

Though our *Idyia* is slow in its locomotion, its movements are particularly graceful. Its most common attitude is horizontal; that is to say, the main or vertical axis is generally maintained in a horizontal position, or rather slightly inclined, so that the actinal pole, which moves forward, stands higher than the abactinal, which is turned backward. In this respect *Idyia* coincides with *Pleurobrachia*, which also moves with the actinal pole forward; but, in its most common attitude, *Pleurobrachia* stands with its vertical diameter upright. Again: *Idyia*, while moving horizontally, keeps almost uniformly upon its broad side, and may readily raise its actinal end, with the mouth gaping and ready to seize its prey, as in Pl. I. *Fig. 8*, the flatness of the body facilitating the changes of its attitude. Occasionally it turns, with one or the other side rising; but I have never seen *Idyia* revolving upon itself around its vertical axis, as *Pleurobrachia* constantly does, and only now and then does it make somersaults, turning upon its vertical axis in the direction of the broader plane. It should further be remarked, that the older the specimens grow, and the larger they are, the more sluggish become their movements. The young are far more active, and the smallest of them are comparatively quick; but the motion is always a gliding one, long continued in the same direction, with the body stretched to its full length. Only now and then a powerful contraction may be noticed, during which the animal reduces its greatest diameter by at least one third, and, as the spherosome is extremely flexible, it then assumes very varied forms, according to the condition of the digestive cavity. When this is empty, the actinal end may even be turned inside during such contractions (*Figs. 5 and 5<sup>a</sup>*); the vertical diameter is then reduced by about one half, and the outline becomes almost circular (*Fig. 5<sup>a</sup>*). When the contraction is one-sided, the body curves in various directions. The mouth also may spread or contract, so as to assume the most different outlines: at times gaping widely (*Fig. 1*), at other times contracting in the centre with the opposite ends wide open (*Fig. 9*), or bending sideways (*Fig. 2<sup>a</sup>*), or closing up in a straight line (*Fig. 4*), or even shutting by the inversion of its edges (*Fig. 1 Δ*). When the digestive cavity is gorged with food (*Fig. 10*), the body may be distended in any direction and assume the most irregular shapes.

Our *Idyia* is very voracious, and feeds chiefly on other Ctenophoræ. Whenever I have kept *Bolinas* and *Pleurobrachias* in the same vessel with it, they rapidly disappeared, being generally swallowed entire. In the attempt to seize upon its prey, *Idyia* readily changes the direction of its motion, but always keeps the mouth forward toward its prey, gaping widely as in *Fig. 1*, and when close upon it turning the edges of the mouth still further outward. A small *Pleurobrachia* or a small *Bolina* would frequently pass into its wide digestive sac without any other effort on the part of the *Idyia* than that of shutting its mouth. But when its prey is larger, perhaps nearly of its own size, our *Idyia* may be seen distending its