

the crescentic folds at the end of each longitudinal furrow. The umbrella corona may be subdivided into an upper pedal girdle and a lower lobe girdle. The pedal girdle ("zona pedalis") is, however, much less strongly developed than in most other *Periphyllidæ*, and hardly 2 cm. high. The pedalia are slightly vaulted and comparatively small. The lobe girdle of the umbrella corona (figs. 1, 2, "zona lobaris") is more strongly developed in *Periphylla regina* and differently shaped from that of *Periphylla mirabilis*. The sixteen subradial marginal lobes are much larger compared to the pedalia, and are rounded, not pointed. The difference in size between the four pair of ocular lobes, and the four pair of tentacle lobes alternating with them is considerably greater. Neither the two gelatinous swellings lying in each marginal lobe nor the inter-furrow are so thick as in *Periphylla mirabilis*; the lobe clasp ("loboporpa," fig. 2, *kl*), which lies at the bottom of this furrow, and supports the septum between the two halves of the pouch, is much feebler, but shows the same structure in transverse section, fig. 10, comp. above, p. 71), on the other hand, the thin delicate wings ("patagia," *lp*), which form the selvage of the lobe margin, are much broader and longer in our species than in the foregoing. If we measure from the circular line of the exumbrella, indicated by the insertion of the tentacles between the marginal lobes, the tentacle lobes are 50 mm. long (without wings, 35 mm.), and the ocular lobes only 45 mm. (without wings, 30 mm.). The tentacle lobes are more than 30 mm. broad in the middle, the ocular lobes a little over 20 mm. (figs. 1, 2).

The four interradial sense clubs in this species appear to be very small and almost rudimentary (fig. 2, *o*); in the fragment to hand, however, there was only one preserved, and it did not allow of closer investigation. Only half of the twelve tentacles were preserved (figs. 1, 4). They are on the whole of the same nature as in the preceding species (comp. above, p. 67), but are considerably shorter and thicker. Their length is nearly equal to the height of the umbrella (18–20 cm.), whilst in *Periphylla mirabilis* it is twice as great. The longitudinal muscle appears to be less strongly developed. The thickness of the hollow tentacles at the conically swollen base amounts to 10 mm. They then thin away into a cone and run out below into a fine point (fig. 2, *t*). The peculiar insertion of the tentacle by two root muscles (*mk*) inside a tentacle funnel (*it*), and the remarkable formation of the double-valved vent-hole at its base, is the same here as has been already described in *Periphylla mirabilis* (comp. Pl. XXII. fig. 22, and Pl. XXV. fig. 1).

The inner concave umbrella wall (subumbrella, Pl. XXIV. fig. 1) in *Periphema regina* shows on the whole the same conditions already (p. 71) described in detail in *Periphylla mirabilis*. The muscular system is, however, much more strongly developed in the former, and the separate muscles show more prominently. The eight longitudinal deltoid muscles ("musculi deltoidei") are yellowish-white, very stout, firm glistening bands, and appear remarkably powerful. The strongest is the interradial deltoid muscle (fig. 1, *md'*), an equilibra-