

Family DENDROBRACHIIDÆ, Brook.

Genus *Dendrobrachia*, n. gen.

The sclerenchyma ultimately consists of a rounded spinose axis, but is never hollow and tubular as in the Antipathidæ. Towards the apex of a branch it consists of five to seven plate-like portions radiating from a short central rod. The free margin of each plate is dentate. The angle between adjoining plates gradually becomes filled up by a deposition of new layers of sclerenchyma, until in transverse section the outline is almost circular (*cf.* Pl. X. figs. 6, 7, and 8).

The polyps are usually remote, and often arranged in subopposite pairs, the base of each polyp extending over half the axis. The polyps do not stand out at right angles to the axis as in Antipathidæ, but form an acute angle with it.

The tentacles, the number of which is uncertain, are pinnate, having a central stem and lateral relatively elongate branches.

Owing to the imperfect preservation of the type specimen, a satisfactory examination of the structure of the polyps has been found impossible.

Dendrobrachia fallax, n. sp. (Pl. X. figs. 1-8).

The two specimens of this interesting species are about 24 cm. high, but the basal portions of the corallum are not preserved. The stem is nearly round below, has a diameter of 3 mm., and is distinctly tapering. It has an irregular course, gives off a number of branches at irregular intervals, rarely opposite. These again bear smaller lateral and subalternate branchlets at variable intervals, rarely under one centimetre apart on the same side, but in several places the branchlets are subopposite. The ultimate branchlets are from 1 to 5 cm. long. The whole growth is lax and paniculate, and the upper portion of the corallum is quite flaccid. Figs. 6, 7, and 8 on Pl. X. represent transverse sections of the sclerenchyma at three different points of a branch. Fig. 6 is taken from a section near the apex, fig. 7 near the middle, and fig. 8 from near the base of the branch.

The sclerenchyma is deposited in thin lamellæ as in other Antipatharia, but there is no central lumen around which the horny layers are secreted. The longitudinal ridges (Pl. X. fig. 5) have a dentate or spinose margin, but the spines show the greatest irregularity both as regards size and shape. As the intervals between the ridges come to be filled up with sclerenchyma new rows of spines are formed, until ultimately it would be impossible to distinguish the sclerobasic axis externally from that of Antipathidæ. In the older portions of the axis the original outline of the radiating plates appears to be lost, but the centre is occupied by an irregular mass of less dense tissue.