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MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS XVII

by

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THE SOUTH AFRICAN RACES OF THE PUFFBACK *DRYOSCOPIUS CUBLA* (SHAW)

The Puffback *Dryoscopus cubla* (Shaw) is a small, pied, woodland-haunting laniid with an extensive distribution to the south and east of the Lower Guinea forest, with closely allied and perhaps conspecific forms occurring in other parts of the Ethiopian Region. In the south of the species' range, the nominate race occurs mainly in evergreen forest and dense riparian cover, the races representing the species to the north of the range of *D.c.cubla* inhabiting a wider range of mainly drier woodland associations. Within the limits of sub-continental South Africa, it is now customary to admit three subspecies, namely, *D.c.cubla* (Shaw), 1809: Knysna, southern Cape Province; *D.c.okavangensis* Roberts, 1932: Maun, Ngamiland, Bechuanaland Protectorate; and *D.c.hamatus* Hartlaub, 1863: Kaseh, *i.e.*, Tabora, western Tanganyika Territory. Writing in the *Durban Museum Novitates*, vol. iv, 6, 1954, pp. 86-88, I showed that the southern African populations generally referred to *D.c.hamatus* of Tanganyika Territory differed on account of the fact that the adult female has the lores off-white and not black, and I proposed for such populations the name *D.c.chapini* Clancey, 1954: Newington, eastern Transvaal. In his recent authoritative revision of the races of *D.cubla*, Dr. Austin L. Rand, *vide Fieldiana*, Zoology, vol. 39, 12, 1958, pp. 87-89, shows that in Tanganyika Territory

not all the populations of *D.c. "hamatus"* have females with black loreal spots, and that the populations from the type-localities of *D.c. hamatus* and *D.c. suahelicus* Neumann, 1899: Kakoma, south-west of Tabora, western Tanganyika Territory, have females with off-white lores. For the Tanganyikan and Kenya Colony highland populations of "*hamatus*" in which the female has pronounced black loreal spots Rand, *loc.cit.*, has introduced the name *D.c. nairobiensis* Rand, 1958: Nairobi, Kenya Colony. The distribution of this new race in Tanganyika Territory is apparently quite extensive, and Rand extends its range as far south as Kilosa in the east on the basis of a single female, but specimens with the diagnostic characters of *D.c. nairobiensis* actually range even further south, to at least Ifakara, according to the material I have examined (see later discussion).

In the light of Rand's findings I have deemed it necessary to re-examine the status of *D.c. chapini*, as it is now abundantly evident that this taxon was described on the basis of a comparison carried out with material of what is now known as *D.c. nairobiensis* and not the true *D.c. hamatus*, which occurs further west in Tanganyika Territory. As a result of the study reported fully below, *D.c. chapini* is shown to differ markedly from *D.c. hamatus* on the grounds of smaller size. For the purpose of this research I have been able to study in the Durban Museum no less than 453 specimens of the Puffback, including material of all the races accepted by Rand in his revision (1958) and in the continuation of Peters' *Check-List of Birds of the World*, vol. ix, 1960, p. 318. For the loan of virtually the entire series of Puffbacks in the collection of the National Museum of Southern Rhodesia I am greatly indebted to Mr. M. P. Stuart Irwin, Zoological Assistant of the National Museum. This magnificent series of some 328 specimens from south-central Africa has been of the greatest use in resolving the complex mosaic presented by the ranges of the six geographical races of *D. cubla*.

GEOGRAPHICAL VARIATION

Geographical variation in *D. cubla* affects the physical proportions, the colour of the irides in both sexes, the intensity of the whiteness of the rump and under-parts in adult males, the amount of white in the wings (in both sexes), and the presence or absence of black loreal spots and the colouration of the mantle and rump in females. While Rand's 1958 revision of the races is in the main both reliable and competent, it was based on far too small an amount of material, especially of the southern forms. For instance he had no material of *D.c. chapini* and only a single female example of the nominate

race, with the result that many of the salient and valid racial differences were not utilized by the worker concerned.

In the populations of the typical race of *D.cubla*, which ranges from the forested districts of George and Knysna, in the southern Cape Province, north-eastwards through the eastern Cape to Natal and southern Zululand, and the elevated interior of the Transvaal (eastern and northern highland forests), the adult male has the irides orange, and the whitish under-parts overlaid with smoke grey on the breast, sides of the body and flanks. The adult female has the irides golden yellow, the greyish rump with a delicate overlay of olive-buff, and the under-parts are somewhat variable, the more typical examples having the greyish breast and flanks suffused with an olive-buff tinge, even sometimes faintly vermiculated, while the lores are invariably blackish. In this race the wings of adult ♂♂ measure 78-83, ♀♀ 76-82 mm.

