

DURBAN MUSEUM

# Novitates



ISSUED BY THE DURBAN MUSEUM, DURBAN 4001, SOUTH AFRICA

VOL. XI, PART 12

ISSUED 30th SEPTEMBER, 1977

## MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS XLIX

by

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### SUBSPECIFIC VARIATION IN THE REDCRESTED KORHAAN *EUPODOTIS (LOPHOTIS) RUFICRISTA* (SMITH), 1836

The small Redcrested Korhaan or Bustard *Eupodotis (Lophotis) ruficrista* was described by Dr. Andrew Smith in his *Report of the Expedition for Exploring Central Africa*, 1836, p. 56, where it is stated to inhabit the country between Latakoo (Kuruman) and the Tropic of Capricorn. In his *Illustrations of the Zoology of South Africa*, Aves, 1838, pl. iv (and text), the collecting locality is more precisely given by the author, when Smith states that the "species was first discovered in the vicinity of Latakoo," which may be accepted as the type-locality. The Redcrested Korhaan is frequently considered to be conspecific with two northern Ethiopian African bustards: *Eupodotis (L.) gindiana* Oustalet, 1881: between Somaliland and Zanzibar, East Africa=Bardera, Giuba R., south-western Somalia, according to Mackworth-Praed and Grant, *Birds Eastern and North Eastern Africa*, vol. i, 1952, p. 323, and *Eupodotis (L.) savilei* Lynes, 1920: En Nahud, western Kordofan, Sudan, though Sclater, *Syst. Av. Aethiop.*, part i, 1924, p. 115, treats *ruficrista*, *gindiana* and *savilei* as three separate species, which latter arrangement appears to be nearer the truth of the matter.

The north-eastern *gindiana* differs in the adult male in lacking the leaden streak below the eye, in being paler and more creamy, less bluish grey, over the sides of the neck, and on the breast the white is

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meet in southern Malawi, *zombae* is under the *Rules* the correct name to use for the present *L.t.albigularis*. With *zombae* being treated as an earlier name for Neumann's *albigularis*, the *L.t.zombae* of my revision of 1956 and later writings on this barbet will require to be described as a new subspecies. This, when proposed, should be based on specimens obtained near the delta of the Zambesi.

VARIATION IN THE SOUTHERN POPULATIONS OF  
*BUBALORNIS NIGER* A. SMITH, 1836

In dealing with the genus *Bubalornis* Smith, 1836, Hall and Moreau, *Atlas of Speciation in African Passerine Birds*, 1970, map 371, express the view that *B.albistrois* (Vieillot), 1817: Senegal, and *B.niger* Smith, 1836: Kurrichaine=Zeerust, western Transvaal, are specifically distinct, whereas the generally held view is that they are conspecific. In contrast to the stand taken in the *Atlas*, Moreau, in his (earlier) treatment of the African Ploceidae in the continuation of Peters' *Check-list* (vol. xv, 1962, pp. 3, 4), places *albistrois* and *niger* as component forms of a single species. In *B.albistrois* the bill in the non-breeding male is blackish, changing in the breeding season to white or pinkish yellow with a dusky tip, the base of the culmen becoming swollen. In plumage, the sexes are virtually alike. In the case of *niger*, the bill of the adult male is a dull coral red or light carmine, the tip darker, and there is little or no seasonal change in bill colour or in the profile of the basal culmen associated with breeding. The inner vanes of the remiges are broadly white, not entirely black as in *albistrois*, and the sexes are dissimilar in dress in that the adult female is distinctly more slaty, less black, than the male. In addition, there are other differences in both the immature and juvenile stages. Hartert, *Novit.Zool.*, vol. xiv, 1907, pp. 485, 486, was the first to review the races of *B.albistrois*, *sensu lato*, which were again considered in some detail by Van Someren, *Novit.Zool.*, vol. xxix, 1922, pp. 133, 134 (wherein Van Someren treats *albistrois* and *niger* as separate species), but the later pronouncements of both Sclater, *Syst.Av.Aethiop.*, part ii, 1930, p. 175, and Moreau, in Peters' *Check-list* (as above), are simply taxonomic arrangements of populations, lacking constructive and worthwhile comment on the relationship between *albistrois* and *niger*.

