

rather small size, with a few small, simple double-spindles, and rarely small, irregular crosses." To this may be added that in the structure of the axis there is a general resemblance to that of *Plexaurella*. The following two species come from Japan.

*Euplexaura pinnata*, n. sp. (Pl. XXXIII. fig. 5).

The colony arises from a broad, irregular, membranous base, which spreads over the surfaces of rocks, stones, &c. In well-developed specimens, the main axis reaches a height of 3 dm.; being slightly flattened at its base, where it measures from 5 to 6 mm. in diameter. Two branches are given off at a height of 5 mm., and these give origin to a second and third series of branches, which are all given off in the one plane; the primary branches reach a length of 2.5 dm., other lateral branches are given off at intervals of from 6 to 10 mm. and are about 3 mm. in diameter, tapering from this to 2 and 1 mm., so that the whole colony assumes a broad, flattened, fan-shaped form.

On cross section the axis is seen to consist of a central hollow or somewhat calcareous portion, 5 mm. in diameter, which is surrounded by a horny layer, 1 mm. in thickness; this is infiltrated with calcareous particles, which want, however, the symmetrical arrangement which is seen in *Plexaurella*. In the outer layer the nutrient canals run.

The polyps are scattered in irregular spirals over both the axis and the branches; they are completely retractile within the thickness of the cœnenchyma. When the polyps are quite withdrawn, the walls of the cœnenchyma close in over them so that there is but little trace of the polyp cavities, but when these cavities are left partially open, they are somewhat oval in form.

The cœnenchyma is dense and granular. The spicules of the polyps are small flattened needles, toothed on their edges, mixed with some quadriradiate forms; the spicules in the tentacles are minute curved needles, those of the cœnenchyma are small warty spindles with a few tri- and quadri-radiate forms.

The spicules measure 0.06-0.02; 0.1-0.04; 0.2-0.04; 0.12-0.04; 0.16-0.04; 0.1-0.04; 0.1-0.08; 0.1-0.02; 0.08-0.06 mm.

The colour in spirits is a light brown.

It is possible that this may be the *Plexaura olivacea*, Lamx.,<sup>1</sup> described as "*Plexaura ramosissima*; ramis sparsis vel subpinnatis; cortice olivacea; cellulis sparsis distantibus. Indes orientales."

*Habitat.*—Stations 233 and 233A, Kobé, Japan, May 17, 19, 1875; depths, 8 and 50 fathoms.

*Euplexaura parciados*, n. sp. (Pl. XXXIII. fig. 6).

In this species the colony arises by a much-divided base which spreads over and clings to small shells and pebbles.

<sup>1</sup> Hist. des Polyp. flexibles, p. 431, pl. xvi. (Hist. Nat. des Coralliaires, vol. i. p. 156).