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Csiromedusa medeopolis: a remarkable Tasmanian medusa (Cnidaria: Hydrozoa: Narcomedusae) comprising a new family, genus and species

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Abstract

An unusual new species of narcomedusa from Tasmania is described. It differs from all other species of narcomedusae in having two whorls of tentacles, as well as a beveled opening in the apical surface containing peculiar 'sky-scraper-like' protruding structures, which we have interpreted as gonads. We place this unusual form in its own family, the Csiromedusidae fam. nov. Knowledge about its basic biology and ecology is currently lacking. We provide a comparative table of features of the families of Narcomedusae, as well as a summary of characters observed in known juvenile and larval stages of species of Narcomedusae.

Key words: Cnidaria, Hydrozoa, Narcomedusae, Tasmania, jellyfish, taxonomy, morphology, anatomy, new family, new genus, new species

Introduction

The medusa fauna of Tasmania is almost completely unknown, particularly the smaller, inconspicuous hydromedusae. The few larger scyphomedusae that have been reported have often been attributed erroneously to overseas or mainland species, one by one being shown to bear distinctive morphology and genetic patterns, e.g., *Cyanea* (Dawson 2005b) and *Catostylus* (Dawson 2005a); it seems likely that *Aurelia* will prove to be distinct as well, given that recent studies have demonstrated diagnostic characters between other forms previously thought to be identical (Dawson & Jacobs 2001; Gershwin 2001; Schroth et al. 2002). If the regional differences between large and conspicuous taxa have been misinterpreted, it is possible that similar patterns will be found in the smaller, inconspicuous forms.

Whereas the benthic hydroid fauna of Tasmania has been fairly well studied by Watson (1975; 2001), this is not the case with the pelagic hydromedusae; the few studies that have been made have been quite limited in taxonomic and spatial scope (Flynn 1927; Blackburn 1955; Hamond 1974). There is every reason to hypothesize that the medusa fauna of Tasmania is rich and diverse, with many new species likely to be found.

In order to begin cataloging the medusae of Tasmania, we sampled from every marina, wharf, jetty, and boat ramp throughout the state. The resulting collection is still being studied, with a manuscript in preparation. One species, however, deserves special attention, an animal that is so unlike all other medusae in its overall form that naturalists from a century ago may well have given it its own class status. However, based on today's knowledge, certain characters suggest that it clearly fits within the hydromedusan order Narcomedusae. The purpose of this paper is to describe this interesting little medusa, in hope that further study into its biology and ecology is stimulated.

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