In *B.niger* Van Someren, *loc.cit.*, listed *B.n.niger*, *B.n.intermedius* (Cabanis), 1868: Kisuani, Usambara, north-eastern Tanzania, *B.n.scioanus* (Salvadori), 1884: Daimbi, Shoa, Ethiopia (surely a *lapsus calami* for *schoanus*), and *B.n.nyansae* (Neumann), 1905: Kwa Kitoto, Kavirondo, south-western Kenya, the last three names comprising the *intermedius* group of populations of East Africa, which is

considered an incipient second species of the present Buffalo Weaver by Hall and Moreau in their *Atlas*. While the taxon *intermedius* is universally accepted, both *scioanus* and *nyansae* are generally relegated to its synonymy, though the former of the two questionable races was acknowledged as valid by Hartert (1907) and Van Someren (1922). On the other hand, Friedmann, *Bull.U.S.Nat.Mus.*, No. 153, 1937, pp. 376, 377, in considering the subspecific status of the Kenyan and Ethiopian birds, found no significant difference between adults from Ethiopia, Kenya and Tanzania, concluding that *scioanus* was in all probability invalid and a synonym of *intermedius*.

In the case of the austral subspecies, Benson, *Occ. Papers Nat. Mus. S. Rhod.*, vol. iii, No. 21B, 1956, p. 41, appears to have been the first to demonstrate a tendency to smallness in the isolated population of *niger* in the upper Luangwa Valley of eastern Zambia, and, perhaps, in the littoral of Angola representatives. The possible discreteness of the Luangwa isolate is again referred to in Benson and White, *Check List Birds of Northern Rhodesia*, 1957, p. 119, and more recently in Benson *et al.*, *Birds of Zambia*, 1971, p. 331. In dealing with the Luangwa isolate, Benson only gave consideration to the length of the wing, giving the wings of adult ♂♂ as 114 - 122, ♀♀ (with which he included measurements of immature ♂♀, which are not strictly comparable) 109 - 115, *versus* ♂♂ 121 - 128, ♀♀ 108 - 118mm in a good sample from South West Africa, Botswana and the Transvaal. My measurements for juvenile and immature birds from Luangwa are: ♂♂ 116 - 120, ♀♀ 109 - 113mm. Judging from these findings, males from eastern Zambia are demonstrably smaller than those from the South West Arid District but with overlap, whereas females, the wing-measurements of the latter which completely subsume those of the Luangwa sample, are not.

Through the courtesy of the Director of the National Museum of Rhodesia, Bulawayo, I have examined a series of 21 specimens from Luangwa, which with the rest of the material in the Durban, Transvaal and National Museums has provided about twice the comparative material of southern African *niger* available to Benson in 1955/1956. Taking care to exclude adult males still retaining abraded juvenile remiges and rectrices, my measurements for fully adult ♂♂ from South West Africa, Botswana, the Transvaal and western Rhodesia are 119 - 128, females 113 - 118, against 116,5 - 122,5 in eight males and 109,5 and 110mm in two females from Luangwa, the short wings of these latter perhaps not diagnostic as juvenile females from Luangwa measure 109 - 113mm. These findings confirm that while eastern Zambian birds are on the whole smaller than those of

the South West Arid populations, they are not satisfactorily taxonomically distinguishable on such grounds.

Flattened wing- and tail-measurements of fully adult ♂♂ examined during the course of this research are tabulated hereunder in Table I. As a like number of adult ♀♀ is not available from the same range of territories at this stage, measurements of females have been excluded.

