

## ***Cliona minuscula*, sp. nov. (Hadromerida : Clionidae) and other bioeroding sponges that only contain tylostyles**

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### **Abstract**

A new bioeroding sponge belonging to the genus *Cliona* is described from the Australian Great Barrier Reef, *Cliona minuscula*, **sp. nov.** As the sponge lacked microscleres, comparison with existing clionaid species was difficult. We considered 15 other species of *Cliona* with only tylostyles: *C. alderi*, *C. arenosa*, *C. caesia* nov. comb., *C. californiana*, *C. celata*, *C. delitrix*, *C. dissimilis*, *C. ecaudis*, *C. insidiosa*, *C. janitrix*, *C. kempfi*, *C. laticavicola*, *C. macgeachii*, *C. millepunctata* and *C. peponaca*. Characters of all species are presented in table-form to facilitate comparison during future studies. We listed additional species of *Cliona* that were not directly compared to the new species, because they were either invalid, insufficiently described, or they may not be obligate bioeroders. The form and dimensions of the megascleres of *C. minuscula*, **sp. nov.** indicated that it is distinct from all considered species. Its mean tylostyle dimensions were 225.3 µm length, 4.5 µm shaft width and 6.8 µm tyle width, which is comparatively small. Because other morphological features were small as well (erosion chambers, papillar diameter), this species was named *C. minuscula*. The species record for sponges of the genus *Cliona* reported from Australia is now 11.

**Key words:** *Cliona minuscula*, Porifera, new species, description, taxonomy, faunistics

### **Introduction**

Bioeroding sponges are the principal endolithic bioeroders of tropical coral reefs and play an important role in marine ecological processes (e.g. Bak 1976; Scoffin *et al.* 1980;