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MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS XIV

by

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1. GEOGRAPHICAL VARIATION IN THE NAMAQUA SAND- GROUSE *PTEROCLES NAMAQUA* (GMELIN)

The Namaqua Sandgrouse *Pterocles namaqua* (Gmelin), 1789: Namaqua country, is a locally common, gregarious species of the desertic regions of south-western Africa. While in the main resident, the populations in many parts of the species' range are given to movement in the non-breeding season, the full nature of which is still not known. The American systematist Rudolphe Mayer de Schauensee, *Proceedings of the Academy of Natural Sciences of Philadelphia*, vol. lxxxiii, 1931, p. 441, was the first worker to demonstrate the existence of subspecific variation in the species, when he arranged the populations into two races (*P.n.namaqua* and *P.n.ngami* de Schauensee, 1931: 25 miles north-west of Lake Ngami, northern Bechuanaland Protectorate) on the basis of a study of the totally inadequate material of five skins (*sic!*). The recommendations of de Schauensee have not been widely accepted, and following the opinion of White, *Ibis*, vol. 93, 3, 1951, p. 462,

2. NOTES ON VARIATION IN THE SOUTH AFRICAN POPULATIONS OF THE YELLOW-BILLED HORNBILL *TOCKUS FLAVIROSTRIS* (RÜPPELL), WITH THE CHARACTERS OF A NEW RACE

Eleven specimens of the Yellow-billed Hornbill collected in Damaraland, South-West Africa, in May, 1959, and now in the collections of the Durban and East London Museums, were found to be appreciably larger in size than the rest of our material of the species from the eastern Transvaal lowveld and eastern Swaziland. Five adult males and two males in juvenal dress from Damaraland have wings 205.5 (moult), 209 (moult), 212, 213, 214, 214 and 218 mm., while a single juvenal male from 97 miles on the Kuruman-Askham road, northern Cape Province, has a wing of 216.5 mm. In the case of eastern Transvaal and Swaziland adult and sub-adult males, the wings of five specimens measure 186, 187, 187.5, 188, 195 mm. This very marked size difference is also shown by the females: 4 ♀♀ from Damaraland (three adults and one juv.) have wings 193.5, 194.5, 198.5 and 200 mm., whereas seven eastern Transvaal and Swaziland adults and sub-adults have wings 173, 176, 177.5, 177.5, 183.5, 184.5 mm. Through the kindness of the Directors of the East London and Natal (Pietermaritzburg) Museums the material available to me in the Durban Museum from South-West Africa and and south-eastern Africa was augmented by the loan of additional critical material, while Mr. M. P. Stuart Irwin, Zoological Assistant of the National Museum of Southern Rhodesia, Bulawayo, most kindly measured up the entire series in the collection under his control. This additional material and the mensural data provided by Mr. Irwin confirm that the populations of *T. flavirostris* in southern Africa are divisible into two races on the basis of size, those of the eastern lowlands consisting of appreciably smaller birds than the populations of the interior and arid west.

At the present time only one race of the Yellow-billed Hornbill is recognised from within South African sub-continental limits, that being *Tockus flavirostris leucomelas* (Lichtenstein), 1842: Kaffirland (*vide Verz. Samml. Vög. Kaffernl.*, 1842, p. 17). The Kaffirland of Lichtenstein is the country lying to the north and east of the Great Fish River, *i.e.*, the eastern Cape Province, in which region the Yellow-billed Hornbill is not known to occur. It seems almost certain that the specimens believed by Lichtenstein to have come from the eastern Cape were actually brought from the interior of the sub-continent, probably by a hunting or missionary party, from what is now the northern Cape Province or the south-

western Transvaal, which are the southern limits of the range of *T.f.leucomelas* in the west. In order to permanently associate the name *leucomelas* Lichtenstein, 1842, with the large-sized birds of the interior and arid west of southern Africa, I propose to restrict the type-locality to the **Northern Cape Province**.

T.f.leucomelas as now understood is characterized by its large size: wings of ♂♂ 205-218, tails 213-225, wings of ♀♀ 186-198.5, tails 191-208 mm.

The range of *T.f.leucomelas* can be defined as from southern Angola and South-West Africa to the northern Cape Province (west and north of the Asbestos Mountains), Bechuanaland Protectorate, south-western Northern Rhodesia, western Matabeleland, Southern Rhodesia, and the western Transvaal.

