

lateral arms of either side, which is affixed to the outer surface of the web above described, and in its turn passes to within 30 mm. of the extremity of the dorso-lateral arm. Its margin is thickened where it is attached to the dorsal arm (Pl. XII. fig. 3); this thickening corresponds to the hardened tract forming this part of the margin of the web in *Cirroteuthis mülleri*, but there is no trace of anything horny or cartilaginous in its constitution in the present species.

The membrane is attached in a precisely similar way to each two successive arms, producing, when looked at from the anterior end of the animal, the figure shown in woodcut 2, A.

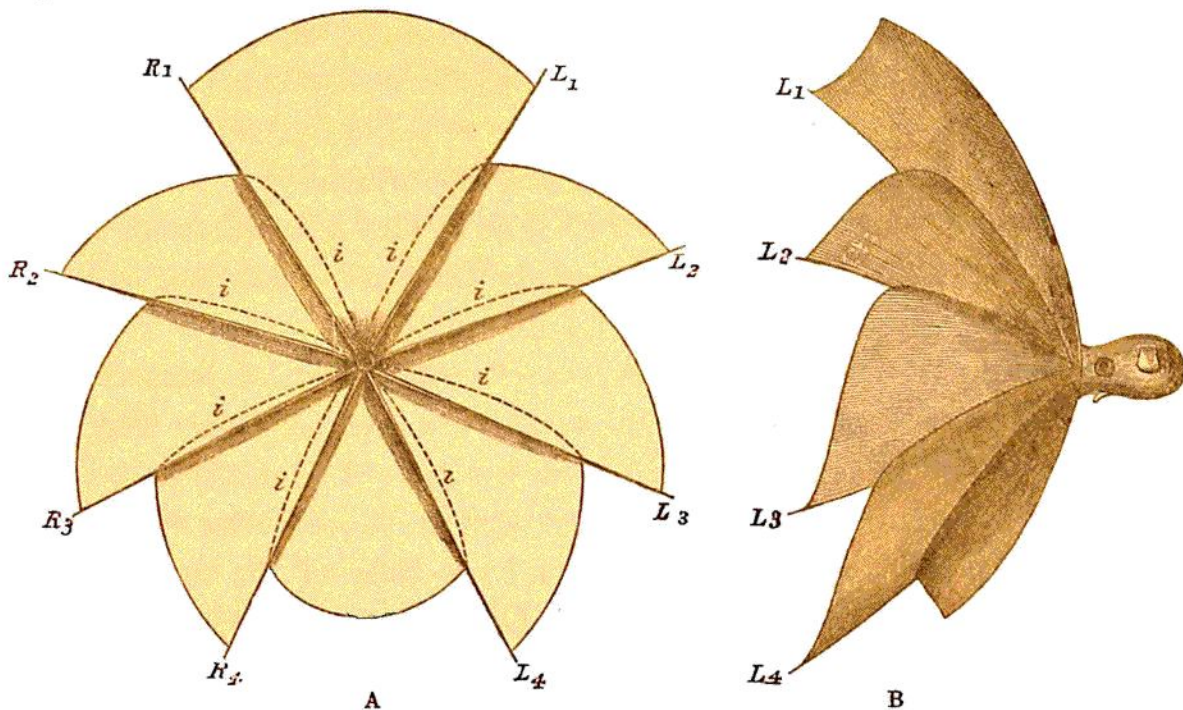


FIG. 2.—Diagrammatic figures of *Cirroteuthis magna*, drawn to a scale of about one-twentieth, to show the form and arrangement of the umbrella. A, seen from the anterior aspect; B, from the left hand side; R_1 - R_4 , L_1 - L_4 , the arms of the right and left sides respectively; i , i , the lines indicating the attachment of one web to the other.

The effect of this arrangement is that when the umbrella is extended the arms do not lie in its plane, but each is separated from it by the portion of web lying between the arm and the curved line alluded to above; this may be conveniently called the "intermediate" web.

Measurements of the different parts of the web led to the following conclusions as to its form when fully expanded. The perimeter of the margin must have been about 450 cm., the distance between the tips of the two dorsal arms being 80 cm., between the two ventral 62 cm., while the distances between the remaining pairs varied from 46 to 54 cm.

The radius of the circle in which the tips of the arms lie would thus be about 72 cm., and taking the average length of an arm at 87 cm., and assuming them to be quite extended or but slightly curved, the mouth would then be about 60 cm. behind the plane of the tips of the arms. The web itself, however, would form deep pouches between the