

Abstract

Placoderms are restricted to the Devonian in the Prague Basin, occurring on localities dated from the Lochkovian to the Givetian. Černá rokle near Kosoř with the Radotin Limestone is the richest placoderm bearing locality.

A revision of specimens from collections of the National Museum in Prague confirms occurrences of three species of two genera belonging to the placoderm order Acanthothoraci: *Radotina kosorensis* Gross, 1950; *Radotina tessellata* Gross, 1958 and *Kosoraspis peckai* Gross, 1959. Genus *Holopetalichthys* was accepted as valid and a diagnosis of *H. primus* (Barrande, 1872) was amended. Its assignment to higher taxonomic units remains uncertain. Four morphological types of undeterminable specimens classified in the order Arthrodira are defined.

Some previously unpublished morphological structures are figured and described: the median dorsal plate of the thoracic armour of *R. kosorensis* and its relation to the head shield, the cranial cavities and trunk shield plates of *R. tessellata*, a well preserved neurocranium and scales of *K. peckai*, the trunk shield and vertebral column of *H. primus* and large dermal plates of each Arthrodiran morphotype.

The placoderm diversity in the Prague Basin was lower compared to neighbouring areas at the beginning of the Devonian (Lochkovian and Pragian). Only the members of the less advanced order Acanthothoraci have been found. The migrations of the more advanced arthrodirans to the Prague Basin initiated in the Emsian. They completely replaced the previous group of placoderms but their abundance in the fossil record is far lower.