

**PRELIMINARY CONSIDERATIONS ABOUT TAPHONOMY AND  
PALEOECOLOGY OF ?ANODONTITES (BIVALVIA, UNIONOIDA) FROM BAURU  
GROUP (LATE CRETACEOUS, BAURU BASIN), BRAZIL**

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Recent analysis of specimens probably belonging to genus *Anodontites* (Unionoida) show the possible identification and reconstruction of muscle scars and consequent interpretation of their taphonomy and paleoecology by the first time related to the internal anatomy of these bivalves of Bauru Group (Late Cretaceous). The type material and other examined fossils are deposited at "Coleção Científica Sergio Mezzalira" located in "Instituto de Geologia da Secretaria do Meio Ambiente do Estado de São Paulo", Brazil. The specimens of ?*Anodontites* have small rounded and well-defined anterior adductor muscle scars, located near the anterior margin of the shell. A probably isthmus on the muscle scar delimits the contact of pedial retractor with the posterior margin of the adductor muscle scar. The external morphology is compressed (obesity indices averages are 2,0) and elongated (elongation indices averages are 1,4), indicating blade shape shell and a probably rapid burrowing mode of life in stable substrate. There is no register of pallial sinus in the fossils but the articulated specimens (almost absent) display a notorious siphonal gap that is related to a deeply infaunal suspensivorous feeders. The analyzed fossils are deposited in collections without a complete record of lithological and taphonomical data. However, autochthonous to parautochthonous deposition is interpreted based on parallel position on the bed and disarticulation of the specimens that preserve these features. The distal posterior portions are fragmented in articulated shells indicating substrate remobilization by a probable energetic event. Although is not possible recognize if fragmentation and remobilization of the assemblages are previous or posterior to death of the organisms. Finally, the samples reveal a complex taphonomic history and additional collects and analysis are necessary.