, this new form is either extremely close to or synonymous with *C.c.bechuanae*, several specimens of which have been examined from the central Caprivi Strip, which area lies not far removed from the range of *C.c.cuanhamae* as given by Rosa Pinto, and which is in the same faunistic sub-region as Huila. *C.c.cuanhamae* is described as similar to *C.c.pallidiceps* in the density of the green pigment on the breast, but differs in having a shorter crest and darker face — just the very differences which separate *C.c.bechuanae* from *C.c.pallidiceps*. Rosa Pinto had no material of the Goaway Bird from the Caprivi Strip, Bechuanaland, Southern Rhodesia and the western Transvaal when working out the characters of his new taxon, which was an unfortunate omission.

Through the kindness of Mr. O. P. M. Prozesky, the Ornithologist of the Transvaal Museum, I have been able to examine two paratypes of *C.c.chobiensis*. These are similar to all others studied from adjacent parts of Bechuanaland and the Caprivi Strip, and seem to me to be in no way nomenclaturally separable from *C.c.bechuanae*, though they admittedly exhibit reduced olive-green on the breast, in so doing indicating the trend of variation evident further north, in which populations the breast lacks any overlay of olive, and the ventral plumage is lighter and bluer throughout.

(c) ***Corythaixoides concolor pallidiceps*** Neumann

Corythaixoides concolor pallidiceps Neumann, *Journal für Ornithologie*, vol. xlvii, 1899, p. 66: Angola and Benguela.

Similar to *C.c.bechuanae*, but with a rather more extensive olive-green pectoral wash, and rather paler throughout, most noticeable over the lower breast and abdomen. Face and sides of neck lighter and more silvery, becoming quite white over the caudad and dorsal surfaces of the orbits. Olive-green on breast slightly lighter and more yellowish (pure Citrine-Drab (pl. xl)), and outermost rectrices still blacker apically. Ranging rather larger in size, and with a longer

and fuller decomposed crest, which is paler, buffier, less grey. Crest-length 66-72 mm.

Wings of 10 ♂♀ 216-228.5 (222.0), tails 241-259 (252.6) mm.

Range: Western Angola from Moçamedes and north-western Huila to coastal Benguela; also at Luanda and up the lower Cuanza to Barraca (*vide* Traylor, *Check-list of Angolan Birds*, 1963, p. 77), and recorded (? this race) from the Congo R. mouth. Ranges south to South-West Africa, and almost certainly extending seasonally to extreme western Bechuanaland on the Nossob R., and common south on the Fish R. to about Seeheim, Great Namaqualand. *C.c.pallidiceps* and *C.c.bechuanae* evidently meet and intergrade. but material from critical areas to show this is not currently available,

Specimens examined: 12.

Remarks: This large, pale race has been generally accepted and need not be discussed.

(d) ***Corythaixoides concolor molybdophanes***, subsp.nov.

Type: ♂, adult. 5 miles east of Lusaka, Northern Rhodesia. 1 December, 1952. Collected by R. W. Gingell. In the collection of the Durban Museum. D.M.Reg.No.8507.

Diagnosis: Similar to *C.c.concolor*, but with the sides of the head and entire under-parts more bluish leaden, less smoky, grey, and without any suffusion of olive-green to the breast, which is immaculate bluish grey. Similar in size and crest-length.

