

## Helminths of the Hydromyini (Muridae: Hydromyinae) from Papua New Guinea with the description of a new species of *Labiobulura* (Nematoda: Ascaridida)

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### Abstract

From a survey of helminths of the alimentary tracts of 26 hydromyins; 11 *Leptomys*, 1 *Mayermys*, 3 *Neohydromys*, 9 *Paraleptomys*, and 2 *Parahydromys* from Papua New Guinea an acanthocephalan, *Porrorchis hydromuris*; a cestode, *Mathevotaenia* sp.; the trematodes, *Brachylaima* sp., and a psilostome; and the nematodes, *Heterakis fieldingi*, *Odilia mackerrasae*, *O. emanuelae*, *Protospirura kaindiensis*, *Rictularia mackerrasae*, and *Capillaria* sp. s.l., as well as encapsulated larval ascaridids were found. All represent new host records. *Labiobulura leptomyidis* n. sp. (Subuluridae), differs from its congener in having longer spicules, no spines on the chordal lobes of the buccal cavity and it is described from *Leptomys* spp. Spirurida or Ascaridida were the dominant taxa in each helminth assemblage, with dietary preferences being a determinant. Either coevolution and or host switching, sometimes associated with migration between Australia and Papua New Guinea, also appear to have influenced the development of the helminth assemblage in each host taxon.

**Key words:** Acanthocephala, Cestoda, Nematoda, Trematoda, *Labiobulura*, rodent, Muridae, hydromyins, Australia, Papua New Guinea

### Introduction

The tribe Hydromyini (Muridae) is one of four clades of the Hydromyinae, a rodent group endemic to Australia and the island of New Guinea. The Hydromyini are a monophyletic group that may have originated in montane New Guinea (Flannery 1995). Comprising 10 genera, eight endemic to New Guinea, one endemic to Australia (the monospecific genus *Xeromys* Thomas, 1889) and one found in both Australia and New Guinea (*Hydromys* Geoffroy, 1805); The hydromyins include small shrew-like, medium sized foraging and larger aquatic rats (Flannery 1995), are mostly carnivorous and insectivorous and are