SOME MARINE BENTHIC ALGAE FROM CHRISTMAS ISLAND, LINE ISLANDS

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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, 1966b) 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

DIVISION CHLOROPHYTA

*Acetabularia mobii* Solms-Laubach

*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.

*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 serrulata* (Forsskal) J. Ag. emend Børg.

*Caulerpa urvilleana* 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 anastamosing 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


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.


Enteromorpha clathrata (Roth) Greville


Halimeda fragilis Taylor


Halimeda gracilis Harvey ex J. Ag.

Halimeda lacunalis Taylor


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


PHAEOPHYTA

Dictyota friabilis Setchell


Ectocarpus indicus Sonder


Lobophora variegata (Lam.) Womersley


Turbinaria ornata (Turner) J. Ag.


RHODOPHYTA

Acanthophora spicifera J. Ag.


Acrochaetium gracile Börg.

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


Pterocladia capillacea (Gmelin) Bornet

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

LITERATURE CITED


