

A rare coleoid mollusc from the Upper Jurassic of Central Russia

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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.

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