

0·054 mm. in diameter (B.), 0·063 mm. (S.), 0·06 mm. (R.). 5. *Microstrongyle*, minutely spined, centrotylote or not, 0·03 mm. long (B.), 0·0236 mm. (S.), 0·0316 by 0·005 mm. (R.).

*Colour*.—Slate-grey on the portion exposed to the light, almost white beneath; specimens from considerable depths pink or red (Bowerbank).

*Habitat*.—Rocks between high and low water mark, Torquay, Guliot Caves, south coast of Ireland (Bowerbank); near Plymouth, south coast of England (Stewart); Budleigh Salterton, Devonshire (Carter); the island of Douon, about four miles north-east of Roscoff, Brittany, at low water of highest spring tides (Sollas); St. Malo, Brittany (Grube).

*Remarks*.—The letters given after the dimensions of the spicules signify as follows—(B.) measurements from Bowerbank's description and figures; (S.) from a specimen presented me by Professor Stewart; (R.) from a specimen obtained by myself from Douon, Roscoff. Bowerbank assigns certain specimens which he received from the Orkney Islands and Wick, Scotland, to this species, and I have made the same identification of specimens placed in my hands by Dr. Norman, and obtained by him from Kors Fjord, Norway. Further examination of these last has led me to regard them as the type of a new species, to be next described; this helps to sustain the distinction which I have already suggested as existing between the sponge fauna of the North German Ocean and of the English Channel.

The colour of the sponge is due to pigment-cells richly scattered through the cortex; oil-bearing cells also occur in this region.

*Pachymatisma johnstonia*, Hansen, appears to belong to a different genus.

*Pachymatisma normani*, n. sp.

*Pachymatisma johnstonia*, Bowerbank (in part), *loc. cit.*

„ „ Sollas, *Ann. and Mag. Nat. Hist.*, ser. 5, vol. ix. p. 141, pl. vi., 1882.

„ „ Norman, *Mon. Brit. Spong.*, Bowerbank, vol. iv. p. 28, 1882.

*Sponge*.—Similar to *Pachymatisma johnstonia*, Bowerbank, but with a relatively thicker sterrastral layer in the cortex.

*Spicules*.—I. Megascleres. 1. *Strongyle*, fusiform, curved, sometimes irregularly, 1·68 by 0·0276 mm. 2. *Orthotriæne*, rhabdome 0·83 by 0·026 mm., cladi 0·446 mm. long.

II. Microscleres. 3. *Sterraster*, ellipsoidal, 0·2 by 0·16 mm. 4. *Oxyaster*, actines few, conical; somewhat coarsely spined; diameter 0·08 mm. 5. *Microstrongyle*, cylindrical, minutely spined, 0·019 to 0·022 mm. long.

*Colour*.—Slate-grey in spirits, nut-brown when dry.