

The strong, smooth, principal radial ray, which is always pointed towards the interior of the sponge-body, is either simply pointed at the outer extremity, so that simple oxydiact forms result, or gives origin to four exactly tangential rays (6 to 10 mm. in length), which do not, however, intersect at right angles, but form with one another three acute angles of 40° to 50° , so that the two outermost rays together form an angle of 100° to 150° , rarely of 180° (Pl. LV. figs. 9, 13). As from three to five of these pentacts are grouped together in a tuft, and so disposed that the points of the tangential rays meet at an angle, a most beautiful veil is formed, which spreads over the sponge at a distance of 5 to 12 mm. from the surface. Besides these peculiar pentacts, each tuft of parietal prostalia includes several of the above-mentioned radial diacts, which project freely for 3 to 6 mm. beyond the surface of the pentact-veil. Near the oscular margin the pentact prostalia disappear, and the oxydiacts become more prominent. The latter are sometimes so numerous and closely grouped that they form a thick wreath of externally directed and pointed spicules (Pl. LV. figs. 1, 7). The long, smooth, radial ray of the pleural pentacts, is, as regards its surface, in marked contrast to the four tangentials which spring from its outer extremity, and run out in a straight or slightly curved course to a gradually narrowed point. As Carter has carefully described, the whole surface of these tangentials is so thickly and uniformly beset with fine pointed tubercles that it presents a thoroughly rough appearance. Between these small tubercles, but at greater intervals, strongly developed spines project obliquely outwards like the prickles of a rose. They occur with tolerable uniformity, but without recognisable law, and gradually decrease in height towards the narrowed end (Pl. LV. figs. 9, 13).

The spicules of *Rossella antarctica* undergo peculiar modification at the base, where the sponge is either attached directly to some solid body, or fixed by means of processes to various smaller objects. The parenchyma contains, in the first place, very abundant small discohexasters, like those represented in Pl. LV. fig. 6, but with more numerous and shorter terminals rising from comparatively broad basal discs.

We have also to note that here all the longer spicules, and especially the long diacts, exhibit terminally a club-shaped thickening with large tubercles, instead of the small points or roughnesses which occur elsewhere. Finally, in the region where the sponge comes into contact with the substratum, manifold modifications occur in the form of outgrowths, fusions, and not unfrequently irregular reticulations, similar to those represented in Pl. LXIV. fig. 3, from *Rhabdocalyptus mollis*. Such modifications only occur where some irritation is exerted on the sponge through contact with foreign bodies.

Whether the spicule figured in Pl. LV. fig. 12, which I found isolated in the basal portion of a *Rossella antarctica* (Station 320), really belongs to the sponge or is a foreign intrusion, I cannot determine.