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Revision of the genus *Chrysaora* Péron & Lesueur, 1810 (Cnidaria: Scyphozoa)

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Abstract

Revision of the scyphozoan genus *Chrysaora* Péron & Lesueur, 1810 was undertaken from observations on museum material (Brazil, Europe, and USA), on living specimens in nature, and on life-cycles of some species cultured under laboratory conditions. A total of 168 museum lots, some of them having many medusae, were inspected. Included amongst these were nine type specimens. The genus comprises 13 valid species (*Chrysaora achlyos*, *C. chinensis*, *C. colorata*, *C. fulgida*, *C. fuscescens*, *C. hysocella*, *C. lactea*, *C. melanaster*, *C. pacifica*, *C. pentastoma*, *C. plocamia*, and *C. quinquecirrha*), one *species inquirenda* (*Chrysaora caliparea*), and two doubtful species (*C. kynthia* and *C. wurlerra*). Differentiation of species is based mostly on tentacle number, shape of radial septa, order of tentacle development, colouration, and measurements of nematocysts. We resurrect *C. chinensis* for specimens from southeast Asia. *Chrysaora pacifica* is considered valid and distinct from *C. melanaster* based on tentacle number and nematocyst complement. Mediterranean specimens assigned to *C. hysocella* are hermaphroditic and thereby considered distinct from those of *C. fulgida* from west Africa. *Chrysaora achlyos* (northeast Pacific) and *C. plocamia* (southeast Pacific and southwest Atlantic) are geographically isolated but morphologically identical, being distinguished only by colour pattern. The recently described *C. southcotti* is considered a junior synonym of *C. pentastoma*. The Australian *C. kynthia* and *C. wurlerra*, here considered *nomina dubia*, merit further study. Our phylogenetic hypothesis indicates that the genus *Chrysaora* forms a monophyletic group, with *C. colorata*, *C. plocamia*, and *C. achlyos* having a basal position in the phylogeny. Species with more than 24 tentacles (formerly assigned to the genus *Dactylometra*) form a clade with a derived position.

Key words: Discomedusae, Pelagiidae, Semaestomeae, scyphomedusae, life cycle, cnidome, jellyfish, medusa, sea nettle