To the north of the range of *D.c.cubla* in the elevated interior of sub-continental South Africa occurs the race *D.c.okavangensis*, the range of which is very much more extensive than hitherto believed, extending from south-western and southern Angola and south-western Northern Rhodesia (including Barotseland), south and south-east to eastern Great Namaqualand, the northern Cape Province (Molopo River), western, northern and north-eastern Transvaal and most of Southern Rhodesia (eastern limits about Nuanetsi in the south, and Salisbury and Rusape in the north). The adult male of *D.c.okavangensis* differs from that of *D.c.cubla* in having the irides ruby red, not orange, and in being slightly paler below, less washed with smoke grey over the breast and flanks, but this latter criterion is only an average one and not always reliable, especially if the plumage is worn. On the other hand, the wings exhibit appreciably broader white edging to the outer webs of the primaries and secondaries (apparent in both sexes). The adult females of *D.c.okavangensis* differ more saliently from *D.c.cubla* than do the males in their paler and rather greyer general colouration, the rump with little or no overlay of olive-buff, while in unworn dress the whole of the back has the feathering broadly edged with grey, resulting in the exposed black of the upper-parts being more or less restricted to the crown and nape. The feathers of the forehead and fore-crown are also edged with grey, and the lores are off-white and not blackish as in *D.c.cubla*. The eye-colour is reddish brown, not golden yellow. In the case of first-year birds, with their buffish under-parts, *D.c.okavangensis* is found to be rather brighter and more buffy coloured ventrally than examples of nominotypical *D.cubla* in comparable dress. Wear results in the loss of

much of the grey fringing to the head and mantle feathers in females, and in such a condition *D.c.okavangensis* is not always readily distinguishable from females of other races. In *D.c.okavangensis* the wings of ♂♂ measure 79.5-86, ♀♀ 75-83 mm.

In the south-eastern and eastern coastal lowlands of Africa, from north-eastern Zululand, eastern Swaziland (unstable), the eastern Transvaal lowveld (slightly unstable) and Sul do Save, southern Portuguese East Africa, northwards to the eastern highlands of Southern Rhodesia, the Luangwa River valley of eastern Northern Rhodesia, southern Nyasaland, northern Portuguese East Africa and south-eastern Tanganyika Territory occurs the race *D.c.chapini*. The adult male of *D.c.chapini* differs from *D.c.okavangensis* and *D.c.cubla* in having the under-parts much whiter, the breast and flanks with little or no grey overlay and in being smaller in size. The eye-colour is as in *D.c.okavangensis*. While the racial variation in the males is quite obvious in series, the characters exhibited by the females are even more diagnostic. The female of *D.c.chapini* more closely resembles *D.c.cubla* than *D.c.okavangensis*, differing therefrom in having the rump clear grey with no overlay of olive-buff, in being much whiter below and in averaging smaller in size, while the lores are off-white and not blackish. In *D.c.chapini* the wings measure in ♂♂ 76.5-81, ♀♀ 75.5-80.5 mm.

As stated earlier in this paper, when I described *D.c.chapini* I distinguished it from *D.c.hamatus* on the grounds that the lores in adult females were whitish and not black. As Rand has adequately demonstrated, the populations of the Puffback (Rand calls this species a bush shrike (sic!)), but the true bush shrikes belong to the Genera *Chlorophoneus*, *Malaconotus*, etc., and the correct vernacular name for *D.cubla* is the Puffback) occurring in Tanganyika Territory, the females of which have blackish lores are referable to *D.c.affinis* (Gray), 1837: Zanzibar, the recently described *D.c.nairobiensis*, and not *D.c.hamatus* of western Tanganyika, which is white lored. Arising from the observations on *D.c.hamatus* and the description of *D.c.nairobiensis* by Rand, it is necessary to give careful consideration to the precise relationship between the former race and my *D.c.chapini*. I now find that the two races concerned are not separable on the colour of the lores in adult females as claimed in the original description of *D.c.chapini*, which race is now found to differ from *D.c.hamatus* in its substantially smaller dimensions, and in being similar in size in both sexes.

