

Taxonomic review of the species of *Gomphina* (*Macridiscus*) (Bivalvia: Veneridae) from the Western Pacific Ocean

Konstantin A. Lutaenko



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Three species of the venerid subgenus *Gomphina* (*Macridiscus*) Dall, 1902, are recognized on a conchological basis in the western Pacific Ocean: *G. (M.) semicancellata* (Koch, in Philippi, 1843), *G. (M.)* sp. ("*aequilatera*" auctt.), and *G. (M.) melanaegis* Römer, 1860. *Donax aequilatera* G. B. Sowerby I, 1825, a name currently widely used for a subtropical Sino-Japanese species of *Gomphina*, is regarded as a *nomen nudum* or a *nomen dubium*, and *Donax veneriformis* Lamarck, 1818, often applicable to the same species in Japanese and Korean literature, is instead based on a specimen of Donacidae; *Venus donaciformis* Mabilbe & Le Mesle, 1866, is a *nomen nullum*. The most important conchological features useful for species recognition are shell shape (highly trigonal in *G. semicancellata*, subtrigonal in *G. sp.*, and subovate in *G. melanaegis*), degree of extension of pallial sinus toward the midline, and development of fine radial ribs on the posterior slope. Biogeographically, two species are subtropical in Japan and China - *G. sp.* and *G. melanaegis* - and *G. semicancellata* is tropical, with distribution southward to Indonesia and Vietnam.

Konstantin A. Lutaenko. Institute of Marine Biology, Russian Academy of Sciences, Vladivostok 690041, Russia.
E-mail: lutaenko@mail.primorye.ru

INTRODUCTION

The representatives of the genus *Gomphina* Mörch, 1853, belonging to the venerid subfamily Tapetinae P.-H. Fischer, 1887, are Indo-Pacific elements of the subtropical and tropical fauna. According to the revision of the subfamily by Fischer-Piette & Metivier (1971), there are four species with distributions from New Zealand to Zanzibar, and north to Japan. The genus has three subgenera: *Gomphina s.s.*, *Gomphinella* Marwick, 1927, and *Macridiscus* Dall, 1902. These subgenera, however, are rather artificial. Indeed, the early concept of *Gomphina s.s.*, included present day *Marcia* H. & A. Adams, 1857, and *Hemitapes* Römer, 1864, in addition to *Gomphina* itself. Dall (1902) who separated *Macridiscus* from *Gomphina s.s.*, diagnosed both subgenera (as sections in his treatment) as follows:

Gomphina s.s.:

"Valves usually heavy, solid, and very tumid: the lower edge of the right nymph and the upper edge of the left posterior cardinal with reciprocal rugosities" (Dall 1902: 359)

Macridiscus:

"Valves more equilateral, trigonal and compressed, less heavy and sometimes with feeble striation distally; nymphs and teeth entire, smooth" (Dall 1902: 359)

The subgenus *Gomphinella* is endemic to New Zealand and is represented only by the rare *Gomphina (Gomphinella) maorum* Smith, 1902. A report of this species from Zanzibar (Fischer-Piette & Metivier, 1971) is doubtful (R. N. Kilburn, pers. comm.).

Among paleontologists, *Gomphina* has long

