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Some anthoathecate hydroids and limnopolyps (Cnidaria, Hydrozoa) from the Hawaiian archipelago

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Abstract

A systematic account is given of 17 families, 25 genera, and 32 species of anthoathecate hydroids and limnopolyps reported from Hawaii. Applying Reversal of Precedence provisions in zoological nomenclature, the familiar hydrozoan genus names *Hydractinia* Van Beneden, 1844a, *Bimeria* Wright, 1859a, and *Porpita* Lamarck, 1801 are designated as valid and as nomina protecta, while seldom-used older names threatening them (the synonyms *Echinochorium* Hassall, 1841 and *Manicella* Allman, 1859a, and the homonym *Porpita* Soldani, 1789 respectively) are relegated to nomina oblita. Also designated a nomen oblitum is the name *Pyxidium* Leuckart, 1856, threatening its junior but widely used synonym *Ectopleura* L. Agassiz, 1862. The species name *Bimeria vestita* Wright, 1859a is rendered valid and a nomen protectum, while its virtually unused senior synonym *Manicella fusca* Allman, 1859 becomes a nomen oblitum. *Hydrodendrium* Nutting, 1905 is reinstated as a valid genus, distinct from *Hydractinia* and replacing its junior objective synonym *Nuttingia* Stechow, 1909. The spelling of Hydrodendridae Nutting, 1905 is emended to Hydrodendriidae, but that family name is retained as a synonym of Hydractiniidae. Usage of the familiar generic name *Sphaerocoryne* Pictet, 1893 is upheld by recognizing it and its former senior subjective synonym *Corynetes* Haeckel, 1879 as valid. The correct spelling of the family name originally founded as Olindiadae Haeckel, 1879 is taken to be Olindiidae, and spelling of the species name *Solanderia misakinensis* (Inaba, 1892), first established as *Dendrocryne* (sic) *misakii*, is stabilized. One new species, *Stylactaria munita*, is described from shallow waters at Hawaii Kai, Oahu. Lectotypes are designated for *Corydendrium corrugatum* Nutting, 1905 and *Corydendrium minor* Nutting, 1905 (= *Turritopsis minor*), both originally described from Hawaii. Type material of *Balea mirabilis* Nutting, 1905 (= *Balella mirabilis*), originally described from waters between the islands of Molokai and Maui, could not be located. Six anthoathecate species [*Corydendrium parasiticum* (Linnaeus, 1767), *Bimeria vestita*, *Amphinema* sp., *Eudendrium carneum* Clarke, 1882, *Ectopleura viridis* (Pictet, 1893), and *Sphaerocoryne bedoti* Pictet, 1893] are recorded from Hawaii for the first time.

Key words: Capitata, Filifera, Hydroidolina, marine biology, oceanic islands, Pacific Ocean, taxonomy, Trachylina, zoological nomenclature

Introduction

Taxonomic information on hydroids of Hawaii, exclusive of stylasterids, is based largely on two publications. Nutting (1905) reported 49 species from offshore waters (10–500 fathoms: 18–914 m), collected during a cruise of the steamer *Albatross* in 1902. Seven of them were anthoathecates. Cooke (1977) included 28 species of hydroids and hydromedusae in an account of the shallow reef and shore fauna of the islands, with 14 of them being anthoathecates. In addition to these two works, records of hydroids from the islands occur in studies on introduced and cryptogenic marine and estuarine biota (Coles *et al.* 1999, 2006; Carlton & Eldredge 2009). Reports of one or a few marine hydrozoans from Hawaii also exist in various papers (Allman 1888; Hartlaub 1901; Edmondson 1930, 1933, 1946; Boone 1938; De Oreo 1946; Chu & Cutress 1954, 1955; Pardy & Lenhoff 1968; Rees *et al.* 1970; Rees 1971; Reed 1971; Pardy 1971; Tusov & Davis 1971; Long 1974; Martin 1975; Eldredge & Devaney 1977; Grovhaug & Rastetter 1980). Hoover (1998, 2006) included several species of hydroids, and provided color photographs of them, in guidebooks. Meanwhile, hydrozoans from limnic waters have been documented by Edmondson (1940), Mumford (1940), Matthews (1963, 1966), Rahat & Campbell (1974), and Bailey-Brock & Hayward (1984).

The objective of this study was to provide a synopsis of the anthoathecate hydroids and limnopolyps currently known from Hawaii, based on both previous records and new collections. Stylasterid hydroids of the islands have been investigated earlier by Cairns (1978, 2005) and are excluded here. No representatives of the family Milleporidae Fleming, 1828 have been reported from the archipelago (Cooke 1977). A total of 32 species, other than stylasterids, are recorded here from the Hawaiian Islands. Several anthoathecate species can be identified only to genus at present, and knowledge of the local hydroid fauna is acutely limited, as it is for much of the Indo–Pacific region.

Fundamental changes are currently underway in hydrozoan systematics, the result of advances made possible by phylogenetic systematics and more recently by molecular methods. Classification of the group is