

circular, measuring 25 mm. across; the upper surface is very slightly convex. It is of a firm, dense consistency.

Seven autozooids arise around the edge of the capitulum; they are retractile within verrucal openings, which measure 4 mm. across; the verrucal edges are scarcely indented. One extruded polyp, with retracted tentacles, measures 8 mm. in height. The pinnae of the tentacles appear to be short, and much less developed than those of the previous species.

The siphonozooids are conspicuous, about three within the range of 1 mm.; they project sufficiently over the surface of the cœnenchyma to give it quite a roughened appearance; they are of a slightly paler colour than the surrounding surface. They are found equally over the convex lower and convex upper portions of the disc, and are ovigerous.

The colour of the colony is a dull red.

The spicules measure:—The long slender spiny spindles 0·5–0·02; 0·4–0·02 mm. The four-rayed forms 0·24–0·06; 0·34–0·1 mm. The shorter spiny spindles 0·3–0·04; 0·24–0·04 mm. Some long rod-like spicules, with enlarged roughened heads, occur, which measure 0·2–0·04 mm., and the double crosses vary from 0·1–0·06 to 0·06–0·06 and 0·06–0·04 mm.

This species, especially in the auto- and siphonozooids, also resembles *Anthomastus purpureus* (K. and D.), but the difference in the spicules is very great.

Habitat.—Station 235, Japan; depth, 565 fathoms.

Genus *Sarcophytum*, Lesson, *emend.* Marenzeller.

Sarcophyton, Lesson, Belangé's Voyage aux Indes orientales, and Zoologie du Voyage de la Coquille, Zoophytes, p. 92, 1831.

Sarcophytum, Marenzeller, Zoologische Jahrbücher, Bd. i. p. 351, 1886.

The colony is mushroom-shaped, polytypic dimorphic; autozooids and spot-like siphonozooids, placed on the upper surface of the colony, which forms a convex expansion, and is supported on a stalk-like sterile stem. The disc in process of growth often becomes wrinkled at the edges; the folds for the most part becoming once again plaited or remaining unaltered. The upper surface of the disc is generally soft and elastic; owing to the numerous openings of the siphonozooids it has a shagreen-like appearance. The autozooids are perfectly retractile, and are more numerous towards the margins of the disc; they have not well-developed siphonoglyphes.

The siphonozooids, with four very short and four longer septa, have the siphonoglyphes well developed; they are sexless.

A compact outer layer of small club-shaped spicules is present, except on the basal portion of the stalk. The spicules of the cœnenchyma of the disc are slender rods or spindles, with scattered spines or warts, seldom exceeding 0·02 mm. in breadth. The