I agree with Rand, *loc.cit.*, that *D.c.occidentalis* Neumann, 1899: Angola, is inseparable from western Tanganyikan topotypes

of *D.c.hamatus*, while the diminution in size claimed in the original description of *D.c.suahelicus* Neumann, 1899: Kakoma, Tanganyika Territory, is almost certainly the outcome of using a composite series culled from the eastern peripheral elements of *D.c.hamatus*, *D.c.nairobiensis* and their intergrading populations with the littoral forms, *D.c.affinis* and *D.c.chapini*, as demonstrated in part by Rand. By restricting the type-locality of *D.c.suahelicus* to Kakoma (5°50' S., 32°29' E.), a locality lying a short distance to the south-west of Tabora (Kaseh) (5°01' S., 32°50' E.), in the same stretch of country, Rand has made the form concerned an absolute synonym of *D.c.hamatus*. It is interesting to note that Rand (1958) states that the type-locality of *D.c.hamatus*, Kaseh-Mwanza, is on the southern shores of Lake Victoria, as Chapin, *Birds of the Belgian Congo*, part iv, 1954 (Gazetteer), pp. 638-738, shows that Kaseh or Kazé are early names for the present town of Tabora, not Mwanza (as since admitted by Rand in Peters (1960)).

The pattern of geographical variation in Tanganyika Territory is certainly very complex, and while the western populations do not appear to differ any way from those occurring in the southern Congo, northern and north-western Northern Rhodesia and Angola, the variation in the east is involved and still by no means clearly understood. The littoral form *D.c.affinis* has little or no white in the wings in both sexes, the male is purer white on the rump, and whiter on the under-parts than the other races (not separable on the latter character from *D.c.chapini*), the female exhibits black loreal spots, and the form differs further from those of the interior in being smaller (wings of ♂♂ ♀♀ 75-82 mm.), though similar to *D.c.chapini* in this respect.

D.c.nairobiensis of the Kenya Colony highlands and adjacent high areas of north-eastern Tanganyika Territory is larger in the male than *D.c.affinis*, and also greyer underneath and has the white rump overlaid with grey, while both sexes exhibit prominent white edging to all the wing feathers. On the other hand, the female of *D.c.nairobiensis* resembles that of *D.c.affinis* in having black loreal spots. In other words, *D.c.nairobiensis* is similar to *D.c.hamatus* except for the *affinis*-like loreal character in the female. Unlike the forms considered earlier, *D.c.nairobiensis* exhibits marked size disparity between the sexes, in which it agrees with *D.c.hamatus*.

Rand (1958) extends the range of *D.c.nairobiensis* south in the east to Kilosa, in eastern Tanganyika Territory, and, as already noted, I have seen similar specimens from still further south in the east (Luwipa River, south-west of Ifakara). Both Kilosa and

Ifakara are localities interposed between the ascertained ranges of *D.c.affinis* and *D.c.hamatus*, and I would personally interpret these specimens which resemble *D.c.nairobiensis* as being the result of simple intergradation between the two races concerned and not due to any southward extension of the true *D.c.nairobiensis*, which is a pure highland race from further north. I feel that this view is more satisfactory than that adopted by Rand, as it obviates the necessity of admitting a tongue-like extension of the range of *D.c.nairobiensis* as far south as the Southern Province of Tanganyika Territory.

To return to the populations embraced within the taxonomic unit *D.c.hamatus*, it is important to note that Neumann, *vide Journ.für Ornith.*, vol. xlvii, 1899, pp. 413-414, considered the Angola birds (*D.c.occidentalis*) to be different on the basis of size to those occurring in Tanganyika Territory. The material available to me suggests that, while Angola birds do tend to run larger in size than those from further to the eastward (wings in adult males up to 90 mm.), the overlap is so great that no nomenclatural division is feasible. Indeed, birds every bit as large as those of Angola occur in north-western and northern Northern Rhodesia and the southern Congo, as will be seen from the figures hereunder given.

TABLE I

Locality	No. of Specimens	Males		No. of Specimens	Females	
		Wings	Tails		Wings	Tails
Angola	4	84.5-89	70-73	3	81-84	69-71 mm.
Southern Congo N. & N.W.	1	87	70	2	81-85	68-70 mm.
N. Rhodesia ...	15	84-88	68-75	18	81-86.5	68-75 mm.
W. Tanganyika Territory ...	3	84-86	68-70	2	81.5-82	67-69 mm.

In the light of these findings, I believe that we are justified in admitting only one race of *D.cubla* as extending from central and northern Angola, the southern Congo, and north-western and northern Northern Rhodesia, eastwards to western and central Tanganyika Territory under the earliest available name, viz., *D.c.hamatus*, with *D.c.occidentalis* and *D.c.suahelicus* as synonyms.

