

oxyhexacts with slightly curved slender rays occur, similar to those which were found so abundantly in the former species (Pl. XLVIII. figs. 1, 10). In certain regions, for instance somewhat abundantly below the outer skin, a skeletal element, not represented in *Poliopogon amadou*, occurs—in the form of small spindle-shaped smooth oxydiacts, (0·15 to 0·25 mm. in length) which have a maximum thickness either in the neighbourhood of their centre (Pl. XLVIII. fig. 3) or more rarely nearer one end (Pl. XLVIII. fig. 7). Here and there, especially in the neighbourhood of the external surface, long uncinates occur, with narrow appressed pointed barbs covering minute depressions. I have not been able to determine whether the amphidiscs of varied form and size, which occur scattered in great abundance in the parenchyma (Pl. XLVIII. fig. 1), are really true parenchymalia, or have grown in from the bounding surfaces of the external skin, of the gastral cavity, or of the canals.

The dermal skeleton consists of rather strongly developed smooth oxypentacts. The autodermal pinules are indeed for the most part pentacts, but others not unfrequently occur, in which the sixth proximal radial ray is more or less distinctly developed (Pl. XLVIII. figs. 8, 11). The four basal rays of the ordinary pentact pinules are somewhat long, and bear externally short spines projecting obliquely outwards, while the extreme outer end is rounded off or even truncated, though rarely pointed. As a rule the basal rays are like those of the dermal pinuli in *Poliopogon amadou*, bent like the middle portion of a figure 8 (Pl. XLVIII. figs. 5, 9). The freely projecting, radial distal ray is not so long and slender as in *Poliopogon amadou*, but rather broad and only about 0·15 mm. in length. It is beset with lateral spines, which are curved somewhat markedly outwards, and terminally apposed in bud-like fashion. Less frequently the distal ray ends in a point (Pl. XLVIII. fig. 5). The large amphidiscs lying in the dermal membrane have a length of about 0·2 mm. Their axial rod is somewhat uniformly beset with small tubercles. The campanulate umbels have usually eight, less frequently more rays, which are of considerable length, often almost meeting, and but slightly divergent (Pl. XLVIII. fig. 2). Besides these, there is an abundant occurrence of small amphidiscs with short, hemispherical, eight-rayed terminal umbels and slender axial rod (Pl. XLVIII. figs. 4, 6).

Whether the gastral skeleton surrounding the cavity closely resembles the dermal I was unable certainly to determine, owing to the want of sufficient material from that portion of the giant sponge. It is, however, extremely probable, from analogy with the related species of *Poliopogon amadou*, that the structure of the canalicular skeleton lining the larger ducts and lacunæ essentially resembles that of the skin. Pinules are not wholly absent, but occur as slender, scattered, canalicular pentacts or hexacts, with long, narrow, pointed basal rays, and a slender free radial, which ends in a delicate point, and bears isolated, short, straight, obliquely projecting lateral spines. In the larger ducts and lacunæ, numerous large and small amphidiscs occur of the form described in the