

## **New cranial material of the acanthothoracid placoderm *Palaeacanthaspis vasta* from the Lower Devonian of Podolia—phylogenetic and taxonomic significance**

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The Early Devonian vertebrates of Podolia in Ukraine are well known thanks to the material of the basal arthrodire placoderm genus *Kujdanowiaspis*, originally mentioned by Brotzen in 1934. The anatomical fame of *Kujdanowiaspis* brought by Erik Stensiö almost eclipsed the presence of the acanthothoracid placoderm *Palaeacanthaspis vasta* in the underlying beds, with the original material of *P. vasta* being less well preserved and abundant than that of *Kujdanowiaspis*. Here we describe a newly discovered specimen of the acanthothoracid *P. vasta* from the Lochkovian of Podolia (Ukraine). The specimen, although incomplete, is very well preserved in three dimensions and allows a thorough description of its external morphology, which is compared to that of *Romundina stellina* and other well-known Acanthothoraci. A phylogenetic analysis is performed and the acanthothoracid nature of *Palaeacanthaspis* is confirmed. However, the position of *Palaeacanthaspis* within the Acanthothoraci remains uncertain, and its resemblance with *Romundina* could be due to either synapomorphies or symplesiomorphies. Similarities and differences between the two forms are exposed, and lead to the lack of synonymy at the specific level. Generic synonymy is also questioned for the first time but remains equivocal.

**Key words:** Placodermi, Acanthothoraci, neurocranium, Lochkovian, Devonian, Podolia, Ukraine.

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