ACTA PALAEONTOLOGICA POLONICA

Echinoid burrow *Bichordites monastiriensis* from the Oligocene of NE Italy

Massimo Bernardi, Sergio Boschele, Paolo Ferretti, and Marco Avanzini
Acta Palaeontologica Polonica 55 (3), 2010: 479-486 doi: http://dx.doi.org/10.4202/app.2009.0064

Several specimens of trace fossil *Bichordites monastiriensis* were discovered in two shallow water Oligocene sandstone beds from Valsugana (Trentino, NE Italy) representing the oldest documented occurrence for this ichnospecies. They are grazing–crawling (pascichnion–repichnion) structures and are occasionally associated with enlarged structures that can be interpreted as resting traces (cubichnia) and assigned to the ichnogenus *Cardioichnus*. The resulting *Bichordites–Cardioichnus* compound trace fossil is here described for the first time. In the basal part of some specimens, skeletal remains of *Eupatagus ornatus* were found in life position. This founding enables to widen the spectrum of known *Bichordites* tracemakers. Exceptional conditions of preservation of one specimen extending in two beds recording different environmental conditions gave an opportunity to document the effects of various taphonomical histories on the preservation of this traces.

Key words: Trace fossils, Bichordites, echinoid burrows, *Upogebia*, foredeep, Oligocene, Italy.

Massimo Bernardi [massimo.bernardi@mtsn.tn.it], Paolo Ferretti [ferretti@mtsn.tn.it] and Marco Avanzini [avanzini@mtsn.tn.it], Museo Tridentino di Scienze Naturali, Via Calepina, 14, I-38122, Trento, Italy; Sergio Boschele [s.boschele@wwf.it], WWF Trentino- Alto Adige Südtirol, Via Malpaga 8, I-38122, Trento, Italy.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Full text (676.9 kB)