several arms owing to the presence of the intermediate web, and might render the whole apparatus a very effective fishing-net.

The dorsal cartilage (Pl. XIII. figs. 1, 2) may be described as saddle-shaped; it is narrow, thick, and rises up into a prominent angle on the dorsum, while the two sides are flattened out into obovate expansions, which are more prominent anteriorly than posteriorly. A thick semi-cartilaginous membrane is attached all round the dorsal surface, and appears to have been reflected over it, and thus to have enclosed a narrow cavity above the cartilage: in *Cirroteuthis mülleri* a similar membrane seems to have overlapped the posterior surface and to have formed a cavity there.[1] This organ is widely different in form from that of *Cirroteuthis mülleri* as may be seen at once on comparing Pl. XIII. figs. 1, 2, with the figures in Reinhardt and Prosch's Memoir. In both instances, however, the cartilage is entirely free from the sac in which it lies, and the bases of the fins rest upon it near the extremities of the lateral expansions.

The mangled specimen from Station 298 was at first referred to *Stauroteuthis*, but with very great hesitation; firstly because of its lacerated condition, and secondly in consequence of doubts as to the validity of the genus.

In Verrill's definition there are but few points mentioned which seem to me of generic importance, and of these a large proportion are also common to *Cirroteuthis*, for instance, the opening sentence—"Allied to *Cirrhoteuthis*, but with the mantle united to the head all around, and to the dorsal side of the slender siphon, which it surrounds like a close collar, leaving only a very narrow opening around the base of the siphon, laterally and ventrally"[2]—is quite misleading, and would not have been written if the author had had the opportunity of examining a specimen of *Cirroteuthis* in good condition, for he would then have seen that these characters, upon which he relies for distinction, are common to both genera; the mistake has no doubt arisen from his having had for comparison only the figures of Eschricht,[3] which exhibit the mantle as gaping widely open and exposing the gills; a condition only seen in specimens whose tissues have become loosened and stretched in consequence of defective preservation. The excellent drawing of the animal in a living condition by Madame Rudolph, published by Reinhardt and Prosch,[4] would have shown Professor Verrill the true state of the case, especially when taken in conjunction with their clear description of the arrangement:—"Head and body are united to the greatest extent possible, so that there only remains a horse-shoe-shaped aperture closely surrounding the funnel in the ventral median line" (*op. cit.*, p. 11).[5]

The points which are really diagnostic between the two genera, if only reliance can be placed upon them, are the following:—(1) "Dorsal cartilage forming a median

[1] Om Sciadephorus Mülleri, tab. iii. figs. 1, 2, 3.

[2] Ceph. N. E. Amer., p. 382.

[3] *Nova Acta Acad. Cæs. Leop.-Carol.*, tom. xviii., tab. xlviii.

[4] Om Sciadephorus Mülleri, tab. i.

[5] Professor Steenstrup, who gave Dr. Rudolph a preliminary acquaintance with the Mollusca of Greenland before his departure to that country, tells me that this account of the form of the mantle-opening was confirmed by Dr. and Madame Rudolph in conversation with him.