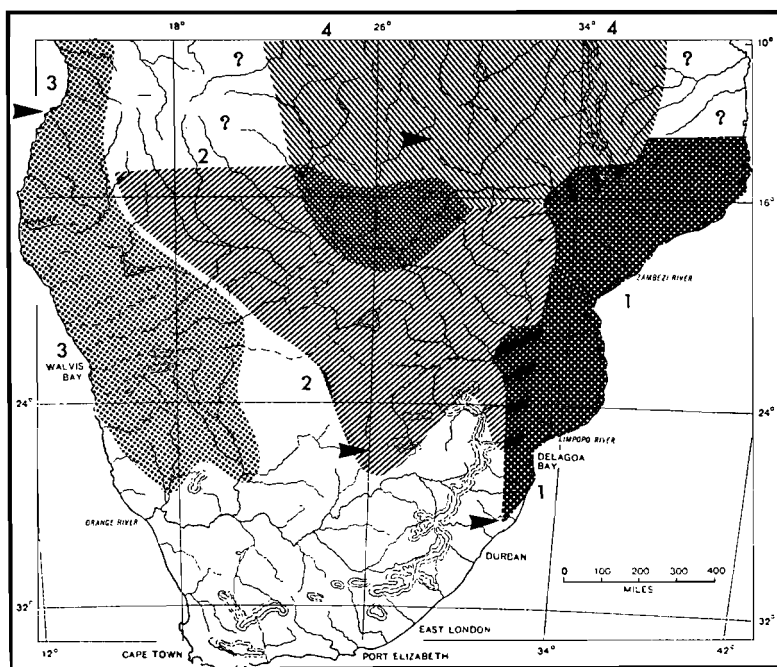
Wings of 8 ♂♀ 205-211 (208.3), tail 234-246 (241.4) mm.

Range: The savannas of the southern Congo, particularly in the Upper Katanga (listed by Schouteden, *De Vogels van Belgisch Congo en van Ruanda-Urundi*, vol. i, 1948-1950, p. 504, from Kabeça, Lukafu, Kakyelo, Luombwa/Luapula, Kilwa, Sampwe, Shindaika, Kinyama, *inter al.*), adjacent north-eastern Angola, Northern Rhodesia (except for south-west where it intergrades with *C.c.bechuanae*), northern Nyasaland, southern Tanganyika and contiguous districts of northern Moçambique.

Measurements of the Type: Wing (flattened) 211, tail (in moult) 245 mm.

Specimens examined: 10 (mainly from Northern Rhodesia).

Remarks: The populations here named *C.c.molybdophanes* have almost without exception been referred by workers to *C.c.concolor* on the basis of a lack of an olive-green overlay to the breast, and on the short crest and dark face. As demonstrated above, *C.c.concolor*, as understood on the basis of topotypes, has the upper breast moderately overlaid with green.



Sketch-map showing the approximate ranges of the four geographical races of the Goaway Bird *Corythaixoides concolor* (Smith) in southern Africa.

1. *Corythaixoides concolor concolor* (Smith)
 2. *Corythaixoides concolor bechuanae* Roberts
 3. *Corythaixoides concolor pallidiceps* Neumann
 4. *Corythaixoides concolor molybdophanes* Clancey
- Type-localities are indicated by black arrowheads.

A NEW SUBSPECIES OF RED-BILLED HORNBILL *TOCKUS ERYTHORHYNCHUS* (TEMMINCK) FROM THE SOUTH-EASTERN LOWLANDS OF AFRICA

Writing in the *Durban Museum Novitates*, vol. v, 18, 1959, pp. 238-242, I demonstrated that the populations of *Tockus flavirostris* (Rüppell) occurring in the lowlands of south-eastern Africa consisted of birds mensurally smaller than in those of the dry interior and extreme west of sub-continental South Africa. A recent study of the South African populations of the sympatric *Tockus erythrorhynchus* (Temminck) shows conclusively that the size variation in *T. flavirostris* is paralleled in the former species, the size-difference between south-eastern lowland birds and those of the interior plateau (*T. e. rufigrostris* (Sundevall), 1850: Apies R., Pretoria, Transvaal) being of such magnitude that I consider it imperative that the present taxon *T. e. rufigrostris* be broken down into two races.

Tockus erythrorhynchus degens, subsp. nov.

Type: ♂, adult. Mlaula Estates, Stegi district, north-eastern Swaziland. 24 May, 1963. Collected by Walter J. Lawson. In the collection of the Durban Museum. D.M.Mus.Reg.No.15305.

