brought into view. In the attitude in which Gegenbaur has represented his Euramphæa vexilligera, they cover one another, as they then lie in the same plane. In order readily to designate these two tubes, which are eminently characteristic of the Mnemiidæ or Calymnidæ, I shall hereafter designate that which follows closely the outline of the digestive cavity as the *stomachal* or *cœliac chymiferous tube*, and call that which lies outside, the *interambulacral* or *tentacular chymiferous tube*. Now, the structural peculiarity of the Beroids proper consists in having a very large stomachal or cœliac chymiferous tube opening into an equally wide oral tube (Pl. II. *Fig.* 10), *whilst the interambulacral* or *tentacular tube is entirely wanting*. The centre of the whole chymiferous system, its main trunks and the axial funnel, is remarkably small in comparison to the wide ambulacral, cœliac, and oral tubes.

There are other secondary anatomical peculiarities, equally characteristic of this group, which may now be mentioned also. The eight ambulacral chymiferous tubes are equally developed; there is no difference in the extent or size or structure of those running along the sides, or along the anterior and posterior surfaces; they all give out numerous, rather conspicuous, and highly ramified branches, while the cœliac tube is entirely destitute of ramifications. The ovaries and spermaries (Pl. II. *Fig.* 4, and Pl. I.), the special arrangement of which has already been described above, are large and very conspicuous at the spawning season. The circumscribed area (Pl. I. *Fig.* 3, and Pl. II. *Fig.* 9) is encircled by a prominent wall of elegantly branched fringes.

The structural character bearing more directly upon the form of this group of Ctenophoræ consists chiefly in the even thickness of the spheromere (Pl. I. *Figs.* 3 and 4), which renders it movable in every direction; so that the changes of outlines of the Beroids proper are far more extensive than those of any other members of the whole order. This ability to change their form is further enhanced in these animals by the circumstance, that the digestive cavity extends so far towards the abactinal pole as to reduce the bulk of the spherosome in that direction to the average thickness which it has upon the sides. A comparison of the different figures of Pl. I. may give some idea of these changes of form; and *Fig.* 10, especially, which represents a specimen of the same size as *Figs.* 7 and 8 gorged with a Bolina nearly of its own size, will show to what extent they may be distended. *Fig.* 5 represents a specimen with the actinostome turned inside the digestive cavity. Notwithstanding this remarkable movability, all these animals preserve a very regular and symmetrical form in a state of rest, the sides appearing uniformly compressed.

Thus we have here two different categories of characters: first, anatomical peculiarities of the same kind as those upon which the order of Ctenophoræ is founded, only relating to certain limited points of their structure; and, secondly,