TABLE I

Population	Sex	No.	Wings	Tail	Culmen
1. South-West Africa and Northern Cape	♂	9	205-218 (211.9)	219-231 (224.6)	84-97 (89.4)
	♀	5	188-200.0 (194.9)	199-208 (205.3)	76-83 (79.1)
2. Bechuanaland Protectorate and Caprivi Strip	♂	5	208-215 (212.4)	213-224 (218.4)	83-92 (88.8)
	♀	4	186-193 (190.2)	191-206 (198.7)	70-82 (74.5)
		1	183	178	82)
3. Western Southern Rhodesia ...	♂	4	198-208 (204.0)	206-215 (212.5)	86-90 (88.0)
	♀	5	181-195 (188.4)	192-206 (200.0)	70-81 (76.0)
4. South-east Southern Rhodesia and Portuguese East Africa	♂	6	193-198 (195.6)	203-213 (205.5)	80-93 (87.7)
	♀	1	180	195	75
5. Eastern Transvaal, Swaziland and Zululand	♂	9	186-204 (192.7)	203-219 (204.3)	80-91 (85.7)
	♀	9	173-184.5 (179.4)	182-193 (188.0)	70-77 (71.3)

Measurements of Five Populations of South African
Tockus flavirostris (Rüppell)

It will be noted that in populations 1 and 2 ♂♂ have wings measuring 205-218, ♀♀ 186-198.5 mm., whereas in populations 4 and 5 the wings in ♂♂ measure 186-204, ♀♀ 173-184.5 mm. Population 3 consists of intergrades between the large- and small-sized populations. The size difference separating the large *T.f.leucomelas* from the smaller *T.f.parvior* is also demonstrable on the basis of a comparison of the tail-lengths. The slightly longer bill-length of *T.f.leucomelas* is only an average difference, and the large overlap in culmen-measurements precludes the use of this statistic as a subspecific criterion.

In the Zambesi River valley and the lowlands of south-eastern Africa populations of smaller-sized birds are found. A male from Feira, and a male and female from Msussua, Zambesi River, have wings ♂♂ 193, 195, ♀ 180 mm. Three males from Chitza's, Sabi-Lundi confluence, Southern Rhodesia/P.E.A. border, and Nuanetsi and Umvuma, south-eastern Southern Rhodesia, have wings 194, 197, 197 mm., while, as recorded above, five males from the eastern Transvaal and Swaziland have wings 186-195, and seven females 173-184.5 mm. Six males from the Umfolozi Game Reserve and Nongoma, Zululand, have wings 186, 189, 190, 198, 200, 204, and a single female has a wing of 184.5 mm. The small size of the birds

of the eastern populations warrants the introduction of a new subspecies for which a name is required, and the new taxon is accordingly named *T.f.parvior* mihi, subsp. nov., below. It will be noted that in the Zululand population birds rather larger than those found further north in the littoral are to be found. The significance of males in Zululand with wings in excess of 200 mm., is not understood on the basis of the inadequate sample available for this study.

In the western parts of Southern Rhodesia *T.f.leucomelas* and *T.f.parvior* meet and intergrade, and the influence of the small *T.f.parvior* is also observable in the north-eastern Bechuanaland Protectorate population. A male from Que Que, Southern Rhodesia, has a wing of 204, and one from Nyamandhlovu, north-west of Bulawayo, has a wing of 208 mm., the latter well within the size-range of *T.f.leucomelas*. On the other hand, another male from the main camp of the Wankie Game Reserve, in extreme north-western Southern Rhodesia, is like *T.f.parvior* in size, with a wing of 198 mm. This fusing of the two races in the western districts of Southern Rhodesia is also to be seen in a small series of females, the wing-measurements of which are as follows: 181 (Matopos), 186 (Unguza Forest Reserve), 188 (Wankie Game Reserve), 192 (Syringa), 195 (Nyamandhlovu) mm. In the case of the Bechuanaland Protectorate populations, a single female from Nata, in the north-east of the territory, has a wing of 183 mm., which is within the size-range of *T.f.parvior*.

The marked size difference separating *T.f.leucomelas* and *T.f.parvior* is readily noticeable in the field. During my recent travels in South-West Africa and the northern Cape Province (May-June, 1959), it was noted that the Yellow-billed Hornbills resident in such western regions were larger than those I was accustomed to seeing in south-eastern Africa. Dr. Hans Kumerloeve, of the Museum Alexander Koenig, Bonn, Western Germany, has made the observation that *T.flavirostris* seen by him in the Kruger National Park, eastern Transvaal, in September, 1959, appeared no larger than *Tockus erythrorhynchus rufirostris* (Sundevall) in the field, whereas in South-West Africa a month or two earlier he had noted that it was much larger than the sympatric Red-billed Hornbill (*T.e.damarensis* (Shelley) and *T.e.rufirostris*).

