

those among the Hydroids proper, from which no free Medusæ arise, are not to be associated with the Polyyps; their special structure and mode of reproduction showing them to be genuine Acalephs, as I trust to be able presently to prove, upon a broad basis of carefully considered facts. It may, however, facilitate the perusal of the next few chapters, if I add, that among the Hydroids, as I limit this order here, two more or less distinct forms occur, one of which leans towards the Polyyps by their general appearance, though in their structure they agree with the brood of the Discophoræ, and not with that of Polyyps; the other, resembling in every respect genuine Medusæ. Between these extreme forms, there exists every possible gradation, from Hydroids assuming medusoid characters, to true Medusæ, with some of the characteristic structural features of the Discophoræ either abortive or entirely wanting. Again, among these Acalephs we find a great variety of combinations of individuals: some forming compound communities, either attached to the ground or entirely free, in which the hydroid elements are predominant, and the medusoid elements assume the appearance of simple reproductive organs; others, forming similar compound communities, in which the hydroid and medusoid elements are more equally combined; others forming free compound communities, in which the medusoid elements are predominant, and the hydroid elements more or less subordinate; and, finally, others still in which the hydroid elements appear only in the young brood.

As the mode of development of the Medusa long known under the name of Sarsia, and its genetic relations to the Hydroid described under the names of Coryne and Syncoryna, afford the best opportunity of proving that free Medusæ may be produced by Hydroids, I shall make a beginning with this type, and first refer to the publications in which the information already on hand, respecting its history, may be found. In this type the hydroid and medusoid forms of the animal appear separately, in alternate generations; the hydroids forming communities or colonies which are attached to the ground, while the medusæ, budding from their branches, become free, and are found, at certain periods of the year, floating in the water as independent Acalephs, with distinct sexual organs, the males and females being developed upon different hydroid communities.

REFERENCES TO THE PAPERS IN WHICH THE INFORMATION NOW ON HAND UPON THE
GENUS CORYNE OF GAERTNER MAY BE FOUND.

- Coryne*, Gaertner, in Pallas, Spic. Zoöl., fasc. 10, 1774, p. 40, Tab. IV. Fig. 8, A, a.
 “ Johnston, Brit. Zoöph., 2d ed., 1847, p. 36, et Fig.
 “ Gosse, Devonshire coast, 1853, p. 189, Pl. IX., &c.
 “ Alder, Catal. Zoöph., 1857, p. 12, Pl. VII.