

number and quality thus characteristic of every sponge and not dependent on the peculiarities of the surrounding soil, it would still be practically impossible to distinguish *Cacospongia* from *Oligoceras* by these characters alone. And the third additional character of the latter would be also of very little assistance. The skeleton of *Cacospongia* is represented by a continuous network of fibres; that of *Oligoceras* is interrupted by spaces of parenchyma devoid of any skeleton, so that, on the whole, its chief fibres show a tendency to free themselves, to separate from one another in order as is the case with *Aplysilla*, and to form tree-like formations. But this character, or rather tendency, is common to all Spongidæ with skeletal fibres overcharged with foreign enclosures; in my *Cacospongia spinifera* and *Cacospongia tuberculata*, amongst fibres forming obviously a continuous network, I find fibres whose secondary ramifications do not reach the neighbouring primary fibres, so that a small tree is actually formed. In *Spongelia spinifera* F. E. Schulze¹ found a form with a still more pronounced tendency in its skeletal fibres to ramify, to lose connection with one another in order to form small tree-like structures. He did not, however, create for it a special genus. Again, as before alluded to, the conjectural generic characters of *Oligoceras* seem to be of a very unstable nature, and this is the second ground why the genus *Oligoceras* should not be adopted even provisionally.

The genus *Halispongia*, Bowerbank, being according to O. Schmidt identical with his *Cacospongia*, the genus *Ditela*, O. Schmidt, having been given up by Schmidt himself, who pointed also to the necessity of the same proceeding with respect to the genus *Auliscia*, Bowerbank, there remain only the genera *Hircinia* and *Ceratella* to be mentioned, since the names *Stematomenia*, Bowerbank, *Polytherses*, Fonbressin and Michelotti, and *Filifera*, Lieberkühn, are synonyms of *Hircinia*. The subgenus *Sarcotragus*, established by O. Schmidt in the year 1862, was abandoned by him in the following year.

As to the genus *Hircinia*, the reasons why I cannot adopt the family Hircinidæ in the sense of F. E. Schulze and Vosmaer have been stated in the foregoing pages (pp. 12-14), and indeed the grounds above mentioned which forbid us to use the presence of parasites in order to characterise the family, also forbid the use of this character for purposes of generic distinction. It is not without interest that amongst the Challenger specimens I have forms attached by filaments, some of which, according to their other properties, I must group in the genus *Stelospongos*, others in the genus *Oligoceras*, had it been retained, and others in the genus *Cacospongia*. Should we adopt the name *Hircinia* for forms with very large meshes and with fibres overcharged with foreign enclosures as Carter and Hyatt have done? I think this would be a very doubtful proceeding; the above characters are also common to *Oligoceras*, and we have

¹ *Zeitschr. f. wiss. Zool.*, Bd. xxxii. p. 152.