In Northern Rhodesia, a territory from which a fine panel of skins is now available, thanks mainly to the unremitting efforts in the field of Mr. C. W. Benson and his associates, a marked shift from large- to small-sized birds is demonstrable on the basis of the very adequate material before me. In the above table, I have shown that

in north-western and northern Northern Rhodesia the wings of adult ♂♂ measure 84-88, ♀♀ 81-86.5 mm. Along the line of the Muchinga Range and the western periphery of the Luangwa River valley a well-marked transitional population between the large-sized *D.c.hamatus* and a smaller form (best placed with *D.c.chapini*) is located, as adequately demonstrated by the measurements of a series of adult males from Mpika and its neighbourhood, thus 86, 86, 85.5, 84.5, 84.5, 84, 84, 83, 82.5, 82.5, 81.5, 80.5, 80 mm.). Apart from the diminution in size, the sexes become mensurally similar. In the Luangwa River valley and the areas in Northern Rhodesia lying to the south-east, all the birds measured are small (wings of 8 ♂♂ 79-83, tails 61-68, 8 ♀♀ wings 74-81, tails 62-67 mm.), though not as small as those of southern Nyasaland (13 ♂♂ wings 77.5-81, 7 ♀♀ wings 76.5-80.5 mm.), which are typical of *D.c.chapini*. It is interesting to note that on the eastern periphery of the Luangwa River valley there is a reversed trend towards increased size associated with altitude and temperature, as evidenced by material collected by Button in the Lundazi area.

In the fine series of meticulously prepared specimens from Sul do Save, southern Portuguese East Africa, in the collection of the Durban Museum, the wings of adult ♂♂ of *D.c.chapini* measure in 22 specimens 76.5-81, and in 9 ♀♀ 76-79 mm. The topotypical population of *D.c.chapini* is not quite stable, lying as it does near the region of contact with *D.c.okavangensis* of the interior of southern Africa. While most of the females in our collection from Newington, the type-locality of *D.c.chapini*, have the mantle concolorous with the crown and nape, at least one example is as grey backed as the greyest topotype of *D.c.okavangensis* from the northern Bechuanaland Protectorate. The wings of eastern Transvaal lowveld topotypes measure in 10 ♂♂ 78-84, 7 ♀♀ 77.5-80.5 mm., averaging slightly larger than the littoral birds, and so likewise revealing the influence of the larger-sized birds of the elevated interior (*D.c.okavangensis*) and areas to the south (*D.c.cubla*). It is, perhaps, rather unfortunate that the type-locality of *D.c.chapini* was not placed a little further east on the actual coastal plain of southern Moçambique, but at the time the taxon was described the full nature and complexity of the geographical variation in the South African sub-continental populations of the Puffback was not understood. However, the point is simply one of academic interest and taxonomic refinement, and no adjustment in the nomenclature of the South African forms of the Puffback as proposed by me in 1954 is actually warranted.

The northern range limits of *D.c.chapini* appear to be in the south-eastern parts of Tanganyika Territory to the south of the

range of *D.c.affinis* and the intergrading *D.c.affinis* \supseteq *D.c.hamatus* populations, and specimens in the Durban Museum from Songea, in the Southern Province, are attributable to it. *D.c.chapini* is essentially a lowland race of the south-eastern tropics of Africa, reaching south in the littoral as far as Lake St. Lucia, in Zululand.

THE SUBSPECIES OF *Dryoscopus cubla* (SHAW)

The nomenclature, characters and ranges of the three South African races of *D.cubla* are listed hereunder. For the sake of completeness, the three extralimital races are also listed.

(a) *Dryoscopus cubla cubla* (Shaw)

Lanius cubla Shaw, in Stephens, *General Zoology*, vol. vii, 2, 1809, p. 328: Knysna, southern Cape Province, South Africa (ex Levaillant).

