

The Attack and Strike Behaviour of the Brown Goshawk

Goslow (1971) described in detail, using high-speed photography and precise measurement, the attack and strike behaviour of some North American raptors. These studies showed exactly how certain species of *Falco*, *Accipiter* and *Buteo*, and presumably related and similarly un-specialised genera, attack their prey. No such study has been published on Australian species, therefore it seems worth recording some observations on a wild Brown Goshawk *Accipiter fasciatus*. This bird was an immature male which was a regular, almost daily visitor to a suburban garden at Longueville, New South Wales in late autumn and winter 1978. It was eventually caught by means of a bal-chatri baited with a live bird and banded* by S. G. Lane (band number 090-83155). It weighed about 300 g.

The goshawk was originally attracted by an aviary containing domestic birds (small parrots and quail). It soon gave up trying to catch these and waited in ambush for birds which came to feed in a fowl run adjacent to the aviary. It often perched about eight metres up in a thick Hoop Pine *Araucaria cunninghamii* about 25 metres from the aviary and made several attacks on birds on the ground near it. Its perch and two strikes at Spotted Turtle-Doves *Streptopelia chinensis* were visible from a house window. Subsequently the bal-chatri was placed next to the aviary. Observations were made with 8 x 40 binoculars and strikes by the goshawk at the doves and at the bal-chatri enabled a composite picture to be obtained.

The goshawk would burst from its concealed perch with about five rapid flaps and commence a gliding attack (see Baker-Gabb 1980 for terminology). It covered the 25 metres in about five seconds (timed by a wrist watch), giving a body velocity of about five metres per second. This compares well with a velocity of 4.8 metres per second for Cooper's Hawk *A. cooperii* (Goslow 1971), males of which average 295 g (Brown 1976). The Brown Goshawk ceased flapping about 15 metres from its intended prey which is much further than the 3.5-4.5 metres measur-

ed for Cooper's Hawk. However two factors may be involved: 1) obstacles in the goshawk's flight path which required negotiating and which also allowed an unseen approach, and 2) the inability of the bird in the bal-chatri to escape. The doves' escape path was blocked by the aviary and fowl run walls. Occasionally the goshawk made a direct flying attack to within a few metres of its prey before ceasing flapping and was once seen tail-chasing a dove (unsuccessfully) for perhaps 100 metres.

At the moment of strike the goshawk swung its pelvis forward so that the body axis was almost vertical, and threw its feet forward to deliver a violent blow at the prey, exactly in the manner described for Cooper's Hawk. Once, the goshawk was seen to repeatedly strike and clench with one foot while holding down a dove with the other. Twice, a dove appeared too heavy to carry in one foot from a standing start, and was carried in both with laboured flight. The doves would have weighed about 160 g, 50% of the hawk's body weight (data from specimens in The Australian Museum).

The attack and strike of the Brown Goshawk is essentially the same as that described for accipiters elsewhere, and the three other Australian species probably also conform to this pattern. A similar correlation between body weight, attack velocity and shock at impact would probably apply, but deserves investigation. As Brown (1976) suggested, studies on more specialised genera would be especially valuable.

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References

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