

Melanism in the Zebra Finch

By NOBLE ROLLIN, World Bird Research Station,
Glanton, Northumberland, England

Summary

Melanism in two Zebra Finches is described. The association of melanism with natural dark markings, and possibly with latent plumage characteristics, is briefly discussed.

Compared with birds exhibiting abnormal white plumage, melanism is infrequently reported amongst Australian birds. Enwright (1945), in describing a black Swamp-Pheasant (*Centropus phasianinus*) at Myall Lakes, N.S.W., states he has "found melanism rare". As increases in humidity tend to produce increases in black pigment, the general climatic conditions in Australia are likely to be less favourable to the production of melanism when compared with some other more humid parts of the world. Nevertheless one of the most interesting cases of melanism is the well-known one concerning the Australian Yellow-rumped Finch (*Donacola flaviprymna*), where examples "kept in captivity in England became darker (due most likely to special feeding and changed climatic conditions) and showed the black throat and markings on the sides of the chest of the Chestnut-breasted species" (Cayley 1932). The production by the Yellow-rumped Finch of characteristics which belong to the Chestnut-breasted Finch (*Donacola castaneo-thorax*), suggest that these characteristics are latent in the former species and can be produced directly in an individual by melanism.

The production of latent factors by melanism through the effect of climatic and other conditions is, however, by no means a usual form of melanism, much of which is simply a dark suffusion through the plumage. The author has suggested (Rollin, in press) that there are two main types of melanism: (a) this general suffusion of dark pigment throughout the plumage, (b) melanism in particular parts of the plumage often associated with natural dark markings. The Chestnut-breasted marking on the Yellow-rumped Finch is a rather special example of this latter group.

At the World Bird Research Station at Glanton at present is a melanistic hen Zebra Finch (*Taeniopygia castanotis*) which shows melanism associated with natural specific dark markings. In this bird the white area between the two black marks leading down from the base of the mandibles is completely melanised, forming with the black marks a solid black moustachial stripe. This is so clearly defined that there is no doubt that this melanism is associated directly with this particular plumage characteristic of the Zebra Finch. The plumage of the upper and lower tail-coverts and extending into the rump area is also strongly melanistic. This area is black, flecked here and there with only a few lighter

feathers. The tail itself is completely melanised, showing no white at all. Although the borders of this melanism are less clearly defined than the moustachial streak, it would appear that this melanism is associated with the dark parts of the tail. On the breast there is melanism apparently associated with a latent male marking. Although there is no hint of the grey and black barring normally to be found on the throat and fore-neck of the male, a black melanistic band is present on the hen bird corresponding to the position of the band found in the male at the base of the grey and black barred area. From this black band the melanism extends as solid black down the breast but becomes more and more intermixed with lighter feathers towards the belly. The plumage of the head and neck generally and down to the melanistic breast band is uniform dark grey; there is no hint of a cheek patch. The remaining upper parts anterior to the tail region melanism are dark greyish-brown. The bill and legs are normal. Fig. 1 shows the areas affected by melanism.

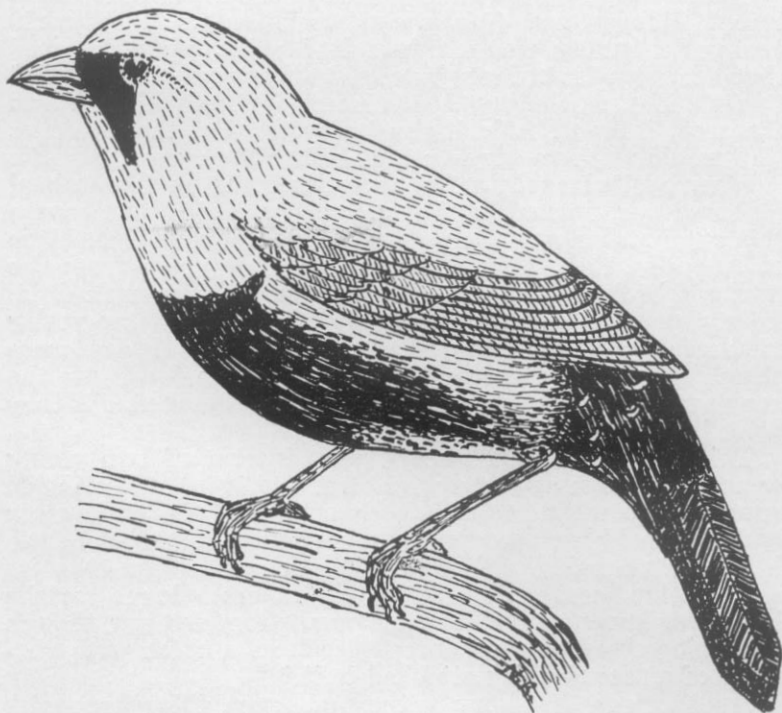


FIG. 1.—Areas of plumage affected by melanism in hen Zebra Finch.

How far any of this melanistic plumage is an indication of a latent but unknown plumage of the Zebra Finch is difficult to say. The moustachial stripe is so prominent and

clearly defined that it could well become, or have been, a natural plumage characteristic. It is certainly an extremely good example of melanism associated with normal markings.

Mr. C. J. Simpson-Scott of Surrey, England, has kindly furnished me with some details of another melanistic hen Zebra Finch. This bird was melanistic from the first adult plumage. About half of the plumage was melanistic, the remainder being normal. The impression was gained that the melanism varied somewhat from time to time. These notes were supplied when the bird was about a year old.

REFERENCES

- Cayley, N. W., 1932. *Australian Finches in Bush and Aviary*. Angus and Robertson, Sydney.
 Enwright, W. J., 1945. Black Swamp-Pheasant. *Emu*, 44: 182.
 Rollin, N. (in press). Melanistic Orange Bishop Bird *Euplectes franciscana*. *Ostrich*.

Stray Feathers

Some curious eggs.—An egg seen in the nest of a Yellow-tufted Honeyeater (*Meliphaga melanops*), in Victoria during September, was so unusually large and pale-coloured that I supposed it at first glance to be the product of a Pallid Cuckoo. But, as there was no shortage of suitable hosts in the area, I found difficulty in believing that the parasitic bird would place an egg in a nest before the owner had laid.

When visited again a few days later the nest contained a second egg, normal in size and colour, and in due course this egg hatched and the young honeyeater departed. More or less idly, then, I lifted the first (larger) egg from the nest and broke it open, expecting to see only infertile fluid. To my surprise, however, the contents comprised two young birds, fairly well developed; the heads and beaks were clearly defined, but the bodies were so messy (owing to the rough method of opening) that I could not determine if they were joined.

This is the only instance I have known of two young occurring in one egg of a wild bird, and it is interesting to speculate on what would have happened if the honeyeater had continued her brooding long enough to cause the egg to hatch—it probably needed a rather longer period than its single-yolked companion. A poultry expert tells me that he has never known two chicks to emerge from one egg, though a double-yolked egg sometimes produces a chick with portions of a second chick attached to it.*

Another odd discovery in the same area (Maryborough) was a nest of a Dusky Wood-Swallow (*Artamus cyanop-*

* More recently, a Sydney newspaper has published this paragraph cabled from London: "Siamese twin chicks were hatched at Diss, Norfolk, today—the first ever in a hatchery which produces millions of chicks a year."—A.H.C.