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RESEARCH NOTE

A Preliminary Survey of Gastrointestinal Helminths of Murids (Rodentia: Muridae) at Five Selected Localities in Western Sarawak

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ABSTRACT

Field survey of gastrointestinal helminths on rodents from family Muridae were conducted at five localities in Western Sarawak from June 2013 until April 2014. A total of 31 host individuals comprising six species of murids were examined for gastrointestinal helminths using opportunistic necropsy. The hosts examined were *Leopoldamys sabanus*, *Maxomys rajah*, *M. surifer*, *M. whiteheadi*, *Niviventer cremoriventer* and *Sundamys muelleri*. Of these host species, 186 individuals consisting of two taxonomic groups of helminths were recovered, namely Nematoda and Cestoda. This study contributes to the growing literature on the infestation of endoparasites in rodents especially in Sarawak.

Keywords: Cestodes, gastrointestinal helminths, Muridae, nematodes

Taxonomically, rodents can be divided into five main suborders based on their musculature and associated structures of the skulls (Carleton & Musser, 2005). These include Anomaluromorpha, Castorimorpha, Hystricomorpha, Myomorpha and Sciuromorpha. Among these, Muridae or murids which represented suborder Myomorpha are known as the largest mammalian family (Wilson & Reeder, 2005). Being a group that consists of the largest number of species, rodents are significantly known as the reservoirs of zoonotic diseases (Paramasvaran *et al*., 2009). Rodents may act as a definitive or intermediate host of endoparasites especially those represented the group of intestinal helminths lead to increasing concerns on humans and domestic animals (Singla *et al.,* 2008).

Gastrointestinal helminth is a type of intestinal parasite that resides in the gastrointestinal tract by depleting the host nutrients. Helminths can be divided into three phyla; Platyhelminthes, Nemathelminthes and Acanthocephalan which is further divided into classes; Trematoda, Cestoda and Nematoda (Bhatia *et al.,* 2006). Some parasitic helminths of rodents in Malaysia are known to be of public health importance such as *Heterakis* sp., *Taenia taeniaeformis*, *Hymenolepis nana* and *H. diminuta* (Paramasvaran *et al*., 2005 & 2009). Research on the role of parasites through contamination of human and wildlife animals remains largely understudied in Malaysia and there is lacking of published report for Western Sarawak. The aim of this study is therefore to identify the gastrointestinal helminths present at five selected localities in Western Sarawak that is of known public health importance. In addition, this study will enhance the knowledge on helminthic infestation in murid rodents in Malaysia.

The samplings were conducted from June 2013 until April 2014 in Bako National Park (BNP), Kubah National Park (KNP), Matang Wildlife Center (MWC), Tanjung Datu National Park (TDNP) and Universiti Malaysia Sarawak Arboretum (UA). A total of 100 cage traps were set up throughout the sampling period using banana and pineapple as baits.

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