

In *Esperella murrayi* (Pl. XIV. fig. 1) we find a still more remarkable arrangement of the pores. Here again there is an exceedingly dense and compact dermal skeleton, and the pores are collected in definite grooves from which alone the dermal skeleton is absent. These grooves appear on the surface of the sponge like cracks (Pl. XIV. fig. 1, *p.a.*; Pl. XLVIII. fig. 2*a*, *p.a.*), and the floor of each is formed by a thin and delicate dermal membrane, overlying an elongated subdermal cavity (Pl. XLVIII. fig. 2*a*, *s.c.*), and pierced by numerous round pores (Pl. XIII. fig. 16, *c*; Pl. XLVIII. fig. 2*b*, *p.*). They are guarded on either side by dense tufts of large stylote spicules (Pl. XIII. fig. 16, *a*), and, by the action of appropriate bands of muscular fibre, running from side to side between the pores, the two sides can be brought together and the cracks closed (see also pp. xxx, 68).

In this case also we find that in other species of the genus (*e.g.*, *Esperella lapidiformis*, nobis, *Esperella mammiformis*, nobis, &c.), where the dermal skeleton is arranged in such a manner as not to interfere with the distribution of the pores, these latter occur all over the surface of the sponge; and so we must regard the arrangement of the pores in *Esperella murrayi* as due to the exceptional arrangement of the dermal skeleton. And here again this view is strengthened by the fact that, where there is room for them, there are a few odd pores scattered over the general surface of the sponge.¹

We have now to consider a similar condition of things occurring in a corticate sponge, *viz.*, *Latrunculia*. We have only succeeded in satisfactorily working out the relations of the pores in one species of the genus, *viz.*, *Latrunculia apicalis*, but we have strong reasons for believing that the same arrangement obtains in at least several species of the genus, if not in all (*cf.* p. 237, &c.). It will be seen from the figure (Pl. XLIV. fig. 4) that the upper surface of the sponge is covered with mammiform projections. Those nearer the top are larger than the remainder and not nearly so abundant; each one is conical and has a distinct oscular opening at the summit, to which a wide exhalent canal leads up (Pl. LI. fig. 1). The smaller processes, on the other hand, are cylindrical and abruptly truncated at the top, which is commonly slightly concave and without any opening visible to the naked eye; in longitudinal section (Pl. LI. fig. 1) we see, however, that numerous slit-like pores (*p*) lead from the surface vertically

¹ Vosmaer has described in *Esperella lingua*, Bk. sp., a localisation of the pores in grooves very similar indeed to that which occurs in *Esperella murrayi*, only in the former case the localisation appears to be due to the fact that the general surface of the sponge is covered with sand; he says, "The most remarkable thing in *Esperella lingua* is perhaps the incurrent canal-system. The sponge, covered with sand, shows on its surface numerous fissures that are not covered with sand. In examining the sponge with a lens it becomes clear that in these places the pores are situated (fig. 22, pl. iv.)," Sponges of the "Willem Barents" Expedition, 1880-81, p. 30. Bowerbank in his description mentions no such pore-cracks, and we were inclined to think that Vosmaer's species could not be the same; but on examining Bowerbank's dried type (Mon. Brit. Spong., vol. iii, pl. lxxvii. fig. 1) we found the pore-cracks in one or two places in a most perfect condition, and were enabled to make a microscopic preparation which showed them to be identical with those of *Esperella murrayi*, even down to the presence of the transverse bands of muscular (?) tissue. Unfortunately, we were not aware of these important facts until after our description of *Esperella murrayi* was printed, so that we have made no comparisons in that place. The two species are, however, perfectly distinct, as shown by the external form, the arrangement of the skeleton and certain details of spiculation.