The pooled series of the present *B.n.niger* reveal, apart from the size diminution in the north-east of the range discussed above, little variation of moment in adult males, immature males and females and juveniles, though immatures from the east of the range, *i.e.* from eastern Zambia, Rhodesia, central and eastern Transvaal, Moçambique and Swaziland, appear to be more extensively and deeper black over the caudad ventral surface. In the case of adult females, a valid difference between the South West Arid birds and those of the more mesic east is readily demonstrable, the western (xeric) birds being light slaty black below, with much white showing over the fore-throat and pronounced white sub-terminal mottling to the breast and sides in most (twelve out of fourteen examined). In eastern specimens, the white has been lost in the majority, and the entire ventral ground is dark fuscous, *versus* greyish hair brown in the western examples, with the white bases to the breast and lateral feathers reduced, resulting in a more uniform brownish black aspect to the venter. This pattern of variation is analogous to that of many predominantly South West Arid bird species, some populations of which extend to the mesic east and onto the eastern littoral. Cognisance requires to be taken of the marked differences shown by the adult females in southern African populations of *B.niger* by admitting two races instead of the current one in our taxonomic treatment of the species in the South of its range.

In the case of *B.n.intermedius*, material of the various plumage stages in southern African collections is too limited for a study similar to that undertaken in respect of the austral populations of the species. Variation in our adult male specimens of *intermedius* corroborates the conclusions of Friedmann, and contradicts the findings of Neumann, Zedlitz and others, that the amount of vestigial white to the bases of the remiges is too unreliable to support the breakdown of the subspecies on this variable alone. On the other hand, possible variation in adult females, immatures and juveniles seems not to have been closely investigated in the past, with the result that the validity or otherwise of both *scioanus* and *nyansae* must still be considered open questions. Friedmann, *loc.cit.*, p. 377, draws at-

TABLE I

Population	No.	Wing Range	Ave.	SD	SE	No.	Tail Range	Ave.	SD	SE	CV
<i>Bubalornis niger niger</i> Smith											
W. Transvaal . . . . .	9	119 - 128	122,8	2,68	0,89	8	99 - 109,5	103,5	3,05	1,08	2,95
N. Botswana . . . . .	10	119 - 127	123,7	2,98	0,94	10	100 - 109	104,8	2,37	0,75	2,26
S. W. Zambia . . . . .	5	121,5 - 127	124,1	2,07	0,92	5	98 - 107	103,7	3,73	1,67	3,60
S. W. Africa . . . . .	4	122 - 126	124,2	1,71	0,86	4	102 - 103	102,6	0,48	0,24	0,47
<i>Bubalornis niger militaris</i> Clancey											
E. Zambia . . . . .	8	116,5 - 122,5	120,3	2,60	0,92	8	95 - 100	98,3	2,01	0,71	2,04
Rhodesia . . . . .	6	121 - 127	124,6	2,94	1,20	5	99,5 - 109	104,6	3,54	1,58	3,38
E. Transvaal . . . . .	9	119,5 - 126	122,2	2,03	0,68	9	99,5 - 106,5	103,2	2,80	0,93	2,71
<i>Bubalornis niger intermedius</i> (Cabanis)											
Kenya and Tanzania . . . . .	5	121 - 130	124,0	3,29	1,47	5	92,5 - 100,5	96,0	3,92	1,75	4,08

The wing- and tail-length variables in adult ♂♂ of the three races of the Buffalo Weaver *Bubalornis niger*.

tention to a marked difference in the wings of juveniles of *B.n. scioanus* and *B.n. intermedius*, which is supported by the limited number of juveniles available to me from eastern Africa. A single juvenile from Isiolo, north of Mt. Kenya, differs absolutely from a short series of 4 ♂♀ from Garissa, Tana R., Kenya, in having the pale edges to the wing-coverts and remiges buffish white, whereas the Garissa sample has the same feathers edged deep clay colour. The character, if confirmed by the examination of a larger corpus of material, would almost certainly justify the recognition of *scioanus* as discrete from *intermedius*.

(a) **Bubalornis niger niger** Smith

*Bubalornis niger* A. Smith, *Rep. Exped. Expl. Centr. Afr.*, 1836, p. 52: "country about Kurrichaine" = Kaditshwêne (farm "Bloemfontein"), Zeerust, western Transvaal.

