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MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS XXX

by

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VARIATION IN THE SOUTHERN AFRICAN POPULATIONS OF THE LAUGHING DOVE *STREPTOPELIA* *SENEGALENSIS* (LINNAEUS)

Virtually all the wide-ranging, open country pigeons and doves of southern Africa whose ranges include the whole or part of the South West Arid District exhibit marked response to the arid conditions obtaining in having distinctly paler populations resident or breeding in this xeric region. The Cape Turtle Dove *Streptopelia capicola* (Sundevall) has two South West Arid races, namely *S.c. damarensis* and *S.c. onguati*, while the Redeyed Turtle Dove *Streptopelia semitorquata* (Rüppell) is represented along the northern periphery of the region by rather paler but variable populations which lack the requisite constancy to be considered worthy of nomenclatural recognition, though the trend was clearly evident in material studied in Durban some years ago. Two small-sized, widely distributed doves, the Emeraldspotted Dove *Turtur chalcospilos* (Wagler) and the Namaqua Dove *Oena capensis* (Linnaeus) are also represented by pallid races in the South West Arid District, the first by the race *T.c. volkmanni* and the latter by *O.c. anonyma*. In the case of the rupicolous Speckled Pigeon *Columba guinea* Linnaeus, a pale race, *C.g. bradfieldi*, extends from the arid regions

of the lower and middle Orange R., north through the western half of the region to south-western Angola, while the fruit pigeon *Treron australis* (Linnaeus) has a true desertic and nomadic race, *T.a. vylderi*, restricted to South-West Africa, with a second pale dry-country but riparian form in the Okavango drainage and the Ngamiland swamp region of north-western Botswana, this being *T.a.damarensis*. In the case of the only other wide-ranging dove on the South African list, the Laughing Dove *Streptopelia senegalensis* (Linnaeus), a recent study, which is reported on below, shows that this dove, too, is represented in the South West Arid District by populations which are on the whole paler and greyer above, less ruddy, than mesic populations occurring to the north and east, and the underside is markedly lighter. As *S.senegalensis* is one of the commonest and most widely distributed of doves in the whole of southern Africa, it is strange that the possible existence of a desertic race in the South West Arid District seems not to have previously excited any curiosity on the part of systematists. As recently as 1957, Macdonald, *Contr.Orn.West.S.Afr.*, p.74, remarked, under the heading of *S.s.aequatorialis*, that the "populations in South Africa appear to be fairly constant in appearance and can be identified with the Abyssinian race, *aequatorialis*."

At the present time practically all the populations of *S.senegalensis* occurring in the Ethiopian Region are grouped in the nominate race, described in the first instance from Senegal, in West Africa, though *S.s.aequatorialis* (Erlanger), 1904: Menaballa and Harar, Ethiopia, based on a putative redder dorsal surface, received wide currency for many years, when it was accorded an extensive range over much of Ethiopian Africa. Chapin, *Birds of the Belgian Congo*, part ii, 1939, p.154, admitted *aequatorialis*, but remarked "The validity of *aequatorialis* seems none too sure." Peters, *Check-list Birds of the World*, vol.iii, 1937, p.99, comments that *aequatorialis* is "doubtfully distinct from *S.s.senegalensis*," and most writers since the 1930's have treated it as a subjective synonym of the nominate race. That *S.s.senegalensis* as at presented interpreted is a composite of minor subspecies seems certain, as quite apart from Erlanger's *aequatorialis*, at least two other African mainland and insular races proposed by workers, namely *S.s.sudanensis* Sclater and Mackworth-Praed, 1920, from the Upper Nile, Sudan, and *S.s.thome* Bannerman, 1931: Sao Thomé, are both currently placed along with *aequatorialis* in the synonymy of nominate *senegalensis* by, among others, Vaurie, *Birds of the Palearctic Fauna*, vol. ii (Non Passeriformes), 1965, p.559. Even the insular *S.s.sokotrae* Grant, 1914: Hadibu Plain, Socotra, is synonymized with the nominate

subspecies by Mackworth-Praed and Grant in their African *Hand-book*, though the race is admitted by the equally conservative Vaurie, *loc.cit.* North of the Equator the situation appears to be that relatively pale birds range extensively from west to east in the dry savannas distributed along the southern edge of the Sahara, extending east of this to Arabia, thence northwards to Palestine (Israel) and perhaps Turkey (Vaurie described the eastern block of such populations as showing some similarity to *S.s.phoenicophila* Hartert, 1916: near Biskra, southern Algeria), such pallid populations of *senegalensis* giving way to the southward to redder backed birds associated with mesic biomes surrounding the ecologically unsuitable forested regions of Upper and Lower Guinea. This is the variational pattern frequently accepted by students of African birds, recognised by the acceptance of the pale northern arid, desert-fringe birds as representing nominate *senegalensis* and the tropical mesic ones *aequatorialis*.

