

sisting chiefly of the sterrastral layer; ectochrote thin, traversed by numerous hispidating cortical oxeas.

Spicules.—I. Megascleres. 1. *Somal oxea*, 3·2 by 0·058 mm. 2. *Cortical oxea*, 0·33 to 0·5 by 0·006 mm. 3. *Orthotriæne*, rhabdome 3·25 by 0·08 mm., cladi 0·4 mm. long. 4. *Protriæne*, rhabdome fusiform, 4·0 mm. long and probably over, by 0·0193 mm. near the cladal origin, and 0·0258 mm. where thickest, cladi 0·206 mm., chord 0·143 mm., sagitta 0·191 mm.; rhabdome sometimes produced 0·08 mm. beyond the cladal origin. 5. *Anatriæne*, rhabdome cylindroconic, often strongylate, 4·5 by 0·025 mm., cladi 0·16 mm., chord 0·143 mm., sagitta 0·122 mm.

II. Microscleres. 6. *Sterraster*, spherical, 0·064 mm. in diameter. 7. *Somal spheraster*, actines minute, short, cylindrical, strongylate; 0·013 mm. in diameter. 8. *Choanosomal oxyaster*, actines conical, not numerous, a single actine 0·0258 mm. long. 9. *Subcortical (?) spheraster*, a well-marked centrum and somewhat numerous, stout cylindrical actines, spined near the ends and truncate.

Size, 213 mm. long by 113 mm. broad; another specimen 69 mm. in thickness.

Habitat.—Honduras and Jamaica.

Geodia barretti, Bowerbank.

Geodia Barretti, Bowerbank, Phil. Trans. Roy. Soc., p. 279, 1858; *Ibid.*, pl. xxxii. fig. 2, 1862; Mon. Brit. Spong., vol. i. pp. 168, 171, pl. xxviii. fig. 354, 1864; Proc. Zool. Soc. Lond., p. 198, pl. xi. 1872.

Cydonium Barretti, Gray, Proc. Zool. Soc. Lond., p. 548, 1867.

Geodia Barretti, Sollas, Ann. and Mag. Nat. Hist., ser. 5, vol. v. p. 241, pls. x.–xii., 1880.

Geodia Barretti, Vosmaer, Sponges of the "Willem Barents," p. 23, pl. iii. figs. 50, 51, pl. iv. figs. 120–122, 1881.

Sponge.—Spherical when young, with a single oscule with inflected margin leading into a deep cloaca, into which the excurrent canals open by sphinctrate mouths through walls which resemble the cortex in structure; massive and sessile when of larger growth, with one or more oscules, which are the patent openings of a wide shallow cloaca. Cortex 0·6 mm. (B.), and 0·4 mm. (S.) thick, with a well-developed ectochrote 0·238 mm. (B.), 0·075 mm. (S.) thick, traversed by cortical oxeas which hispidate the surface; sterrastral layer 0·318 mm. (B.), 0·250 mm. (S.) thick, and inner fibrous layer 0·075 mm. (S.) thick.

Spicules.—I. Megascleres. 1. *Somal oxea*, 3·6 by 0·058 (B.) to 3·6 by 0·071 mm. (S.). 2. *Cortical oxea*, 0·387 mm. in length (B.), 0·387 by 0·01 mm. (S.). 3. *Dichotriæne*, rhabdome 4·1 by 0·1 mm. (B.), 2·3 by 0·071 mm. (S.); protocladi 0·286 mm., deutero-cladi 0·32 mm. long (B.), chord 0·61 mm. (S.). 4. *Anatriæne*, rhabdome 4·46 by 0·013 mm. (B.) by 0·0145 mm. (S.); cladi 0·167 mm., chord 0·116 mm. long (B.), cladi 0·13 mm., chord 0·08 mm. long (S.). 5. *Protriæne*.

II. Microscleres. 6. *Sterraster*, spherical, 0·064 and 0·077 mm. (B.), 0·070 and