

central cavity of this system, and the difficulty of preserving these animals alive after injecting colored liquid into the chymiferous sac, I have not succeeded in discovering a regular alternation between the contractions of the right and left sides of the system. It may be also, that, the transverse diameter being so much shorter in this genus than in *Pleurobrachia* and the means of establishing a retrograde current from the periphery very extensive, the circulation takes place through alternate dilatations and contractions of the whole body, causing an injection of the fluid in all directions, rather than by an alternate passage from one side to another; and, for various reasons based upon analogy, I incline to this view. In the Discoid Medusæ we have an absolutely radiating circulation, and a movement simply to and fro from the centre to the periphery and back throughout the whole system. In *Pleurobrachia* there is an alternation between right and left, with a prominent circulation to and fro. In *Bolina* there is also a bilateral symmetry, but the radiating circulation seems to be recurring in itself through a complete circle in the lobes and around the mouth, which arrangement would already approximate the Beroid Medusæ of the genus *Bolina* to the type of Echinoderms, though in a lower condition of the circulatory system.

Whatever may be the value of these suggestions, so much is plain, that the digestive cavity constitutes a capacious sac with a longitudinal mouth, the fissure of which opens in the same plane with the circumscribed area precisely as in *Pleurobrachia*, in an oblong disk, extending with its longer diameter flat between the anterior and posterior lobes (*Fig. 91*). This disk is entirely surrounded by the large lobes when they are shut, but it forms the lower outline of the body when the lobes are entirely open and fully spread. In this attitude the mouth is shut, but the lobes are wide open, to inclose any food that may come within reach; and whilst dropping fragments of oysters upon them, as they are generally turned mouth upward, in this extreme state of dilatation, I have sometimes seen the lobes close upon such morsels to secure them, and afterward the mouth expand and open within to swallow the food, the tentacles being alternately drawn out and retracted.

The visible outline of the digestive cavity changes most remarkably in these various operations. When the mouth is shut and the digestive cavity is empty, the digestive sac is completely flattened and compressed in the direction of the longer diameter, rising like a tapering funnel toward the central chymiferous cavity; that is to say, the folds of the digestive sac which are stretched between the anterior and the posterior angles of the mouth converge towards the abactinal extremity of the body, and the flattened walls are pressed upon each other. In this position the coeliac chymiferous tubes run in a straight course toward the actinal pole along the middle of the outer surface of the digestive cavity, and reach,