

larians, are disposed in a single row around the base of a simple proboscidal actinostome. As an instance of the far-reaching power of the tentacles, by means of their lasso-cells, we would mention having seen an Infusorium, which was swimming in the vicinity of one of the hydræ, suddenly stopped in its course, and drawn violently to a tentacle, which rolled around it and conveyed it into the expanded mouth, the other tentacles remaining stationary. The mouth expanded rapidly several times, thus causing an inward current, and then closing, the tentacle was drawn out in close contact with the lips, as if to rub off, or prevent the escape of the Infusorium. The disposition of parts in the reproductive calycle, as far as the hydrarium proper is concerned, is the same as in that of *Obelia commissuralis* (Pl. XXXIV. *Fig.* 11), but the medusæ, at the time they are freed, have twenty-four (*Fig.* 9^a), instead of sixteen tentacles, and the reproductive organs (*Fig.* 9^a, *f*¹) begin to develop before birth.

The adult medusa of this species has already been described in my Contributions to the Natural History of the Acalephs of North America, under the name of *Thaumantias diaphana*.

Embryology.—The breeding season of *Eucopa diaphana* is during the spring and summer months, while from December to April, in some years at least, the reproductive calycles are absent; but there would seem to be either some variation as regards time, or else those specimens found along shore, in the deep pools close to low-water mark, are not so fertile as those which live in deeper water, or may be retarded in their growth by the changes of alternating tides. We are led to this belief by the fact that, on the sixteenth of April, 1855, we found some free medusæ (Pl. XXXIV. *Fig.* 9^a) which were identical, in every respect, with those which were taken from the reproductive calycles in September, 1854. The anatomical details of the medusa and its mode of development are, with one or two exceptions, identical with those of *Obelia commissuralis*, and, therefore, the illustrations of the latter may serve for the former. The only differences between the two are, that the medusa of *Eucopa diaphana*, while attached to the column of the reproductive calycle, develops twenty-four tentacles at once, and that, at the same time, the ovarian pouches (*Fig.* 9^a, *f*¹) become so far advanced as to be quite conspicuous, and extend from the base of the actinostome half way to the margin; while *Obelia* has only sixteen tentacles at first, and no sexual pouches. The eyes (α) are on the second tentacle from the radiating tubes.