A new tannuolinid problematic from the lower Cambrian of the Sukharikha River in northern Siberia

Artem Kouchinsky, Stefan Bengtson, and Duncan J.E. Murdock

Acta Palaeontologica Polonica 55 (2), 2010: 321-331 doi: <http://dx.doi.org/10.4202/app.2009.1102>

A new species of tannuolinid, *Tannuolina pavlovi*, is reported from the basal Krasnoporog Formation cropping out along the Sukharikha River at the northwestern margin of the Siberian Platform. The new material expands the geographic range of tannuolinids onto the Siberian Platform and extends their stratigraphic range into the basal Tommotian Stage of the traditional Lower Cambrian. The oldest appearance of tannuolinids in the fossil record is shown herein to have occurred as early as the oldest appearance of the linguliformean brachiopods, of which tannuolinids have been suggested to be a stem group. The sellate sclerites of *T. pavlovi* sp. nov. are different from those of the other known species of *Tannuolina* in the consistent absence of a pronounced sella and duplicature on the respective sides of sclerites, as well as in having regularly distributed large setal pores on the lateral edges. The mitral sclerites of *T. pavlovi* sp. nov. do not clearly show asymmetry of left and right forms, manifested in other species by the presence of the carina on the interior surface. Large pores aligned along the lateral margins of sellate sclerites regularly coalesce below the wall surface from an apically and an aperturally directed basal branch, forming a nearly right angle.

Key words: Tommotiida, Brachiopoda, *Tannuolina*, Cambrian, Tommotian, Siberia.

Artem Kouchinsky [artem.kouchinsky@nrm.se] and Stefan Bengtson [stefan.bengtson@nrm.se], Department of Palaeozoology, Swedish Museum of Natural History, Box 50007, SE-104 05 Stockholm, Sweden; Duncan J.E. Murdock [duncan.murdock@bristol.ac.uk], Department of Earth Sciences, University of Bristol, Wills Memorial Building, Queen's Road, Bristol BS8 1RJ, UK.

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 \(1,012.5 kB\)](#) |

[Supplementary file \(104.8 kB\)](#)