

MEASUREMENTS OF BIRDS AT GOODE BEACH

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A bird-banding study which commenced in 1983 at Goode Beach (117°56'E; 35°05'S) near Albany on the south coast of Western Australia (Smith 2002) has yielded morphometrical data which is presented in Table 1 and raises two points which merit discussion.

Wattle measurements of the Red Wattlebird *Anthochaera carunculata* would not appear to be a reliable guide when sexing this species, because of the wide range of wattle measurements recorded in known male and female birds.

The head-bill measurements of the New Holland Honeyeater *Phylidonyris novaehollandiae* at the extreme south of their range in Western Australia showed a bimodal frequency distribution (Rooke 1976; Rogers *et al.* 1986; Pyke and Armstrong 1993). The head-bill measurements of 303 adult Goode Beach New Holland Honeyeaters (Fig. 1), plotted in increments of 0.5 millimetres, showed clear-cut peaks at 41.5 millimetres and 44.5 millimetres and a trough at 43 millimetres, indicating a population of larger birds than, for instance, that investigated by Rooke (1976). Using the simplest interpretation (Pyke and Armstrong 1993), when a head-bill measurement of 43 millimetres was taken as the threshold, the wing lengths, tail lengths or weights of those individuals below (females) and above (males) showed clear-cut overlapping but unimodal frequency distributions when plotted separately, as

demonstrated by their mean and standard deviation (Table 1). This confirmed, as would be expected, that those individuals below the mean head-bill measurement of 43 were also smaller in mean wing length, mean tail length or mean weight.

The head-bill measurements of several marked individuals, of known sex based on breeding behaviour and shown in a footnote at the bottom of Table 1, have revealed that their mean measurements coincide with the peaks shown in Figure 1, and suggest that the thresholds indicated by Rooke (1976) are too low for the Goode Beach population. The proportions of birds above/below the head-bill threshold of 43 millimetres are similar (142/147) suggesting a stable and even population.

REFERENCES

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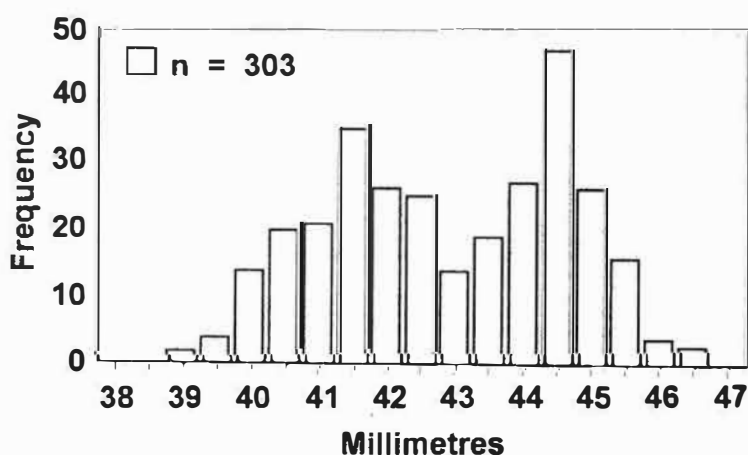


Figure 1. Frequency distribution of head-bill measurements for adult New Holland Honeyeater in Goode Beach.

TABLE 1

Measurements of five most commonly caught species in Goode Beach.

Species	Group	Head-Bill			Wing			Tail			Weight			Wattle		
		n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.	n	Mean	Range
Golden Whistler	Juvenile	26	37.3	0.71	26	92.7	1.91	27	78.2	2.51	26	23.5	1.31			
	Female	8	36.9	0.65	8	94.1	2.39	8	77.3	3.37	8	23.6	1.39			
	Male	7	37.3	0.26	7	96.4	1.81	7	75.6	3.41	7	23.3	0.81			
White-browed Scrubwren	Juvenile	20	30.5	0.95	21	50.9	1.92	19	45.5	2.22	21	11.7	0.91			
	Female	21	31.3	0.71	21	50.2	1.61	22	45.6	1.51	22	11.5	0.77			
	Male	20	32.6	0.41	19	53.8	1.92	20	48.8	1.68	19	12.2	0.43			
Red Wattlebird	Juvenile	14	57.5	3.01	14	138.3	7.78	15	136.2	12.3	13	86.9	11.5	12	2.1	1 to 7
	Female	23	58.7	1.49	13	141.2	5.63	23	147.7	8.09	22	94.7	6.8	22	8.3	2 to 14
	Male	27	63.4	1.35	27	152.9	6.58	27	160.2	10.6	26	118.7	7.4	27	10.9	7 to 15
New Holland Honeyeater	Adults	See Figure 2			269	75.6	3.23	268	77.1	4.18	267	20.6	1.92			
	Female	(HB < 43 mm.)			154	73.3	2.34	150	74.7	3.36	153	19.3	1.43			
	Male	(HB < 43 mm.)			151	77.8	2.29	146	79.8	3.44	150	21.9	1.21			
Western Spinebill	Juvenile	22	36.7	1.15	23	57.5	2.13	23	53.3	2.42	23	9.3	0.69			
	Female	30	36.8	0.84	31	57.1	2.32	30	53.2	2.02	28	9.1	0.64			
	Male	47	39.6	0.99	46	62.8	2.18	47	58.9	2.12	47	10.7	0.56			
New Holland Honeyeater	head-bill measurements of individuals of known sex															
	Female	18	41.3		Range			39.7-42.6								
	Male	19	44.3		Range			43.1-45.3								