

A Checklist of Free-Living Marine Nematodes along Sarawak Coastal Waters

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Abstract

The exploration and studies on marine meiofauna such as nematodes are still at its infancy stage in Sarawak. Few detailed studies had been conducted on marine nematodes up to species level. The aim of this study is to establish a database for marine nematodes in Sarawak. This study was carried out at 15 sampling sites along the Sarawak coastal waters. A total of 93 nematode species were recorded (19 families, 38 genera and 5 suborder). Xyalidae was represented by 16 species, followed by Desmodoridae (9 species) and Cyatholaimidae (8 species). A total of 93 species of free-living marine nematodes were documented along the Sarawak coastal waters.

Keywords: free-living nematodes, marine, diversity, Sarawak

Introduction

Nematodes, also known as microworms is derived from the phylum Nematoda, which are one of the most abundant and widespread multi-cellular organisms on earth (Platt and Warwick, 1983; Platonova and Gal'tsova, 1985; Platt and Warwick, 1988; Warwick *et al.*, 1998). The whole phylum contains 20,000 nominal species and an estimated 4,000 to 5,000 species are free-living nematodes (Platt and Warwick, 1983, 1988; Giere, 1993; Warwick *et al.*, 1998). According to Gibbons (2002), nematodes are also colloquially referred to as roundworms but this rarely reflects their shape in cross-section. Nematodes exist as free-living or parasitic organisms which can be found in almost all types of soils, sediments, in freshwater lakes, deep ocean floor, hot springs, Antarctic soils and even within animals and plant (Platt and Warwick, 1983; Tarjan, 1987; Platt and Warwick, 1988; Warwick *et al.*, 1998).

Studies on free-living marine nematodes in Malaysia are limited, particularly up to species level. Studies conducted in Malaysia have so far only covered the ecology and diversity of marine meiofauna or meiobenthos (Sasekumar, 1994; Shabdin and Othman, 2005; Shabdin, 2006). Research in