

Variability of conch morphology in a cephalopod species from the Cambrian to Ordovician transition strata of Siberia

Jerzy Dzik


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A block of stromatolitic limestone found on the Angara River shore near Kodinsk, Siberia, derived from the exposed nearby Ust-kut Formation, has yielded a sample of 146 ellesmeroceratid nautiloid specimens. A minor contribution to the fossil assemblage from bellerophontid and hypseloconid molluscs suggests a restricted abnormal salinity environment. The associated shallow-water low diversity assemblage of the conodonts *Laurentoscandodus triangularis* and *Utahconus(?) eurypterus* indicates an age close to the Furongian–Tremadocian boundary. Echinoderm sclerites, trilobite carapaces, and hexactinellid sponge spicules were found in another block from the transitional strata between the Ust-kut and overlying terrigenous Iya Formation; these fossils indicate normal marine salinity. The conodont *L. triangularis* is there associated with *Semiacontiodus iowensis* and *Cordylodus angulatus*. This means that the stromatolitic strata with cephalopods are older than the early Tremadocian *C. angulatus* Zone but not older than the Furongian *C. proavus* Zone. The sample of nautiloid specimens extracted from the block shows a unimodal variability in respect to all recognizable aspects of their morphology. The material is probably conspecific with the poorly known *Ruthenoceras elongatum* from the same strata and region.

Key words: Cephalopoda, Nautiloidea, Endoceratida, Ellesmeroceratina, evolution, Furongian, Tremadocian, Russia.

Jerzy Dzik [dzik@twarda.pan.pl], Institute of Paleobiology, Polish Academy of Sciences, Twarda 51/55, 00-818 Warszawa, Poland and Faculty of Biology, Biological and Chemical Centre, University of Warsaw, Żwirki i Wigury 101, 02-096, Warszawa, Poland.

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