

The stem is broadly flattened, 40 mm. at its widest, and about 21 mm. at its narrowest diameter; as the capitulum sits upon it sideways it is higher behind than before; the former measures 45 mm. in height, the latter not more than 15 mm. The texture of the lower 15 mm. of the stem is rough with spicules, while the upper portion is comparatively smooth, and is very finely striated, the striæ being continued up to the very edge of the polyp-bearing portion of the capitulum. The stem is firm, though elastic.

The capitulum is in the form of a pair of unequal sized, irregular shaped, flat lobes, with involuted edges. The lobes are themselves again lobate, these lobes having a tendency to lie over one another. It is about 70 mm. in its widest diameter, the larger lobe is about 60 mm. broad, the smaller is 45 mm.; nowhere are these lobes thicker than 5 mm. The surface on drying is granular.

The autozooids are scattered irregularly over the whole surface of the capitulum, leaving but dot-like openings when completely withdrawn.

The siphonozooids are numerous, and in a dried morsel seem to be more conspicuous than is usual in species of this genus.

The colour of the colony is a dark brown.

This species resembles in form *Sarcophytum glaucum* (Q. and G.), but the spicules are different.

The spicules of the stem measure:—Those of the trunk—the tuberculated spindles 0.8–0.16; 0.8–0.1; 0.6–0.08; 0.54–0.06 mm.; the spiny curved spindles 0.5–0.06; 0.04–0.02 mm. In the capitulum the stachelkeulen measure 0.14–0.06; 0.14–0.04 mm. Some spicules, with large spiny heads, measure 0.34–0.08; 0.26–0.06 mm.

*Habitat.*—Station 208, Reefs off the Philippines; depth, 18 fathoms.

*Sarcophytum ambiguum*, n. sp. (Pl. XLI. fig. 2).

The colony consists of a well-developed column, and a mushroom-like capitulum. The whole structure is soft and most easily torn, and unfortunately the unique specimen is greatly contracted and somewhat tattered.

The column is oval in section, tapering, about 40 mm. in height. It has a basal diameter of 12 mm., and gradually tapers to a diameter of 9 mm. just below the commencement of the expanded head. The average narrow diameter of the column is 7 mm. The first 18 mm. from the base is roughened, the upper portion is smoother and finely striated. It was attached to sand and shell debris, possibly by a few stolon-like prolongations.

The capitulum is broadly oval, projecting upwards, funnel-shaped, resembling a *Clitocybe* rather than an *Agaricus*; it projects over the column in its long diameter, about 25 mm. on either side. It is concave on its upper surface, the long diameter of which measures from 60 to 70 mm., with a width varying from 45 to 50 mm. (The