In the south of Africa a very similar pattern of variation in conformity with increasing aridity of the biotope can be demonstrated if adequate material is assembled. On the basis of the material recently studied in Durban, the populations of the Laughing Dove breeding in South-West Africa, along the arid coast of Little Namaqualand, in Bushmanland, and through the Kalahari of Botswana to the low rainfall districts of the western and northern Transvaal along the Limpopo and parts of western Matabeleland, Rhodesia, were found to be appreciably paler than those occurring still further east, south and north in Africa. In the case of males of the South West Arid populations of *S.senegalensis*, the head in freshly moulted specimens is more lavender grey, not reddish or vinaceous brown, and the upper-parts of the body are less washed and mottled with ochraceous rusty. Below, the throat is appreciably whiter, the diced or checked cinnamon and black neck-band narrower and usually medially broken by an invasion of pink, while the breast is lighter and somewhat more violaceous in aspect. Females show analogous differences, having the head greyer, less vinaceous brown than in birds from the moister districts to the east and north of the South West Arid District, and the mantle is duller, more greyish brown, lacking the buffy or olive overlay. Below, the pallor results in a whiter throat and lighter breast, which latter is not zoned with a dark vinaceous pink patch. The overall effect is of an appreciably whiter ventralled bird. In both sexes there is a perceptible trend to have the grey surfaces in the wings lighter, the feathers more sharply edged with white.

The differences outlined in the previous paragraph in respect of

South West Arid *S.senegalensis* more or less exactly parallel, both in style and disposition, the described variation in the sympatric *S.capicola*, in which the main South West Arid race, *damarensis*, is replaced to the north and east of its range by populations with a more olive or buffy, less grey, brown back and pinker, less lavender, grey surfaces (*S.c.tropica*). As in the case of *S.c.damarensis*, the South West Arid populations of *S.senegalensis* appear to have some elements which move to the east and south of the breeding range in sympathy with the onset of cold, dry conditions during the southern "winter", when pale birds are to be found in parts of the middle Zambesi R. valley, southern Zambia, Western Rhodesia, and in the Republic of South Africa in the western Orange Free State, and in the Cape even at Cape Town. Benson and White, *Check List Birds of Northern Rhodesia*, 1957, p.40, have already drawn attention to the purely seasonal incidence of *S.senegalensis* in parts of southern and south-western Zambia.

In arranging the southern African populations of the Laughing Dove in two subspecies, I follow current convention in considering *S.s.aequatorialis* as a subjective synonym of nominotypical *senegalensis*. I do not find this small dove inordinately variable, and believe that the arguments raised by many workers against the taxon *S.s.aequatorialis* on the grounds that it is so are almost certainly invalid. Further analytical study of adequate material from the north of the Ethiopian Region will almost certainly result in the resurrection of *aequatorialis* as a recognisable subspecific entity.

For the loan of material to augment that already in the collection of the Durban Museum, I am grateful to the following museums and stated officials: South African Museum, Cape Town (Professor J. M. Winterbottom), East London Museum (C. D. Quickelberge), Natal Museum, Pietermaritzburg, Transvaal Museum, Pretoria (A. C. Kemp), National Museum of Rhodesia, Bulawayo (M. P. Stuart Irwin), State Museum, Windhoek (P. J. Buys), and the Museu Dr. Alvaro de Castro, Lourenço Marques (Dr. M. Corinta Ferreira).

The names, characters and ranges of the two southern African subspecies it is proposed to recognise are as follows:

(a) ***Streptopelia senegalensis senegalensis*** (Linnaeus)

Columba senegalensis Linnaeus, *Syst.Nat.*, 12th edition, 1, 1766, p.283; Senegal, West Africa.

? *Turtur senegalensis aequatorialis* Erlanger, *Ornith.Monatsber.*, vol.xii, 1904, p.98: Menaballa and Harar, Ethiopia.

