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# BIOSTRATIGRAPHICAL IMPLICATIONS OF THE BIVALVE FAUNA FROM TACIBA FORMATION (BUTIÁ QUARRY), ITARARÉ GROUP, PARANÁ BASIN, LOWER PERMIAN.

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**ABSTRACT:** The use of the Late Paleozoic marine invertebrate faunas of South America to regional scale correlations has been limited not only by the high degree of faunal endemism, but also by the fact that many Brazilian marine assemblages are scarcely described and illustrated, or even undescribed. However, some of these are key faunas for interbasinal correlations. This is the case of the marine invertebrate assemblages found at the top of the Itararé Group, Rio do Sul and Taciba formations, which may show affinities with the classical Lower Permian bivalve faunas of the Bonete Formation, Sierras Australes, Buenos Aires Province, in Argentina. In this context, the Butiá assemblage is of particular interest to regional correlations because it is associated with a short transgressive-regressive episode at the end of the Late Paleozoic glaciation in the Paraná Basin. The assemblage records the first appearance of typical Gondwanian marine bivalves in the basin. Hence, here we describe by the first time, two bivalve species of the Butiá assemblage from the Taciba Formation, State of Santa Catarina, (Mafrá Municipality), Southern Brazil. The main aim of this study is to add new palaeobiogeographic and biostratigraphic information to Late Paleozoic bivalve faunas of Western Gondwana. The studied fauna was found in a 30 cm thick interval of fine sandstones cropping-out in the top of an abandoned quarry wall. The sandstone yielded a poorly diversified fauna mainly dominated by productid brachiopods and rare mollusk shells (bivalves and gastropods). The identified marine bivalve species were: *Myonia argentinensis* (Harrington, 1955), and *Aviculopecten multiscalptus* (Thomas, 1928). The studied fossil-bearing sandstone bed is a marine intercalation recording a brief eustatic rise in sea-level, probably following glacier retreat

and climate amelioration at the end of a broad glacial scenario. The presence of *Myonia argentinensis* is noteworthy since this species is also present in marine siltstones of the Baitaca assemblage, at the top of the Rio do Sul Formation, cropping-out at the Teixeira Soares region, Paraná State. This species is also present in the bivalve fauna from the Bonete Formation, Pillahinco Group, Sauce Grande Basin, Buenos Aires Province, in Argentina. Hence, the marine bivalves of the Taciba Formation are associated with the transgressive event that characterizes the *Eurydesma* fauna, indicating a Late Asselian-Sakmarian age for the bivalve fauna. The presence of the megadesmid *Myonia argentinensis* reinforces the Gondwanic nature of the studied fauna.

**KEYWORDS:** Bivalvia; Taciba Formation; *Eurydesma* fauna.