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 systematic 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,
with nomadic flocks of *Anthus novaeseelandiae* and *Calandrella cinerea*, which may account to a certain extent for the fact that *M. c. stabilior* was not recognised before 1952, while its complete range has only now been accurately determined.

6. FURTHER COMMENTS ON THE SOUTH AFRICAN RACES OF *PASSER DIFFUSUS* (A. SMITH)


Since writing my revision of the southern African races of *P.diffusus*, loc. cit., I have been able to study the series in the collection of the East London Museum from the central Orange River valley and the northern Cape Province, as well as extensive new material from various parts of South-West Africa collected by the staffs of the Durban and East London Museums during the months of May and June, 1959.

I now find that the population of the Kuruman district (topotypical of *P.d.diffusus*) is inseparable on any character from those of Damaraland (topotypical of *P.d.georgicus*), and that the populations of the middle and lower Orange River are intermediate between *P.d.diffusus* of the arid interior and west and the darker
P. *d. stygiceps* of the moister east and south-east of southern Africa. On the finding that Kuruman birds are as pale as the palest South-West African examples, to maintain three racial taxa in southern Africa would necessitate the introduction of a new name for the Orange River birds. On careful reconsideration of this whole problem, I now subscribe to the view that such action would be inadvisable and that only two groups of populations of the *diffusus* group of Grey-headed Sparrow forms warrant nomenclatural recognition. Such a view is in accord with the opinions of Roberts (1940) and Vincent (1952), with the exception of the nomenclature to be used for the eastern and south-eastern populations.

My report on the races of the Southern Grey-headed Sparrow *P. diffusus* occurring within South African sub-continental limits now requires to be adjusted by the sinking of *P. d. georgicus* into *P. d. diffusus*, and the recognition of two subspecies only:

(a) *Passer diffusus diffusus* (A. Smith)


In breeding dress head-top and hind neck about Mouse Gray (Ridgway, *loc. cit.*, pl. lii) with an overlay of olive; mantle about Saccardo’s Umber (pl. xxix), the tips of the feathers paler; rump Sayal Brown (pl. xxix). On under-parts dull white, the breast, body-sides and flanks washed with light grey.

*Range:* The valley of the central and lower Orange River (intergrades *P. d. diffusus* $\prec P. d. stygiceps*); northern Cape Province, South-West Africa, the Bechuanaland Protectorate, western Matabeleland, Southern Rhodesia, and the western Transvaal. Extralimitally to southern and south-western Angola, Southern Barotseland and adjacent Northern Rhodesia.

*Remarks:* Smith’s description, *loc. cit.*, of the colour of the head and neck of his *Pyrgita diffusa* as dull rusty grey confirms that this name applies to the western populations with the head-top olive tinged and not to the bluer-headed eastern birds.
(b) *Passer diffusus stygiceps* Clancey


In breeding dress head-top and hind neck darker and distinctly more blue-grey than in *P.d.diffusus*, the olive overlay lacking; mantle darker and richer (Saccardo's Umber/Sepia (pl. xxix)), and sharply demarcated from the blue-grey of the hind neck; rump darker. On under-parts more strongly washed with darker grey over the breast, body-sides and flanks. Wings and tail rather darker.

The darker and more saturated general colouration of *P.d.stygiceps* is equally well marked in the freshly moulted dress, when the head-top and nape are heavily overlaid with brownish, and the upper-parts are more uniform.

**Range:** Eastern Cape Province (local), Orange Free State, Basutoland, Natal and Zululand, Swaziland, eastern, northern and highveld of the Transvaal, southern Portuguese East Africa, eastern Southern Rhodesia (western limits not certain), northwards to southern Nyasaland. Intergrades to the west of its stated range with the previous race.

**Remarks:** Smithers et alia, *Occasional Papers of the National Museum of Southern Rhodesia*, No. 23B, 1959, p. 24, follow the unqualified opinion of White and Moreau that variation in this sparrow from the moist, humid east to the dry west of southern Africa is vague and clinal. The variation in the southern African populations of *P.diffusus* is not clinal. It is now known that a comparatively homogeneous pale race of this sparrow extends with little significant internal variation from south-western Angola, south and south-eastwards to the eastern limits of the Kalahari thornveld savannas. Within the populations of the dark *P.d.stygiceps* there is also little variation, and it is now established that *P.d.diffusus* and *P.d.stygiceps* meet and intergrade in a comparatively narrow zone of contact. The variation shown by the southern African populations of *P.diffusus* is simple and orthodox, and similar to that admitted by workers for a whole range of South African birds with analogous distributions. It is entirely wrong to apply the cline concept in cases of this nature, where the fundamental variation in the populations is sharply stepped and salient. At the present time there is a general tendency by some less painstaking workers to apply the cline concept at every opportunity without giving critical consideration to the true nature of the variation covered by their recommendations.
White and Moreau, *loc. cit.*, suggest that in *P. diffusus* the bill is always flesh coloured, but this is not so. The bill in *P. diffusus* changes to black in the breeding season, just as in the case of the European House Sparrow *Passer domesticus* (Linnaeus), though in this latter species only the male assumes a wholly black bill. In the case of *P. d. stygiceps* the mandibles start to turn black in the latter half of July and the early part of August.

7. POLYTYPIC VARIATION IN THE VIOLET-EARED WAX-BILL *GRANATINA GRANATINA* (LINNAEUS) OF SOUTHERN AFRICA

The Violet-eared Waxbill *Granatina granatina* (Linnaeus) is a widely distributed and relatively common estrildine species of the south-west African biota, its range being centred on the thornveld savannas of the interior and arid west of sub-continental South Africa. In the west of its range it occurs north in the littoral of Angola to about Benguela, but does not extend south of the Orange River. The species, which is much sought after for aviaries, occurs in small flocks and family parties in light thorn woodland, favouring matted tangles of thorns and grass, being attracted to concentrations of such herbage bordering primitive cultivations.

*G. granatina* is currently believed to be monotypic, and nowhere in the literature at my disposal has it been suggested that demonstrable geographical variation exists. Comparison of material collected in South-West Africa in May-June, 1959, with that already in our collections from the Transvaal revealed quite marked differences between the two groups of populations, and suggested the existence of at least two nomenclaturally recognisable races. Through the kindness of the Directors of the East London Museum, the Transvaal Museum (through Mr. O. P. M. Prozesky), the National Museum of Southern Rhodesia, Bulawayo (through Mr. M. P. Stuart Irwin), and the Chicago Natural History Museum, U.S.A. (through Mr. Melvin A. Traylor), a series of just over one hundred skins (106) has been available for critical study. Careful examination of this adequate material, 90 per cent. of which has been obtained since 1950, confirms the existence of subspecific variation in *G. granatina*: a pale race of the arid west of southern Africa, which extends south-eastwards into the Kalahari Desert, Bechuanaland Protectorate, and a darker (nominate) one lying to the east and north-east of the pale form.

*Fringilla granatina* Linnaeus, *Systema Naturae*, 12th edition, i, 1766, p. 319, is based on the Red and Blue Brazilian Finch of