

proceeding would have been as natural and comprehensible had it taken place before the classical investigations of F. E. Schulze were published, as it is strange now, Dr. Marshall's paper in question having been issued in the year 1881. Dr. Vosmaer¹ places this genus in his and F. E. Schulze's family Hircinidæ, another proceeding which would be quite inexplicable, since the species of *Oligoceras* hitherto described is entirely devoid of any filaments, had it not a very simple explanation, that of an erratum. Schulze himself lays great stress on the close affinity of *Oligoceras* with *Cacospongia*, and indeed, since in its somewhat absolute character (I speak of that of the canal system) the genus thoroughly agrees with other Spongidæ, and differs from *Cacospongia* only by secondary and therefore extremely conditional characters, its natural systematic place is near *Cacospongia*. The differentiating characters above mentioned are the following: (1) the tendency to take foreign bodies into the parenchyma, and particularly on to the external surface; (2) the want of a proper network of horny fibres, the horny substance being developed so scantily that portions of the body as large as peas are completely devoid of any skeletal fibres; (3) the structure of the skeleton, its fibres being overcharged with foreign enclosures, and the skeleton on the whole being represented by isolated fibres which have only rare anastomoses and ramify widely like the antlers of a stag. Do these characters together justify the establishment of a genus, even from the naturalist's point of view, not demanding for generic distinctions differences of an absolute nature? I see, logically at least, no grounds for answering this question in the negative, since one may regard the Oligoceratidæ as a group of forms with a tendency to lose the horny skeleton entirely in order to become Myxospongidæ, or at least analogues of *Psammopemma* among the Spongidæ. *Oligoceras* has accordingly the same right to exist as a genus as *Cacospongia* or *Hippospongia*, each personifying a new principle, all being connected amongst themselves by all possible intermediate stages. From this point of view I should be obliged to adopt F. E. Schulze's genus in question; I cannot, however, do so on account of the unusually conditional nature of the characters distinguishing the Oligoceratidæ, apart from the point that the transformation of a true *Cacospongia* into a not less typical *Oligoceras* appears to be very easily realisable (comp. p. 84). The characters separating *Cacospongia* and *Euspongia* from one another are also conditional, but in this latter case at least a conventional boundary is admissible. We can, if necessary, group in *Euspongia* forms with fibres not thicker, and with meshes not larger, than a given dimension, the forms with larger meshes and thicker fibres being grouped in the genus *Cacospongia*. But even a similar, quite artificial boundary is not applicable to the distinctions between *Cacospongia* and *Oligoceras*. All Spongidæ take foreign bodies into the parenchyma as well as into the skeletal fibres, and F. E. Schulze² himself warns us not to ascribe to this character too great a significance. But apart from this, even did the taking in of foreign bodies represent the manifestation of an "unknown intellectual power," and were their

¹ On *Velinea gracilis*, p. 445.

² *Zeitschr. f. wiss. Zool.*, Bd. xxxiii. p. 14.