Diagnosis: Similar to *T.e.rufirostris*, described from Pretoria, Transvaal, at c. 5,500 ft. a.s.l., but much smaller in size, thus: 10 ♂♂ wings 166-179 (171.6), tails 177-191 (184.4), culmens (from base) 67-77 (73.1), 5 ♀♀ wings 160-163 (161.2), tails 167-171 (168.8), culmens 54-64 (58.8), as against 5 ♂♂ of *T.e.rufirostris* wings 183-195 (188.2), tails 192-213 (200.8), culmens 77-102 (83.4), 7 ♀♀ wings 170-180.5 (175.9), tails 174-190 (181.3), culmens 63-75 (67.9) mm.

Material examined: *T.e.degens*, 15 (Lubuli, south-eastern Swaziland, 1; Mlaula Estates, Stegi district, north-eastern Swaziland, 7; Newton, eastern Transvaal lowveld, 7). *T.e.rufirostris*, 12 (Motale R., Transvaal, 3; Blouberg, Transvaal, 2; Waterberg, Transvaal, 2; Rustenburg, Transvaal, 4; Northampton, Transvaal, 1). *T.e.damarensis* (Shelley), 2. *T.e.erythrorhynchus*, 2.

Range: Northern Zululand from about the Umduna and Mkuzi Rivers, north-west of Lake St. Lucia, and the country to the west of the Lebombo towards Candover, northwards through eastern Swaziland to the eastern Transvaal lowveld, south-eastern Southern Rhodesia, southern Moçambique and southern Nyasaland. Presumably intergrades with *T.e.rufirostris* to the west of its established range.

Measurements of the Type: Wing 169, tail 182, culmen 76 mm.

Remarks: The three races of Red-billed Hornbill found in South Africa will now stand as follows:

- (a) ***Tockus erythrorhynchus degens*** Clancey, 1964: Mlaula Estates, Stegi district, Swaziland.

Smallest race. Wings of ♂♂ 166-179, ♀♀ 160-163 mm.

Range: As given above.

- (b) ***Tockus erythrorhynchus rufirostris*** (Sundevall), 1850: Apies R., Pretoria, Transvaal.

Similar to *T.e.degens* in colouration but much larger in size. Wings of ♂♂ 183-195, ♀♀ 170-180.5 mm.

Range: Extends from south-western and southern Angola and northern and north-eastern South-West Africa to Bechuanaland, south-western Northern Rhodesia (Luangwa R. valley populations probably *T.e.degens*), the plateau of Southern Rhodesia and the western and northern Transvaal. Intergrades with *T.e.damarensis*

in the Kaokoveld and in northern and north-eastern Damaraland, South-West Africa.

Note: *T.e.ngamiensis* (Roberts), 1932: Maun, Ngamiland, Bechuanaland, based on an allegedly longer bill, is invalid and a synonym of *T.e.rufirostris*.

(c) ***Tockus erythrorhynchus damarensis*** (Shelley), 1888: Otjimbingwe, Damaraland, South-West Africa.

Still larger than *T.e.rufirostris*. Wings of ♂♂ 186-203, ♀♀ 181-186 mm. (after Sanft). Rather whiter over the face and frons, and whiter throughout below, less variegated or marmorated on the throat and upper breast with black. Basal surface of outermost rectrices with reduced blackish grey, and inner secondaries (not tertials) largely plain white.

Range: Restricted to western and central Damaraland, South-West Africa.

The nominate race from further north in Africa lacks the sub-terminal black bar to the outer tail-feathers and is plain white below, lacking the black marmorations to the lower throat and upper breast, in addition to other differences. It does not occur in South Africa, *contra* Macdonald, *Contr.Ornith.West.South Africa*, 1957, pp. 79-81, and Macdonald and Hall, *Annals of the Transvaal Museum*, vol. xxiii, 1, 1957, p. 13.