Stigmatopelia senegalensis sudanensis Sclater and Mackworth-Præd, *Ibis*, 1920, p.832: Kaka, Upper Nile Province, Sudan.

? *Streptopelia senegalensis thome* Bannerman, *Bull.Brit.Orn. Club*, vol.li, 1931, p.115: Zalma, Sao Thomé.

♂, adult. Top and sides of head and neck Sorghum Brown (Ridgway, 1912, pl. xxxix); mantle and scapulars dark vinous brown, overlaid with rufous, the feathers broadly tipped ochraceous rusty. Below, with forethroat and breast Light Russet Vinaceous (pl.xxxix); over the sides of the lower neck and lower forethroat a broad band of black, the feathers broadly tipped with cinnamon or vinaceous brown, the individual feathers apically bifurcate. In the wings, most of the lesser-, median- and greater-coverts, as well as the outer vanes of the secondaries, Deep Gull Gray (pl.liii).

♀, adult. Similar to the adult ♂, but pink of head and neck sharply demarcated from the mantle, and not diffused over the latter surface as in the male; mantle and scapulars duller, more olive, brown, and less overlaid with ochraceous rusty, the pale tipping to the feathers pale dull tawny rather than light rufous. Below, with tipping to feathers of neck-band lighter, and white of medio-ventral plane more extended up over the breast. A little smaller than the male.

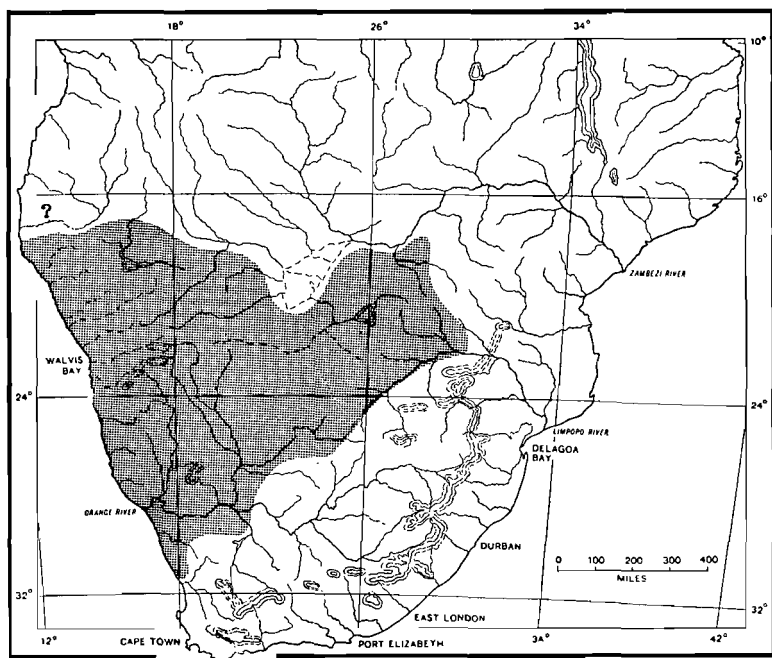
Wings (flattened) of 10 ♂♂ 135—143 (139.3), tails 107.5—114.5 (110.5), wings of 10 ♀♀ 131—138 (134.4), tails 101—110 (105.3) mm. (East African specimens from Kenya to the Zambesi).

Material examined: 156. **Kenya**, 9; **Malawi**, 2; **Zambia**, 23 (Shangombo, Chilanga, Mazabuka, Feira, Fort Jameson, Mpika, Mporokoso, Kabwe, etc.); **Moçambique**, 7 (Messenguese, Msussua, Moamba, Mapulanguene, Moatize, etc.); **Rhodesia**, 24 (Zambesi R., Sabi/Lundi confl., Umtali, Umvuma, Bulawayo, nr. Beit Bridge, etc.); **Transvaal**, 6 (Kendal, Sabi R., Newington); **Natal**, 27 (Durban, Pietermaritzburg, etc.); **Basutoland**, 1 (Mamathe's); **Cape**, 48 (Cape Town, De Aar, Kimberley, Port Elizabeth, East London, etc.); **South-West Africa**, 3 (Cunene R., Kapaku, W. of Runtu, Okavango R.); northern Botswana, 6 (Serondela, Linyanti, Tsotsoroga Pan, etc.).

