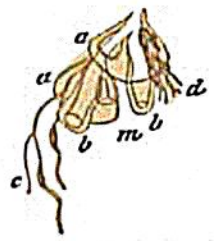
protected by a flattened, scale-like, gelatinous body (*Fig.* 37 *a a*), and between the scale and the Polyp hangs a complicated tentacle, *c d*. These individuals I consider to be identical with the Hydroids of the Physalia, the so-called Polyp representing the proboscis, as we observe it in Coryne and Clava, only that each is provided with a single tentacle and surrounded by a protecting scale. Now, if I am not greatly mistaken, that protecting scale must be considered as a sort of bell, analogous to that of Campanularia, but gelatinous, and split open on one side; and the so-called sexual organs (*Fig.* 37 *m*) of these so-called Polyps are genuine Medusæ buds, with a proboscis, four radiating tubes, and a circular tube, with a diaphragm around the rim, exactly as in naked-eyed Medusæ, producing eggs or spermatic cells upon the proboscis, according to the male or female character of the different individuals, exactly in the same manner as in Sarsia or Hippocrene.

Fig. 37.



Two twin individuals of the pendent string of the community of DIPHYES SIEBOLDII, Köll.

a a The so-called scales. — *b b* The so-called Polyps. — *m* The so-called sexual capsule. — *c* External feeler, with lasso cells. — *d* Feeler contracted.

We have, then, in a Diphyes community, three kinds of individuals.[1] First, one or two, or sometimes three, Medusoid individuals at the base of the stock; secondly, a large number of more Hydroid-like individuals hanging connected with the pendent string, but differing from the common Hydroids in having an open, gelatinous, somewhat Medusoid bell, commonly called scale; and, thirdly, arising from the base of the proboscis of these Hydroids, genuine Medusæ buds that are either male or female, and which can no more be considered as the sexual organs of these so-called Polyps, than those of the types already considered, since they are themselves provided either with an ovary or a spermary.

The Diphyes community presents another peculiarity, highly important with reference to a correct appreciation of the Medusoid character of the genuine Hydroids. In most of these, we find that every individual consists chiefly of a bell-shaped or trumpet-shaped or club-shaped sac, with tentacles around the central opening, or upon its sides or around its base, comparable, indeed, in every respect, to the proboscis of the naked-eyed Medusæ as it exists in Sarsia. But though the body of the individual Hydroids appears more or less bell-shaped, as in Tubularia and still more in Campanularia, yet that bell is not hyaline and gelatinous like the bell of the Medusæ proper, while the so-called scale of the Diphyes is so, thus forming a sort of transition to the so-called swimming-bells, in which the radiating and circular tubes are fully developed, as in ordinary Medusæ, but at the expense of the proboscis, which is wanting. This would at once explain why the

[1] For illustrations of this and the following families I would refer to the papers of Gegenbauer, Huxley, Kölliker, Leuckart, and Vogt, quoted page 27, notes 5, 10, 11, 12, and 13.