THE GEOGRAPHICAL RACES OF THE YELLOW-THROATED SPARROW *PETRONIA SUPERCILIARIS* (BLYTH)

Current opinion is divided as to the extent to which the populations of the Yellow-throated Sparrow *Petronia superciliaris* (Blyth), 1845: Cape Town, Cape Province, South Africa, are divisible into named subspecies, and most conservative workers treat the species binomially. Roberts, *Journ.S.Afr.Ornith.Union*, vol. viii, 1, 1912, p. 46, in proposing *P.s.bororensis* Roberts, 1912: Villa Pereira, Boror, northern Moçambique, was the first worker to demonstrate geographical variation in the species. Later, the same worker in *Ann.Transv.Mus.*, vol. xvi, 1, 1935, p. 170, and *Birds of South Africa*, 1940, p. 335, admitted a third race, namely, *P.s.flavigula* (Sundevall), 1850: Hamanskraal, north of Pretoria, Transvaal. Other workers have consistently refused to follow Roberts' lead, admitting no races, though Chapin, *Birds of the Belgian Congo*, part iv, 1954, p. 293, with his usual perspicacity, appreciated that the species showed quite marked variation, though he, too, followed the lead of others, tentatively admitting no races. Recently, the S.A.O.S. List Committee, *Ostrich*, vol. xxxiii, 1, 1962, p. 19, admitted *P.s.*

flavigula, following on the findings of Clancey, *Ostrich*, vol. xxiv, 3, 1953, pp. 128, 129.

A critical study of the variation exhibited by *P.superciliaris* recently carried out in the Durban Museum, utilizing the pooled specimen resources of the East London, Durban, Natal and Transvaal Museums, as well as the large holdings of the National Museum of Southern Rhodesia, Bulawayo, when 318 specimens were studied in great detail, shows that four good races of this sparrow can be admitted. Variation in *P.superciliaris* affects the depth of the brown colouration of the upper-parts and wings, the colouration of the lower breast, abdomen and flanks and general size. Large-sized and saturated populations occur in the extreme north and far south of the species' range, interposed between which are populations of markedly lighter birds. The pale birds themselves are divisible into two racial taxa on the basis of size, the populations of the humid, hot coastal lowlands of eastern Africa being significantly smaller than those resident on the plateau of the interior. Much of the doubt which has arisen as to the validity of races in this sparrow stems from the condition of much of the material in our collections. This arboreal sparrow wears rapidly, and the plumage becomes seriously eroded in the breeding season. This wear is irregular in that populations resident in moist regions retain much of their dark colouration and the feathers do not erode to the same extent as in birds living in dry districts, while the species' habit of dust-bathing also results in serious discolouration of specimens in some areas. Late breeding material is often also badly stained over the head and under-parts with insect and larval juices. In the face of these obstacles, I have arrived at the findings detailed below using material only in fresh plumage, taken mainly between February-June, and of recent collecting (since 1950).

The four subspecific taxa it is proposed to recognise in the Yellow-throated Sparrow are as hereunder detailed:

(a) ***Petronia superciliaris superciliaris*** (Blyth)

Gymnorhis superciliaris Blyth, *Journ.Asiatic Soc. of Bengal*, vol. xiv, 1845, p. 553: "South Africa". Type-locality restricted to Cape Town, Cape Province, by Grant and Clancey, *Ostrich*, vol. xxiv, 2, 1953, p. 128.

Head-top Fuscous (pl. xlvi), grading into Olive-Brown (pl. xl) on the hind-neck; mantle streaked with dull black, the feathers edged Buffy Brown (pl. xl); rump Olive-Brown (same pl.). Supercilium pale buffy white; lores and broad post-ocular streak dark fuscous. Underparts with breast and lateral surfaces dull buffish grey, faintly

streaked with buff; gular spot lemon chrome; lower breast and abdomen greyish white.

Measurements: Wings of 18 ♂♂ 94-99 (96.6), tails 58-65 (61.2), wings of 5 ♀♀ 89-92 (90.6), tails 57-60 (58.1) mm.

Material examined: 27 (Eastern Cape Province, 17; Pondoland, 1; Natal, 8; Zululand, 1).

