The diamondback squid, *Thysanoteuthis rhombus* Troschel, 1857: a “living fossil”?

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The gladius of the diamondback squid *T. rhombus* is qualitatively different from the gladii of all other Recent myopsid and oegopsid squids and resembles the gladii of extinct Loligosepiida (Triassic — Cretaceous). Some authors (Ya.I. Starobogatov, V.A. Bizikov) stated that *T. rhombus* is a direct descendant of loligosepiids, and its ancestors began to adopt the way of life of the nektonic squids during Lower Jurassic. It was supposed that *Thysanoteuthidae* should be isolated at the subordinal level. I argue that *T. rhombus* is distinct from other squid, particularly from Ommastrephidae, in many morphological, biological (especially reproductive) and ethological characters, but the resemblance between its gladius and the gladii of Loligosepiidae is only superficial. *T. rhombus* is definitely not related to any extinct squid taxon. It represents a peculiar evolutionary pathway in the common adaptive zone with ommastrephid squids and occupies a separate ecological niche. Its adaptation to the mode of life of epipelagic nektonic squids was long but began later than the beginning of evolutionary explosion of oceanic pelagic fish in Upper Cretaceous. *T. rhombus* appeared on the evolutionary arena only after the extinction of Loligosepiina.

**INTRODUCTION**

The diamondback (or simply diamond) squid, *Thysanoteuthis rhombus* Troschel, 1857, is the only species in the family Thysanoteuthidae. The latter family belongs to the suborder Oegopsida (oceanic squids) and the order Teuthida (squids). It is a large animal — dorsal mantle length (DML) up to 80–100 cm, total length up to 1.5 m and more, weight to 20–25 kg. Its appea-