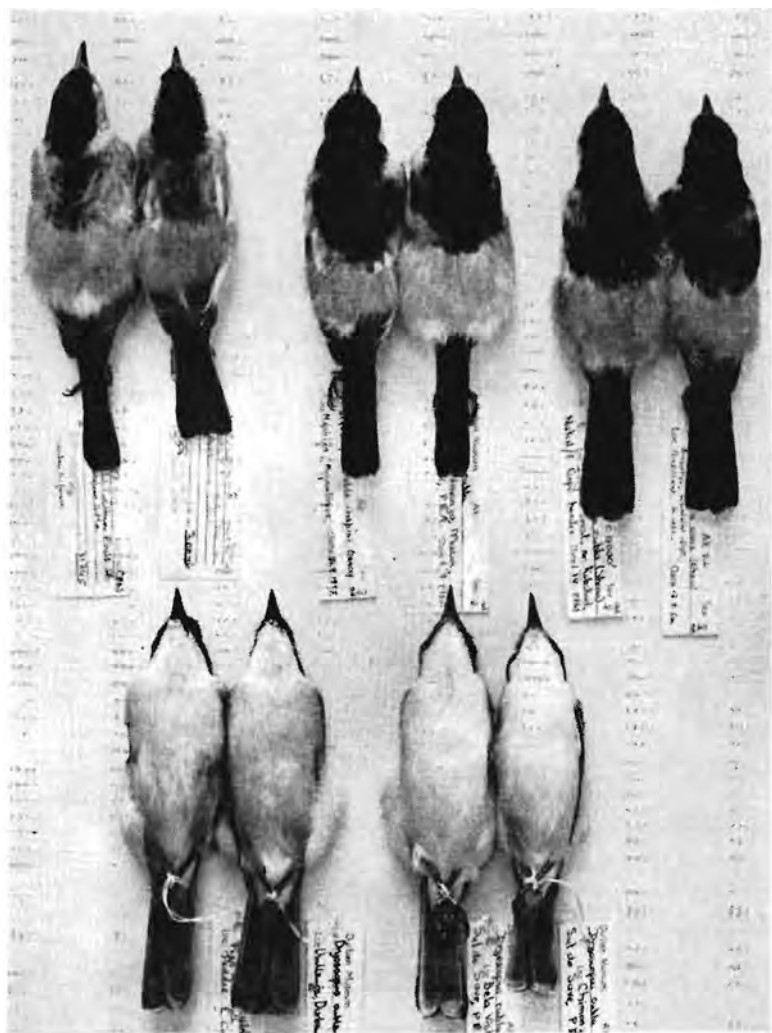
Adult male with head-top, nape and back glossy blue-black; rump silky white, washed with smoke grey. On under-parts off-white, the breast, sides of the body and flanks washed with smoke grey. *Adult female* dull, glossed black from forehead to lower back; rump a light greyish olive, and upper tail-coverts plain black. Lores blackish. Under-parts smoky grey, with suffusion of pale olive-buff over the breast, sides of the body and flanks, and often faintly vermiculated. The irides in the adult male are orange and in the female golden yellow. *First-year* ♂ and ♀ resemble the adult female but are more strongly suffused with olive-buff, especially over the rump, and the under-parts are finely transversely vermiculated.

Measurements: Wings (flattened) of 12 ♂♂ 78-83.5 (80.8), tails 67-73 (68.8), wings of 12 ♀♀ 76-82 (79.2), tails 66-74.5 (69.1) mm.

Material examined: 52. (eastern Cape Province, 3; Pondoland and East Griqualand, 24; Natal, 24; Transvaal, 1).

Type: None. Based on "Le Cubla", of Levaillant, *Hist.Nat. Ois.d'Afr.*, vol. ii, 1799, p. 89, pl. 72.

Range: Southern Cape Province, from the forested districts of George and Knysna, north-eastwards to the eastern Cape (including East Griqualand and Pondoland), Natal and southern Zululand, western Swaziland (highland forests), and the eastern and northern Transvaal in highland forest.



DRYOSCOPIUS CUBLA (Shaw)

Photograph of adult specimens of the three South African races of the Puffback
Dryoscopus cubla (Shaw)

Upper row, left to right

- left pair *Dryoscopus cubla okavangensis* Roberts ♀♀
middle pair *Dryoscopus cubla chapini* Clancey ♂♂
right pair *Dryoscopus cubla cubla* (Shaw) ♀♀

Bottom row, left to right

- left pair *Dryoscopus cubla cubla* (Shaw) ♂♂
right pair *Dryoscopus cubla chapini* Clancey ♂♂

The snowy white under-parts of the adult male of *D. c. chapini* when compared with *D. c. cubla* should be noted. In the case of the females, the almost complete loss of black over the mantle is diagnostic of *D. c. okavangensis*.

(Photo Dennis Cleaver)

(b) **Dryoscopus cubla okavangensis** Roberts

Dryoscopus cubla okavangensis Roberts, *Annals of the Transvaal Museum*, vol. xv, i, 1932, p. 31: Maun, Ngamiland, north-western Bechuanaland Protectorate.

