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A New *Halimeda* (Chlorophyceae, Codiaceae) from the Philippines[1]

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ABSTRACT: *Halimeda batanensis* is described as a new species from Batan Island in the Philippines, and compared with similar species.

OUR KNOWLEDGE of the genus *Halimeda* has advanced greatly since Barton (1901: 1) first gave it comprehensive coverage. The monographic treatment by Hillis (1959: 321) next brought it up to date, but several additional species have since been described. An old collection in the Berkeley herbarium has been under my consideration for some years, and I have finally decided that description as a new species was the only way it could be distinctively put on record. Its nearest known relative is probably *H. velasquezii* Taylor (1962: 177). Other species with some similarities have been discussed in that paper, which may be referred to for details.

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Halimeda batanensis n. sp.

Fig. 1–2

Plants to 4–8 cm tall from a small stupose base, compact, dull greenish white when dried, firmly calcified, the lower segments rather widely and irregularly fused, above which region they are subterete or compressed and laterally separate. The upper branching is close, tending toward a plane arrangement, the middle segments triangular and often slightly ridged, or occasionally three-lobed, to 4 mm broad, 5 mm long. The upper segments are triangular to spatulate or round, 2.5–4.0 mm broad, seldom over 3 mm long, occasionally subreniform and to 8 mm broad. The central internodal filaments are loosely branched, hardly constricted except at the outer forks, where the subcortical utricles are distinct, notably obconical, 33–50 μm tall, each bearing four obconical surface utricles about 25 μm tall, 11–23 μm diameter, which are in but very slight contact, being united chiefly by the surface cuticle, so that they separate fairly easily under pressure after decalcification. The nodal medullary filament walls are not greatly thickened. The filaments fuse briefly in pairs at midnode and divide in trifid fashion shortly above the points of separation. Sporangia were not seen. PHILIPPINES: Batanes Province, Batan Island, collector M. Ramos, June–July 1930. Bureau of Science, Manila, no. 80725 in part. TYPE in herbarium, University of California at Berkeley, no. 699411*B*.

Halimeda batanensis n. sp.

Plantae usque ad 4–8 cm alt, e basi stuposa parva enascentes; plantae compactae, solide calcifactae, segmentis inferioribus latius irregulariterque se coniunctis, segmentis supra subteretibus compressisve, atque lateraliter discretis. Ramificatio superior stricta, segmentis mediis triangularibus et saepe paulum corrugatis, usque ad 4 mm lat, 5 mm long. Segmenta superiora triangularia ad spatulata rotundatave, 2.5–4.0 mm lat, raro plus quam 3 mm long. Utriculi subcorticali discreti, manifeste obconici, omni 4 utriculos superficiales obconicos ca. 25 μm alt, 11–23 μm diam., qui cuticula superficie paesertim se coniunguntur, ferente. Membranae filamentorum nodorum non admodum incrassatae, ha filamenta breviter binatim inter se coniungescent. Plantae typicae e loco Insula Batan, Prov. Batanes, Philippines dicto, per M. Ramos collectae mm. Jun.–Jul.

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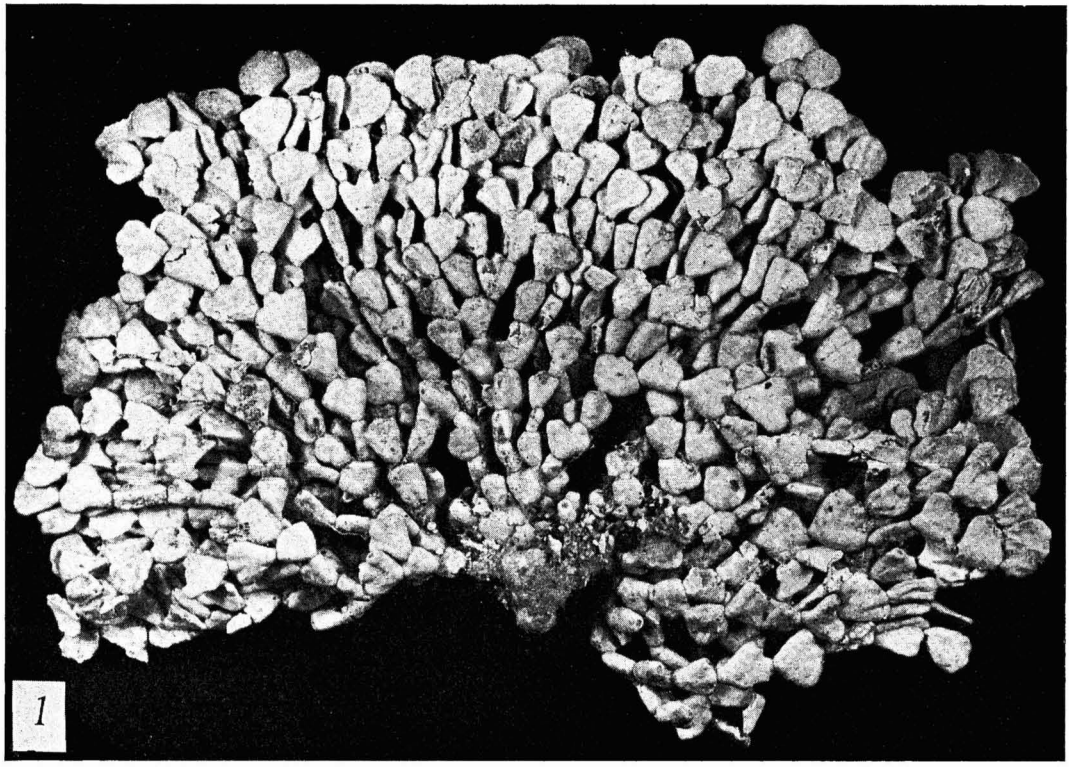