Type: No longer in existence (see Grant and Clancey, *loc.cit.*).

Range: The southern Cape (stated by Stark, *Birds of South Africa*, vol. i, 1900, p. 158, to occur in the neighbourhood of Cape Town, cf. Winterbottom, *Ostrich*, vol. xxx, 3, 1959, pp. 139, 140), eastwards to East Griqualand and Pondoland, Natal and southern Zululand, north of which it grades into *P.s.bororensis*.

Remarks: Winterbottom, *loc.cit.*, has argued against the restriction of the type-locality of this sparrow to the Cape Town district on the grounds that there are no recent records of it from that locality, and he has recommended that the type-locality be changed to Port Elizabeth. Actually, the argument is purely a legal one and, fortunately, does not affect the subspecific taxonomy of the species, but as both Stark and Sclater were satisfied that it had occurred in the Cape Town area, I prefer to leave the type-locality as it was originally fixed in 1953.

(b) ***Petronia superciliaris flavigula*** (Sundevall)

Xanthodira flavigula Sundevall, *Oefv.K.Sv.Vet.-Akad.Förhandl.*, vol. vii, 1850, p. 98: "Caffraria superiore". Type from Hamanskraal, N. of Pretoria, Transvaal, *vide* Gyldenstolpe, *Ibis*, 1934, p. 292.

Similar to *P.s.superciliaris*, but lighter, less dark brown, more buffy above. Head-top about Olive-Brown (pl. xl), hind neck Buffy Brown (same pl.); mantle with dark brown, not black, streaks, edged laterally with Light Brownish Olive (pl. xxx); rump Buffy Brown. Post-ocular streak narrower and paler. On under-parts, much lighter, less brown, over the breast and lateral surfaces, and with the lower breast, abdomen and flanks markedly whiter; yellow throat-spot, paler and duller. Averaging a trifle smaller.

Measurements: Wings of 20 ♂♂ 94-98 (95.8), tails 57-62 (59.4), wings of 10 ♀♀ 88-93 (89.9), tails 55-59 (56.8) mm.

Material examined: 156 (Barotseland and southern Northern Rhodesia, 25; Bechuanaland, 9; Caprivi and South-West Africa (Tsumkwe), 2; Southern Rhodesia, 100; Transvaal 20).

Type: In the Naturhistoriska Riksmuseum, Stockholm.

Range: From southern Angola and north-eastern South-West Africa, including the Caprivi Strip, Bechuanaland, Barotseland and the southern district of Northern Rhodesia eastwards to the plateau of Southern Rhodesia, the western and northern Transvaal, the western Orange Free State and northern Cape. Intergrades with *P.s.bororensis* to the east of its established range.

(c) ***Petronia superciliaris bororensis* Roberts**

Petronia superciliaris bororensis Roberts, *Journ.S.Afr.Ornith. Union*, vol. viii, 1, 1912, p. 46: no *Type* designated, but Villa Pereira, Boror, northern Moçambique, is mentioned in the field notes.

Synonym: *Petronia superciliaris oraria* Grote, *Ornith.Monatsber.*, vol. xxxviii, 1930, p. 57: Magagoni, Rufu R., Tanganyika.

Compared with *P.s.superciliaris* rather lighter on the upper-parts in freshly moulted condition, more buffy, less dark brown, and in this respect like *P.s.flavigula*, but inclined to be colder, less warm. On under-parts differs from the nominate race in being lighter over the breast, and with the lower breast, abdomen and flanks much whiter, i.e., as in *P.s.flavigula*. Ranging markedly smaller in size than either *P.s.flavigula* or *P.s.superciliaris*.

Measurements: 14 ♂♂ wings 88-95 (90.7), tails 53-58.5 (55.0), wings of 8 ♀♀ 83.5-88 (85.9), tails 52-55 (53.2) mm.

