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SOME MARINE BENTHIC ALGAE FROM CHRISTMAS ISLAND, LINE ISLANDS

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SOME MARINE BENTHIC ALGAE FROM CHRISTMAS ISLAND, LINE ISLANDS

by William J. Gilbert*

Published records of marine algae from the Line Islands are restricted to Palmyra, Fanning, and Christmas Islands. Howe and Lyon (1916), Dawson, Aleem and Halstead (1955), Dawson (1959) and Taylor (1966b) have all listed algae from Palmyra I. More recently a series of papers treat the benthic marine algae of Fanning I. (DeWreede and Doty, 1970; Tsuda, Russell, and Doty, 1973; and Tsuda, 1973.) Only occasional reference to the marine algae of Christmas I. can be found. Taylor (1966a, 1966n) cites Turbinaria ornata (Turner) J. Ag. and Caulerpa cupressoides (West) C. Ag., v. mammilosa (Mont.) W.-van Bosse. Tsuda (1968) reported the presence of Ulva fasciata Delile and Halimeda lacunalis Taylor is mentioned from Christmas I. in the paper by DeWreede and Doty (1970). There is mention, also, of a few benthic algae from Cochrane Reef in a paper by Helfrich, et al. (1968). Voucher specimens are cited for Christmas I. species only by Taylor.

The algae reported below are from two sources: 1) collections made by the author between June 19 and 23, 1963, who accompanied a group led by Philip Helfrich that was working on ciguatera fish poisoning (Helfrich, et al., (1968) at Christmas Island and 2) some miscellaneous collections provided through the kindness of Dr. Maxwell S. Doty, University of Hawaii.

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SPECIES LISTING

Except where otherwise noted, collection numbers are those of Gilbert's 1963 collections.

DIVISION CYANOPHYTA

Lyngbya majuscula (Dillw.) Harvey ex Gomont
63025, common on reef flat, Commissioner's Reef, London, 20 VI 1963.

DIVISION CHLOROPHYTA

Acetabularia mobii Solms-Laubach
63008, on corals, Cochrane Reef, London, 19 VI 1963.

Boodlea composita (Harvey) Brand
Doty 20050, N.E. Point of Christmas Island, 3 VI 62.

Bryopsis pennata Lam.
63009, on coral, Cochrane Reef, London, 19 VI 63.

Caulerpa racemosa (Forsskal) J. Ag.
63028, in holes of coral along surge channels, Commissioner's Reef, London, 20 VI 1963.

Caulerpa racemosa (Forsskal) J. Ag. var. exigua (W.-van Bosse)
Eubank 63046 and 63047, Commissioner's Reef, London, 22 VI 1963. This material was in the drift in large, tightly packed, matted clumps.

Caulerpa racemosa (Forsskal) J. Ag. var. peltata (Lam.) Eubank
63013, Cochrane Reef, London, 19 VI 1963.

Caulerpa serrulata (Forsskal) J. Ag. emend Børg.
63048, in drift, Commissioner's Reef, London, 22 VI 1963; CRL 2807.3, on shore, west side of lagoon above London, 24 XI 1964; Doty 26700, East London, 26 IV 1977, coll. Sapayani Adjak.

Caulerpa urvilliana Mont.
63019, on reef, main USA Camp, 20 VI, 1963; 63051, abundant on reef flat near Poland Village, 23 VI 1963; Doty 18981, seaward reef flats off "L" site, 16 V 1962, coll. R.F. Palumbo; Doty 18982, N.E. Point of Christmas Island, 3 VI 1962; CRL 2802.1, west reef, 1/2 mile north of London, in shallows but covered at low tide, 23 XI 1964; Doty 20014.

Caulerpa webbiana Mont.
CRL 2782.5, north reef near airport, from exposed reef rocks subject to wave battering, 23 XI 1964.

Cladophora spp.

Doty 20026, 16 V 1962, coll. R.F. Palumbo. The material consists of a mixture of two species.

Cladophoropsis sundanensis Reinbold

63057, on vertical walls of small tide pools, reef flat, Bay of Wrecks, 23 VI 1963.

Codium sp.

CRL 2781.1, north reef, found in drift, 23 XI 1964. The material is very close to C. edule Silva, the thallus consisting of cylindrical anastomosing branches, 2-3 mm diam., more or less matted and prostrate, with utricles simple, not forming secondary utricles, and well within the size range of C. edule. There was no evidence of gametangia.

Derbesia minima W.-van Bosse

63016, attached to iron plates of scow, London, 20 VI 1963; 63026, Commissioner's Reef, London, 20 VI 1963.

Dictyosphaeria setchellii Børg.

63002, in drift, main U.S.A. Camp, 19 VI 1963; 63052, on reef, near Poland Village 23 VI 1963; 63058, on reef flat, Bay of Wrecks, 23 VI 1963; Doty 18970.

Enteromorpha lingulata J. Ag.

63022, attached to corals, Commissioner's Reef, London, 20 VI 1963; 63050, in small tide pool near the Royal Navy Dock, London, 22 VI 1963.

Enteromorpha clathrata (Roth) Greville

63010, on coral, Cochrane Reef, London, 19 VI 1963.

Halimeda fragilis Taylor

63004, in drift, main U.S.A. Camp, 19 VI 1963; 63053, on reef flat, Poland Village 23 VI 1963; Doty 18977, N.E. Point of Christmas Island, 3 VI 1962; Doty 18989, 16 V 1962, coll. Ralph F. Palumbo.

Halimeda gracilis Harvey ex J. Ag.

63001, in drift, main U.S.A. Camp, 1963; 63012, Cochrane Reef London, 19 VI 1963.

Halimeda lacunalis Taylor

63006, in drift, main U.S.A. Camp, 19 VI 1963, 63020, on reef, main U.S.A. Camp, 20 VI 1963.

Valonia fastigiata Harvey

63021, in drift, Commissioner's Reef, London, 20 VI 1963; CRL 2782.1, forming mats over exposed reef rocks, subject to wave battering, north reef near airport, 23 XI 1964; Doty 20010.

Ulva fasciata Delile

63018, attached to iron plates of scow, London, 20 VI 1963; Doty 26702, Southeast Point, 7 V 1977, coll. Sapayani Adjak; Doty 28411, in lagoon, E. of London, 16 IV 1977, coll. Sapayani Adjak; CRL 2803, beach reef, 1/2 mile north of London, 23 XI 1964.

PHAEOPHYTA

Dictyota friabilis Setchell

63014, on coral, Cochrane Reef, London, 19 VI 1963.

Ectocarpus indicus Sonder

63024, Commissioner's Reef. London, 20 VI 1963.

Lobophora variegata (Lam.) Womersley

63011, on coral, Cochrane Reef, London, 19 VI 1963; 63022, attached to corals, Commissioner's Reef, London, 20 VI 1963.

Turbinaria ornata (Turner) J. Ag.

63023A, forming dense growth on reef flat, main U.S.A. Camp, 20 VI 1963.

RHODOPHYTA

Acanthophora spicifera J. Ag.

Doty 28409, lagoon, E. of London, 16 IV 1977, coll. Sapayani Adjak.

Acrochaetium gracile Børg.

63049, epiphytic on Turbinaria, Cochrane Reef, 22 VI 1963.

Ceramium sp.

64027, scraped from iron plates of scow, London, 20 VI 1963.

Pterocladia capillacea (Gmelin) Bornet

63056, Reef flat near Poland Village, 23 VI 1963.

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