

According to the arrangement of the polyps on the stem we can distinguish three groups, which, it must be confessed, are not sharply marked off from one another, and are even connected with one another by intermediate forms. They are:—

A. *Spicata*.—The terminal twigs of the colony are thick, spike-shaped lobes, upon which the little polyp heads are directly and thickly placed. The general form reminds one more of *Alcyonium*.

B. *Glomerata*.—The little polyp heads are for the most part united in little bundles which are placed on peduncles on the terminal twigs (*Spoggodex*, Gray).

C. *Divaricata*.—The little polyp heads arise singly, generally on long peduncles (*Spoggodia*, Gray).

These three divisions correspond essentially with those established by Klunzinger in his work *Die Korallenthiere des rothen Meeres* (p. 36), and are to be regarded only as provisional.

A. *Spicata*.

Spongodes digitata, n. sp. (Pl. XXXVI. figs. 2a, 2b).

Colony upright, consisting of a number of stems arising from a common base. The stems ramify irregularly, and finally terminate in numerous finger-shaped, cylindrical lobes, rounded at the end. Height of the colony, 75 mm. Thickness of one of the stems at the base, 12 to 16 mm. Length of a terminal lobe, 6 to 9 mm. Thickness of the same, 4 to 5 mm. The little polyp heads are overtopped by bundles of needle-like spicules; on the stem they occur isolated and scattered, on the branches they begin to group themselves more closely together, and finally they completely cover the finger-shaped lobes, on which they are densely crowded. The projecting portion of the polyp, which corresponds to the tentacular portion and the section containing the œsophageal tube, is narrower at the base, and terminates with the head-like, protruding, tentacular portion. The former is surrounded by large, needle-like spicules, of which a bundle of three or four is so strongly developed on one side that it projects beyond the head. Spicules are strongly developed in the head and tentacles.

The cœnenchyma of the stem and branches is thickly beset with large spicules of a yellow colour. These spicules are horizontally arranged, and so closely packed together that no interspaces of soft tissue remain. They are stout spindles, straight or bent, often even bent into somewhat the shape of the letter *f*; they measure 0·9 to 1 mm. in length and 0·07 to 0·08 mm. in thickness. Their surface is thickly covered with small spines.

The bundles of spicules which project beyond the head consist of white-coloured, spiny, slightly curved spindles, which often appear to be somewhat enlarged at one end; their length reaches 0·86 to 1·4 mm.; their diameter 0·12 to 0·07 mm. The polyp heads,