As a name is required for the small-sized birds of the eastern populations of *T.flavirostris* in southern Africa, it may be known as

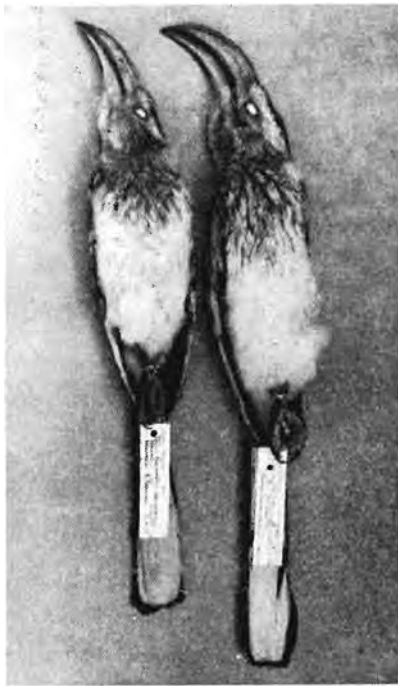
Tockus flavirostris parvior, subsp.nov.

Type: ♀, adult. Lubuli, near Nsoko, south-eastern Swaziland. Altitude 300 ft. above sea level. August, 1955. Durban Museum Expedition. In the collection of the Durban Museum.

Diagnosis: Similar to *T.f.leucomelas* (Lichtenstein), 1842: northern Cape Province (see above), but smaller in size, thus: wings of 15 ♂♂ 186-204, 10 ♀♀ 173-184.5, tails ♂♂ 203-219, ♀♀ 182-195, as against 14 ♂♂ wings 205-218, 9 ♀♀ 186-200.0, tails ♂♂ 213-231, ♀♀ 191-208 mm. in *T.f.leucomelas*. Also more creamy white ventrally and with less pronounced blackish streaking over the lower throat and breast, and narrower dark brownish markings bordering the cutting edges of the mandibles. Legs and feet smaller sized.

Material: *T.f.parvior*, 26. *T.f.leucomelas*, 24. Intergrades 10.

Measurements of the Type: Wing (flattened) 177, culmen from base 74.5, tail 189 mm.



YELLOW-BILLED HORNBILL

Left: *Tockus flavirostris parvior* Clancey

Right: *Tockus flavirostris leucomelas* (Lichtenstein)

Adult males of two South African races of the Yellow-billed Hornbill. Note small size and reduced streaking on the breast in *T.f.parvior*.

(Photo: A. L. Bevis)

Range: Natal and Zululand from about the basin of the Tugela River (once from as far south as the Umgeni River (Shelley)), eastern Swaziland, eastern and northern Transvaal, eastern and south-eastern Southern Rhodesia, southern Portuguese East Africa (on the Zambesi River extending to about Victoria Falls), southern Nyasaland and the southern parts of northern Portuguese East Africa. Intergrades to the west of its stated range with *T.f.leucomelas*.

Remarks: The name is derived from the Latin *parvus*, small, little, in recognition of the reduced size of the new race in comparison with the other South African form, *T.f.leucomelas*.

3. NOTES ON THE SOUTH AFRICAN SUBSPECIES OF *LYBIUS LEUCOMELAS* (BODDAERT)

The geographical variation exhibited by the South African sub-continental populations of the Pied Barbet *Lybius leucomelas* (Boddaert) is highly complex, affecting both plumage colouration and physical proportions. Roberts, *Birds of South Africa*, 1940, p. 177, admits no less than six races, as does Vincent, *Check List of the Birds of South Africa*, 1952, pp. 48, 49, while McLachlan and Liversidge, *Roberts' Birds of South Africa*, 1957, p. 230, recognise five. Winterbottom, *Annals of the South African Museum*, vol. xlv, 3, 1958, pp. 69-72, reduces the number of recognised forms in South Africa to three: *L.l.leucomelas* (Boddaert), 1783: Beaufort West, Cape Province, *L.l.namaqua* (Sclater), 1922: Klipfontein, Little Namaqualand, and *L.l.zuluensis* (Roberts), 1931: Mkuzi River, Zululand. Of the races admitted by Vincent, Winterbottom makes *L.l.centralis* (Roberts), 1932: Rustenburg, western Transvaal, *L.l.nkatiensis* (Roberts), 1932: N'kate, Bechuanaland, and *L.l.affinis* (Shelley), 1879: Weenen, Natal, synonyms of *L.l.leucomelas*. Macdonald, *Contribution to the Ornithology of Western South Africa*, 1957, pp. 88-89, also discusses the variation in the western populations of South African *L.leucomelas*, placing South-West African birds with the nominate race (*sic!*). Study of the large series of the Pied Barbet in the collection of the Durban Museum suggests that Winterbottom has gone too far in the lumping of races, and that *L.l.centralis* is not a synonym of *L.l.leucomelas*. The validity of *L.l.affinis* of the elevated interior of Natal is still not satisfactorily settled and must await the production of a really adequate series in fresh dress. Such examples of *L.l.affinis* as I have studied are like *L.l.leucomelas* in size, but have the yellow under-parts of the eastern littoral form, *L.l.zuluensis*.