

The taxonomic status of the rudist bivalve genus *Pironaea* Meneghini, 1868 amongst the multiple-fold hippuritids

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Multiple-fold hippuritid rudist bivalves, i.e., those having in-folds of the outer shell layer into the inner shell layer (secondary pillars) other than the three hippuritid pillars, were known from both sides of the Atlantic since the second half of the nineteenth century (WOODWARD, 1855, 1862). Eurasian species have currently been referred to the genus *Pironaea* Meneghini, 1868, as it also happened originally to some American ones. Those species with poor development of the secondary pillars have been ascribed to not widely accepted new genera (e.g., *Pseudopironaea* Bilotte, 1982) or to known genera having other characters in common (e.g., *Vaccinites loftusi* Woodward, 1855); *Tetravaccinites* Bilotte, 1981, having a single secondary pillar, is now recognized as a teratology. American species have been mainly ascribed to *Barrettia* Woodward, 1862 or *Praebarrettia* Trechmann, 1924 with *Pseudobarrettia* Müllerried, 1931 being also recognized as a teratology. The number or the degree of development of secondary pillars has always been considered as the main character.

Recent taxonomic work on American multiple-fold hippuritids (MITCHELL, 2014) stressed the relevance of the myo-cardinal apparatus and the shell structure in defining genera and recognizing phylogenies. Thus, the genera: *Barrettia* and *Whitfieldiella* Mitchell, 2010, and *Praebarrettia*, are evidenced as members of two different clades. Similar work on Eurasian multiple-fold hippuritids (MUNUJOS et al., 2016, and the authors' work in progress) pay also attention to the myo-cardinal apparatus and shell structure, as well as to the ontogenetic and intra-specific variability of different species, thus recognizing synonymies, and relating the pore and canal system to the development of the secondary pillars. From all this, it becomes manifest that: 1) the presence of secondary pillars is a convergent character in different hippuritid lineages and can't be used as discriminative when stablishing genera; and 2) the genus *Pironaea* should be reserved to *P. polystyla* Pirona, 1868, and a few related species, and should not be used for other ones with a different myo-cardinal pattern.

MITCHELL, S., 2014. In: PONS, J.M. & VICENS, E. (Eds.), Tenth International Congress on Rudist Bivalves. Scientific Program and Abstracts, 16–17.

MUNUJOS, H. et al., 2016. Cretac. Res., **63**, 122–141.

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