Material examined: 59 (Portuguese East Africa, 26; southern Nyasaland, 7; south-eastern Northern Rhodesia, 6; south-eastern Southern Rhodesia, 2; eastern Swaziland, 14; north-eastern Zululand, 4). Eastern Transvaal lowveld birds, which are *P.s.bororensis* \simeq *P.s.flavigula*, included in the latter race.

Type: In the Transvaal Museum, Pretoria.

Range: Eastern Tanganyika, Portuguese East Africa, central and southern Nyasaland, south-eastern Northern Rhodesia and the Luangwa R. valley, south-eastern Southern Rhodesia in the valleys of the Sabi, Nuanetsi and Limpopo Rivers, eastern Transvaal lowveld (mainly intergrades towards *P.s.flavigula*), eastern Swaziland, and apparently the flats of north-eastern Zululand, south of which it grades into *P.s.superciliaris*.

Remarks: Roberts, *loc.cit.*, described this race on the basis of two specimens from Boror, which were stated to be much paler than those from South Africa, especially on the under surface of the body, but in his *Birds of South Africa*, 1940, p. 335, separated the form on the basis of pale colouration and shorter wing-length, the wings in ♂♂ not above 95 mm.

(d) ***Petronia superciliaris rufitergum***, subsp.nov.

Type: ♂, 1st. winter. Kabompo Boma, western Northern Rhodesia. 2 April, 1959. Collected by W. F. H. Ansell. In the collection of the National Museum of Southern Rhodesia. Nat. Mus.Reg.No.39348.

Diagnosis: Similar to *P.s.flavigula*, as defined above, but with the upper-parts distinctly darker and more saturated reddish olivaceous, the reddish colour most marked over the rump, which is pure Cinnamon-Brown (pl. xv), as against Buffy Brown (pl. xl) in *P.s.flavigula*. On the mantle, the feathers are blackish, edged with Dresden Brown (same pl.), as against brown striae, edged Light Brownish Olive (pl. xxx) in *P.s.flavigula*. In series more saturated and ochraceous tinged over the sides of the head and neck, the supercilia quite buffish, less white, and in the wings the secondary-coverts and tertials have the pale edging redder. Ranging slightly larger in size.

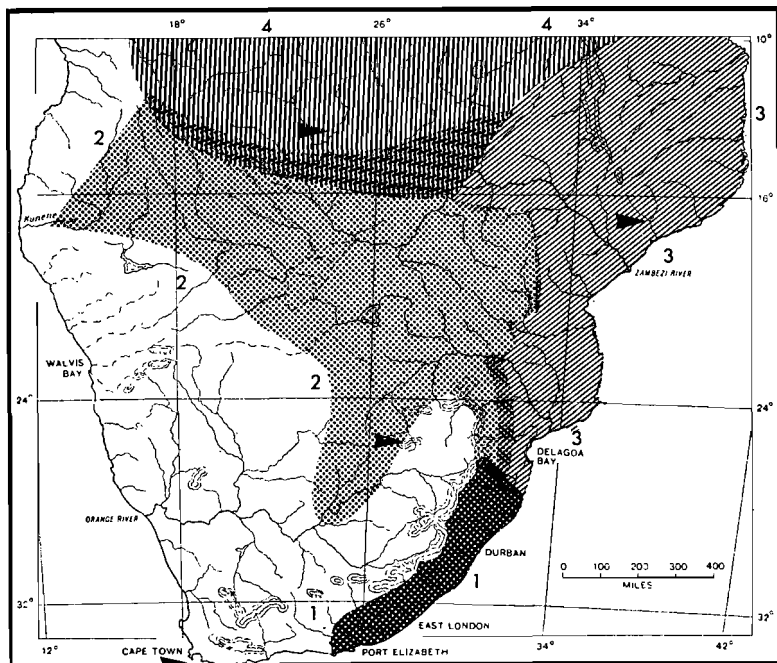
Measurements: Wings of 15 ♂♂ 95-100.5 (97.2), tails 58-64 (60.3), wings of 5 ♀♀ 89-94 (90.3), tails 54-59 (55.8) mm.

