



## A new species of *Lagis* (Polychaeta: Pectinariidae) from Hong Kong

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### Abstract

*Lagis crenulatus* sp. nov., (Pectinariidae) is described based on specimens collected from an intertidal mudflat in an estuary of Hong Kong. The specimens are small, with a body length of 6.4 mm to 15.4 mm. Among a total of 10 described species of *Lagis*, *L. crenulatus* sp. nov., and *L. abbranchiata* (Fauvel, 1932) are the only two without thoracic branchiae. *Lagis crenulatus* sp. nov., can be distinguished from *L. abbranchiata* by having crenulated rather than knobbed margins in the scaphe, and lacking a pair of dorsal elongated pads on the third segment.

**Key words:** Taxonomy, polychaete, *Lagis crenulatus*, new species, Hong Kong

### Introduction

Pectinariids are commonly found in soft-bottom samples around the world. They are a family of polychaetes with several unique morphological characteristics. They live in a cone-shaped sandy tube made by them, therefore are often called “ice-cream cone worms”. Their first segment bears two bundles of stout golden chaetae (paleae) and a cephalic veil. Their posterior body section, the scaphe, bears spine-like chaetae forming an arch on both sides (Fauvel 1953; Ushakov 1955; Imajima & Hartman 1964; Day 1967).

There has been some confusion in the generic designation in this family (Hartman 1941; Hutchings, 2000). Hartman (1941) was unsure whether the species should be grouped into five genera or subgenera. Day (1967) and Holthe (1986) only recognized two genera, *Petta* Malmgren, 1866 and *Pectinaria* Savigny, 1818, with the latter genus having four subgenera (*Amphictene* Savigny, 1818, *Cistenides* Malmgren, 1866, *Lagis*, and *Pectinaria*). Fauchald (1977), Wolf (1984), and Hutchings and Peart (2002) did not accept the subgenera, and considered *Amphictene*, *Cistenides*, *Lagis*, *Pectinaria*, and *Petta* to be genera. Hutchings and Peart (2002) provided a table listing the major characters distinguishing the genera, which mainly include the smoothness of the dorsal opercular rim, smoothness of the cephalic veil and degree of attachment to the first segment, distinctness of the scaphe from the abdomen, number of biramous chaetigers, and number of rows of major teeth in uncini. This 5-genus taxonomic scheme is followed in the present study.

*Lagis* Malmgren, 1866 can be distinguished from other genera of Pectinariidae by having a smooth cephalic veil well-attached to the first segment, 12 biramous chaetigers, and uncini with at least two rows of teeth (Fauchald 1977; Hutchings & Peart 2002). Nine species of *Lagis* have been described (Fig. 1). The geographic distributions of most species of *Lagis* do not overlap. Although Hutchings and Peart (2002) pointed out that many of the morphological characters of *Lagis* exhibit ranges which makes it difficult for distinguishing species, one species, *L. abbranchiata* (Fauvel, 1932), lacks thoracic branchiae and is therefore clearly distinguishable from other congeners. In this paper we describe *Lagis crenulatus* as a new species similar to *L. abbranchiata* in lacking thoracic branchiae but different in some other morphological characters as well as geographical distribution.