

prominences. These spicules measure, length by breadth, including the spiny combs—0·58–0·16; 0·33–0·12; 0·22–0·13; 0·41–0·12; 0·3–0·12 mm. The spicules of the deeper layers are spindles, sometimes with pointed, sometimes with truncated ends; on all sides armed with branching spines; their length by breadth being 0·75–0·12; 0·41–0·12; 0·45–0·01 mm. The darker violet layer contains straight or feebly bent spindles, with simple spines, or blunt, somewhat rough spines, with a length by breadth of 0·38–0·03; 0·2–0·03 mm. The axis is of a dark brown colour, horny, and somewhat flattened and thickened at the commencement of the branches. The colour of the stem is of a light brimstone. The deeper layer of the cœnenchyma is of a violet hue. The habit of the species and the form of the polyps agree very closely with *Eunicea humilis*, Milne-Edwards,¹ so that, being found in the same locality, the identity of the two is not improbable. While from the shape of the polyps and its habit the species might be placed among the *Eunicea*; yet the shape of the superficial layer of spindles, and the absence of the outer club-shaped layer, characteristic of *Eunicea*, makes it more expedient to place it among the *Muricea*; where however it may be regarded as somewhat intermediate between the two genera.

Habitat.—Off Bahia; depth, 10 to 20 fathoms.

Family V. PLEXAURIDÆ, Gray.

Plexauridæ, Gray, Ann. and Mag. Nat. Hist., ser. 3, vol. iv. p. 442, 1859.

Euniceidæ, Kölliker, Icones Histiol., Abth. ii. p. 137, 1865.

Plexauridæ, Verrill, Trans. Connect. Acad., vol. i. p. 413, 1869.

Professor H. Milne-Edwards (1857) arranged the genera *Plexaura* and *Eunicea* in a division of his second group of the Gorgonaceæ with the genera *Gorgonia* and *Leptogorgia*; following in close sequence of time Dr. Gray (*loc. cit.*) made the family Plexauridæ to include the two genera *Plexaura* and *Eunicea*, indicating also two new genera.

This family he characterised as follows:—"Bark granular, persistent, cork-like, without any impressed grooves. Cells placed equally on all sides of the branches."

Kölliker (*loc. cit.*) adopted the genus *Eunicea* as the type genus, and diagnosed the family Euniceidæ as "having a thick cœnenchyma, not superficially echinulate, but provided with a cortical layer of club-shaped spicules; verrucæ absent or well developed. Axis calcareous (*Plexaurella*) or horny."

Kölliker included in this family *Eunicea*, Lamk., *Plexaura*, Lamx., *pro parte*, and a new genus *Plexaurella*, for *Gorgonia dichotoma*, Esper, and allied forms, in which the stem structure and spicules were of a different type from those in *Plexaura* as now defined.

¹ Hist. Nat. des Coralliaires, vol. i. p. 149, pl. B³, fig. 1.