Zootaxa 3383: 39–60 (2012)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

The Myidae (Mollusca, Bivalvia) from Chinese waters with description of a new species

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Abstract

The present study recognizes ten species of the family Myidae from China based on a comparison with myids described from Russia, Korea, Japan, Australia, and Europe: *Mya arenaria* Linnaeus, 1758, *Cryptomya (Cryptomya) busoensis* Yokoyama, 1922, *C. (Venatomya) elliptica* (A. Adams, 1851), *C. (V.) sinensis* (Xu, 1987), *Paramya recluzi* (A. Adams, 1864), *Tugonia (Tugonia) huanghaiensis* Xu, 1987, *T. (Distugonia) decurtata* (A. Adams, 1851), *Tugonia (Distugonia)* sp., *Sphenia coreanica* Habe, 1951; *Sphenia elongata* **sp. nov.** is characterized by an elongate shell, straight posteroventral margin and commarginal growth lines. We briefly discuss the biogeographic distribution of these species and present a determination table using adult shell characters.

Key words: Myinae, Cryptomyinae, Spheniinae, biogeography, taxonomy

Introduction

The Family Myidae currently includes three Recent subfamilies (Bernard 1983; Bouchet *et al.* 2010; Carter *et al.* 2011) and about 25 to 40 species worldwide (Coan *et al.* 2000; Huber 2010). Myids developed a variety of life modes from deep burrowing in sand and mud as most species of *Mya* (Bernard 1979; Huber 2010), byssally attached and nestling in crevices of shells or stone as *Sphenia* (Hanks & Packer 1985; Narchi & Domaneschi 1993; Pastorino & Bagur 2011; Yonge 1951a), or living burrowed in association with thalassinoidean shrimps or echiuroid worms as *Cryptomya* and *Paramya* (Henry 1976; Itani & Kato 2002; Jenner & McCrary 1969; Lawry 1987; Nara *et al.* 2008; Yonge 1951b). This variety and its correlated morphological variability have probably contributed to the fact that the family remains overall poorly studied, except for species from the eastern Pacific (cf. Coan *et al.* 2000; Huber 2010), and there are still many unsettled questions especially concerning the species from China and Japan.

We have therefore set out to re-describe the Chinese species from the collection of the Marine Biological Museum, Chinese Academy of Sciences. Our results are based on comparisons with previous records from China (Xu 2008; Xu & Zhang 2008) and an extensive study of the literature concerning similar or identical species from the northwestern Pacific. We thus record ten myid species in China, with one new species, *Sphenia elongata* **sp. nov.** The presence of a second new species is suspected but could not be substantiated on the basis of current evidence; it is here described under *Tugonia (Distugonia)* sp. Species characters are summarized in Table 1.

Material and methods

All examined specimens are preserved in 70% ethanol or air dried and deposited at the Marine Biological Museum, Chinese Academy of Sciences (abbreviated MBM), in Qingdao, China. For each registered specimen number, valve quantity, collection locality, collector and collection date are recorded except for some items which lacked this information.

Accepted by N. Malchus: 24 May 2012; published: 10 Jul. 2012