Adult male similar to that of *D.c.cubla* as defined above, but differs in having more prominent white edging to the wing feathers (remiges and coverts), and usually showing more greyish white over the scapulars. On under-parts slight paler, the greyish overlay to the breast, sides of the body and flanks clearer, less buffy tinged. Irides ruby red, not orange. There is also a tendency for the bill to be slightly longer, weaker and more uncinat. *Adult female* differs from *D.c.cubla* in having the forehead and fore-crown flecked with grey, and in having the whole mantle distinctly greyer, the feathers broadly edged with grey, resulting in the black of the upper-parts being more or less restricted to the head-top and nape; rump clearer grey, with little or no olive-buff overlay, and upper tail-coverts black tipped with grey, not plain black as in *D.c.cubla*. Lores off-white, not blackish. On under-parts whiter, less tinged with olive-buff. Wings with more prominent white edging to all remiges and coverts, and tail often exhibiting more white to the tips and outer webs of the outermost two pairs of rectrices. Irides reddish brown, not golden yellow. Bill rather weaker. *First year* ♂ and ♀ show similar differences to those described for the adult female, and are further distinguished by having the throat, breast, sides of the body and flanks lighter and brighter buffy, the vermiculated effect found in *D.c.cubla* being absent. Averaging slightly larger in size, and size disparity between sexes greater.

Measurements: Wings of 12 ♂♂ 80-86 (83.1), tails 62-69 (67.0), wings of 12 ♀♀ 75-85 (79.8), tails 63.5-68.5 (65.7) mm. (Bechuanaland Protectorate specimens only).

Material examined: 139. (Bechuanaland Protectorate and South-West Africa, 38; Southern Rhodesia, 72; south-western Northern Rhodesia, 27; north-eastern Transvaal, 2.)

Type: In the Transvaal Museum, Pretoria. Reg. No. 17653. Collected on the Vernay-Lang Kalahari Expedition, 1930.

Range: South-western and southern Angola, South-West Africa (local and mainly in northern Damaraland, Ovamboland, the Kaokoveld and the Caprivi Strip, but also in central Damaraland and eastern Great Namaqualand (rare)), the Bechuanaland Protectorate, northern Cape Province (Molopo River), western, northern and north-eastern (unstable) Transvaal, western and central Southern Rhodesia (in south, east to Nuanetsi, and in north, east to Salisbury

and Rusape), and south-western Northern Rhodesia (Barotseland, eastwards to about Lusaka-Chilanga-Chirundu, east of which it intergrades with *D.c.chapini*). Intergrades to the north of its stated range with *D.c.hamatus*: (a short series from Balovale, western Northern Rhodesia, shows this clearly), and to the east with *D.c.chapini*.

Note: *D.c.okavangensis* is frequently rejected by workers (see Smithers *et alia*, *Check List of the Birds of Southern Rhodesia*, 1957, p. 133; Benson and White, *Check List of the Birds of Northern Rhodesia*, 1957, p. 106; and Hoesch and Niethammer, *Die Vogelwelt Deutsch-Südwestafrikas*, 1940, pp. 299, 300), but is actually extremely well characterized on the basis of the greyish back colouration of the female.

(c) ***Dryoscopus cubla chapini*** Clancey

Dryoscopus cubla chapini Clancey, *Durban Museum Novitates*, vol. iv, 6, 1954, p. 86: Game Farm "Malamala", near Newington, eastern Transvaal lowveld, South Africa.

Adult male similar to that of *D.c.okavangensis*, and not separable on the upper-parts, but much whiter below, the breast, sides of the body and flanks with little or no greyish overlay. Otherwise similar in all respects, but averaging smaller in size. *Adult female* more closely resembles *D.c.cubla* than *D.c.okavangensis* in having the back concolorous with the head-top and nape, and the forehead and fore-crown without freckling of grey; upper tail-coverts without prominent grey tipping as in *D.c.okavangensis*, and lores off-white, *i.e.*, similar to *D.c.okavangensis*. Rump as *D.c.okavangensis*, and lacking the olive-buff overlay present in *D.c.cubla*. On under-parts not always separable from *D.c.okavangensis* but a little less greyish. Averaging smaller. Sexes almost similar in size.

