

secondary folds lie in each transverse fold. The interspaces between these folds perhaps develop into special genital sinuses with excretory passages opening into the pouch space and from there into the ring sinus, which probably comport themselves as in the complicated forms of the Lucernaridæ. The complicated structure of this many-folded genital band, is, however, as in the Lucernaridæ, very difficult to make out. In the single specimen of *Periphylla mirabilis* before me, the ripe pouches of the testes were already flattened for the most part, and the spermatozoa emptied into the coronal sinus. The small follicles of the testes which, closely placed together, compose the folded genital band, are placed in 3-4 layers, the one above the other, and have an irregular roundish polyhedric shape, and measure 6, 1·0, 5· in diameter. Each single follicle (fig. 40) is surrounded and separated from the others by a thin fulcral lamella containing nuclei (*zs*). In transverse section, under stronger magnifying power, we see that the larger mother-cells of the spermatozoa (*sd*), which arise from the endodermal epithelium of the sinus wall, line the wall of the follicle, whilst the centre is filled by the ripe spermatozoa (Pl. XXIII. fig. 40 *sz*).

Periphema,¹ Hæckel, 1877.

Periphyllidæ, with four perradial buccal pouches of the œsophagus and four perradial niches of the basal stomach, united in its aboral basis. Between the niches, the four subumbral funnel cavities (or the four hollow interradianal tæniola of the basal stomach) form hollow cones, which are beset with two rows of gastral filaments, but are free from them above each end, separated below the point of the cone.

I established the genus *Periphema* in 1877 (in the Prodrömus Systematis Medusarum) for a large Periphyllid, of which there were, unfortunately, only broken and incomplete fragments of a single, very large specimen in the Challenger collection. I was, however, able by careful examination of these fragments, and with the help of other Periphyllidæ examined by me (viz., by comparison with the large, perfectly preserved specimen of *Periphylla mirabilis*), to compose a complete quadrant of the Medusa from the fragments, from which the figure in Plate XXIV. is drawn in its natural size. The reconstruction was more difficult, as the enormously developed proboscis or buccal stomach (fig. 3) was completely torn away from the pylorus and broken in pieces, and there were also distracting abnormal deformities—clearly in consequence of an earlier but completely healed injury—on the only remaining quadrant of the subumbrella (fig. 1), which I have of course left out in the figure. Apart from these, our *Periphylla regina* seems very closely allied to the preceding *Periphylla mirabilis*, and I therefore included it without hesitation in this genus in my System (1879, p. 421). However, I now consider it more appropriate to separate it generically from *Periphylla regina* under the

¹ Περειφημῶς = greatly renowned.