Adult male wholly blue-black, with broad snowy white bases to the contour feathering. Wings broadly white over the inner vanes of the remiges, and with white edging to the outer vanes of the primaries, the tips of which are black. Tail plain black. Bill coral red with dusky tip.

Adult female dull brownish black above and slaty below, with greyish white bases to the feathers, the fore-throat, breast and sides variously mottled and scaled with off-white. Bill duller, more pinkish than male.

Immature ♂♀ much as adult female, but throat and breast blackish brown, heavily scaled with greyish white, the lower breast, belly, crissum, etc., dull black. Remiges and rectrices of juvenile dress retained.

Juvenile dark olive-brown above and on wings and tail, the primary- and greater-coverts edged buff, and the primaries edged buffy white (inner vanes of remiges largely as in adults). Ventrally, longitudinally streaked dark olive-brown on a whitish ground.

*Measurements*: As given in Table I (males). Female measurements in text.

*Material examined*: 60 (*Angola*: Evale; *South West Africa*: Ugab R., Ondangua, Okanjande, Omaruru, Caprivi Strip; *Botswana*: Cungna, Kai Kai, Kuke, Mothlatlogo, Maun, Savuti, Kwaai R., Tsotsoroga, Sukwane (Botletle R.), W. of Sehitwa, Nata, Lothlekane Well; *south-western Zambia*: Shangombo, Nasiongo, Sesheke, Chunga Pools (Sesheke), Machili R.; *south-western Rhodesia*: Sibainni, Fort Tuli, Sentinel Ranch (Limpopo R.); *western Transvaal*: Blouberg, Palala R. (Waterberg), Northam, Pienaar's River, Pretoria, Groot Marico).

*Range:* Angola in Huila and southern Cuando-Cubango, and with an isolated population on the coastal plain of Luanda, central and northern South West Africa, the Caprivi Strip, northern and eastern Botswana (in west, south to Ghanzi, and east of the Kalahari, south to Gaborone), south-western Zambia (west of Livingstone to the southern Barotse Province), south-western Rhodesia at Fort Tuli and Sentinel Ranch, and western Transvaal.

*Remarks:* The Kwaai R., Botswana, sample shows that this race is in newly moulted dress as from December. In the case of the *militaris* samples, birds taken in June and July are in fresh dress.

(b) ***Bubalornis niger militaris***, subsp.nov.

*Type:* ♀, adult. Luangwa Valley at 11° 45' S., 32° 15' E., Mpika District, Northern Province, Zambia, at 640m a.s.l. 4 August, 1951. Collected for Major W. E. Poles. In the collection of the National Museum of Rhodesia, N.M.Reg.No.7 032.

*Diagnosis:* Differs from nominate *B.niger*, as defined above, in that the female in adult dress is deep Fuscous (Ridgway, pl. xlvi), *versus* greyish Hair Brown (same pl.) below, with an almost entirely fuscous throat and little or no visible mottling or scaling of white to the breast and lateral surfaces.

*Measurements:* As given in Table I (males). Two Luangwa Valley ♀♀ have wings 109,5 and 110, four from Rhodesia 113 - 117, and two from the eastern Transvaal lowveld 112 and 113mm.

*Material examined:* 45 (*Zambia:* Luangwa Valley in Mpika and Lundazi Districts between 11° 45' - 13° 03' S. and 31° 57' - 32° 30' E.; *Rhodesia:* Matetsi, Ngamo Pans (Wankie), Tjolutjo, Gwaai Reserve, Syringa, Champion Ranch (Shashi R.), Manama Mission (Tuli R.); *eastern Transvaal:* Newington; *Swaziland:* Eranchi, Stegi district; *Moçambique:* Dindiza).

*Range:* Western, southern and south-eastern Rhodesia, the eastern Transvaal lowveld, the interior of Sul do Save, Moçambique, from the Save R. south to the Incomati R., eastern Swaziland, and north-eastern Natal on the Transvaal border, and with an isolated population in the upper Luangwa Valley of Zambia. Range disrupted and apparently largely relict.

