

fact, intersections with and without such a cross alternate quite regularly both in the longitudinal and transverse direction.

The parenchyma is richly provided with oxyhexasters, each of the principal rays of which bears four or three straight diverging terminals (Pl. XVII. fig. 8). Here and there I also found an oxyhexaster form with much curved terminal rays (Pl. XVII. fig. 7), though it remains doubtful whether this type really belongs to the sponge. On the other hand, more frequently, and undoubtedly belonging to the sponge, characteristic hexact spicules occur which, like those of *Holascus polejaevii* represented in Pl. XVII. fig. 4, bear on each of the strong principal rays (which are widened and petaloid towards the exterior) a bundle of eight or more markedly diverging terminals. The terminal expansion of the principal rays is even larger, and more sharply separated from the inner portion than in the above-mentioned species.

The hypodermalia resemble those of *Holascus polejaevii*, and are, like the latter, extended outwards by the longer apposed, thin, pointed diacts.

The hypogastralia on the other hand are not pentacts but slender hexacts, in which the somewhat swollen proximal ray, projecting freely inwards into the gastral cavity, is beset with small prongs.

Genus 2. *Malacosaccus*, n. gen. (Pls. XVIII., XIX.).

These sponges are saccular or tubular forms, with a flabby readily pliable wall, whose outer surface appears uniformly even, while on the inner surface numerous, larger or smaller, round openings of the efferent passages occur in irregular distribution. The inferior extremity has not been observed, but the superior exhibits a wide opening surrounded by a narrow smooth margin.

The principalia are represented by hexacts with long, thin, flexible rays, which are disposed in radial, longitudinal, and transverse directions, becoming apposed to one another, and partly interwoven to form a cubical lattice-work. Oxyhexasters and discohexasters also occur in the parenchyma.

On the projecting rays of the sword-shaped hexact hypodermalia and hypogastralia, floricomes occur. The epidermal floricomes are larger and stronger than the epigastral.

1. *Malacosaccus vastus*, n. sp. (Pl. XVIII.).

In the south of the Indian Ocean, at a locality about halfway between the Cape of Good Hope and Kerguelen (Station 146, lat. 46° 46' S., long. 45° 31' E.), there was trawled, from a depth of 1375 fathoms, and from a bottom of *Globigerina* ooze, a flabby plate which could be folded like a woollen cloth. Some fragments belonging to the