FIG. 1. *Halimeda batanensis*. Habit of a specimen from the type collection, no. 699411*B*, ×2.24.

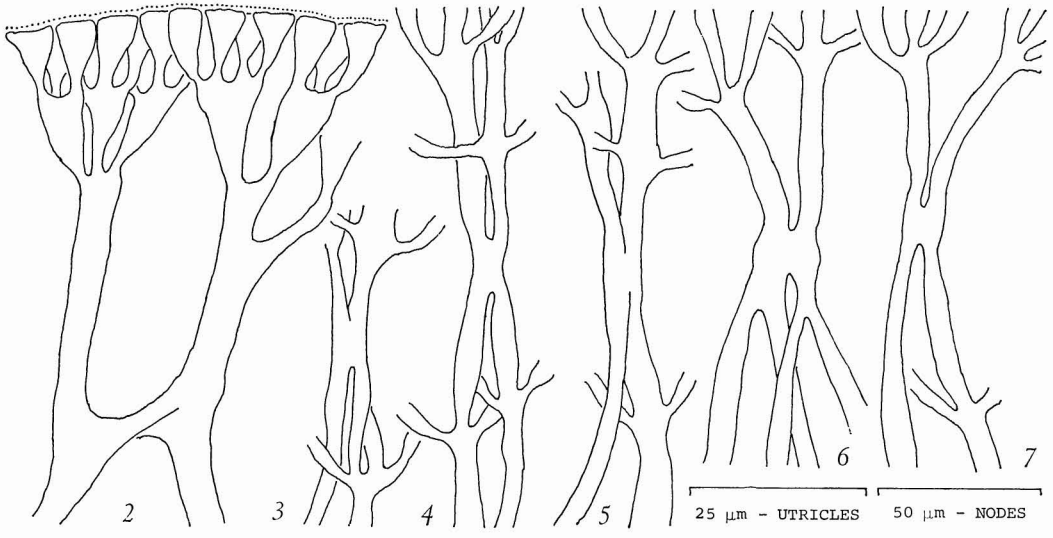

FIG. 2. *Halimeda batanensis*. *2*, Detail of part of the cortical and subcortical portion of an internode in longitudinal section; *3–7*, filaments dissected from the nodal region, showing the type of fusion.

1930, in herbaria Universitatis Californiensis (Berkeley) nom. 699411*B* depositae.

This small *Halimeda* is most closely related in structure to *H. velasquezii* Taylor, but in habit, shape, and dimensions of the segments, it is very distinct. It is more erect in habit, so the height does not appear very different. The base involves considerably more condensation and fusion of the lower segments, instead of the short series of unfused segments characteristic of *H. velasquezii*. Above this fused mass the segments continue upward less flattened, relatively narrower, and thicker, than in that species, until ultimately in the most distal branches they become broader and flatter, but more spatulate than reniform. The segments in the central parts of the plant are quite often three-lobed, but the clefts seldom exceed one-third of the length of the segment, and the cleft segments are generally concealed by the closeness of the branching.

Structurally, the fusion of the nodal filaments follows the familiar pattern of short unions in pairs, very rarely more (Fig. 2—*3–7*). The walls at and near the fusion areas are not notably thicker, nor are they colored. The development of the outer layers of the internodes is more distinctive than in *H. velasquezii*. The subcortical divisions are clearly utriculiform, obconical with narrow bases, though not particularly enlarged, nothing like those of *H. discoidea* Dec. The cortical divisions are, as is general in the genus, also obconical, a bit smaller than in *H. velasquezii* (Fig. 2—*2*).

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