Symmetrical albinism, a possible secondary sexual character in the Black Cuckoo-Shrike *Campephaga phoenicea* (Latham)

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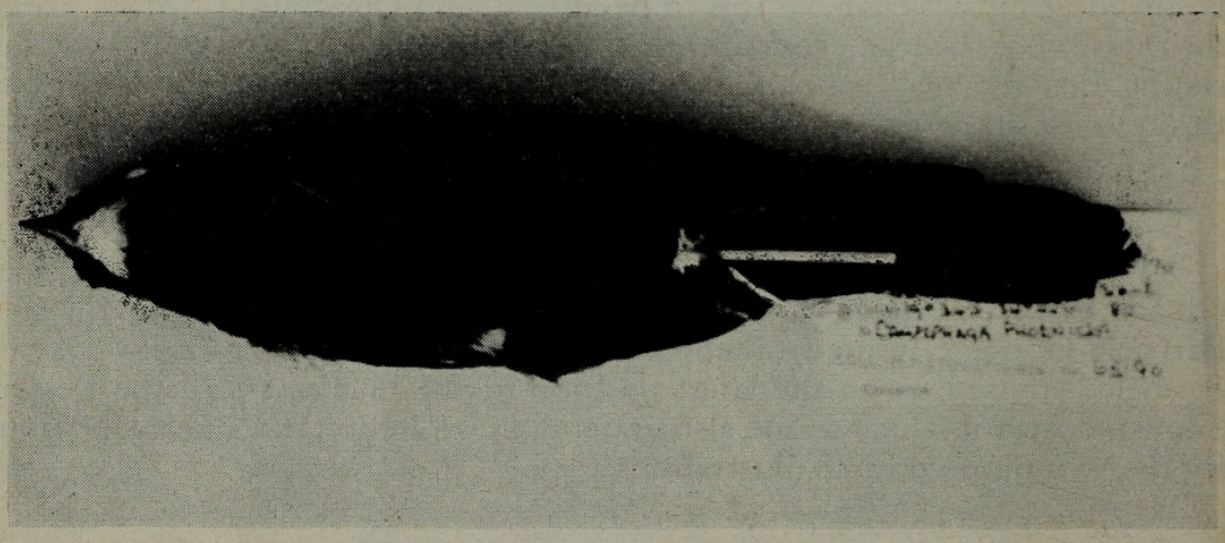
The Black Cuckoo-Shrike *Campephaga phoenicea* (Latham) ranges from Senegal to Eritrea and the Cape Province, over this enormous range dividing into three very distinctive races that are sometimes given specific status. The males are for the most part wholly blue-black, but differ in the degree of instability in the colour of the shoulder patches, which are red, or occasionally orange, in nominate *phoenicea*. In *C. p. petiti* Oustalet such shoulder patches are usually lacking, while in *C. p. flava* Vieillot yellow shoulder patches do occur, though rarely. Thus of 88 adult males of *C. p. flava* in the collection of the National Museum, Bulawayo, from south-central Africa northwards to Tanzania, only five are so marked, two of these being from Rhodesia with one each from Malawi, Tanzania and Moçambique. One of these in which the chin is wholly white is the principal subject of this note.

It is an adult male obtained by one of us (Irwin), at Dondo, 19° 34′ S., 34° 44′ E., in Moçambique on 14th June, 1968, where the species was relatively common on the borders of coastal forest clearings. While possessing yellow shoulder patches, this specimen has in addition a strikingly white symmetrical chinpatch, showing up in contrast to the otherwise normal glossy blue-black throat. This area of white extends from the junction of the mandibular ramus to approximately the commissure or about 10 mm. in depth. It was most noticeable in the field. The specimen is illustrated in the accompanying photograph.



No very detailed study appears ever to have been made on the display patterns of this, or any other member of the genus. Skead (1966: 71–75) provides some information, though none of this seems particularly relevant as to the precise function of the shoulder patches, though they do receive mention. However, it may be assumed that when present, they are of some significance. On the other hand, the swollen orange-yellow skin at the sides of the gape, together with the brightly coloured mouth, have a very definite function, as has been shown recently by Marshall *et al.* (1968: 203). Though

it seems not to have been mentioned in the literature, this skin tends to become swollen and more highly coloured in the breeding season, when it takes on the appearance of an incipient wattle.

Its greatest development takes place in the related *Campephaga* (*Lobotos*) *lobata* (Temminck), in which it forms expanded lobe-like wattles at the corners of the mouth.

Whether or not the coloured shoulder patch is in the process of attaining genetic dominance depends upon which population is considered, but there seems little reason why such a conspicuous character, once evolved, should later become lost, if the modification of a more decorative gape is considered as a progressive adornment arising from a simpler function. Whatever the answer, the shoulder patch in *flava* seems to have attained little more status than a genetically recessive secondary sexual character, dominant only in nominate *phoenicea*. The possible tendency therefore for the addition of yet another character, in this instance, a white chin, cannot be dismissed, and may well also have a true genetic basis and is not necessarily a case of fortuitous albinism.

While there is no further evidence of albinism in the material of *C. phoenicea* in Bulawayo, examination by Benson of 189 males of this species in the British Museum (Natural History), from throughout its range, has revealed two specimens, both with red shoulder patches, showing some signs of it, as follows:

Registered number 76. 6. 1. 8, locality "Gold Coast", no date; a little white on the throat, upper breast and neck; nape mostly white; crown partly white, mostly on the sides, though with a narrow band of blue-black immediately above both eyes, while there is a narrow band of white across the forepart of the crown, adjacent to the blue-black forehead; two white feathers on the back. The white areas on the crown and nape are partially suffused with pinkish brown (possibly dried blood), and there is some yellow streaking.

Registered number 1910. 5. 6. 1325, Gunnal, Portuguese Guinea, 27th May, 1909: two white feathers on the throat, one on the neck; white more plentiful, quite irregularly, on the nape, crown and forehead.

Unlike the Moçambique specimen, in neither of these two from West Africa is there any sign of a symmetrical chin patch, or indeed of any white on the chin at all. Nevertheless in the one from the Gold Coast (Ghana) there seems to be some "attempt" at symmetry, but on the crown and nape.

A colour combination of a white chin against a contrastingly dark throat is not of uncommon occurrence and has evolved in members of several unrelated African passerine families. Thus it occurs in the females of the genus *Platysteira* and is again linked with the presence of wattles, in this instance above the eyes. It is one of the diagnostic characters of the recently described sibling bulbul species *Chlorocichla prigoginei* De Roo (*Rev. Zool. Bot. Afr.*, 75, 1967: 392). The reverse process has perhaps occurred in the barbet *Pogoniulus makawai* Benson and Irwin (*Bull. Brit. Orn. Cl.*, 85, 1965: 6), in which the chin is black, instead of dull white as in the related *P. bilineatus* (Sundevall).

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References:

Marshall, B. E., Cooper, J. and Graves, J. V. 1968. Courtship behaviour in the Black Cuckoo-Shrike *Campephaga phoenicea*. *Ostrich*, 39 (3): 203.

Skead, C. J. 1966. A study of the Black Cuckoo-Shrike *Campephaga phoenicea* (Latham). *Ostrich*, 37 (2): 71–75.