

Northern Range Extension of the Powerful Owl *Ninox strenua*

The northern limit of the range of the Powerful Owl *Ninox strenua* is frequently cited as the Rockhampton area (e.g. Storr 1973, 1984; Blakers et al. 1984; Garnett 1992) or in the headwaters of the Dawson and Comet Rivers at a similar latitude to Rockhampton (Schodde & Mason 1980). Pavey (1993) suggested that the northern distributional limit of this species remains unresolved. Pavey (1993) cited the most northerly records as: a sight record from Kinka Beach near Yeppoon, January 1986 by M. Crawford; a roadkill between Kinka Beach and Tanby near Yeppoon in November 1986 by M. Crawford; and an unidentified *Ninox* species (possibly *N. strenua*) heard along the St Lawrence-Croydon Road, 75-80 km north-north-west of Marlborough in 1985 and 1989 by C. Corben and G. Ingram. The most northerly record cited by Pavey (1993) was an unconfirmed sight record at Eungella over 300 km north-north-west of Rockhampton on 14 June 1985 by J. Sullivan. An adult male was collected (specimen no. 44019, Australian National Wildlife Collection) in hill broadleaf forest adjacent to Pine Mountain on 18 August 1991 in the Shoalwater Bay Training Area, north of Rockhampton (Schodde et al. 1992).

A ten-minute session of tape playback of a Powerful Owl call was conducted 2 hours after dusk adjacent to North Road, Cathu State Forest, Clarke Range, c. 60 km north of Eungella in late July 1994. The call playback technique was part of a standardised site-sampling procedure employed in a broadscale study of the Yellow-bellied Glider *Petaurus australis* in south-eastern and mid-eastern Queensland (Eyre 1993). A vocal response was elicited from a *Ninox* owl c. 400 m from the authors. After the Yellow-bellied Glider sampling period was completed, the playback tape was played continuously for another 10 minutes. The owl responded by flying in to perch within 10 m of the authors, where it was spotlighted with a 50 W spotlight and positively identified as a Powerful Owl. The owl remained stationary for 5 minutes before moving off.

The Powerful Owl was recorded at an elevation of 680 m on a ridge in dry open forest dominated by Pink Bloodwood *Eucalyptus intermedia* and White Mahogany *E. acmenoides*. Wet sclerophyll forest and rainforest dominated the lower slopes and gullies. The conditions at the time of the survey were no wind, no cloud cover, no moon and a temperature of 15°C. Other nocturnal birds recorded in the vicinity included the Southern Boobook *Ninox novaeseelandiae*, Tawny Frogmouth *Podargus strigoides* and Australian Owlet-nightjar *Aegotheles cristatus*.

Studies on the diet of the Powerful Owl throughout eastern Australia suggest that it prefers to prey on Common Ringtail Possum *Pseudocheirus peregrinus*, Greater Glider *Petauroides volans*, Squirrel Glider *Petaurus norfolcensis*, Sugar Glider *P. breviceps* and flying-foxes *Pteropus* spp. (Seebeck 1976; James 1980; Tilley 1982; Kavanagh 1988; Chafer 1992; Traill 1993; Debus & Chafer 1994; Lavazanjan et al. 1994; Pavey 1994, 1995; Pavey et al. 1994). In south-eastern and mid-eastern Queensland the Powerful Owl has been recorded feeding on the Common Brushtail Possum *Trichosurus vulpecula*, Common Ringtail Possum, Greater Glider, Squirrel Glider, Sugar Glider, Koala *Phascolarctos cinereus* (immature), flying-foxes, Scaly-breasted Lorikeet *Trichoglossus chlorolepidotus*, Laughing Kookaburra *Dacelo novaeguineae*, Australian Brush-turkey *Alectura lathami* (immature), Tawny Frogmouth, Pied Currawong *Strepera graculina* and Australian Magpie *Gymnorhina tibicen* (James 1980; Pavey 1994, 1995; Pavey et al. 1994). In the high-elevation forest at Cathu State Forest the following potential prey species (from Pavey 1994, 1995) were recorded in the period between 29 and 31 July 1994: Common Brushtail

Possum, Common Ringtail Possum, Greater Glider, Sugar Glider, flying-fox species, Scaly-breasted Lorikeet, Laughing Kookaburra, Australian Brush-turkey, Tawny Frogmouth, Pied Currawong and Australian Magpie (T.J. Eyre & M. Schulz unpubl. records).

This sighting represents the most northerly record of the Powerful Owl and corroborates the record of J. Sullivan at Eungella in the Clarke Range (Pavey 1993). This locality also represents the most northerly site for the southern population of the Yellow-bellied Glider.

The record of the Powerful Owl at Cathu State Forest lies within the range of the Rufous Owl *Ninox rufa* (Schodde & Mason 1980, Blakers et al. 1984, Storr 1984, Pavey 1993). Mason & Schodde (1980) proposed that these two species occupied different habitats: the Powerful Owl in wet sclerophyll forest (tall open forest) and the Rufous Owl in rainforest. It was suggested that this difference in habitat acted as an isolating mechanism at sites where the two species have adjoining ranges. Mason & Schodde (1980) proposed interspecific territorial competition as an additional factor maintaining allopatric distribution. We propose that at the northern extremity of its range, the Powerful Owl is restricted to high-elevation tall open forest and open forest such as those found in the higher elevations of the Clarke Range. The Rufous Owl did not appear to occur in these areas (T.J. Eyre & M. Schulz unpubl. records).

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Received 30 November 1995

