

almost to the Mozambique littoral, but much work still remains to be done on the distributions of the races of *P. melba* occurring within Portuguese East African limits.

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## On the geographical variation of the Yellow-throated Longclaw *Macronyx croceus* (Vieillot)

by P. A. CLANCEY

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Gyldenstolpe (1924) was the first worker to demonstrate the existence of geographical variation in the populations of the wide-ranging Yellow-throated Longclaw *Macronyx croceus* (Vieillot) of the savannas of Africa. Friedmann (1930), following on Gyldenstolpe's original observations, arranged the populations of *M. croceus* in two races: *M. c. croceus* (Vieillot), 1816: Senegal, and *M. c. vulturinus* Friedmann, 1930: coastal parts of Natal in the vicinity of Durban, the latter, introduced as a new race restricted to the extreme austral parts of the species' range, being separated from *M. c. croceus* solely on the basis of longer culmen length. While Friedmann's findings have been very largely followed by subsequent workers (see Roberts [1940], Vincent [1952], McLachlan and Liversidge [1957], *inter alia*), White (in Peters [1960]; 1961) has recently tried, without presenting nearly sufficient evidence, to convince other workers that the variation in this species is either seasonal or of such irregularity as to preclude its satisfactory nomenclatural recognition.

Some years ago, I showed (Clancey, 1952A) that the population of *M. croceus* occurring in north-eastern Zululand consisted of birds with rather shorter bills than in Natal topotypes of *M. c. vulturinus*, and in a fuller exposition (Clancey, 1952B) I arranged the populations of the South African sub-continent in two races (*M. c. vulturinus* and *M. c. croceus*), restricting the range of *M. c. vulturinus* to Pondoland, Natal and Zululand, the rest of the South African populations being referred to the nominotypical race. In a still later study (1958) I distinguished the populations of *M. croceus* of east-central and eastern Africa from both *M. c. vulturinus* and *M. c. croceus* on colour and mensural characters under the name *M. c. tertius* Clancey, 1958: Hartley, Matabeleland, Southern



Rhodesia. From *M. c. vulturinus*, *M. c. tertius* was separated on the basis of overall smaller proportions, rather greyer upper-parts, and clearer yellow medial ventral surface, and from *M. c. croceus* on the basis of greyer upper-parts, and the Lemon Chrome as against Light Cadmium (*vide* Ridgway [1912] pl. iv) of the breast and abdomen. In discussing the differences between *M. c. vulturinus* and *M. c. tertius*, I demonstrated that in a direct and critical comparison between series of skins of the two forms prepared by exactly similar techniques and by the same hands, there was a marked difference of between  $\frac{1}{2}$  and  $\frac{3}{4}$  of an inch in length between the skins of the respective forms. This connoted a palpable size difference which could conceivably be treated statistically in the event of sufficient weights of newly shot *M. c. vulturinus* and *M. c. tertius* being made available in the future.

White (1961), in seeking to justify his earlier rejection of *M. c. vulturinus* (1960), has expressed the view that the geographical variation in this species is so complex and irregular that science is not served by the recognition of races (*cf.* Chapin [1953]). I do not believe that this species is abnormally or particularly locally variable, or that the recorded variation cannot be conveniently expressed by the recognition of subspecies. Moreover, White saw fit to discuss only about half of the characters utilized by me in my arrangement of the populations in to three forms—for instance he makes no reference to the fact that West African birds have duskier yellow under-parts than eastern or southern African ones, nor is any mention made of the differences in skin size advanced by me in the original description of *M. c. tertius* to enable one to distinguish this race from the adjacent *M. c. vulturinus*. That West African birds do in fact have dusky yellow under-parts was noticed years ago by the critical Zedlitz (see Gyldenstolpe [1924]). I submit that the inadequate evidence propounded by White does not amount to a fresh appraisal of the polytypic variation in *M. croceus*, warranting the synonymizing of *M. c. vulturinus* and *M. c. tertius* with *M. c. croceus*.

As in all pipits living the greater part of their lives in rank grass, the Yellow-throated Longclaw is subject to marked seasonal colour variation due mainly to abrasion, which appears to affect the plumage of the dorsal surface and the wings and tail more extensively than the underside. Therefore, in order to assess the geographical variation in the plumage colouration one is compelled to found decisions on material collected during the two or three months in the year in which the birds are in relatively fresh dress. It is an unfortunate fact that much of the material in the general run of museum collections is too worn and otherwise unsatisfactory to be of use in determining the existence and nature of the geographical as opposed to seasonal colour variation.

A critical study of that material in the Durban Museum collection which meets the above requirements shows that colour variation is not heterogeneous as suggested by White but is remarkably stable over vast areas. For instance, in the race *M. c. tertius* there is not the slightest palpable colour difference between birds from Sul do Save, southern Portuguese East Africa, Mashonaland, eastern Southern Rhodesia, southern Nyasaland and western Northern Rhodesia and those of coastal Kenya Colony. In further support of this finding, one need only look at



the highly stable, though admittedly localized, *M. c. vulturinus*, in which there is little individual variation in series of skins in a precisely comparable condition.

