

its full extent. The powerful volume of its contents is probably subject to important modifications according to the state of contraction of its muscular and very extensible subumbral wall.

The inner or axial wall of the coronal sinus is firmly connected with its external or abaxial wall at four interradiial points. These points lie exactly in the radii of the four sense clubs, in the middle third of the height of the sinus, a little above the middle (figs. 8, 12, 13, *kn*). They are the important septal nodes or fused nodes ("nodi septales, nodi cathammals," *kn*; Pl. XX. fig. 8, *kn*; Pl. XXI. fig. 17, *kn*; Pl. XXIII. fig. 33; Pl. XXV. fig. 8); they correspond to the interradiial septa of the Lucernaridæ and Cubomedusæ, which divide the length of their radial pouches. Each of the septal nodes forms a gelatinous cube, tiny but firm as cartilage, of from 2–3 mm. in diameter. Under strong magnifying power, the transverse section (Pl. XXV. fig. 8) shows that the umbral gelatinous substance of the thick abaxial wall (*wg*) is firmly fused here with the gelatinous supporting plate of the subumbral axial wall (*zw*). Between the two walls, however, in the tangential median plane of each node, there is a double layer of endoderm cells, the important cathammal plate ("vascular plate or endodermal lamella," *dk*). The higher cylindrical cells of the axial cell layer (*dw₂*) form the direct continuation of the subumbral endodermal epithelium of the inner sinus wall (*dw*); in the same way the flatter cells of the abaxial cell layer (*du₂*) pass immediately into the umbral endodermal epithelium of the external sinus wall (*du*), and contain the black-brown round pigment granules by which the wall is characterised. We cannot, therefore, doubt that the nodes are really formed by fusion of the two vascular walls. The gelatinous substance on both sides of the double gastral lamella was so much hardened that it notched the knife in making sections. Under stronger magnifying power (Pl. XXV. fig. 8) it showed here the same striking induration and histological modification of the gelatinous tissue, already described in the periphery of the lobe clasps, the transition into hard fibrous cartilage (comp. above p. 67, and Pl. XXV. fig. 10).

If we suppose that the four septal nodes, prolonged centripetally to the pylorus and developed into four selvages, connect the axial and abaxial wall of the coronal sinus in its entire proximal half, the sinus would thereby be divided into four wide perradiial pouches, corresponding to those of the Lucernaridæ and Charybdeidæ; and as in these the four radial pouches here communicate below by a circular canal, viz., by the simple distal half of the circular sinus, below the septal nodes. We may therefore say the ideal horizontal circular line, in which the four interradiial septal nodes lie, form the boundary line between an upper and a lower coronal sinus, both of which are in open communication between the four nodes. The upper or proximal coronal sinus (*cs₁*) corresponds to four wide perradiial pouches, whose septa are reduced to nodes, and which communicate by the gastral openings with the central stomach. The lower or distal coronal sinus (*cs₂*) corresponds to a very much widened coronal canal which connects the four radial pouches