

**MOLECULAR APPROACH OF DECABRACHIA PHYLOGENY:
IS *IDIOSEPIUS* DEFINITELY NOT A SEPIOLID**

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ABSTRACT: The taxonomic and phylogenetic position of *Idiosepius* among Decabrachia is reconsidered, based on cephalopod partial gene sequencing and on accessory nidamental gland symbiotic bacteria DNA analyses. Phylogenetic trees are established from partial ribosomal mitochondrial genes (16S rDNA and 12S rDNA) and cytochrome oxidase genes (CO I and CO III): they are analysed in relation with some diagnostic morphological characters and compared with the symbiotic bacteria 16S rDNA phylogenetic trees. The results obtained by both approaches show the idiosepiids as more closely related to teuthoids than to sepiolids. These new data lead us to propose that the taxon Teuthoidea gathers oegopsids (including Idiosepiidae), Myopsida, Sepiolida and Sepiariidae.
