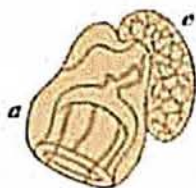


tube, and even the inverted rim of the margin of the bell so constant in naked-eyed Medusæ (*Fig. 36*); and though no mouth is described, I can hardly suppose that it is

Fig. 30.



Embryo of
DIPHYES SIEBOLDII, KÜLL.
(Copied from Gegenbauer.)

c Remnant of the embryonal body.
— *a* Swimming-bell developed
from the embryonal body.

wanting. The radiating tubes imply the circulation of a fluid, and that fluid is in all naked-eyed Medusæ derived from the surrounding medium, and introduced either through a proboscis or through a cruciate opening in the centre leading into the radiating tubes. The fact that in *Staurophora*¹ I have found an immense mouth where none was suspected, leads me to suppose that this young Diphyes and the so-called swimming-bells of the Siphonophoræ generally, must have such an oral opening, which has probably not been remarked only because such an opening would not be looked for in what was supposed to be a mere organ. Yet, considering the strict homology between the open Polyps, so called, and the closed sacs mixed with them in Physalia, and like them provided with tentacles, it may be that the swimming-bells are not open externally, and only communicate with the main axis.

Be this as it may, the swimming-bells of the Diphyidæ cannot be compared to the swimming-bag of the Physalia, which, as we have seen, is the common base of all the Hydroids of that community; nor is it homologous to the so-called swimming apparatus of the Physophoridæ. The only part in these different communities really identical in all Siphonophoræ is the caual marked *c* in *Figs. 34* and *35*, along which hang the heterogeneous individuals of the community in Diphyidæ, Physophoridæ, and Physalidæ; in the same manner as the many individuals of the common Hydroids are attached to their hollow axis. In Diphyes proper there exist, generally, two so-called swimming-bells of nearly the same size, though occasionally but one is observed, and in others the lower one appears sometimes so much smaller than the upper one, that, taking these facts in connection with the facts observed by Gegenbauer respecting the origin of the first swimming-bell from an egg, it is natural to infer that the second swimming-bell arises from the main tube of the first, and gradually enlarges to the same size; in the same manner as in the proliferous naked-eyed Medusæ (*Figs. 12, 13, and 14*), in which one of the four radiating tubes becomes the basis of attachment of numerous lateral bells. It is farther to be observed, that the pendent string of Diphyes, with its numerous individuals, is only a continuation of that same tube which connects the two swimming-bells, and that the individuals attached to it arise also as buds from it. But here we perceive a variety of parts which require our special attention.

The individuals described as Polyps, or suckers, in Diphyes, are as it were

¹ AGASSIZ (L.), Contributions to the Natural History of the Acalephs, Part. I. p. 300.