Compared with *D.c.hamatus* similar in colour in both sexes but of markedly smaller size, thus: wings of adult ♂♂ of *D.c.chapini* 76.5-81, ♀♀ 75.5-80.5, as against 84-89 (90) in ♂♂ of *D.c.hamatus* and 81-86.5 mm. in ♀♀. In *D.c.hamatus* the male is larger than the female.

Measurements: Wings of 12 ♂♂ 76.5-81 (79.1), tails 60-67 (64.3) wings of 12 ♀♀ 75.5-80.5 (77.9), tails 61-68 (65.2) mm. (Sul do Save, southern Portuguese East African specimens only).

Material examined: 178. (Northern Zululand, 4; eastern Swaziland, 2; eastern Transvaal, 23; Sul do Save, 37; eastern Southern Rhodesia, 52 (includes several revealing influence of *D.c.okavangensis*); Luangwa River valley and south-eastern Northern Rhodesia,

30 (includes small-sized intergrading specimens from Mpika and district); lower Zambesi River valley in P.E.A., 2; southern Nyasaland, 25; south-eastern Tanganyika Territory, 3).

Type: In the collection of the Durban Museum. Collected by P. A. Clancey.

Range: The south-eastern and eastern tropical lowlands of Africa, ranging from northern Zululand, eastern Swaziland (unstable) and the eastern Transvaal lowveld (not quite stable), northwards through the lowlands of southern Portuguese East Africa to eastern Mashonaland, Southern Rhodesia, south-eastern Northern Rhodesia in the Luangwa River valley, southern Nyasaland, northern P.E.A., and south-eastern Tanganyika Territory to the south of the range of *D.c.affinis* and the *D.c.affinis* \supseteq *D.c.hamatus* populations.

Note: As noted in the above discussion of the geographical variation of this shrike, the toptotypical population of the eastern Transvaal lowveld is slightly unstable, showing the influence of the contiguous *D.c.okavangensis* in a slight increase in size in males, and the presence of odd females resembling the latter race in the greyness of the mantle. The *Type* is a particularly long-winged example, but has the characteristic white under-parts of the lowland birds.

Extralimital races.

(d) ***Dryoscopus cubla affinis*** (Gray)

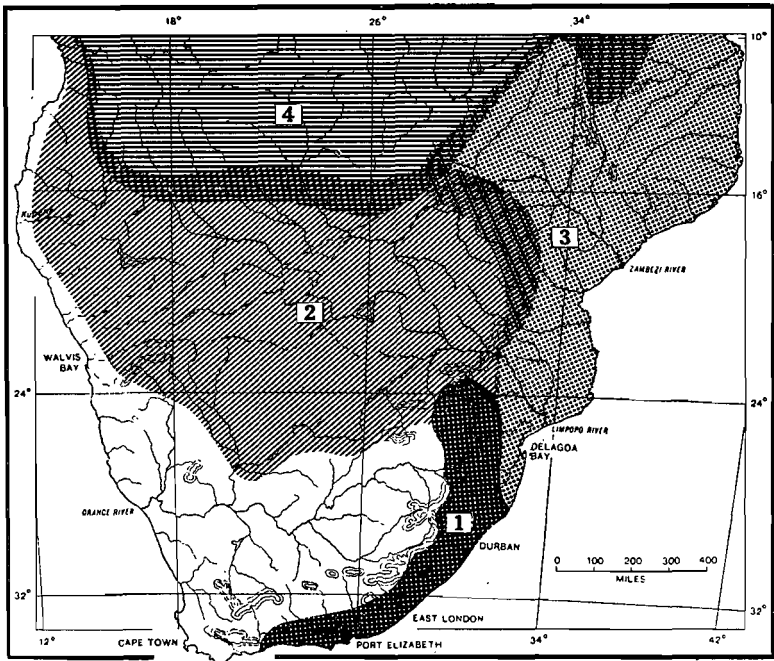
Hapalophus affinis Gray, *Mag.Nat.Hist.* (Paris), n.s., i, 1837, p. 489: Zanzibar.

Adult male like *D.c.chapini* but with the silky white rump without an overlay of grey. White in wings vestigial or absent, and remiges and coverts usually wholly black. *Adult female* similar to that of *D.c.chapini*, but with the lores black and not off-white, and wings with almost complete loss of white, as described in the case of the male. Similar in size.

Measurements: Wings of 2 ♂♂ 75.5, 81, tails 62, 64 mm. Rand, *loc.cit.*, gives the wing-length of this race as 75-84 mm.

Material examined: 2 (coastal Kenya Colony).

