

curvature towards the dermal surface. The lateral union of these longitudinal radial plates, which are separated by spaces of uniform breadth, is effected by means of transverse bridges of the same dictyonal framework. These extend uniformly on the gastral side, where they are perforated only here and there by long oval openings, while similar bridges arching over the interradiial spaces on the dermal side have a more limited longitudinal extension. In this manner a canal system is formed, which is, for the most part, longitudinally disposed, and is here and there dichotomously branched. It opens towards the outside by somewhat long longitudinal clefts, towards the inside by round or oval pores; and since the inner openings are frequently arched over by the external connecting bridges of the adjoining radial plates, it often results that a transverse section of a complete tube exhibits the appearance of a folded plate (Pl. XCIV. fig. 3; Pl. XCV. fig. 1). The beams of the fibrous framework bear small superficial knobs, which are either irregularly scattered or arranged in incomplete transverse rows (Pl. XCV. fig. 2). The nodes of intersection are somewhat thickened and knobbed here and there, especially in the outer layer of the framework.

On the outer (dermal) surface the dermal membrane extends quite uninterruptedly over all the clefts and openings, while on the inner surface the gastral membrane passes into the excurrent openings of the larger efferent canals, which in most cases traverse the wall very obliquely.

The strong dermal pentacts almost invariably exhibit a button-, peg-, or knob-like rudiment of a sixth distal ray. The proximal ray, which varies in length, and the four tolerably long, and in most cases slightly curved tangential rays, terminate in points and are beset with small conical knobs all over in the case of the larger spicules, but only on the extremities of the rays in the smaller (younger) forms. Strong scopulæ<sup>1</sup> also occur, in which the four parallel or slightly diverging, thick or slender, rough knobbed terminal rays usually arise just above an annular quadri-tuberculate thickening of the stalk (Pl. XCIV. fig. 8).

Finely pointed slim oxydiacts extend here and there in bundles, close to the proximal ray of many dermal pentacts, in the dermal membrane, and even above the latter.

The gastral skeleton almost completely resembles the dermal. A distinction could only be found in the fact that the pentacts are less strong, and their projecting rudiment of the sixth ray is somewhat longer, so as almost to warrant the term hexact. The gastral scopulæ agree completely with the dermal.

The parenchyma contains delicate uncinates, and numerous isolated, thin-pointed spicules, which are united in somewhat loose bundles. Besides small hexacts of various dimensions and provided with small terminal knobs (Pl. XCV. figs. 3, 4), sphærohexasters occur. These have a variable number of curved terminal rays, which are in most cases only of medium size, and are convex externally (Pl. XCIV. figs. 6, 7,

<sup>1</sup> The scopulæ figured on Pl. XCIV. figs. 5, 9, do not belong to this form. They are casual intruders.