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Gastrointestinal helminths (Cestoda, Chabertiidae and Heligmonellidae) of *Pogonomys loriae* and *Pogonomys macrourus* (Rodentia: Muridae) from Papua Indonesia and Papua New Guinea with the description of a new genus and two new species

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Abstract

Pieces of cestode, not indentified further, and 12 species of nematode including 1 new genus, 3 new species and 7 putative new species from the Families Chabertiidae and Heligmonellidae were collected from the digestive tracts of 16 *Pogonomys loriae* and 19 *P. macrourus* (Murinae: Hydromyini) from Papua, Indonesia and Papua New Guinea. The chabertiid *Cyclodontostomum purvisi* and the heligmonellid *Odilia mackerrasae* have been described previously from endemic murids. *Hasanuddinina pogonomyos* n. sp. can be distinguished from its congeners by the number of ridges in the synlophe, length of spicules and having a vagina with a dorsal diverticulum. *Odilia dividua* n. sp. is larger than its congeners, has a longer oesophagus, relatively shorter spicules and larger eggs. *Pogonomystrongylus domaensis* n. gen., n. sp. differs from all other genera in the Heligmonellidae in the characters of the synlophe, 7–10 ridges oriented sub frontally with a single left ventral ridge hypertrophied. Species richness of the nematode assemblages of *P. loriae* and *P. macrourus* are comparable to those of *Abeomelomys sevia*, *Chiruomys vates* and *Coccyomys rummleri* when numbers of hosts examined are considered. Species composition was distinctive with 12, including the 7 putative species, of 14 species presently known only from species of *Pogonomys*. Similarities between the nematode fauna of endemic rodent hosts from Indonesia and Papua New Guinea were noted.

Key words: Nematoda, Strongylida, Strongylina, Trichostrongylina, Chabertiidae, Heligmonellidae, Nippostrongylina, *Hasanuddinina*, *Odilia*, *Pogonomystrongylus*, Papua Indonesia, Papua New Guinea

Introduction

The genus *Pogonomys* Milne-Edwards (Muridae: Murinae) belongs to the *Pogonomys* Division of the Tribe Hydromyini, the ancestral clade of the Sahulian Old Endemic rodents and reflects the earliest colonists of the Sahul Region. Within the clade five species of tree mice are known from across New Guinea, a sixth as yet undescribed, is reported from Papua, Indonesia and a seventh, also not fully characterized is the sole Australian representative of the group (Musser & Carlton 2005; Breed & Aplin 2008; Lecompte *et al.* 2008). All are highly arboreal and presumed to be entirely herbivorous (Flannery 1995). *Pogonomys macrourus* Milne-Edwards, the chestnut tree mouse and *P. loriae* Thomas, the large tree mouse, are sympatric species, wide spread and through out New Guinea. The former is found in lowland and mid montane forests from sea level to 1800 m while the latter, common in mature forests and young regrowth, from 100–3000 m but is restricted to 200– 800 m in northern New Guinea (Flannery 1995; Musser & Carlton 2005).

The Chabertiidae Popova (Strongylida: Strongylina) is a cosmopolitan family of nematodes, including the monospecific genus *Cyclodontostomum* Adams, which are parasites of marsupials, ruminants, primates and rodents (Durette-Desset 1983). *Cyclodontostomum purvisi* Adams occurs in a range of murid hosts and is widely distributed from India across south east Asia through to Australia (Adams, 1933; Hasegawa & Syafruddin 1994a; Smales 2012a). The Heligmonellidae (Skrjabin & Schikhobalova) (Strongylida: Trichostrongylina) is also a cosmopolitan family of nematodes comprising four subfamilies parasitizing a variety of small mammals (Durette-Desset *et al.* 1994). The most highly evolved of the sub families, the Nippostrongylinae Durette-Desset, now

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