Notes on Marine Algae from Hateruma Island, Ryukyu

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This paper deals with a small collection of marine algae which the author gathered at Hateruma island, one of the southernmost islands of the Ryukyu groups. Twelve species are reported; seven of which, Udotea glaucescens, Codium ovule, Halimeda micronesica, H. fragilis, Ectocarpus laurenciae, Centroceras apiculatum and Ceramium sympodiale, are recorded here for the first time in Japan, one of which, Feldmannia formosana, is proposed as comb. nov., the other four, Chlorodesmis haterumana, Struvea haterumensis, Centroceras japonicum and Lophocladia minima, are described here as new species.

Hateruma island is a small island lying at the southernmost end (24°1'2" N.L., 123°47'8" E.L.) of the Ryukyu islands. The algal flora of this island, as well as that of several other islands located in the southern part of the Ryukyu archipelago, has been insufficiently known. The only, more or less perfect report was the one made by Yamada and Tanaka (1938) on the algal flora of Yonakuni island. In 1957, Dr. T. Tanaka of Kagoshima University had a field trip to the southern part of the Ryukyu archipelago, collecting some specimens from Hateruma island as well as from other small islands. In 1972, I also visited Hateruma island and, during a week's stay on this island, collected a number of algal specimens.

My purpose is to give a taxonomic account of some marine algae collected at Hateruma island, and twelve species are included in this paper.

Materials

Materials used in the present observations were all collected between the 6th and the 13th of August, 1972. In addition to my collection, the specimens of Chlorodesmis collected by Dr. T. Tanaka in Nov. 1957 were also used in the present study. All of the materials used in the present study are stored in the Herbarium of the Faculty of Fisheries, Kagoshima University.

Chlorodesmis haterumana Tanaka and Itono sp. nov.
(Figs. 3, 4–5)

Thallus ad 1.5 cm altus, ex stipite sine colore et caespite filamentorum virideorum compositus; stipes bulbosus, ex rhizoidibus implicatum; filamenta erecta moniliforma, usque ad 8–10 mm longa, dichotome ramificata, ad 60 μm in diam., ambo ramuli prope
basin dichotomae constricti; segmenta dichotoma non bifurcata.

Thallus to 1.5 cm high, composed of colourless holdfast and a tuft of upright green filaments; holdfast cushion-shaped, formed of felted rhizoids; upright filaments up to 8–10 mm long, dichotomise frequently in the basal region and sparsely in the upper region, internodal portion constricted frequently and appearing moniliform; dichotomy not symmetrical, supporting segment not truncated at the top; diameter of filaments up to 60 μm; both branches constricted near the dichotomy; biacicular crystals 24–30 μm long and ca. 3 μm in diameter.

Holotype: no. H119731; collected by Dr. T. Tanaka Nov. 1957 at reef flat of intertidal zone; in Herbarium of the Faculty of Fisheries, Kagoshima University.

Japanese name: Hina-mayuhakimo (nom. nov.)

Distribution: Known only from the type locality.

The plants are quite similar to C. fastigiata, and both species have several features common to each other. Ducker (1967) described precisely the species of genus Chlorodesmis in the Indo-Pacific region. In comparison with C. fastigiata as was designated by Ducker (1967, as C. comosa), the present southern Japanese species differs from C. fastigiata in the following points: the smaller width of the filaments, the presence of highly moniliform filaments and the globular thallus composed of filamental masses. C. haterumana was found growing at the reef flat of the intertidal zone and, hence the plants should have the faculty to endure the high desiccation during the low tide time. This is another feature which kepted me to distinguish C. haterumana from C. fastigiata inhabiting the shallow waters.

Fig. 1. Codium ovale. Habit of plants (Scale 4 cm).
Fig. 2. Udotea glaucescens. Habit of plants (Scale 2 cm).
Fig. 3. Chlorodesmis haterumana. Habit of plants (Scale 2 cm).