Czech and Moravian Permian acanthodians

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The Lower Permian acanthodians of the Czech Republic were found out in the Sudetic (The Krkonoše Piedmont and Česká Kamenice Basins) and Furrows (The Boskovice and Blanice Basins) Areas. Great number of better or well preserved specimens yielded the Krkonoše Piedmont and Boskovice Basins. Most of them represent *Acanthodes gracilis* (Beyrich, 1848) or *Acanthodes* sp. Another species *Acanthodes stambergi* Zajíc, 2005 was described on the basis of three specimens which come from one outcrop (Kladoruby „Dolní pepřík") in the Boskovice Basin. All Czech and Moravian Permian acanthodian remains coincide with the local bio/ecozone *Acanthodes gracilis* of Asselian age (in sense of Zajíc 2005 and Štamberg & Zajíc 2008 in press). The uppermost part of the zone is developed as fossiliferous with acanthodians (including *Acanthodes stambergi*) only in the Boskovice Basin (the Lower Letovice Formation). *Acanthodes gracilis* is known from 9 outcrops of the Krkonoše Piedmont Basin and 7 outcrops of the Boskovice Basin. *Acanthodes* was recognized on 22 outcrops of the Boskovice Basin, 17 outcrops and boreholes of the Krkonoše Piedmont Basin, one outcrop in the Blanice Basin and one borehole in the Česká Kamenice Basin.

Acanthodes stambergi differs from *Acanthodes gracilis* by extremely long dermotrichia of the pectoral fins (along whole length of the pectoral fin). Dermotrichia of the pectoral fins of all specimens of *Acanthodes gracilis* as well as *Acanthodes* sp. are short. Similar situation is known in abundant *Acanthodes bronni* and rare *Acanthodes tholeyi* with extremely long dermotrichia in the Saar-Nahe Basin (Germany; Lower Permian). The Czech and Moravian species are, however, more close each other than the German ones. One of the possible explanations of this phenomenon is a sexual transformation during the reproduction. In that case, *Acanthodes stambergi* could represent males of the *Acanthodes gracilis* with secondary sex characteristic during spawning. For verification of this explanation is necessary to examine quantitatively all specimens on the layer with *Acanthodes stambergi*. However, the exact layer is presently unknown.

The labyrinth infillings and otoliths were found in all three taxa. The overlapping of the body scales and the microsculpture of the scale crowns were detected unlike the Zidek's statement (1985). The ontogenetic development (particularly the development of the squamation) was described especially in *Acanthodes gracilis*. The conventional boundaries (based on the real structures) of three main growth stages (the juvenile, subadult, and adult) were established. The total specimen size (based on the competent estimation) was ranges from 61 to 567 mm. The lengths could be rather undervalued. On the other hand, some specimens were unquestionably smaller (50 mm or less). Other anatomical structures are mentioned.

The strange areas of the scales that are deformed by the shallow hollows were detected on various positions of the trunk and fins. The deformation is probably caused by a scale dentine disease like caries.

Paleogeographic overview of the known Permian acanthodians is done.

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