

*Gonosome* not known.

*Locality*.—Honolulu; depth, 20 to 40 fathoms.

The very regularly pinnate disposition of the ramuli, and the absolutely distichous and regular disposition of the hydrothecæ, give to this species an aspect of considerable elegance. It is a strong growing form with rather close-set, stout, and short hydrothecæ.

It is an inhabitant of rather shallow water, having been obtained from a depth of between 20 and 40 fathoms; one of the specimens had adherent to it a species of the Rhizopodous genus *Myriotrema*—a characteristic littoral form.

*Cryptolaria crassicaulis*, n. sp. (Pl. XIX. figs. 3, 3a).

*Trophosome*.—Colony attaining a height of four inches, profusely and very irregularly branched main stem, and primary branches very thick. Hydrothecæ alternate and distichous.

*Gonosome* not known.

*Locality*.—Station 344, off Ascension Island; depth, 420 fathoms.

The present species is remarkable for the profuseness and irregularity of its ramification, and for the great thickness of its stem and principal branches. The ultimate branches on the other hand are slender and flaccid. The hydrothecæ are stout, and the exerted portion rather long. Here and there, and at uncertain intervals, slight constrictions may be noticed in the branches.

*Cryptolaria geniculata*, n. sp. (Pl. XX. figs. 1, 1a, 1b).

*Trophosome*.—Colony attaining a height of three inches or more, irregularly branched, stem and branches rather rigid, very regularly geniculate. Hydrothecæ alternate, distichous, springing from the salient angle of every geniculation; orifice with two membranous valves.

*Gonosome*.—Gonangia somewhat flask-shaped, each occupying the entire interval between two successive geniculations of the stem, to which it is adnate by nearly the whole of its epicauline side.

*Locality*.—Station 173, off Matuku, Fiji Islands; depth, 315 fathoms.

*Cryptolaria geniculata* is, of all the species of *Cryptolaria*, the most strongly defined, —so distinct is it indeed that one might almost be justified in assigning it to a new generic group. The valvular orifice of the hydrothecæ affords in itself a striking character, while the singularly geniculate form of the stem is a condition not met with in any other known species of *Cryptolaria*.