ACTA PALAEONTOLOGICA POLONICA

A new thalassematid echiuran worm from the Middle Ordovician Castle Bank Biota of Wales, UK

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Acta Palaeontologica Polonica 68 (4), 2023: 571-581 doi:10.4202/app.01107.2023

Echiurans (spoonworms) are a very distinctive group of polychaete annelids that had long been considered to constitute a separate phylum. Their fossil record is extremely limited, although trace fossils that have been suggested to be attributable to them date back as far as the Cambrian Period. The oldest body fossils are from the Carboniferous Mazon Creek Biota, and preserve only limited morphological detail. New material from the Middle Ordovician (Darrivilian, *Didymograptus murchisoni* Biozone) Castle Bank Biota of Wales shows fine detail of the morphology of a new taxon, *Llwygarua suzannae* gen. et sp. nov., including several details that indicate an assignment to the derived family Thalassematidae, allied to the speciose genus *Ochetostoma*. These details include proboscis morphology, anterior setae, and muscle organisation within the trunk. An additional specimen is described in open nomenclature, as it may be either a distinct species, or a juvenile of *Llwygarua suzannae* gen. et sp. nov. with a relatively elongated proboscis. These worms demonstrate a very early and previously unrecognised diversification of the echiuran grown group, further supporting an early diversification of Annelida as a whole.

Key words: Annelida, Echiura, Thalassematidae, Darriwilian, Middle Ordovician, United Kingdom.

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