

The pentact pleuralia of *Rossella antarctica* (Pl. LV. figs. 1, 7, 9) deserve special notice. They arise from small conical elevations and project radially in bundles from the outer surface of the Sponge, while their four tangential rays, which arise transversely to the radials, extend at tolerably equal distances over the surface of the Sponge. The tangential rays, which are provided with small prongs and a uniformly rough cortical layer, do not intersect at right angles, but are so disposed at acute angles that the four together enclose a right angle (Pl. LV. figs. 9, 13). Between these pentacts, which also form a remarkable veil-like structure, other longer simple pointed radially projecting diacts occur.

Marginalia.—In the oscular margin of numerous Lyssacina there is a circle of more or less widely projecting spicules—*marginalia*—which usually consist of elongated diacts, in which the axial canal cross, which is often distinctly recognisable, or even indicated externally by boss-like swellings, usually lies almost in the plane of the outer skin. The projecting distal ray is for the most part thickly beset with outwardly directed prickles and prongs; it is less frequently quite smooth, and usually terminates in a point, though sometimes in a small knob-like thickening (Pl. L. fig. 4). The internal, usually much shorter ray of the diact exhibits in some cases small proximally directed prongs (Pl. XL. fig. 6), but is usually smooth and uniformly pointed. The marginalia include those spicules which project freely in a cuff-like fashion from the margin of the terminal sieve-plate in many Euplectellidæ. These differ from the above chiefly in this, that their four transverse rays are not abortive, but remain more or less long, so that the spicules are not diacts but hexacts. At the oscular aperture of *Tægeria* a peculiar form occurs in which the distal rays are specially long and peculiarly bent (Pl. VII.).

Dermalia.

As to the spicules of the dermal skeleton, which all deserve the title *dermalia*, some belong wholly or at least specially to the outer bounding skin, and have their axial cross and transverse rays within the latter, while others lie for the most part *under* the dermal membrane, with a more or less specially developed proximal ray extending for a variable distance towards the interior, and with the axial cross and transverse rays either lying immediately below the inner side of the dermal membrane, or even somewhat removed towards the interior. Although these two forms of dermalia are not by any means sharply separable from one another, it may be convenient to distinguish them by the special designations *autodermalia* and *hypodermalia*, especially where they occur close to one another.

As examples of autodermalia, which are exclusively confined to the dermal membrane, I may cite the dermal tetracts of *Lanuginella pupa* (Pl. LIII. figs. 4, 5) and