oxypentacts, which form the main support of the dermal, gastral, and canalicular skin, and which here and there appear to lie quite within the parenchyma, are really to be regarded as true parenchymalia, does not seem to me probable. As a rule I could readily connect them with the above named surfaces, and thus regard them as hypodermal, hypogastral, and hypocanalicular elements respectively.

The dermal skeleton has for its supporting basis large, strong oxypentacts, in which the four long smooth tangential rays are usually indeed all but straight and crossed at right angles, though not unfrequently somewhat curved, and in their inclination to one another more or less diverted from a right angle. They are frequently disposed not exactly tangentially, but slightly inclined inwards. The likewise long and strongly developed, smooth, straight, proximal ray is, as a rule, at right angles to the surface; it may, however, in certain cases, for instance in the immediate neighbourhood of the marginal boundary, deviate from this exactly radial disposition. The tangential rays of the adjacent hypodermal pentacts lie for the most part in long stretches close to one another, and thus form a strong, quadratic, dermal lattice-work, in the meshes of which the sieve network of the dermal membrane is spread out. The quadratic skeletal meshwork is, however, in no way uniformly composed, but numerous deviations and displacements occur all over. The skin is externally beset with autodermal pentact pinuli which are more or less roughened. Their tangential basal rays are of considerable length and almost always smooth, but rarely tuberculate towards the end, while the moderately long (0·15 to 0·2 mm.) radially projecting distal is smooth below, but on the outer three-fourths of its length beset in fir-tree-like fashion with strongly developed lateral spines (Pl. XLIII. fig. 4). It is noteworthy that these dermal pinuli are in no way so abundantly or thickly present as is usual in the other Hyalonematids; in certain positions, indeed, they are sparsely present or have a quite isolated occurrence. Especially near the oscular margin they are only to be found here and there among the especially abundant pleural *prostalia* (Pl. XLIII. fig. 2).

As to amphidiscs, I found, in the external skin of the North Atlantic specimens, only the small (0·03 to 0·05 mm.) eight-rayed form (Pl. XLIII. figs. 6, 8) with short hemispherical umbels. In the remains of the Brazilian specimens, however, besides the above forms, larger eight-rayed amphidiscs of similar form (Pl. XLIII. figs. 9, 10) occurred. I hesitate, however, before proposing to erect a distinct species on the strength of this single deviation.

In the compact gastral membrane the skeletal elements are disposed in essentially the same way as in the external skin. The following deviations are, however, of some interest. In the first place, the whole free surface is much more closely and uniformly beset with pinuli, and these pinuli differ from the autodermal forms in this, that they are for the most part, especially in the neighbourhood of the oscular opening, bent by the stream of water towards the efferent aperture (Pl. XLIII. fig. 2). The