



***Ficopomatus talehsapensis*, a new brackish-water species (Polychaeta: Serpulidae: Ficopomatinae) from Thailand, with discussions on the relationships of taxa constituting the subfamily, opercular insertion as a taxonomic character and their taxonomy, a key to its taxa, and their zoogeography**

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Abstract

A new brackish-water serpulid polychaete species belonging to the genus *Ficopomatus* from Thailand is described. It had previously been identified as another known species belonging to the same genus. Taxonomic problems within the subfamily Ficopomatinae to which it belongs and the relationship of the genus *Marifugia* and its single known species which occurs in freshwater are discussed. While the other known genera of the subfamily possess seven thoracic chaetigers, *Marifugia* has six, but agrees with the former with regard to all other important characters. Likewise, among typically marine taxa, the genus *Pomatoleios* has six thoracic characters but agrees with the genera *Pomatoceros* and *Spirobranchus* with regard to all other important characters. As there are also other known serpulid genera having six thoracic chaetigers, an analysis was undertaken of 10 genera, six of them having six thoracic chaetigers and the remaining four seven. It revealed that *Marifugia* is the sister to the clade containing the other two genera of the Ficopomatinae (*Neopomatus* and *Ficopomatus*) and *Pomatoleios* is sister to the clade containing *Pomatoceros* and *Spirobranchus*. The usefulness of opercular insertion/derivation from a particular branchial radiole as a character in serpulid taxonomy is discussed. As observed in adults and juveniles of species belonging to ficopomatine genera, as well on available evidence on post-larval development, their opercular insertion is in the position of the first branchial radiole, unlike in genera such as *Pomatoceros* and *Hydroides* where it is on the second. A key to the known taxa of the subfamily is provided. Although they may be geographically separated by oceanic and/or terrestrial barriers, their common characters, including their ability to survive and propagate in their respective typically non-marine habitats, are indicative of their monophyly.

Key words: Ficopomatinae, *Ficopomatus talehsapensis* new species, *Neopomatus*, *Marifugia*, autapomorphies, synapomorphies, zoogeography

Introduction

Although most serpulids typically occur in marine habitats, and some of them may even temporarily occur in brackish-water, certain taxa had been described in recent decades whose typical natural habitats range from brackish to even totally fresh-water. Among them are *Ficopomatus* Southern, 1921 (type species *F. macrodon* Southern 1921), *Sphaeropomatus* Treadwell 1934 (type species *S. miamiensis* Treadwell, 1934), *Mercierella* Fauvel, 1923 (type species *Mercierella enigmatica* Fauvel, 1923), *Mercierellopsis* Rioja 1945 (type species *M. prietoi* Rioja, 1945), *Neopomatus* Pillai, 1960 (type species *N. uschakovi* Pillai, 1960) and *Marifugia* Absolon & Hrabé 1930 (type species *M. cavatica* Absolon & Hrabé, 1930).

Pillai (1971) proposed that the genera *Ficopomatus*, *Sphaeropomatus*, *Mercierella* and *Neopomatus* be grouped in a separate subfamily, the Ficopomatinae. Ten Hove & Weerdenburg (1978), in a generic revision of brackish-water serpulids, synonymized the genera *Mercierella* Fauvel, *Sphaeropomatus* Treadwell, *Mercierellopsis* Rioja, 1945, and *Neopomatus* Pillai, 1960, with *Ficopomatus* Southern 1921, while identifying