

Phyllospongia, Carteriospongia.

The first of these genera was created by Ehlers,¹ the second by Hyatt;² both have been united by the last-named naturalist into a special family Phyllospongiadæ, characterised by the leaf-like shape of its representatives, those of the genus *Phyllospongia* being lamelliform and with the external surface quite smooth, those of the genus *Carteriospongia*, though still lamelliform, very often indeed provided with numerous lateral outgrowths, but far thicker, and probably in physiological harmony with this latter peculiarity, with the outer surface presenting on its whole extension an alternation of more or less deep elongated hollows, and more or less high, also elongated, tubercles. I also think that both these genera are closely allied to one another, but this is only my individual opinion, for while the skeletal fibres of *Phyllospongia*, thin and elastic as they are, recall those of *Euspongia*, the skeletal fibres of *Carteriospongia*, far thicker than the preceding and overcharged with foreign enclosures, resemble those of *Cacospongia*, the possibility is not excluded that the *Phyllospongia* are modified *Euspongia*, the *Carteriospongia*, on the contrary, modified *Cacospongia*. It may be further stated that the natural systematic place of *Carteriospongia* is among the Spongelidæ (comp. p. 17), while *Phyllospongia* as regards its internal organisation belongs to the Spongidæ. On the other hand, the chief point concerning their external shape seems to be also of a rather ambiguous nature, owing to the great variability of the form of the body in the group Keratosa, and particularly of the true Spongidæ. And it is very possible that though O. Schmidt³ united *Spongionella*, Bowerbank, with his *Cacospongia*, the species *Spongionella pulchella*, Bowerbank, instead of being a British variety of *Cacospongia scalaris* as Schmidt supposes, is merely a link connecting the true Spongidæ with *Phyllospongia*. At least the figure of *Spongionella pulchella* given by Bowerbank in his Monograph⁴ recalls very much that of *Spongia (Phyllospongia) papyracea* in Esper's Pflanzenthier, the only distinction consisting in the comparative thickness of specimens which are leaf-like in both cases; and, on the other hand, it must be noticed that as to the second species of *Spongionella* described by Bowerbank (*Spongionella holdsworthii*), Carter⁵ identifies it directly with *Spongia papyracea*, Esper. To sum up,—the affinities of both the genera I am speaking of are surrounded by no less uncertainty than those of the genera *Euspongia*, *Cacospongia*, &c., the generic distinctions being of the same conditional character.

Oligoceras, Hircinia, Ceratella.

The genus *Oligoceras*, established by F. E. Schulze⁶ for some specimens from Lesina, is indeed one of the worst genera. Marshall⁷ classes it under his Dysideidæ, and this

¹ Die Esper'schen Spongien, p. 23.

³ Spong. d. adriat. Meer., Bd. ii., Suppl., p. 9.

⁶ Ann. and Mag. Nat. Hist., ser 4, vol. xvi. p. 193.

² Revision, &c., vol. ii. p. 540.

⁴ Vol. iii., pl. lxxv. fig. 5.

⁵ Zeitschr. f. wiss. Zool., Bd. xxxiii. p. 34. ⁷ Ibid., Bd. xxxv. p. 92