

Stelospongos longispinus, Fonbressin et Michelotti, sp. (Pl. VI. fig. 15; Pl. VIII. fig. 4).

Polytherses longispina, Fonbressin et Michelotti, Spongiaires de la mer Caraïbe, p. 71.

Hircinia acuta, var. *longispina*, Hyatt, Revision, &c., vol. ii. p. 549.

The descriptions of Fonbressin and Michelotti and Hyatt agree closely with the properties of one specimen of the Challenger collection, and I have no doubt that I am right in identifying it with *Hircinia acuta*, var. *longispina* of Hyatt. How far the other varieties of this species distinguished by Hyatt are really to be referred to the genus *Stelospongos*, I am not prepared to say, but it is obvious that the conjectural variety we are speaking of is a true *Stelospongos*. Hyatt himself says, "In fact, so strong is the resemblance (between a *Stelospongos* and the form in question) that it was at first classified with that genus," but constant to his dermal-membrane theory of the formation of the skeleton, he assigned to the form another systematic position. Now we know that the theory just cited is false, and a different procedure is necessary. Indeed, when compared with *Stelospongos maynardii*, or any other true *Stelospongos*, our specimen is not a typical representative of the genus. It is but seldom that one can distinguish in the columns constituting the skeleton—some of which are represented on Pl. VI. fig. 15—the vertical primary, and more or less horizontal secondary, fibres, but in some instances this distinction is still evident, and accordingly there can be scarcely any objections to the proceeding adopted here.

The specimen proved to be full of sperm-balls, and in a far greater degree of filaments, one of which is represented on Pl. VIII. fig. 4.

Colour.—Outer surface dark grey, parenchyma dirty white, skeletal-fibres pale yellow.

Habitat.—Off Barra Grande, September 10, 1873; depth, 400 fathoms; red mud.

Carteriospongia, Hyatt.

Spongidæ of flabellate, leaf-like, or funnel-shaped form, with skeletal-fibres admitting of a distinction into larger primary and smaller secondary ones, with flagellated chambers usually devoid of any inhalent and exhalent canaliculi, with ribbed outer surface.

Carteriospongia radiata, Hyatt (Pl. IV. fig. 5; Pl. V. figs. 7, 8, 9).

Carteriospongia radiata, Hyatt, Revision, &c., vol. ii. p. 541.

There are in the Challenger collection four specimens of the genus *Carteriospongia*, three funnel-like, the fourth presenting a colony of leaf-like individuals, which with regard to the properties of their skeleton—except that the "veil" of Hyatt proved to be propped up not by a network of skeletal fibres but by foreign enclosures—and to those of the outer