

# PLUMAGE CHANGES OF A CAPTIVE BLACK-BREASTED BUZZARD *Hamirostra melanosternon*

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Received 8 February 1990

## INTRODUCTION

The Black-breasted Buzzard *Hamirostra melanosternon* is one of Australia's largest and least known birds of prey. It inhabits arid scrub, riverine and tropical woodlands of inland and northern Australia (Simpson and Day 1984). Although most field guides describe two distinct plumage colour variations (dark and light), in recent years there has been discussion whether they are two distinct colour morphs of its plumage, or whether the light morph is actually that of the immature bird, which darkens with age as with the Wedge-tailed Eagle *Aquila audax* (Hollands 1984). This paper describes the plumage changes of a captive Black-breasted Buzzard over a period of four years.

## METHODS

In July 1984, a light phase Black-breasted Buzzard (plumage as described by Mathews 1915-16, and illustrated in Slater *et al.* 1986), was received at Taronga Zoo. This bird had been found injured by the side of the road at Wollongong, New South Wales. It was measured (as per Disney 1974) and weighed (Table 1), then fitted with a CSIRO leg band 121-14961 in readiness for release. However, because of later complications, the bird proved unsuitable for release and was retained at the zoo for display and breeding purposes. Later in October 1987, the bird was sexed as a female using a laparoscope at Taronga Zoo's Veterinary Clinic (G. Reddacliff, pers. comm.), when it was remeasured and weighed (Table 1).

The bird was photographed at the time of its arrival and then annually until July, 1988.

## RESULTS

Because the photographs were taken under different light conditions, they were of little use in distinguishing detailed plumage changes. However, it was possible to tell when the breast, belly, forehead and back became notably darker.

From 1984 through to November 1986 the plumage remained in the pale phase. The Buzzard moulted annually, each spring-summer. After the 1986-87 moult, the bird showed a distinct colour change on the breast and forehead. The breast had changed to mostly black, streaked with buff brown feathers. The forehead feathers, in front of the crest, had turned from primarily brown to black.

After the moult which commenced in spring 1987, the breast became entirely black with the odd brown feather still remaining. The black continued from under the chin to the tail coverts. The forehead was now totally black, with the crown or crest remaining red-brown. The lower neck and back had turned from brown to black.

TABLE 1

Measurements taken of the Black-breasted Buzzard *Hamirostra melanosternon* in July 1984 and October 1987.

	July 1984	October 1987
Weight (g)	1 210	1 450
Wing length (mm)	465	465
Tarsus length (mm)	82	82
Tail length (mm)	200	200

## DISCUSSION

Gould (1841) first described the Black-breasted Buzzard from a dark plumaged bird; later Mathews (1915) discussed the different colour variations.

Slater (1972) illustrated two differently coloured plumages, which he designated as morphs as first noted by Mathews (1915). Morris (1976) also described the two different colour morphs but queried the significance of the light morph. Following these works, it has been generally accepted that there are two colour morphs (Readers Digest 1976; Pizzey and Doyle 1980; Cupper and Cupper 1981; Simpson and Day 1984).

However, Hollands (1984), following observation of Black-breasted Buzzards over several years, suggested that the light plumaged birds could be in immature plumage, with the dark plumage being that of the adult. Slater *et al.* (1986) also described the light birds as immature and dark birds as adult. The Slaters also introduced a third or red plumage, yet to be confirmed — that of the juvenile.

Assuming that the bird was in at least its first year plumage when taken into captivity, these observations show that the colour of the plumage changed abruptly from a pale phase to a dark phase in at least its fourth year. This supports Hollands' (1984) suggestion that the Black-breasted Buzzard changes from a light immature to a dark adult, and explains the sudden disappearance of the light phase birds which he noted, after a period of only a few years. This is in contrast to the Wedge-tailed Eagle in which the change to adult is very gradual.

## ACKNOWLEDGMENTS

We would like to thank the following for their help on this project over the past few years: David Baker-Gabb for the initial idea; Graeme Phipps and Ian McAllan for their help in reviewing the original manuscript; and the Bird Department at Taronga Zoo for their patience and help throughout the project. A referee made valuable constructive suggestions for which we are grateful.

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## BOOK REVIEW

**The Galah.** Pauline Reilly (text) and Will Rolland (illustrations) 1991. Kangaroo Press Pty Ltd, Kenthurst, Australia. 32 pp., rrp \$6.95.

In 'The Galah', Pauline Reilly achieves a clear and concise text for young children, basing the little life history on information from Ian Rowley's study reviewed in *Corella* 14: 5.

Her account is attractively complemented by Will Rolland's pen and coloured pencil drawings which are simple in execution while faithfully alluding to the Australian landscape and the galah's characteristics. There is also attention to such details as eye colour, although Galah's juvenile plumage is rather bright. There is humour in the illustrations, particularly the ginger tabby's skulking attempt at ambush by a bore drain and in the reactions of various tenants of tree hollows to Galah and his mate.

'The Galah' will appeal to children up to seven years, but should not be overlooked by older youngsters as a source of entertainment and information, or by adults for a 'quick fix' on the life history of this familiar species.

At \$6.95 the book is competitively priced in today's children's book market.

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