

genitalia fixed on its subumbral side. It is very much thickened in the centre of the apex, and projects into the fundus of the gastral cavity in the form of a short, conical, gelatinous appendage (fig. 2, *nk*). On the other hand, the gelatinous substance is much thinner in the lower oral half, hardly one-fourth or one-fifth as thick as in the upper half, from which it is sharply divided (half-way up the height of the umbrella) by the exumbral circular furrow. An enormous number of sinuous elastic fibres, running from the exumbral to the subumbral wall, traverse the gelatinous substance of the umbrella, to which they give a considerable degree of firmness; they are placed together in dainty pyramids (fig. 8, *uf*), whose points touch the exumbrella (*e*), and their bases the subumbrella (*w*); these pyramids form regular longitudinal series, corresponding to the exumbral radial ribs.

The umbrella margin ("margo umbralis," figs. 1, 11, 12, 20) is not so visibly lobed in this genus of the Pectyllidæ as in the two others, but rather appears to be of equal thickness all over, and closely beset with an enormous number of short sucking-tentacles placed in several rows above each other. Closer consideration, however, shows that this garniture of the umbrella margin is by no means equally distributed, but rather arranged in eight larger and thirty-two smaller groups. These, however, hang closely together, and are not separated by depressions as in *Pectyllis* and *Pectanthis*. A similar lobed formation of the umbrella margin also exists fundamentally in *Pectis*, though it is not so apparent externally as in the other two genera. Each of the thirty-two small groups of tentacles (fig. 20, *td*) consists of from 30 to 40 solid tentacular appendages. Of these the 16 to 20 upper (proximal) are short-stalked, pyriform, or club-shaped sucking-cups, the 12 to 16 lower (distal) on the contrary are somewhat longer tentacles, partly with a terminal sucking-cup, partly apparently forming feelers. These "tactile tentacles" without sucking-cup (fig. 17) were mostly torn away, the longest barely above 1 mm. in length. They are probably much longer in the living animal (as in *Pectyllis arctica*, Pl. III. fig. 1). The numerous sucking-cups form 6 to 8 alternating rows placed one above the other on the umbrella margin; in each of the thirty-two small groups, which have an almost rhomboidal outline, they are placed in 5 to 6 diagonal rows, each with 4 to 5 tentacles (fig. 20). The size of the sucking-cups, which enclose a visible conical ectodermal sucking cavity, decreases gradually from above downwards (fig. 12). A larger sucking-cup is placed above somewhat further on the umbrella margin (fig. 20, *st*). All the tentacles of this genus are solid; their endodermal axis consists of large clear chordal cells which are sometimes placed in a discoid row one behind the other (fig. 17, *dt*), sometimes more numerous and in a more complete arrangement beside each other (fig. 15, *dt*). This vesicular axial tissue is covered by very powerful internal annular muscles, which thicken at the end into a strong annular swelling; single bundles of external longitudinal muscles, very much thickened at the exumbral side of the tentacles, extend out above these annular muscles; they run out below the sucking-