Material examined: 76 (Congo, 1; Northern Rhodesia, 75), and typically from Mwinilunga, Kabompo, Kasama, Chiengi, Fort Rosebery and Abercorn, in Northern Rhodesia.

Range: The grasslands of the former French Congo, and the southern Congo from Leopoldville and the Kasai, eastwards to the western shores of Lake Tanganyika, central and northern Angola, Northern Rhodesia in northern Barotseland, and the western and northern districts, northern Nyasaland, and the western and southern highland districts of Tanganyika. Intergrades to the south of its range with *P.s.flavigula*, and to the east with *P.s.bororensis*.

Measurements of the Type: Wing 89, culmen from base 15, tarsus 19.5, tail 56 mm.

Remarks: The saturated dorsal colour characters of *P.s.rufitergum* are not lost as a result of wear, and series in breeding dress show the features as lucidly as birds in pristine condition.



Sketch-map showing the approximate ranges of the four geographical races of the Yellow-throated Sparrow occurring in southern Africa.

1. *Petronia superciliaris superciliaris* (Blyth)
2. *Petronia superciliaris flavigula* (Sundevall)
3. *Petronia superciliaris bororensis* Roberts
4. *Petronia superciliaris rufitergum* Clancey

Type-localities are indicated by black arrowheads.

NEW SUBSPECIES OF THE GREATER SPARROW
PASSER IAGOENSIS (GOULD) and BLACK-CHEEKED
 WAXBILL *ESTRILDA ERYTHRONOTOS* (VIEILLOT)
 FROM SOUTH AFRICA

A great many polytypic species of birds which are largely confined to the dry interior and arid west of southern Africa have darker coloured populations in the moister eastern parts of their ranges. Studies of the populations of the Greater Sparrow *Passer iagoensis* (Gould) and Black-cheeked Waxbill *Estrilda erythronotos* (Vieillot) in South Africa recently carried out in the Durban Museum reveal that these species, too, conform to this rule, and it now seems desirable as a result of these detailed researches to recognise two races of the sparrow and waxbill from zoogeographical South Africa.

***Passer iagoensis subsolanus*, subsp.nov.**

Type: ♂, adult. Ingwezi Ranch, Syringa, Southern Rhodesia. 14 April, 1951. Collector's name not given. In the collection of the National Museum of Southern Rhodesia. Nat.Mus.Reg.No. 5364.

Diagnosis: Compared with *P.i.motitensis* Smith, 1848: near Hope-town, northern Cape Province (*vide* Macdonald, *Contr.Ornith.West.S.Afr.*, 1957, p. 156), the male differs in being rather darker neutral grey on the head-top, nape and hind neck, and with the lateral stripes and sides of the neck darker (about dark Sayal Brown, as against Clay Color (pl. xxix)); back, scapulars and rump darker and redder, more saturated (about dull Hazel (pl. xiv), as against Ochraceous-Tawny (pl. xv), and with the dorsal streaking heavier and blacker. On the under-parts with the breast heavily overlaid with grey and slightly streaked, not almost white as in *P.i.motitensis*, and with the flanks rather darker. Female darker on the head-top, nape and hind-neck, more brownish, less cinnamon, on the mantle than in *P.i.motitensis*, the mantle streaking broader and blacker, and with the breast more overlaid with grey. Similar in size.

Material examined: *P.i.motitensis*, 70; *P.i.subsolanus*, 20.

Range: Matabeleland, Southern Rhodesia (*Type* and short series from Syringa), the Transvaal, northern Orange Free State and Swaziland (once). Intergrades to the west of its stated range with the nominate race.

Measurements of the Type: Wing 89.5, culmen 17, tarsus 22, tail 59 mm.