*Measurements of the Type:* Wing (flattened) 110, culmen from base 24, tarsus 27,5, tail 88,5mm.

*Remarks:* Almost uniform brownish black venter to adult female characterizes this race in comparison with *B.n.niger*.

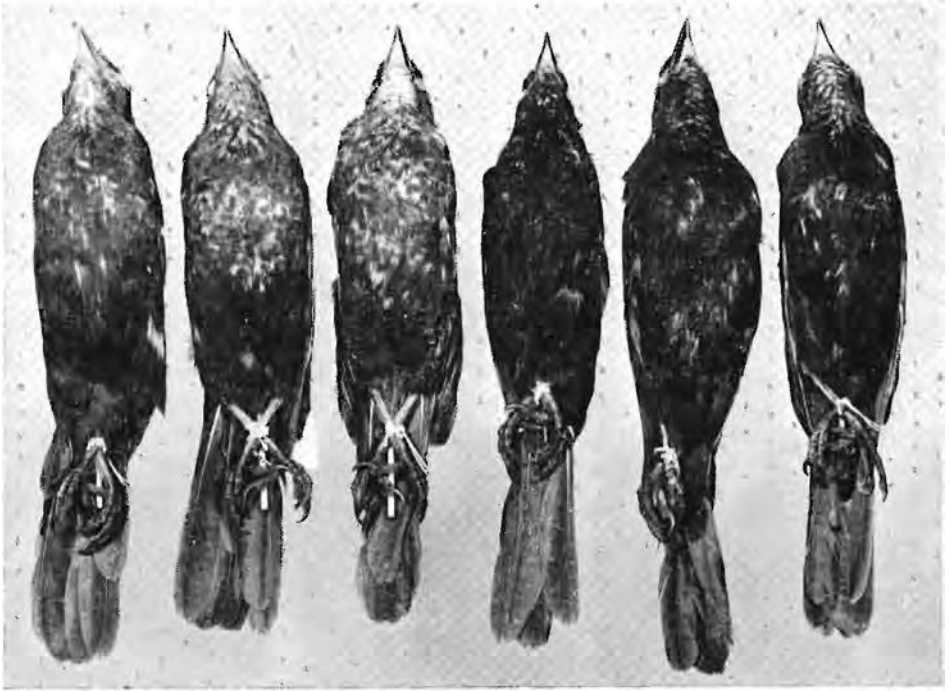


FIG. 1

Ventral views of adult females of the two southern African subspecies of the Buffalo Weaver *Bubalornis niger* Smith.

*Left three:* *B.n.niger*. Kwaai R., northern Botswana, 9 and 11 December, 1968.

*Right three:* *B.n.militaris*. *Left:* Champion Ranch, Shashi R., Rhodesia, 5 May, 1966; *Middle:* Ingwesi Ranch, Syringa, Rhodesia, 23 February, 1953; *Right:* Malamala, near Newington, eastern Transvaal, 23 July, 1952.

