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Characterizations of juvenile stages of some semaeostome Scyphozoa (Cnidaria), with recognition of a new family (Phacellophoridae)

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Abstract

Phacellophora camtschatica has long been assigned to the semaeostome scyphozoan family Ulmaridae. Early stages (scyphistomae, strobilae, ephyrae, postephyrae, and young medusae) of the species were compared with those of several other semaeostomes currently assigned to Ulmaridae, Pelagiidae, and Cyaneidae. Juveniles of *P. camtschatica* did not strictly conform with characters of those of any of these families, and appeared intermediate between Cyaneidae and Ulmaridae. A new family, Phacellophoridae, is proposed to accommodate *P. camtschatica*.

Key words: *Chrysaora*, *Cyanea*, *Aurelia*, *Phacellophora camtschatica*, scyphistoma, ephyra, strobila, development, gastric system

Introduction

Semaeostomeae L. Agassiz, 1862 comprises an order of scyphozoan cnidarians traditionally grouped together based on the following medusoid characters: mouth arms four, large, surrounding a single central mouth opening; tentacles if present hollow, occurring on periphery of umbrella or subumbrella (Mianzan & Cornelius 1999). Recent molecular studies reveal that the group is polyphyletic (Collins 2002, Collins *et al.* 2006).

Within the order, family Ulmaridae Haeckel, 1880 comprises an assemblage of several subgroups having uncertain affinities and few common features. The only characters unifying Ulmaridae are: (1) presence of

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