Remarks: *P.i.subsolanus* was first discovered by Dr. G. Rudebeck, while Ornithologist on the staff of the Transvaal Museum, Pretoria, and was demonstrated to the present author as long ago as 1956. Rudebeck did not, however, name his discovery, and as he now no longer works in Africa or on indigenous African birds, and has severed contact with his colleagues in South Africa, it seems timeous after the lapse of no less than seven years to accord this distinctive racial taxon a name, rather than allow it to lie unrecognised any longer (see Code of Ethics, *Int.Code Zool.Nomencl.*, 1961, p. 93).

P.i.motitensis is a composite of two slightly differentiated groups of populations. Birds from Bechuanaland are slightly more yellowish sandy, less vinaceous cinnamon, on the mantle than those of Damara-land, which also have the dorsal striae finer, shorter and less bold. While I have not been able to examine any specimens from near the type-locality of *P.i.motitensis* (Hopetown), those from southern Bechuanaland, in the northern Cape, which may be taken as topo-

typical of *motitensis*, agree with the slightly yellower, sandy backed birds of the interior desert (Kalahari), rather than with those of Damaraland.

The name here adopted for the new race of Greater Sparrow is from the Latin *subsolanus*, below the rising sun, i.e., eastern.

***Estrilda erythronotos soligena*, subsp. nov.**

Type: ♀, adult. Otjomassu Sandfield, South-West Africa. 29 May, 1955. Collected by W. Hoesch. In the collection of the Durban Museum. D.M.Reg.No.2364.

Diagnosis: In fresh, unsoiled plumage distinctly paler and more pinkish drab, less dark lavender grey, from head-top to lower back than in *E.e.erythronotos* (Vieillot), 1817: Kurrichane, i.e., Zeerust, western Transvaal (*vide* Sclater, *Syst.Av.Aethiop.*, part ii, 1930, p. 802), and with the mantle more strongly washed with dull rose, which colour also extends over the nape to the crown; red of rump and upper tail-coverts rather lighter, being about Jasper Red (pl. xiii) as against Pompeian Red (same pl.), and with the inner greater coverts and tertials rather less lucidly barred, the dark transverse bars being brown as opposed to black, the pale interspaces more brownish or buffy, less silvery white. Ranging distinctly larger in size: wings of ♂♀ 54-58, as against 50-54 mm. in Griqualand West, Orange Free State, Transvaal and Matabeleland, Southern Rhodesia, *E.e.erythronotos*, the tail also correspondingly longer. In addition to these differences, in series *E.e.soligena* is paler and more washed with rose over the throat and breast, and shows rather less black over the abdomen.

Material examined: *E.e.erythronotos*, 46 (Transvaal, 5; Southern Rhodesia, 34; Orange Free State, 1; West Griqualand, northern Cape, 6). *E.e.soligena*, 51 (South-West Africa, 30; Bechuanaland, 12; Barotseland and south-western Northern Rhodesia, 7; western Southern Rhodesia, 2).

Range: Central and northern South-West Africa, southern and south-western Angola, Barotseland and adjacent parts of south-western Northern Rhodesia, the Bechuanaland Protectorate, the western fringe of Southern Rhodesia, north-western Transvaal towards the Tuli Block, and Bechuanaland, northern Cape. Intergrades with nominate *E.erythronotos* to the east of its stated range.

Measurements of the Type: Wing 56, culmen 11.5, tarsus 18, tail 60.5 mm.

Remarks: The range of the nominate race can be defined as Matabeleland, Southern Rhodesia, southwards to the Transvaal, western Orange Free State and Griqualand West, northern Cape (specimens from near Kimberley, Kuruman and Olifantshoek). Material from the Transvaal is old and foxed, and one or two available from "Pretoria" are evidently specimens prepared from zoo captives, and the question of allocating the name *erythronotos* Vieillot, 1817, believed then to have come from India, has been settled on the basis of fresh material from Glen, in the Orange Free State, and Griqualand West, which shows incontrovertibly that it is the desertic populations which require to be named as a new race, and not those of the eastern and south-eastern rain-shadow region. The name given to this taxon is from the Latin *soligena*, a child of the sun, in allusion to the hot, sun-drenched regions inhabited by this xerophilous race.