

twigs. They are placed at wide intervals from one another, and their ramification is so loose that the stem and branches can everywhere be distinctly made out. The distance between the individual branches is from 5 to 8 mm.

Each twig on an average bears three, seldom more, polyps. The polyps have long peduncles and diverge from one another from the base upwards. They measure up to 3 mm. in length, the diameter of a head being 1 mm. A short, fine spicule surmounts each head for a distance of, at most, 0.5 mm.

The outer covering of the stem contains numerous spicules of various shapes, loosely scattered in the thin mesoderm. In the outermost layer there are variously shaped spicules, the prevailing form being that of a spiny club, frequently with divergent processes at its base, or double structures appear which lead to the formation of irregular crosses and stars. Branched spiny spicules occur abundantly over the surface of the ectoderm and give it a granular character. These structures measure on an average 0.1 to 0.18 mm. Amongst these lie fine spindles covered with upright spines, 0.3 to 0.6 mm. long and 0.03 to 0.04 mm. in diameter, and long club-shaped spicules, 1 mm. in length. All these spicules are scattered amongst one another in different directions.

In the little branches and twigs, on the contrary, there are developed only fine, slightly curved spindles, packed close together and longitudinally arranged. These are covered with fine lateral spines, and are often rounded off at one or both ends; size, 1.87 by 0.08; 1.0 by 0.07; 0.65 by 0.05; 0.4 by 0.025 mm. The polyp heads are surrounded at the base by a zone of spicules, from which arise eight groups, each composed of two long needle-shaped spicules converging towards the outside. These form eight rays around the margin, starting from the bases of the tentacles. These latter fold themselves together over the head and thus form a kind of operculum. Each of these spicules is pointed at the free end, rounded off and bent round at the other, and covered with fine lateral spines; length 1.0 mm., diameter at the thick end 0.05 mm.

The tentacles are covered with thickly placed, transversely arranged, curved spicules, which are somewhat flattened on two sides and toothed on the margins; length 0.12 mm., diameter 0.02 mm.

The colour of the stem and branches is white, that of the twigs and polyps a bright and dark yellow ochre.

*Habitat.*—Station 192, off the Ki Islands; lat. 5° 49' 15" S., long. 132° 14' 15" E.; depth, 140 fathoms; bottom, blue mud.

*Spongodes rhodosticta*, n. sp. (Pl. XXXVI A. figs. 4a. 4b).

The straight, upright stem, is fixed at the base in the sand by means of root-like stolons, it gives off from all sides, at a distance of about a quarter of its height, longer and shorter branches which, quickly ramifying, terminate at the end in divergent polyps. The