



A review of the Early Permian bivalve fauna from the Rio do Sul Formation, Paraná Basin, Brazil: some preliminary observations

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The bivalve mollusks of the Teixeira Soares region, state of Paraná, Brazil, are recorded in three main assemblages that occur in stratigraphical succession in the upper part of the Rio do Sul Formation, Paraná Basin. These are locally known as Rio da Areia sandstone, Baitaca siltstone and Passinho shale assemblages, which were firstly discovered by E.P. de Oliveira (Passinho shale) in 1911, and subsequently by F.F.M. de Almeida (two other assemblages) in 1944. Taxonomic lists dealing with the composition and affinities of these assemblages and also pointing out their correlation with Upper Paleozoic faunas of Argentina, Australia, and Peru, were available in the literature during the 1960's and 1970's (see A.C. Rocha-Campos). However, the material is still officially undescribed. Preliminary observations based on new collections (IBB/UNESP) and the old ones (IG/USP) allow the record of the following associations: a) "Rio da Areia sandstone assemblage" [*Aviculopecten multiscalptus* Thomas, *Atomodesma* (*Aphanaia*) sp., *Selenimyalina* sp., *Volsellina* sp., *Leptodesma* (*Leptodesma*) sp., *Myalina* (*Myalinella*) sp., and *Permophorus* sp. or *Stutchburia* sp.], b) "Baitaca siltstone assemblage" [*Aviculopecten multiscalptus* Thomas, "*Allorisma*" *barringtoni* Thomas, *Sanguinolites* sp., *Vacunella* cf. *etheridgei* (Koninck), *Myonia* sp., and *Schizodus* sp.], and c) "Passinho shale assemblage" (*Nuculana woodworthi*, *Anthraconneilo* sp.). The presence of *Atomodesma*, *Leptodesma*, *Permophorus* or *Stutchburia*, "*Allorisma*", and *Myonia* indicate affinities with assemblages of the lower Permian Bonete Formation (Sierras Australes, Buenos Aires Province, Argentina) and the Pennsylvanian Amotape Formation (Peru), as previously indicated by A.C. Rocha-Campos. Although *Eurydesma* has not been found in the assemblages yet, their close affinity with the Bonete fauna may indicate a late Asselian-Artinskian age. However, caution must be taken with some comparisons since some anomalodesmatans preserved in the Baitaca siltstone were found in obrution deposits and in situ. Those shells are deeply compressed along the main axis and some ("*Allorisma*", *Myonia*) may represent taphotaxons.

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