In so far as size is concerned there is also marked constancy in the two races of which we have adequate and fully representative series (*M. c. vulturinus* and *M. c. tertius*). In *M. c. vulturinus* the flattened wings of adult males range from 100–105, tails 80–88 and culmens (from base) 21.5–24 mm. This race ranges from the littoral of southern Pondoland, eastern Cape Province, north-eastwards to northern Zululand and southern Swaziland, where it merges into *M. c. tertius*. This latter race is smaller in most dimensions than *M. c. vulturinus*, having a shorter bill and tail and in being greyer, less saturated brownish olivaceous, on the upper-parts in newly moulted dress—also clearer yellow below in adult males. The wings of adult ♂♂ *M. c. tertius* measure 96–100 (102), tails 74–80, culmens 20.5–21.5 (22.5) mm. The legs and feet are also smaller than in *M. c. vulturinus*. This size variation is quite clearly discernible in carefully prepared series without recourse to measuring, the skins of *M. c. tertius* being from  $\frac{1}{2}$ – $\frac{3}{4}$  of an inch shorter than those of *M. c. vulturinus* (see photograph). As already noted above, there is little or no variation of note within the taxon *M. c. tertius*, and the race is remarkably uniform, ranging from the northern limits of Zululand, northwards through Portuguese East Africa, eastern Southern Rhodesia, eastern Northern Rhodesia and Nyasaland to eastern Tanganyika Territory, coastal Kenya Colony and immediately adjacent south-western Somalia. It is interesting to note that van Someren (1932), working on a series of thirty-nine specimens, demonstrated what appears to be a marked size-difference between coastal Kenya Colony birds (*M. c. tertius*) and those of Uganda and the Kenya Highlands (*M. c. croceus*), giving the wings of examples of both sexes from the Kenya coast as 90–96, and of those from the elevated interior as 96–105 mm. The wings of ♂♂ ♀♀ of *M. c. tertius* in the Durban Museum, including a short series from Kilifi on the Kenya coast collected personally in April, 1958, measure 94–100 (102) (the wings of the Kilifi series measuring ♂♂ 100, 98, ♀♀ 94, 88 mm.) show that the race concerned is not separable from the nominotypical one on size.

Compared with *M. c. tertius*, freshly moulted examples of the nominate race are readily distinguishable on the basis of warmer and redder, less greyish, upper-parts. The brown fringes to the mantle feathers correspond closely to the Tawny-Olive of Ridgway (pl. xxix) as against Isabella Color (pl. xxx) in the eastern race. I did not allude to this distinction in my 1958 report, mainly owing to the fact that the majority of the West African skins then available to me had the upper-parts abraded. In addition to the dorsal character just enumerated, the two taxa are readily segregable on the grounds of a duller yellow abdominal surface in *M. c. croceus*, which has the yellow of the lower breast and abdomen more sullied or overlaid with buff or bronzy, thereby lacking the vibrancy and clarity of colouration present in *M. c. tertius* of the eastern tropics of Africa. As already noted above, while the dorsal differences are largely lost some two or three months after the completion of the moult, the variation in the tonality of the yellow of the medial ventral surface persists.

I have seen insufficient material from West Africa to permit of any



generalisations in so far as *M. c. croceus* is concerned. Specimens from the highlands of Kenya Colony and the eastern Congo do not differ in colour from others from the Moyen Congo, the Gabon, the Cameroons and Nigeria, westwards to Ghana, Liberia and Sierra Leone, although within such populations there appears to be clinal size variation. Western Upper Guinea birds range appreciably smaller in size than those from the eastern sector of the race's range, most marked in the shorter tails (♂♂ from Ghana, Liberia and Sierra Leone having tails 68–77, ♀♀ 65–68 mm. (all specimens in variably worn dress, and tails in some instances particularly worn, but I do not concede that the demonstrable size difference is entirely due to wear, as the Upper Guinea birds are in addition physically very small (see photograph). The tails in 10 ♀♀ of *M. c. tertius* measure 74–78 mm. A single topotypical male of *M. c. croceus* from Mbidjem, near Thiès, Senegal, in the collection of the American Museum of Natural History, New York, is markedly larger than the more southern West African birds just discussed, having a wing of 105.5 and a tail of 82 mm. In these large dimensions it agrees with some of the eastern populations of the same subspecific entity.

With the limited material and data currently available to me I am unable to resolve the mensural variation in the taxon *M. c. croceus* at the present time, though the indications are that the populations of the humid forested regions of Upper Guinea are composed of smaller sized and more delicate birds than those inhabiting the savannas of the interior of West and north-central Africa. This was also noted many years ago by van Someren (1922). The range of *M. c. croceus* is from Senegal, Gambia, Sierra Leone and other West African territories, eastwards to the Cameroons, the Gabon, Moyen Congo, the lower Congo R., and northern Angola to the south-west of the Lower Guinea Forests, and north of the same forested region to the north-eastern and eastern Congo, Uganda, the southern Sudan, Abyssinia and the Kenya Colony highlands. *M. c. croceus* and *M. c. tertius* are largely separated from one another by extensive intrusive populations of the closely allied *Macronyx fülleborni fülleborni* Reichenow and *Macronyx fülleborni ascensi* Salvadori, converging only in the interior of Kenya Colony and immediately adjacent Tanganyika Territory.

