

LATE PLEISTOCENE-HOLOCENE OCCURRENCE OF *CHAEROPUS* (PERAMELIDAE) AND *MACROTIS* (THYLACOMYIDAE) FROM QUEENSLAND. *Memoirs of the Queensland Museum* 51(1): 38. Recent collections of vertebrate remains from cave systems in central-eastern and north-eastern Queensland have yielded diverse small-sized mammalian taxa. Within these faunas, four perameloid genera are present and include species of *Isodon*, *Perameles*, *Chaeropus* and *Macrotis*. The presence of *Perameles* and *Isodon* in these deposits is not surprising because they occur at the localities in the present day. However, Hocknull (2005) and Price (2004) report on the most easterly extent of *Perameles bougainville*, a typically arid distributed taxon. In addition, the presence of *Macrotis* and *Chaeropus* significantly increases the easterly distributions of these distinctly arid-adapted taxa. Muirhead & Godthelp (1995) reported on fossil *Chaeropus ecaudatus* from Chillagoe, northeastern Queensland, considering the age of the material to be late Pleistocene. Hocknull (2005) reported late Pleistocene *Chaeropus ecaudatus* and *Macrotis lagotis* from Mount Etna, central eastern Queensland. A new locality has yielded a specimen of *Macrotis* Thomas, 1887 and is presented herein. The locality (QML1287) is considered to be Late Pleistocene - Holocene in age based on the subfossil preservation of the excavated specimens, distinctly modern associated fauna, and the lack of associated megafauna.

Family THYLACOMYIDAE (Bensley, 1903)

**Macrotis sp. (Fig 1)**

Locality. QML1287, 'Dodgey's Cave', Dosey Limestone Kart, Broken River Province, 120km NW Charters Towers.

**Description.** QMF41971 is a left M<sup>2</sup> with little wear, broken root base. Max. length, 4.66mm; ant. width, 3.42mm; post. width, 2.67mm. Bulbous, sub-rectangular tooth in occlusal aspect, bearing three distinct anterior cusps (protocone, paracone and conical stylar cusp 'B'); two distinct posterior cusps (metacone and conical stylar cusp 'D'). Metaconule absent. Open, dumbbell-shaped roots. Anterior cingulum present.

**Remarks.** Identification of the tooth as *Macrotis* was based on the massively inflated, rectangular-ovoid occlusal crown, dumbbell-shaped molar roots, absence of the metaconule and conical stylar cusps. Muirhead (1994) listed characteristics of the dentition for both species of *Macrotis*, *M. lagotis* and *M. leucura*. Unfortunately, comparative specimens of *M. leucura* were not available for study, therefore, verification of *M. leucura* requires additional specimens and a morphometric appraisal of both species' dentition.

Figure 2 illustrates the distributions (recent and fossil) of *M. lagotis*, *M. leucura* and *Chaeropus ecaudatus*. This is the second record of *Macrotis* in the fossil record of Queensland.



FIG 1. QMF41971, LM<sup>2</sup> in occlusal view. Scale bar = 4mm.

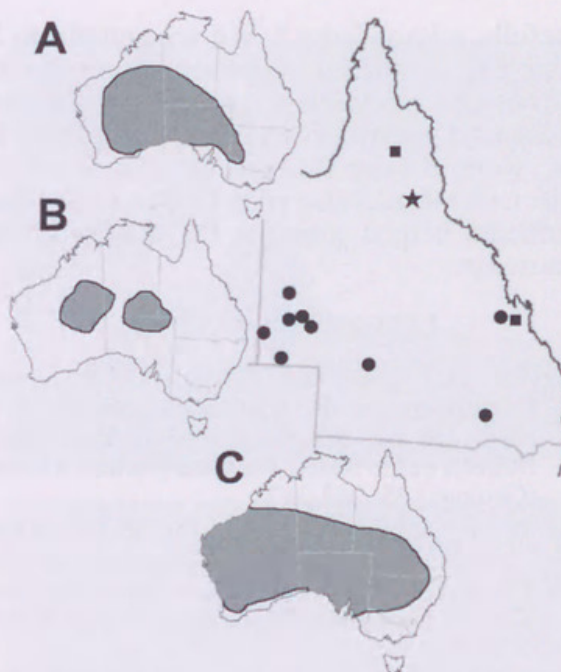


FIG 2. Distribution map of fossil and recent populations of A. *C. ecaudatus* (solid square), B. *M. leucura*, C. *M. lagotis* (solid circle) and *Macrotis* sp. (solid star). Recent bandicoot distributions from Strahan (1998).

The massive difference in the ranges of these three taxa when comparing late Pleistocene-Holocene to pre-European distributions indicates considerable contraction into the arid interior during the Holocene. A more detailed chronology of retraction is required to elucidate the factors influencing such a massive decline prior to European arrival, whether they be climatic, biotic and/or anthropogenic.

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Hocknull, Scott A . 2005. "Late Pleistocene-Holocene occurrence of *Chaeropus* (Peramelidae) and *Macrotis* (Thylacomyidae) from Queensland." *Memoirs of the Queensland Museum* 51(1), 38–38.

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