Range: The littoral of East Africa from the lower valleys of the Juba River and Webi Shebeli, south-western Somalia, southwards through coastal Kenya Colony to the littoral of Tanganyika Territory (south to the Rufiji River). Also on the island of Zanzibar. Intergrades to the west of its range with *D.c.nairobiensis* and *D.c.hamatus*, and to the south with *D.c.chapini*.



DRYOSCOPIUS CUBLA (Shaw)

Sketch-map showing the ranges and zones of overlap of the four races of the Puffback *Dryoscopus cubla* (Shaw) occurring in the southern portion of Africa.

1. *Dryoscopus cubla cubla* (Shaw)
2. *Dryoscopus cubla okavangensis* Roberts
3. *Dryoscopus cubla chapini* Clancey
4. *Dryoscopus cubla hamatus* Hartlaub

(e) *Dryoscopus cubla nairobiensis* Rand

Dryoscopus cubla nairobiensis Rand, *Fieldiana*, Zoology. vol. xxxix, 12, 1958, p. 87: Nairobi, Kenya Colony.

Adult male very similar to *D.c.chapini*, but rather more sullied with grey over the breast, sides of the body and flanks, and with narrower white edges to the outer webs of the remiges. Tail with less conspicuous white tipping to the rectrices. Larger in size. *Adult female* similar to *D.c.chapini* but with narrower white edges to the outer webs of the remiges, and with the lores black, not off-white. Apparently similar in size.

Measurements: Wings of 2 ♂♂ 86.5, 89, tails 70.5, 72.5, wing of 1 ♀ 77.5, tail 65.5 mm. A single sub-adult ♂ has a wing of 80 mm. Rand, *loc.cit.*, gives the wing-length of paratypical *D.c.nairobiensis* as ♂♂ 81-86 (83.4), ♀♀ 77-81 (79.2) mm. (18 Nairobi specimens).

Material examined: 4 (2 Karura Forest, Nairobi, topotypes, and 2 from L. Magadi, Great Rift, Kenya Colony). Also 2 ♀♀ from near Ifakara, Tanganyika Territory, with characters of this race.

Range: The highlands of Kenya Colony, from Mt. Kenya and the Aberdares, southwards to adjacent highland areas in north-eastern Tanganyika Territory. The southern limits are hard to fix, as *D.c.nairobiensis* combines the racial characters of *D.c.affinis* and *D.c.hamatus*, and simple intergradation between these latter parental forms from as far south as the northern parts of the Southern Province of Tanganyika produces females with the general characteristics of *D.c.nairobiensis*. The true southern limits of the race concerned may be in the region of Kondoa.

Note: In this race the female is markedly smaller than the male, whereas in *D.c.chapini* the sexes are closely similar in size.

(f) ***Dryoscopus cubla hamatus*** Hartlaub

Dryoscopus hamatus Hartlaub, *Proc.Zool.Soc.London*, 1863, p. 106: Kaseh, *i.e.*, Tabora, western Tanganyika Territory.

Adult male and *adult female* similar to *D.c.chapini* but distinctly larger (wings of ♂♂ 84-89, ♀♀ 81-86.5, as against 76.5-81 and 75.5-80.5 mm. in *D.c.chapini*). Differs from *D.c.nairobiensis* in that female has off-white and not black lores, and male rather whiter ventrally. Also usually exhibiting rather more white in the wings. Male larger than the female, and not similar in size as in *D.c.chapini*.

Measurements: Wings of 12 ♂♂ 84-89 (86.3), tails 68-75 (70.8) wings of 12 ♀♀ 81-86.5 (82.8), tails 68-75 (69.3) mm. (Specimen from Angola, north-western and northern Northern Rhodesia, the southern Congo and western Tanganyika Territory).

Material examined: 76. (Angola, 7; north-western and northern Northern Rhodesia, 60; southern Congo, 3; western Tanganyika Territory, 6).

Range: From central and northern Angola, the southern Congo and north-western and northern Northern Rhodesia, eastwards to the Western Province of Tanganyika Territory (in the north to the southern and eastern shores of Lake Victoria, and in the south to the Southern Highlands) and northern Nyasaland. To the south of its range intergrades with *D.c.okavangensis* and *D.c.chapini*, and to the east, in east central Tanganyika, with *D.c.affinis* and *D.c.nairobiensis*.

Note: As explained above, I consider *D.c.occidentalis* Neumann, 1899, and *D.c.suahelicus* Neumann, 1899, synonyms of *D.c.hamatus*.