

the projecting distal of the hypodermalia. All the hypogastralia are somewhat uniformly rough. It has not been determined with certainty whether the numerous floricoles which are represented on Pl. XVIII. figs. 6, 7, 9, and which appear abundantly on certain portions of the inner surface, really adhere to the projecting proximals of the hypogastralia. These inner floricoles differ from the outer, moreover, not only in their smaller size, but also in the fact that the slightly bent terminals, which occur to the number of six or more on every principal ray, bear small barbs in addition to the many pronged terminal plate (Pl. XVIII. figs. 6, 7).

2. *Malacosaccus unguiculatus*, n. sp. (Pl. XIX.).

To the south of Sierra Leone (Station 348, lat. 3° 10' N., long. 14° 51' W.) there was collected from a depth of 2450 fathoms, and on grey mud, a saccular sponge, 3 cm. in length and 1.5 cm. in breadth, with walls measuring from 1 to 2 mm. in thickness. The inferior extremity was torn off, and the superior margin only preserved in an injured condition. The outer surface is slightly rough, but on the whole uniformly even, while the inner surface, on the other hand, is perforated by numerous canalicular orifices of varied breadth (Pl. XIX. fig. 1).

The principalia of the parenchymal skeleton are represented by slender hexacts with long, narrow, smooth and flexible rays, which are disposed radially, longitudinally and transversely, and apply themselves by corresponding rays to one another, or to the prolonged parenchymals of the hypodermalia and hypogastralia, so as to form a loose network which permits of the bending and folding of the whole sponge-wall. The parenchyma also includes numerous oxyhexasters with slender, straight, or slightly bent terminal rays, of which three occur in most cases on each of the comparatively short principals (Pl. XIX. fig. 7). Delicate discohexasters also occur, with thin terminal rays which are somewhat thickened outwardly, and which bear upon their outer extremities a whorl of four or more backwardly bent, thin, transverse spines (Pl. XIX. fig. 3).

The hexact hypodermalia have a thickened distal ray beset with scaly teeth, and a greatly prolonged proximal, which, like the moderately long transverse rays, is seldom quite smooth, but is, as a rule, more or less richly beset with small pronged elevations (Pl. XIX. figs. 2, 4).

The hypogastralia are very similar to, but are distinctly more slender than the hypodermalia (Pl. XIX. fig. 2).

Floricoles are not found on the outer surface but appear here and there on the inner. They bear three or four terminals on every principal ray. The thickened outer extremity of every terminal ray runs out into an overhanging plate with two or three strong terminal claws (Pl. XIX. figs. 5, 6).

Although I did not find these floricoles upon the inwardly projecting proximal ray of