

Weight and Wingspan Measurements as a Means of Sexing Birds

S. G. LANE

Weight and size are useful guides for sexing some species of birds when no sexual dimorphism occurs. Recently, Robertson and Woodall (1982) indicated both these characters for sexing Mangrove Honeyeaters *Lichenostomus fasciularis*. They drew attention to the need "to determine the distribution of measurements" within a population as there could be significant differences with some local populations.

However, there are other aspects which must be considered when using weight and wing (or wingspan) measurements for sex determination. Females have been shown to increase in weight when laying. At North Ryde, New South Wales, an Eastern Yellow Robin *Eopsaltria australis* ". . . caught on five occasions during both summer and winter varied only from 16.25 g to 17.25 g. However, when recaptured in September with an egg in the oviduct, it was 21.5 g, an increase of 26 per cent" (Lane 1976). Likewise, a New Holland Honeyeater *Phylidonyris novaehollandiae* (band no. 030-75591), also at North Ryde, was 20.25 g when banded on 7 September 1974; from cloacal examination it was recorded as "female — breeding". The bird was recaptured in March 1975 and March 1977; the weights on those occasions were 16.5 g and 18.0 g respectively.

If breeding condition of females is not established, the determination of sex using weight parameters almost certainly will be incorrect unless, of course, no breeding females are captured.

Robertson and Woodall (p.4) further stated that there were insufficient recaptures of Mangrove Honeyeaters in the study ". . . to demonstrate changes of body size, wing or wing span with age." They went on to say that the inability to ". . . separate immature from adult Mangrove Honeyeaters on features of plumage and the

combination of all age classes may account for the 'flat' histograms (e.g. wing span) in Figure 1".

The increase in wing and wingspan measurements following the first wing moult has been indicated previously (e.g. Disney 1966; Lane 1973, 1974, 1976). Such increases occur in many species and certainly in most species of honeyeaters regularly banded. No doubt the authors had this in mind when making the comment, but specific attention should be drawn to this factor.

When wing or wingspan measurements are used for sex determination, an overlap is likely. Almost certainly this will occur unless first year birds have been separated from older birds by known plumage or other positive characters. The larger adult females and the smaller first year males will provide the overlap.

References

- Disney, H. J. de S. (1966), 'Bird in the Hand — New Holland Honeyeater', *Aust. Bird Bander* 4: 14-15.
- Lane, S. G. (1973), 'Little Wattle-bird banding at North Ryde, New South Wales', *Aust. Bird Bander* 11: 78-80.
- Lane, S. G. (1974), 'Soft part colours in Fuscous Honeyeaters', *Aust. Bird Bander* 12: 55-57.
- Lane, S. G. (1976), 'Results from banding Southern Yellow Robins', *Aust. Bird Bander* 14: 63-66.
- Robertson, J. S. and P. F. Woodall (1982), 'Measurements, weights and seasonal variation of the Mangrove Honeyeater in south-eastern Queensland', *Corella* 6: 1-5.

S. G. Lane.
65 Wood Street,
Lane Cove, N.S.W. 2066.