

DIET OF THE BARN OWL *Tyto alba* NEAR TAMWORTH, NEW SOUTH WALES

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The diet of the Barn Owl *Tyto alba* has been studied intensively in Australia, though mostly in the arid zone (reviewed by Higgins 1999; Debus *et al.* 2004). The few comprehensive studies in the temperate agricultural zone have been conducted mostly in southern Victoria, with one study from north-western Victoria still unpublished (see Higgins 1999). In New South Wales the few dietary studies in the agricultural zone, excepting one substantial sample from Hillston, have been of small numbers of pellets and prey individuals (Rose 1996; Higgins 1999). This paper details the diet of a pair or family of Barn Owls in the Peel Valley west of Tamworth, in the sheep-wheat belt in northern inland New South Wales.

A sample of Barn Owl pellets was found by SD (S. Debus) at the base of the roost or nest tree on 28 August 2004. The tree was an old River Red Gum *Eucalyptus camaldulensis* on the bank of the Peel River, in a 100 hectare Crown Reserve for travelling stock about three kilometres west of Somerton (30°56'S, 150°38'E; 30 km north-west of Tamworth). Vegetation away from the river consisted of Yellow Box *E. melliodora* and Bimble Box *E. populnea* grassy woodland with the surrounding landscape composed of a mosaic of cultivated paddocks and pasture.

The owl pellets had spilled from a hollow on to the ground via a split in the trunk of the tree; the intact ones had the typical *Tyto* 'glazed' mucous coating. A moulted Barn Owl primary feather was with the pellets, and at dusk two Barn Owls arrived at the hollow; they were vocal in the vicinity through the night.

The sample consisted of 47 fresh, whole pellets collectively weighing 180 grams (pellet mean 3.8 g), and a mass of fragmented (though still fairly fresh) pellets weighing 140 grams. The pellets were analysed by ABR (A. B. Rose) as described elsewhere (Debus *et al.* 2004), and the minimum number of prey individuals was determined by counting skulls and paired lower jaws.

The 47 whole pellets measured 25–50 × 18–34 millimetres (mean 35.8 × 27.6 mm). The entire sample, representing about 70 pellets, contained the remains of 269 House Mice *Mus domesticus* (99%), one Stubble Quail

Coturnix pectoralis (<1%) and one House Sparrow *Passer domesticus* (<1%). Only 13 mice were adults, the remainder (95% of mice taken) being juveniles of various ages. Assuming a weight of about 100 grams for the quail, 25 grams for the sparrow and 10–15 grams for the mice, rodents contributed over 95 per cent of prey biomass.

The whole pellets contained 1–6 prey items (mean 3.8 per pellet), typically between three and six juvenile mice per pellet (mode 3, though commonly four or five per pellet). Exceptions were three juvenile and two adult mice (n = 2), three juvenile and one adult mice (n = 3), three juvenile mice and one quail (n = 1), one juvenile and one adult mouse (n = 1), and one adult mouse (n = 1). Assuming one pellet equals one night's successful hunting, the average nightly intake was about 50 grams live weight.

House Mice were abundant in the Tamworth district in May–August 2004 and formed the prey of Black-shouldered Kites *Elanus axillaris* that were numerous and breeding in the area at the time (G. Olde and S. Debus, unpubl. data). Barn Owls were also common and vocal at night in the Tamworth district in September 2004 (S. Debus, pers. obs.). Given the abundance of *Mus* in an agricultural environment with few other small mammals, the results of this study are to be expected. Our results concur with those from other parts of the temperate agricultural zone, where *Mus* form by far the predominant prey of Barn Owls (reviewed by Higgins 1999).

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