

Monaxonida, although we now feel that the group thereby designated has no place in a natural classification.

The Halichondrina are, taken as a whole, strongly contrasted with the Clavulina. Members of the former group very rarely indeed possess a true, fibrous cortex, while those of the latter are rarely without one. In the former group again the skeleton is usually more or less reticulate, in the latter group it is usually radiately disposed, with no secondary, crossing fibres. Thirdly, the Halichondrina have always, or nearly always, a greater or less amount of spongin in the skeleton, which is absent in the Clavulina. All these are important distinguishing characters which, taken in connection with the differences in spiculation, are quite sufficient to separate the two suborders.

Yet here, as in other cases, the line of division is not absolute, for we have, in the Axinellidæ, transitional forms. Hence we have placed the Axinellidæ next to the Suberitidæ and at the end of the Halichondrina. In the Axinellidæ the skeleton shows a strong tendency to radiate arrangement, and the spicules are generally monactinal, as in the Clavulina; moreover, the microsclera, when such are present, appear to be sometimes of a distinctly Clavulinid type; viz., stellate. As yet we know no Axinellid sponge with a true fibrous cortex, but, on the other hand, there are species referred to the genus *Suberites*, in which the presence of a fibrous cortex has not yet been demonstrated, although they possess the characteristic tylostylote spicules. The two genera *Suberites* and *Axinella* appear to be nearly related. This connection may be a less intimate one than we at present think, but this can only be decided when our now very imperfect knowledge of these sponges has been greatly augmented. This is the most apparent point of contact between the Halichondrina and the Clavulina, unless Schmidt's description of his *Sceptrella regalis*¹ should prove to be correct, and then we should be forced to imagine a connection between the Spirastrellidæ and the Esperellinæ. *Sceptrella regalis* is described as possessing discastra (spicules characteristic of the genus *Latrunculia*) and, at the same time, chelæ of a very peculiar type. It is placed by its founder amongst the Desmacidines. There is, presumably, only a single specimen of this sponge. It is described as "eine graue, dünne Kruste," and no account is given of the megasclera. Having regard to the extremely unlikely combination of discastra with chelæ, and to the fact that the sponge is known only by a thin crust, and bearing in mind also the frequent occurrence in sponges of spicules belonging to other species, we are strongly inclined to believe that Schmidt had before him a young Spirastrellid sponge growing over the remains of some species belonging to the Esperellinæ, and that the discastra belong to one sponge and the chelæ to the other.²

¹ Spong. Atlant. Gebiet., p. 58; cf. also p. 234 of the present work.

² This view of the case is very strongly supported by our examination of a preparation of the spicules of *Sceptrella regalis* (labelled in Schmidt's handwriting) in the British Museum. We find that the discastra and megasclera are typically those of a *Latrunculia*. The latter are smooth, sharp-pointed styli, agreeing with those of other species of *Latrunculia* even down to the characteristic slight crookedness of the shaft (cf. Pl. XLV. figs. 8, 9, 10), and measuring