3. *Polyplecta decacantha*, n. sp.

Pentaplegma decacantha, Haeckel, Prodromus, p. 425.

Ten radial spines, curved, cylindrical, irregularly branched, diverge in different directions and seem to arise in pairs from an irregular central framework, in the centre of which five primary spines are united; the latter correspond probably to the five spines of *Pentaspyris*, &c. The density of the spongy central framework did not allow of an accurate investigation, and makes it doubtful whether this species is not a *Spongiomma*.

Dimensions.—Length of the spines 0·3 to 0·4, diameter of the framework 0·18.

Habitat.—Tropical Atlantic, Station 338, depth 1990 fathoms.

4. *Polyplecta polybrocha*, Haeckel.

? *Acanthodesmia polybrocha*, Haeckel, 1865, Zeitschr. f. wiss. Zool., Bd. xv. p. 368, Taf. xxvi. fig. 3.

Plegmosphæra polybrocha, Haeckel, 1881, Prodromus, p. 455.

Numerous (twenty to thirty or more) radial spines, thin, cylindrical, curved and irregularly branched, arising from an irregular central spongy framework, are connected by numerous slender arches. The specimen observed by me in 1880 in Portofino was a true *Polyplecta*, with three primary spines centrally united, between which numerous other spines were intercalated. The similar specimen, however, observed in 1864 in Villafranca, and figured, *loc. cit.*, was perhaps a *Plegmosphæra*.

Dimensions.—Length of the radial spines 0·05 to 0·1, diameter of the framework 0·16.

Habitat.—Mediterranean (Villafranca, Portofino), surface.

5. *Polyplecta dumetum*, Haeckel.

Acanthodesmia dumetum, J. Müller, 1858, Abhandl. d. k. Akad. d. Wiss. Berlin, p. 30, Taf. i. fig. 3.

Numerous (ten to twelve or more) radial spines, thin and straight, with a few straight lateral branches, diverge in different directions and are connected by a few slender curved arches. Some similar forms, but more developed, with numerous branches and curved rods, are found in the Pacific Radiolarian ooze, and represent probably different species.

Dimensions.—Length of the radial spines 0·05 to 0·08, of the branches 0·02 to 0·03.

Habitat.—Mediterranean, French shore (Cette and Saint Tropez), Johannes Müller, surface