

description he gives of it and his figure, to be referable to the present species. In his description the corallum is said to be of "irregular shape, resulting from the young being originally attached to fragments of the parent which become gradually covered over and incorporated by the base;" "the costæ distinct to the base, and fine granulated;" "the septa of the third order lowest of all;" "the primary and secondary septa coloured of a dark purple, which colour continues some distance down the corresponding costæ;" "the young bud out of the calicle, which is split in consequence." All of these peculiarities apply also to *Bathycyathus maculatus*, as described and figured by the same author, and as may be seen in the present Challenger specimens. Moreover, in some of the Challenger specimens (fig. 8, a), which are undoubtedly from Pourtalès' photographic figure identical with *Bathycyathus maculatus*, the tertiary costæ are most prominent, and in some there is a coloured spot on each of the quaternary costæ below the border of the calicle, peculiarities also cited by Count Pourtalès as occurring in *Parasmilia variegata*. It is further stated that the presence of dissepiments was not observed in this latter coral.

The specimen here figured (fig. 9, a) is exceptionally large and evenly grown, being attached to a Gorgonoid stem. The primary and secondary costæ are prominent near the margin of the calicle, are there coloured brown, as are also the exsert parts of the corresponding septa. A few of the tertiary septa are tipped with brown, and there is a brown dot on one or two of the quaternary costæ. The pali are more than usually well developed, as also the columella, which is composed of a mass of twisted and contorted coral matter continuous with the inner margins of the septa. The amount of coloration of the septa seems to vary widely in this species, as might be expected, but the presence of dark brown pigment tinging some septa and costæ and not others is characteristic of it.

Station 170. Off the Kermadec Islands. 630 fathoms. One specimen only.

Station 122. Off Barra Grande, Brazil. 400 fathoms. Five specimens.

*Caryophyllia lamellifera*, n. sp. (Pl. I. fig. 7, a-b).

The corallum is cylindro-conical, attached by a stout pedicle, which is dilated and encrusted at the base. The whole is in the adult compressed and slightly curved. It is of a brown colour, both in the adult and young. The entire outer surface of the corallum is covered with a series of delicate but sharply-cut projecting ridges or lamellæ formed of epithelial substance, which give it the appearance of the cutting surface of a file. The lamellæ, which are sharp-edged, are separated by sulci, which are of about three times their own width. They course parallel to one another horizontally around the surface of the corallum, and the several ridges extend for long distances, branching, or joining contiguous ridges only at long intervals. Some ridges probably extend entirely round the pedicle and cup of the corallum. The ridges are of hard and glistening coral substance; they are continued over the costæ, which are but little prominent, and on the outer edges