

## A rare coleoid mollusc from the Upper Jurassic of Central Russia

Larisa A. Doguzhaeva

*Acta Palaeontologica Polonica* 45 (4), 2000: 389-406

The shell of the coleoid cephalopod mollusc *Kostromateuthis roemeri* gen. et sp. n. from the lower Kimmeridgian of Central Russia consists of the slowly expanding orthoconic phragmocone and aragonitic sheath with a rugged surface, a weakly developed postalveolar part and a long, strong, probably dorsal groove. The sheath lacks concentric structure common for belemnoid rostra. It is formed by spherulites consisting of the needle-like crystallites, and is characterized by strong porosity and high content of originally organic matter. Each spherulite has a porous central part, a solid periphery and an organic cover. Tubular structures with a wall formed by the needle-like crystallites are present in the sheath. For comparison the shell ultrastructure in Recent *Spirula* and *Sepia*, as well as in the Eocene *Belemnosis* were studied with SEM. Based on gross morphology and sheath ultrastructure *K. roemeri* is tentatively assigned to Spirulida and a monotypic family Kostromateuthidae nov. is erected for it. The Mesozoic evolution of spirulids is discussed.

**Key words:** Cephalopoda, Coleoidea, Spirulida, shell ultrastructure, Upper Jurassic, Central Russia.

Larisa A. Doguzhaeva [[larisa@msc.ru](mailto:larisa@msc.ru)], Paleontological Institute of the Russian Academy of Sciences, Profsoyuznaya 123, 117647 Moscow, Russia.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see [creativecommons.org](http://creativecommons.org)), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



[Full text \(1,582.5 kB\)](#)