

mouth to the utmost, and working its prey down into the digestive cavity by repeated contractions, slowly overlapping with the edge of the mouth more and more of the large morsel it is attempting to swallow, until it is finally engulfed. *Fig. 10* represents an *Idyia* immediately after it had swallowed a *Bolina* nearly as large as itself, the outlines of which may be seen in its distended cavity, in a position transverse to the vertical diameter of its own body. If the animal seized upon is too large to be swallowed entire, after forcing into its digestive cavity what is sufficient to fill it, our *Idyia* will, by powerful contractions of the margins of the mouth, cut off the parts which cannot be swallowed. I have once seen an *Idyia*, of about the size of that of *Fig. 7*, seize upon a *Bolina* nearly double its own size, and, after working the abactinal part of the *Bolina* into its digestive cavity, cut off in that way about two thirds of the actinal side of the *Bolina* and let it drop. This operation lasted for about an hour; and while portions of the swallowed body showed signs of life in the contraction of the locomotive flappers during three quarters of an hour, the process of digestion was nevertheless going on so fast, that, after an hour and a half, fragments of the indigestible parts, such as the locomotive flappers, began to be discharged through the mouth. In four hours, the whole portion introduced into the digestive cavity had disappeared from it, the more fibrous cell walls and the locomotive flappers being thrown out through the mouth and the more fluid portions passing into the chymiferous system, so that the main chymiferous cavity and all the chymiferous tubes were distended to the utmost, and the fluid contained in them was moving rapidly up and down through the ambulacral tubes into the oral tube and back through the coeliac tubes. Shortly afterward the two coeliac apertures opened successively and discharged some more of the indigestible matter, and the animal seemed as empty as before, with this difference only, that the interambulacral zones, which, when the animal has been fasting, are depressed, and the digestive cavity itself very much flattened, were now distended and presented a rounded outline, as in *Fig. 3*. On another occasion I noticed a large *Idyia* swallowing a whole *Bolina* of sufficient size to fill its cavity; and yet, after five hours, no trace of the prey could be observed within it.

From the preceding remarks it may be inferred how difficult it is accurately to describe these animals without prolonged study, under the different circumstances which may modify their appearance. But after collecting many hundreds and keeping them together for weeks at different periods of their growth, in a large tank well supplied with food, I may well say, that the different illustrations published of allied animals observed in other parts of the world, though showing the existence of the genus *Idyia* in all seas, do not yet furnish us with the means of distinguishing the species inhabiting different zoological provinces with sufficient precision. For not only do the young differ from the adult in the manner already