

In the branches and twigs they are longitudinally placed and lie close together, and in the terminal twigs and the peduncles of the polyp heads they form a coherent coat of mail. The colour is very various, white, orange, purple, often half red and half white. The principal sizes are 0·8 by 0·08 mm.; 0·4 by 0·03 mm.; 0·8 by 0·05 mm.; 1·7 by 0·12 mm.; 1·2 by 0·56 mm.; 4·0 by 0·3 mm.; 5·0 by 0·29 mm. The head is surmounted by a spicule for as much as 1 mm. At the base of the head fine white spicules occur, arranged in a circle; then they become elevated and form eight bands of spicules arranged *en chevron*. The tentacles are protected by flatish spicules toothed at the margin, 0·12 mm. long, and 0·03 mm. in diameter. The colour of the polyp heads is always white, that of the branches and twigs very various, even on one and the same colony; white or orange or purplish-red. In two colonies the upper branches are purple, the lower ones orange; in a third the upper ones are white, and the lower ones orange. The trunk is always orange, sometimes bright yellowish towards the upper end.

Habitat.—Tahiti; depth, 30 to 70 fathoms.

Spongodes monticulosa, n. sp. (Pl. XXXVIc. figs. 3a, 3b).

In its mode of branching and in the condition of the polyps this species very much resembles the two preceding ones, so that on superficial observation one might be tempted to regard it as a special growth from off a *Spongodes pustulosa*. A more careful examination compels one, however, to make a distinct species of it.

The colony consists of a cylindrical stalk, fixed in the sand by means of stolons, and a head portion thickly covered with polyps. The head appears to be spread out, especially in one plane, and its surface is divided into four roundish, spherical lobes, which, however, are not completely separated from one another.

Height of the colony,	.	.	.	.	.	65 mm.
Height of the sterile trunk,	.	.	.	.	.	23 "
Thickness of the same,	.	.	.	.	.	12 "
Greatest diameter of the head portion,	.	.	.	.	.	69 "

The stalk gives off at its base numerous cylindrical, partly ramified stolons, which attach themselves to grains of sand and fragments of Mussel shells. Its consistence is rather flabby; the outer covering is soft and yielding, almost falling together in folds, yet it is filled with spicules and has a rough, granular feel. In the polyp-bearing head-portion the stalk is continued, giving off larger and smaller branches, until it divides at the end into two short branches. Two large branches come off at the same level, but in two directions from the upper end of the barren part; one of them attains a length of 32 mm.

The four main branches, as well as the stem, are surrounded by short secondary