*Photo:* W. S. Yerbury

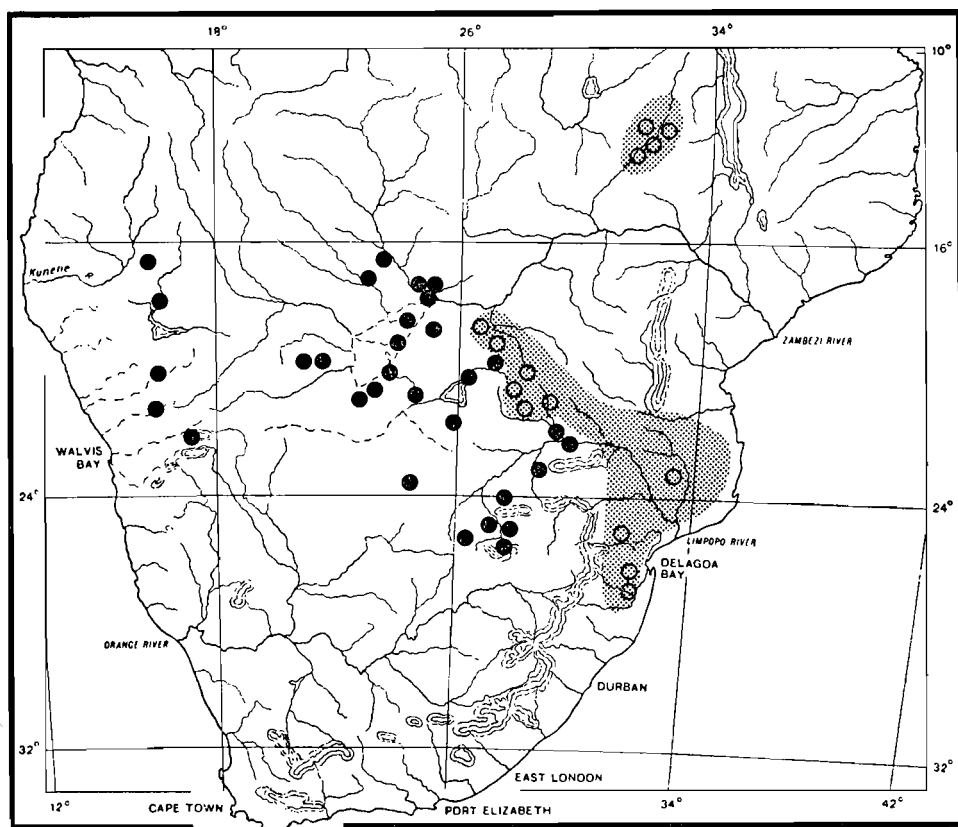
(c) ***Bubalornis niger intermedius*** (Cabanis)

*Textor intermedius* Cabanis, *Journ.f.Ornith.*, vol. xvi, 1868, p. 413: Kisuani, Usambara, north-eastern Tanzania.

? *Textor scioanus* Salvadori, *Ann.Mus.Civ.Genova*, vol. xxi, 1884, p. 195: Daimbi, Shoa, Ethiopia.

? *Textor albirostris nyansae* Neumann, *Journ.f.Ornith.*, vol. liii, 1905, p. 335: Kwa Kitoto, Kavirondo, south-western Kenya.





MAP II

The two austral African population groups of the Buffalo Weaver *Bubalornis niger* Smith

- *Bubalornis niger niger* Smith
- *Bubalornis niger militaris* Clancey

The Luanda, Angola, isolate population of nominate *niger* is not indicated.

Adult male differs from that of *B.n.niger* in having the white panels to the inner vanes of the remiges reduced to a variable vestige over the basal surfaces of the said quills. Adult female likewise shows loss of white over the inner vanes of the remiges. Ventrally, much as in nominate *niger*, with white showing over the throat, but none as mottling on the breast and sides, being relatively uniform; not unlike *militaris* but greyer ventrally and with a whitish fore-throat. In the wings, the primaries have the outer vanes edged more narrowly with greyer white. Size apparently smaller.

