

of the exsert septa there are small notches indicating a direct continuation of the ridges on them. The ridges are, unfortunately, not properly drawn in the plate, but an idea of their appearance will be obtained from fig. 8b, Plate I, which shows their form in a closely allied species. The calicle is oval in outline: in the single adult specimen obtained the septa are disposed hexradiately and quite symmetrically. There are six systems of septa and four complete cycles. The septa are all exsert, the primary being more prominent than the secondary. The tertiary and quaternary septa are little prominent, the latter more so than the former. The surfaces of all the septa in their upper regions are covered with abundant rounded granules disposed in rows; these in the depths of the calicle appear as small, stout, tooth-like projections which nearly block up the cavities of the chambers. The primary and secondary septa are straight, but the inner edges of the tertiary and quaternary are slightly sinuous. There are twelve pali opposite the tertiary septa: they are in the form of small, sinuous laminæ. The columella is large and oval, composed of numerous small, sinuous lamellæ.

Attached to the adult specimen is a young one, in which the calicle is not yet compressed, but is nearly hexagonal in outline. It has six systems of septa and three complete cycles. The secondary septa are much smaller than the primary, and have in front of them six pali. Their inner margins are sinuous. The faces of the septa are thickly beset with projections in the deeper parts of the calicle. The ridges are as well marked on the surface of the young as on the adult coral.

The file-like surface of this coral is very peculiar, and is characteristic of it and the next species. I had some thoughts of making a new genus to contain the two species, but there seem hardly sufficient grounds to separate the present one from *Caryophyllia* in the absence of information concerning the soft structures.

Extreme height of the adult specimen, 12 mm. Breadth of the calicle, 7 mm. Height of the young specimen, 4 mm. Breadth of the calicle, 2.5 mm. One adult specimen only with a young one attached to it.

Station 170. Off the Kermadec Islands. 630 fathoms.

*Caryophyllia rigosa*, n. sp. (Pl. I. fig. 8, a-b).

The corallum is small, of a light brown colour, short and cylindrical in form, attached by a broad, encrusting base. In some specimens the corallum is slightly wider towards the calicular end, and not simply cylindrical, as in the specimen figured; in some young specimens the upper part of the columella is conical, being considerably narrowed above the commencement of the expanded base. The surface of the corallum is marked with a series of horizontal ridges, just as in the foregoing species *Caryophyllia lamellifera*, but the individual ridges are in the present species shorter (fig. 8b). In a vertical section of the corallum, the folds or plaits of the wall composing the ridges are seen to be marked by a peculiar texture of the coral substance or epitheca, far into the thickness of the wall.