## WING LENGTH AT FIRST FLIGHT

### D.B. Hanmer

When comparing the wing length at first flight of several species of owl and the Blackshouldered Kite Elanus caeruleus (Hanmer in press), I noted that owls of the genus Bubo, Barn Owls Tyto alba and a Whitefaced Owl Otus leucotis first flew when their wings were 90-95% of the length achieved when the primaries were fully grown, or of the adult wing length range in the case of juvenile birds not measured after their wings were fully developed. The ground-nesting Marsh Owl Asio capensis differed, only two flying when their wings were 69% and 72% of the length to which they eventually grew. The Blackshouldered Kites flew when their wings were 77% of their fully-grown length. I suggested that chicks of ground-nesting species might find it advantageous to learn to fly at an earlier age and with less developed wings than the chicks of tree or holenesting species.

At Nchalo, Malawi, a few immatures of several species have been caught at or just after first flight and six species were selected for comparison of wing length at first flight with adult wing length or, in the case of the Whitefaced Ducks Dendrocygna viduata, with their own fully grown (but immature) wing lengths. Unfortunately none of the young birds of the other species were recaptured after their wings were fully grown.

# RESULTS

Table 1 (overleaf) shows the wing length range and mean of adults and of immatures at first flight (plus the full-grown length of three immature ducks) of six species, three groundnesting and three which nest elsewhere.

Chicks of the Redwinged (Collared) Pratincole \*\*planeola\*\* pratincola\*\* could fly when their wings were 68% of the mean adult wing length, but young Kittlitz's Sandplovers \*\*Charadrius\*\* pecuarius\*\* did not fly until their wings were 82% of mean adult wing length. The Whitefaced Ducks flew at 91% of their final (immature) wing length and at 89% of the adult mean. The two cuckoos differed, Klaas's \*\*Chrysococcyx\*\* klaas\*\* flying at 87% and Diederick \*\*C.caprius\*\* at 77% of the adult mean, while Brownthroated Weavers \*\*Ploceus\*\* xanthopterus\*\*, males and females, flew at 94% of mean adult wing length.

TABLE 1

MEAN WING LENGTH AT FIRST FLIGHT (FF) AS A PERCENTAGE OF THE ADULT MEAN

Species	Age	No.	Wing length (mm)		Mean wing length
			Range	Mean	at first flight as percentage of adult mean
Whitefaced Duck Dendrocygna viduata					
	Ad.		225 - 246	235,8	
	FF	3	187 - 220	209,0	89%
	Imm.	3	221 - 235	229,0	91%
Redwinged (Collared) Pratincole Glareola pratincola					
	Ad.	6	179 - 193	185,5	
	FF	2	126 - 126		68%
Kittlitz's Sandplover Charadrius pecuarius					
	Ad.	21	104 - 113	106,9	
	FF	12	75 - 98	87,3	82%
Klaas's Cuckoo Chrysococcyx klaas					
	Ad.	61	96 - 109	101,1	
	FF	3	82 - 92	88,0	87%
Diederick Cuckoo Chrysococcyx caprius					
	Ad.	167	109 - 125	113,8	
	FF ,	7	76 - 101	89,3	79%
Brownthroated Weaver Ploceus xanthopterus					
	Ad. Male	384	69 - 77	72,8	
	FF Female	8	67 - 70	68,5	94%
	Ad. Female	322	60 - 68	64,9	
	FF Female	10	58 - 63	60,8	94%
	FF Female	8	67 - 70	68,5	

### DISCUSSION

It is probably not correct to compare the full-grown immature wing length with adult wing length, because in many species the immature wing is shorter than it will become after one or two moults. Thus the figure obtained when comparing wing length at first flight with adult wing length is likely to be a bit low, as is indeed the case with the Whitefaced Ducks. Also, the use of mean wing lengths allows only an approximate figure but, all the same, the percentages given here for wing length at first flight are comparable.

The three non-ground-nesting species differ considerably, as do the three ground-nesters, although the duck is probably a special case since the young are relatively safe on the water until they learn to fly. However, the wings of all non-ground-nesting species were further developed at first flight than were those of Marsh Owls and Redwinged Pratincoles.

These results are insufficient to prove or disprove the suggestion that ground-nesting birds fly at an earlier stage of development than do birds nesting elsewhere. It would be interesting to see figures for wing length at first flight as a percentage of adult wing length for other ground-nesting species.

### REFERENCE:

Hanmer, D.B. Comparative development and food requirement of owls and kites. Proc. 6 P.A.O.C. in press.

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