

number of specimens—then the Mediterranean and Arctic species of *Thenea* are distinct. In the latter the canals are reduced to vesicles by very thick walls of collenchyme (Pl. VII. fig. 3), in the former only some of the canals are provided with collenchymatous walls, and the chambers open into wide spaces, the sinuses of folds which in some cases have scarcely yet been converted into tubular canals. The part of the section chosen for illustration (Pl. VII. fig. 4) shows more abundant collenchyme than occurs elsewhere in the same slice. The flagellated chambers vary from about 0·036 by 0·044 mm. to 0·04 by 0·06 mm. in diameter. In the slices of the Mediterranean specimens a thick layer of spirasters, three or four deep, characterises the outer layer of the ectosome; in *Thenea muricata* this is not present.

*Pæcillastra compressa* (Bowerbank).

*Ecionema compressa*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 55, 1866; vol. iii. p. 19, pl. ix. figs. 1–12, 1874.

*Normania crassa*, Bowerbank, Brit. Assoc. Rep., p. 328, 1868; Mon. Brit. Spong., vol. iii. p. 258, pl. lxxxii. figs. 1–12, 1874; vol. iv. p. 29, 1882.

*Hymeniacidon placentula*, Bowerbank, Mon. Brit. Spong., vol. iii. pp. 189, 353, pl. lxxii., 1874.

*Sponge*.—Irregularly plate-shaped or cup-like; oscules conspicuous, the patent ends of excurrent canals, irregularly distributed over one face of the sponge, pores evenly dispersed over the other.

*Skeleton* as in *Pæcillastra schulzii*.

*Spicules*.—I. Megascleres. 1. *Oxea*, fusiform, 1·6 to 1·9 by 0·03 to 0·045 mm. 2. *Orthotriæne*, cladi varying from about 0·17 to 0·32 mm. by 0·25 mm.; one or two cladi frequently suppressed. This spicule passes into a calthrops in the interior of the sponge.

II. Microscleres. 3. *Microxea*, 0·14 to 0·2 mm. long. 4. *Plesiaster*, a single actine 0·028 mm. long. 5. *Spiraster*, 0·02 mm. long.

*Colour*.—Light grey.

*Habitat*.—Shetland, 110 fathoms; west of Scotland and Hebrides; Queen Charlotte Islands, North America.

*Remarks*.—Type specimens of Bowerbank's three species were kindly lent me by Dr. Norman, and, after a careful comparison, I can find no difference between them. Mr. Carter's assertion of their identity must therefore be accepted. At first I thought I had discovered a difference in the oscules, but closer examination shows that they have the same characters in all—those, namely, so well portrayed in Bowerbank's figure of *Normania crassa*. Since the specific name "*compressa*" has priority, we have no choice but to adopt it, though it is not very applicable as a descriptive term to all the individuals of the species. The additional locality (Queen Charlotte Islands) rests upon my deter-