

and fills the greater part of the umbrella cavity, its oral margin (*am*) reaches to the opening of the latter. Its typical form is a regular quadrangle prism, whose lower surface occupies the simple quadrate oral opening, whilst the upper surface is formed by the endodermal surface of the central gelatinous umbrella. Both these two surfaces and each horizontal transverse section of the œsophagus describe a regular cross, as four perradial cross limbs project centrifugally the whole length, whilst the four interradianal oral columns (*ac*) project inwards centripetally. The largest horizontal diameter of the gastral hollow space (in the perradia) amounts, both at the base of the stomach and at the oral opening, to from 22–34 mm., whilst the smallest diameter (in the interradia) amounts to only half as much, 11–12 mm. The entire height or length of the œsophagus is still less, amounting from the base to oral margin, only from 8–10 mm.

The gelatinous fulcral plate (*zw*) is strongly thickened in the upper half of the subumbral gastral wall, and forms several depressed elevations (fig. 5, *gw*) on its inner surface. It is very delicate and thin, however, in the lower oral half. The circular muscular layer of the œsophagus is also only slightly developed. As in *Nauphanta* (Pl. XXVIII. fig. 14), there is a circular constriction in the middle of its length, which divides the œsophagus into two chambers, shaped like truncated pyramids, which are connected by their narrow bases. We may, perhaps, compare this circular stricture, as in *Nauphanta*, with the palatine door of the Tesseroniæ, in which case the lower chamber (which widens below, towards the mouth) must be regarded as the buccal stomach or œsophagus, and the upper chamber (which widens above, towards the bottom of the stomach) as the central stomach fused with the basal stomach. In transverse section, through the circular stricture or palatine opening (fig. 6), the largest (perradial) diameter of its cruciform lumen only measures 15 mm., the smallest (interradial) only 6 mm. Below the circular stricture the thin perradial walls of the buccal stomach project, inflated to the outside, and form buccal pouches (fig. 3, *bb*) which are separated by interradianal buccal columns projecting inwards (*wc*), as in *Periphylla* (Pls. XVIII.–XX.), but not so strongly developed. Above the palatine opening, the central stomach arches outwards perradially in the same way, corresponding to the characteristic crossform of the gastral covering.

The covering of the stomach, or that part of the endodermal surface of the central gelatinous umbrella, which forms the upper (aboral) wall of the quadrangularly prismatic œsophagus, shows, when the latter is removed, the distinct crossform shown in fig. 6 and the centre of fig. 3. The four perradial limbs of the regular cross are rounded off, almost circularly, and are separated by the four triangular septa, projecting inwards, which on account of their special importance, we shall immediately describe more minutely as "cathammal plates" (*kt*). In the middle, between the cathammal plates, four broad tangential transverse clefts remain at the distal end of the four cross-limbs; these are the four perradial gastral openings (figs. 3, 6, *go*) through which the central stomach opens into the peripheric coronal intestine.