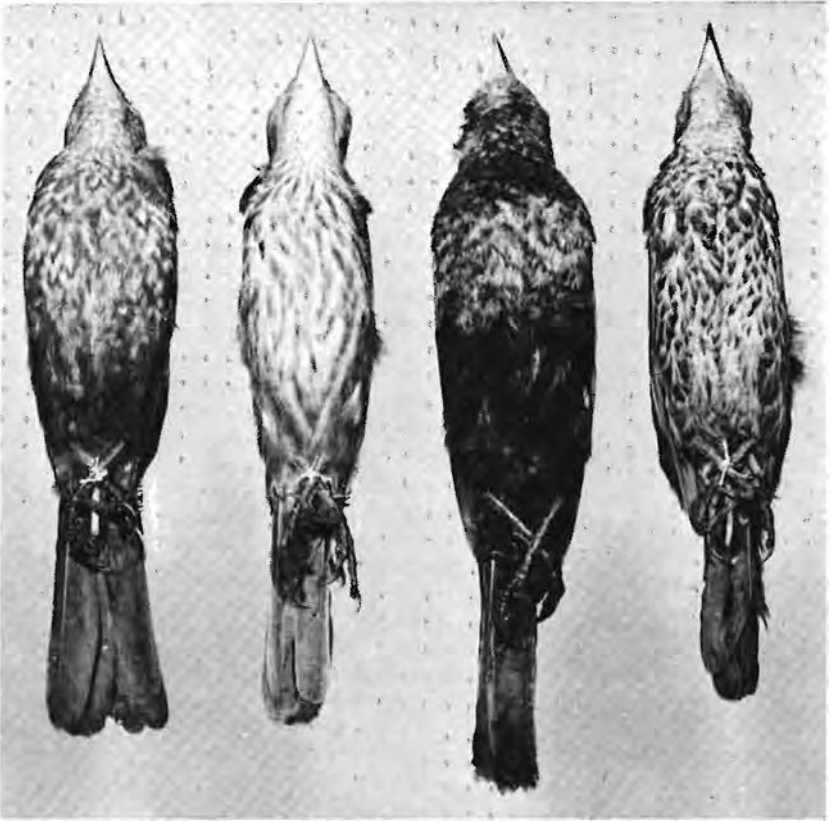


FIG. II

Ventral views of immature and juvenile Buffalo Weavers from southern and eastern Africa.

Left to Right —

1. Juvenile *B.n.niger* from near Northam, western Transvaal, 12 May, 1969.
2. Juvenile *B.n.intermedius* from Garissa, Tana R., Kenya, 20 January, 1961.
3. Immature *B.n.militaris* from Eranchi, Swaziland, 29 May, 1937.
4. Immature *B.n.intermedius* from Garissa, Tana R., Kenya, 16 January, 1961.

Photo: W. S. Yerbury

Immature birds are more whitish or creamy below than in either *niger* or *militaris*, the dark feather centres narrower, giving a more spotted, less scaled effect, and the lower ventral half spotted as breast, not almost uniform blackish brown as in the southern races.

Juvenile lighter brown above than in southern birds, and much whiter below, with narrow light brown streaking, not densely

streaked with blackish brown. In wings, pale edges to coverts and flights broader and more ochraceous-rusty than in either *niger* or *militaris*.

*Measurements:* See Table I for males. Two adult females from eastern Tanzania have wings 107 and 110,5, tails 81 and 84mm.

*Material examined:* 15 (*Kenya:* Yatta, east of Thika, Isiolo, Garissa; *Tanzania:* L. Basuto (near Mt. Hanang), Mkata R. (Morogoro district)).

*Range:* Ethiopia south of about 10° N., eastern and southern Kenya, Somalia, and northern and eastern Tanzania.

*Remarks:* The great reduction of white over the inner vanes of the remiges immediately distinguishes this taxon from the two southern African forms.

A single adult ♂ from L. Basuto, near Mt. Hanang, in north-central Tanzania, is extremely large, with a wing of 130mm. It differs further from other adult males of *intermedius* examined in having the white on the outer webs of the primaries reduced to a vestige. Whether these points have any relevance in so far as the validity of the disputed *B.n.nyansae* is concerned is uncertain. The last named subspecies was erected by Neumann on a single specimen.

The marked variation exhibited in the wings of juveniles is discussed in the above text. As already indicated by Friedmann, this character may ultimately warrant the resurrection of Salvadori's *T.scioanus* from synonymy.

For assistance with the loan of additional specimens I am indebted to Dr. A. C. Kemp, Ornithologist of the Transvaal Museum, Pretoria, and Mr. M. P. Stuart Irwin of the National Museum of Rhodesia, Bulawayo. I am also grateful to Mr. W. S. Yerbury of the Durban Museum staff for taking the photographs.