

ABERRANT WING COLOUR IN THICKBILLED WEAVERS

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At Nchalo, Malawi, 394 Thickbilled Weavers *Amblyospiza albifrons* were caught between 1974 and 1985. All 94 adult males had normally-coloured black and white flight feathers and most of the females and immature males had normal, entirely brown flight feathers. 20 birds (three adult females and 17 immatures) had aberrantly coloured primaries and/or secondaries, although in all these birds the tertials, tail and body feathers were normally coloured.

The first aberrant bird, an adult female, was caught in March 1981. The bird was normally-coloured, apart from having the greater portion of primaries 1-8 (both inner and outer webs) a pale brownish-tinged white; it appeared as if the brown feathers had been thinly covered with white-wash. The tips of the primaries were more or less a normal brown. P9-10 were mainly a paler brown than normal and much of the inner web of both feathers was whitish. Secondaries 1-6 were similarly white-washed, but the proximal secondaries had a smaller area of aberrant colour than had the distal ones. The tertials (S7-9) were entirely normal (Figure 1).

Three other aberrant birds were caught during 1981, one of which, an immature female, had only P1-7 and S1-3 white-washed. The other two birds were as in Figure 1. During 1982 a further four aberrant birds were caught, all immature males. Two of these had only the primaries white-washed, one was as in Figure 1 and the other was similar but with only faint white-washing. None was caught during 1983, but among the flocks breeding or feeding in the area, several brown birds (i.e. females or immature males) were seen which had some white-washing on the wings; it is a clearly visible feature when the birds fly.

In 1984 many aberrant birds were seen and 11 were caught. Four were as in Figure 1, four had only the primaries white-washed, one had P1-7 white-washed, one had only the basal third of the primaries white-washed and one had only S1-6 white-washed. In 1985 a young adult female was caught which had P1-5 white-washed, but the pale areas only extended about half the length of the feathers.

Unfortunately only 18 Thickbilled Weavers have ever been recaptured and none of these was aberrantly coloured, so it is not known whether the white-washing is permanent during the bird's life, nor what occurs when aberrantly coloured immature males develop adult plumage. However, since no aberrant adult

males have been caught, it seems probable that aberrant immature males develop normally coloured adult wings.

H.T. Laycock, who has had considerable experience of this species of weaver, was approached for his comments. He had never seen the phenomenon in Thickbilled Weavers in Natal, but considered that it must be due to some dietary deficiency. G.L. Maclean (pers. comm. to H.T. Laycock) agreed that the birds' diet must have been short of some ingredient needed in melanin synthesis. This theory, however, leaves some points unexplained. If there was a lack of some chemical in the food available at Nchalo, to weavers in general and to Thickbilled Weavers in particular, aberrantly coloured wings might have been expected to occur before 1981, in other species and in larger numbers of Thickbilled Weavers. Furthermore, the aberration might be expected to occur in other parts of the plumage and in adult males as well as in females and immature males.

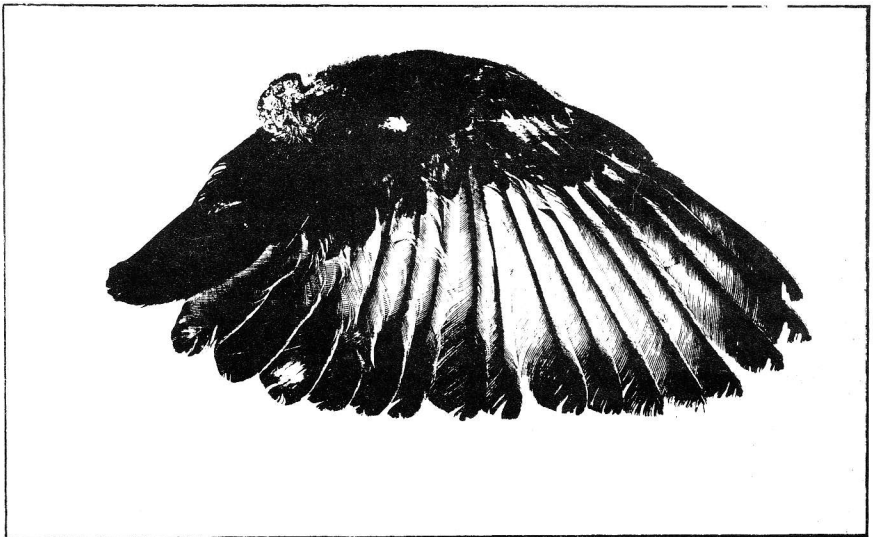


FIGURE 1

ABERRANT WING COLOURATION IN THICKBILLED WEAVER

The colour of the white-washed feathers is very similar to the area of "white with a slight brown tinge" found at the base (inner web only) of the primaries and secondaries of normally plumaged females and immatures, as described by Laycock (1984). This normal area of colour could, therefore, have been expanded under some genetical aberration to cover larger areas of the feathers.

The pattern of aberrant colour on the wings seems to be related to the pattern of white to be found on adult male wings, although the areas are far larger. It seems possible that the aberration is genetic in origin, especially when the apparent increase in the numbers of aberrant birds during 1983-1984 is taken into account, plus the fact that most of the aberrant birds were immature. On the other hand, if it were genetic, it would have had to be caused by some complex mutation and one which would allow for variability of expression, since the same flight feathers are not necessarily affected in all aberrant birds. This would also pose a problem if the cause were dietary, as one would expect all the feathers growing at the same time (in nestlings) to be equally affected.

The data so far collected at Nchalo do not allow of an explanation for this form of aberrant wing colour, but there is always the possibility of a recapture in years to come which might point to an explanation.

REFERENCE:

Laycock, H.T. 1984. Ageing and Sexing Guide: Thickbilled Weaver *Amblyospiza albifrons*. Safring News 13: 79-80.

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