

*Cacospongia spinifera*, n. sp. (Pl. VI. fig. 12).

Had the genus *Oligoceras* been retained it would have been necessary to refer the species I am going to describe to that genus. The outer surface of the single specimen representing this new species in the collection is indeed a contrast to *Oligoceras collectrix*, being quite devoid of any foreign bodies, but they are abundant in the parenchyma, and on the other hand are so richly represented in the skeletal fibres that these latter are extremely poor in true horny substance. Again as to the external aspect of its skeleton,—apart from the point that it is not represented by isolated standing trees as in *Oligoceras collectrix*,—it recalls vividly that of the form just mentioned. The large size of the meshes, the tendency of the fibres to ramify—all this approximates the form I am now describing to *Cacospongia (Oligoceras) collectrix*. There is, however, a character which permits a pretty sharp diagnosis of the species; I mean the nature of its outer surface. The latter, in spite of the great friability of the skeleton and its general tendency to disappear entirely, is still provided with very high conuli (4 to 7 mm.), so that, if drawn, this specimen would give precisely the same impression as the drawing given by Hyatt for his *Hircinia acuta*,<sup>1</sup> and this not only with regard to the character of the outer surface, but also that of the external shape of the sponge in general. The specimen must have died at the moment when its dermal pores were open, and thus the whole of its outer surface is of a sieve-like appearance in the proper sense of the word. Apart from the point that, like the preceding form, this specimen proved to be overloaded with filaments, their heads being of elongated form and reaching 0.06 mm. in length and 0.04 mm. in breadth on an average, there are no histological nor anatomical peculiarities of interest to be stated.

*Colour*.—Outer surface brownish-grey, parenchyma pale greyish, skeletal fibres black.

*Habitat*.—Station 177, August 18, 1874, lat. 16° 45' S., long. 168° 7' E.; depth 130 fathoms, volcanic sand.

*Cacospongia tuberculata*, n. sp.

So far as the properties of the skeleton are concerned (apart from the fact that the fibres are not black but pale yellow), this species seems to be closely allied to *Cacospongia spinifera*. Indeed, in most cases the primary fibres do not ramify at all, but ascend vertically, and are united with one another by horizontal secondary fibres, these latter, as in *Cacospongia spinifera*, beginning very often with flat extensions; yet, here and there ramifying fibres have been found, their secondary obliquely directed branches instead of reaching the neighbouring primary fibres ending freely. There is, however, one character

<sup>1</sup> Revision, &c., vol. ii. pl. xv. fig. 20.