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Three new and two known free-living marine nematode species of the family Ironidae from the East China Sea

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Abstract

Three new and two known species of free-living marine nematodes of the family Ironidae from the East China Sea are described and illustrated. *Conilia sinensis* **sp. nov.** is identified by the relatively large body size (1883–2399 μm); the well developed lips; the number, shape and length of spicule (single and striated, length 87–100 μm as arc); the shape of telamon; the number of supplements (1). *Pheronous donghaiensis* **sp. nov.** is characterized by its sharp tail point; caudal gland absent; buccal cavity armed with four big solid teeth and rows of minute denticles; spicules stout, with central septum at proximal end, male caudal region with two rows of small conical subventral papillae. *Trissonchulus latispiculum* **sp. nov.** can be distinguished by its head not set off from remaining body, tail short and blunt, buccal cavity with minute denticles, spinneret opening slightly ventrally, spicule broad and alate with central septum and head on proximal end. *Trissonchulus benepapillosus* (Schulz, 1935) and *Trissonchulus oceanus* Cobb 1920 which are first reported from China, are redescribed in detail with emphasis on new or hitherto poorly described morphological features. Types are deposited in the Institute of Oceanology, Chinese Academy of Sciences.

Key words: free-living marine nematode, *Conilia sinensis* **sp. nov.**, *Pheronous donghaiensis* **sp. nov.**, *Trissonchulus latispiculum* **sp. nov.**, *Trissonchulus benepapillosus* (Schulz, 1935), *Trissonchulus oceanus* Cobb 1920, the East China Sea

Introduction

The family Ironidae de Man, 1876 is a dominant aquatic group of nematodes, with species found in sea, continental waters and occasionally on land (Tahseen & Mehdi 2009). De Man established the family in 1876 and he placed the genus *Ironus* Bastian, 1865 under Ironidae as its type genus, then Chitwood revised it in 1960 (Gerlach & Riemann 1974). It is a group of nematodes with characteristic buccal cavity structure: having the shape of a narrow, strongly elongate tube armed with teeth in its vestibular part (Platonova & Mokievsky 1994). The taxonomy of Ironidae is still in a state of flux, the generic diagnosis of the species and genera in this family have been comprehensively revised many times (Yeates 1967, Gerlach & Riemann 1974, Tahseen & Mehdi 2009). Currently, there are 9 genera in this family (Gerlach & Riemann 1974; Electronic database: http://www.marinespecies.org/index.php; http://nemys.ugent.be), and only two nematode species of the family Ironidae have been reported from Chinese waters: *Thalassironus bohaiensis* Zhang, 1990 has been described from the Bohai Sea, China and *Trissonchulus janetae* Inglis, 1961 has been recorded from the mangrove habitat of Hong Kong, China (Zhang 1990; Zhou & Zhang 2003).

Meiofaunal sediments were collected during a preliminary survey of the meiofauna in sandy beaches and mangrove mudflats of Fujian Province, the East China Sea. Nematodes are the dominant group in these sampling stations, of which the family Ironidae is either common or dominant in some sampling stations of sandy sediments and mangrove mudflats. Up to now, sixteen species of marine nematodes from the East China Sea have been described (or recorded) in detail and published (Zou 2000, 2001a, 2001b; Huang & Liu 2002; Lin 2003; Hua & Zhang 2007; Yu et al 2014; Chen & Guo 2014), but the species of the family Ironidae from the East China Sea have not been extensively studied. Three new and two known species of this family were found in our East China Sea survey and are described in the present paper.

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