

Accepted Manuscript

Coprolites of marine vertebrate predators from the Lower Triassic of southern Poland

Tomasz Brachaniec, Robert Niedźwiedzki, Dawid Surmik, Tomasz Krzykawski, Krzysztof Szopa, Przemysław Gorzelak, Mariusz A. Salamon

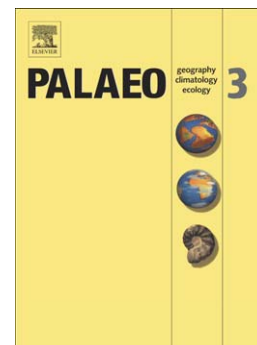
PII: S0031-0182(15)00302-8
DOI: doi: [10.1016/j.palaeo.2015.06.005](https://doi.org/10.1016/j.palaeo.2015.06.005)
Reference: PALAEO 7306

To appear in: *Palaeogeography, Palaeoclimatology, Palaeoecology*

Received date: 12 December 2014
Revised date: 28 May 2015
Accepted date: 3 June 2015

Please cite this article as: Brachaniec, Tomasz, Niedźwiedzki, Robert, Surmik, Dawid, Krzykawski, Tomasz, Szopa, Krzysztof, Gorzelak, Przemysław, Salamon, Mariusz A., Coprolites of marine vertebrate predators from the Lower Triassic of southern Poland, *Palaeogeography, Palaeoclimatology, Palaeoecology* (2015), doi: [10.1016/j.palaeo.2015.06.005](https://doi.org/10.1016/j.palaeo.2015.06.005)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Coprolites of marine vertebrate predators from the Lower Triassic of southern Poland

Tomasz Brachaniec^a, Robert Niedźwiedzki^b, Dawid Surmik^{a,c}, Tomasz Krzykowski^a,
Krzysztof Szopa^a, Przemysław Gorzelak^c, Mariusz A. Salamon^{a,*}

^a *University of Silesia, Faculty of Earth Sciences, Będzińska Str. 60, 41-200 Sosnowiec, Poland. Email: paleo.crinoids@poczta.fm**

^b *Wrocław University, Institute of Geological Sciences, Cybulskiego 30, 50-204 Wrocław, Poland.*

^c *Institute of Paleobiology, Polish Academy of Sciences, Twarda Str. 51/55, PL-00-818, Warsaw, Poland.*

ABSTRACT

Numerous coprolites are described for the first time herein from the Lower Triassic (Olenekian) shallow marine sedimentary rocks in southern Poland. X-ray Diffraction and geochemical analyses show that they are preserved as calcium phosphate with small admixtures of quartz and calcite. Additionally, SEM and thin section studies revealed that they contain highly fragmented faunal remains (crinoids, molluscs and vertebrates). The size, shape, geochemistry, biostratigraphic distribution and co-occurrence with vertebrate skeletal remains imply that the coprolites at hand were likely produced by nothosaurids and the durophagous actinopterygian (ray-finned) fish *Colobodus*. The large number of recorded coprolites implies that durophagous predation has been intense during the Early Triassic and suggests that the so-called Mesozoic Marine Revolution probably started soon after the end-

Download English Version:

<https://daneshyari.com/en/article/6349703>

Download Persian Version:

<https://daneshyari.com/article/6349703>

[Daneshyari.com](https://daneshyari.com)