The material now available in the collections of southern African museums supports the recognition in our formal subspecific arrangement of the populations of two reasonably well-marked races of the Yellow-throated Longclaw in eastern and south-eastern Africa (*M. c. vulturinus* and *M. c. tertius*) as distinct from *M. c. croceus* on both mensural and chromatic grounds. The latter, however, shows some marked, mainly size, variation within its component populations, which clearly warrants further study and analysis. In the light of these observations, I formally reject the findings of White, and resuscitate both *M. c. vulturinus* and *M. c. tertius* from the synonymy of *M. c. croceus*.

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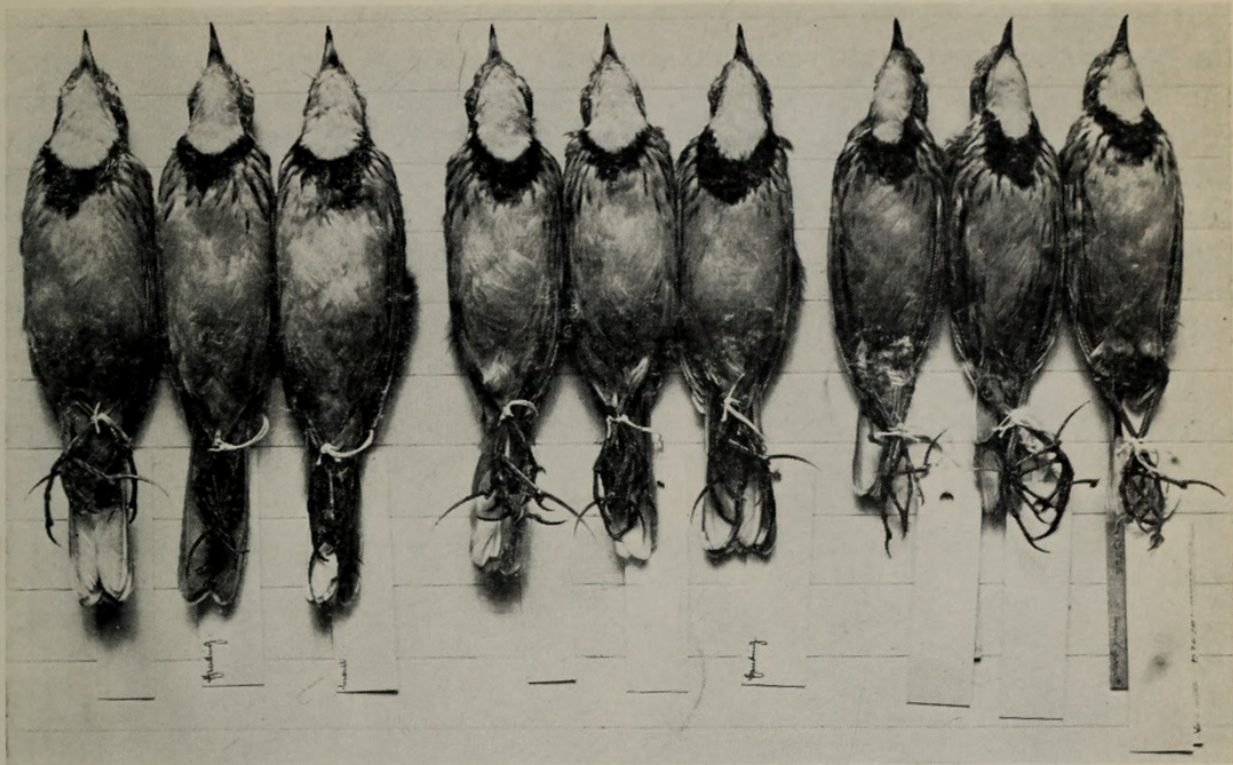


Photo: Dennis Cleaver

*Macronyx croceus* (Vieillot)

Photograph showing size variation in three races of the Yellow-throated Longclaw *Macronyx croceus*. The smaller overall size of the central group of three specimens (*M. c. tertius*) compared with skins of *M. c. vulturinus* (left group), and the much smaller physical proportions of the Upper Guinea populations of *M. c. croceus* (right group) (see discussion in the text) can be readily seen. The darker yellow abdominal surface in *M. c. croceus* when compared with *M. c. tertius* can also be discerned. Each horizontal division in the photograph represents one inch.

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**A revision of Balkan, Aegean and Anatolian Crested Larks**

by GEORGE E. WATSON

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Geographic variation in the Crested Lark, *Galerida cristata*, is obscured by a fair amount of correlation between the colour of the bird's dorsum



Clancey, P. A. 1962. "On the geographical variation of the yellow-throated longclaw *Macronyx croceus* (Vieillot)." *Bulletin of the British Ornithologists' Club* 82, 5–9.

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