

On the erroneous identification of a turiniid thelodont in the Middle/Upper Devonian boundary beds of the Middle Urals

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This short comment is to prevent the distribution of erroneous data in publications about thelodonts resulting from a presentation and published abstract by Märss and Ivanov (2011). At the Eighth Baltic Stratigraphical Conference in Riga, we reported on a thelodont and chondrichthyans from the Middle/Upper Devonian boundary beds of the Middle Urals. The talk was based on two samples from the Pokrovskoye locality given to us by A.Z. Bikbaev (Ekaterinburg, Russia). A turiniid thelodont, chondrichthyans, placoderms, acanthodians, a struniiform sarcopterygian, and actinopterygians had been reported from that locality prior to our work, whereas the beds with thelodont scales were then thought to correspond to the *disparilis* Zone (Bikbaev *et al.* 2002; Ivanov 2008).

The thelodont scales we received were 0.6–1.0 mm long (considered, in retrospect, too small for a turiniid, although in sorted sediments such could be found). On the basis of scale morphology, they were provisionally identified as belonging to a turiniid taxon. One particular feature (laterally slantwise finely striated crown) was considered decisive for that identification. The scale histology had not been studied for the abstract and conference talk, but was completed later, at which time we saw fine, sinuous and branching dentine tubules such as those of Shieliidae, whereas turiniids have long and straight but proximally widened tubules. The histological study did not confirm our preliminary identification and we hereby invalidate it. It also became evident that the samples from the eastern and the western slope of the Middle Urals were mixed up (e-mail from A.Z. Bikbaev to A.O. Ivanov

on 29.12.2012). Neither of these errors affects the data on other fishes (sarcopterygians, chondrichthyans, etc.) published earlier from the Pokrovskoye localities (Bikbaev *et al.* 2002; Ivanov 2008), which are correct.

The error in identification could have been avoided if detailed study of both the morphology and histology of the scales had been carried out before the conference. To avoid any confusion in future publications, we strongly suggest not using any of the thelodont data in question.

REFERENCES

- Bikbaev, A.Z., Snigireva, M.P., Ziegler, W. and Ivanov, A.O. 2002. To the stratigraphy of Givetian–Frasnian deposits of the type section “Pokrovskoye” in the Middle Urals eastern slope. In: Yushkin, N.P., Tsyganko, V.S. and Männik, P. (Eds), Geology of the Devonian System, Proceedings of the International Symposium, Syktyvkar, Komi-Republic, July 9–12, 2002, pp. 138–141. Syktyvkar.
- Ivanov, A.O. 2008. Vertebrate assemblages from the lower and upper Frasnian boundaries of the Middle Urals. In: Königshof, P. and Linnemann, U. (Eds), From Gondwana and Laurussia to Pangea: Dynamics of Oceans and Supercontinents. Abstracts and Programme. Final Meeting of IGCP 497 and IGCP 499, pp. 56–57. Frankfurt am Main.
- Märss, T. and Ivanov, A.O. 2011. A thelodont and chondrichthyans from the Middle/Upper Devonian boundary beds of the Middle Urals. In: Lukševičs, E., Stinkulis, Ģ. and Vasiļkova, J. (Eds), The Eighth Baltic Stratigraphical Conference. Abstracts, p. 45. University of Latvia; Riga.

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