Range: West Africa, except in heavily forested districts, north to Mauretania and the Air and Hoggar massifs, west north of the Lower Guinea forest to the Sudan, Ethiopia and Somalia, south through eastern Africa, including the north-eastern Congo, Uganda, Kenya and Tanzania to Zambia, Angola, much of Rhodesia,

Malawi, Moçambique and the Republic of South Africa (except in north-western Cape). The populations resident in Arabia, Israel and perhaps Turkey are currently associated with this race (see Vaurie, *loc.cit.*). Recorded as intergrading with *S.s.aegyptiaca* in southern Egypt.

Remarks: The action of the sun browns the wings and tail, and wear erodes away the buff or rusty tipping to the back feathers, resulting in breeding birds appearing less mottled with buff or rufous than freshly moulted ones. Soil staining results in the discolouration of the white medio-ventral surfaces and the tail tip.



Streptopelia senegalensis (Linnaeus)

Sketch-map showing the approximate ranges of the two southern African races of the Laughing Dove. (*Note:* Distribution of either race is not continuous within the range as shown).

Unshaded area: *Streptopelia senegalensis senegalensis* (Linnaeus)

Shaded area: *Streptopelia senegalensis divergens* Clancey

(b) ***Streptopelia senegalensis divergens***, subsp. nov.

Type: ♀, adult. Nthane, Makarikari Salt Pan complex, north-eastern Botswana, at 21° 16' S., 26° 10' E. Altitude 973 m. a.s.l. 30 July, 1969. Collected by P. J. G. Ginn. In the collection of the National Museum of Rhodesia, Bulawayo. N.M.Reg.No.68,796.

Diagnosis: ♂, adult. Similar to nominate *S. senegalensis* as defined above, but differs in having the sides and dorsal surface of the head and neck more violaceous, less ruddy brown (Light Brownish Drab (pl.xiv), *versus* Sorghum Brown (pl.xxxix)); mantle with ground less saturated rufous and overlaid or transversely barred with ochraceous rusty, appearing greyer with a dusty pink patina; scapulars, adjacent coverts and tertials paler and with less bright tawny or rusty tipping. Below, with a whiter chin and throat centre, and a somewhat less expansive cinnamon or vinaceous brown and black diced neck-band, which is usually medially sundered by an extension of the pink of the mid-forethroat to link up with that of the breast (the collar is unbroken in *senegalensis*); pink of breast paler, less brownish vinous than in the nominate race (Light Grayish Vinaceous (pl.xxxix), *versus* Light Russet-Vinaceous (same pl.)); rest of underside more extensively and clearer white. In wings, grey surfaces paler, and coverts in most more sharply margined with white. Similar in size.

♀, adult. Racial distinctions perhaps better marked than in the male. Dorsal surface of head and neck lavender grey rather than vinaceous brown (centre of crown Brownish Drab (pl.xlv) or greyer, against Army Brown (pl.xl) in *senegalensis*), the crown centre darker than the periphery; mantle and scapulars, adjacent coverts and tertials distinctly greyer and colder, less warm olive or buffy brown than in the nominate race, the buff or rusty mottling somewhat suppressed, imparting a more uniform, less cryptic facies in series (mantle centre in *divergens* Hair Brown (pl.xlvi), *versus* Saccardo's Umber (pl.xxix)). Below, with a somewhat narrower diced neck-band, this usually medially broken as in the ♂. Pink of breast paler, this surface usually lacking any overlay of vinaceous as in nominate *senegalensis*, and rest of underside clearer and more extensively white. Grey in wings paler, the feathers more sharply edged with white.

Wings of 10 ♂♂ 134—147.5 (139.5), tails 111—115 (113.3), wings of 10 ♀♀ 132—142.2 (138.8), tails 103.5—113 (109.0) mm. (South-West African and Botswana specimens).

Material examined: 63. **Western Cape**, 10 (Noisabis, Pella, Kuboes, Pinelands, Cape Town (14 June), etc.); **South-West Africa**, 15 (Okahandja, Gobabeb, Omaruru, Otjiwarongo, E. of Torra Bay, Sanitatas, Orongo, Ohopoho, Gobabis, etc.); **Botswana**, 12 (Kai Kai, Molepolole, Tsau, Francistown, Nata, Musu, Nthane, Kasane, etc.); **Zambia**, 3 (Mt. Makulu at 15° 34' S., 28° 16' E.) (March, July), Chilanga (13 May)); **Rhodesia**, 20 (Bulawayo, Deka, Fort Tuli,