

come on one tæniolum, and are placed in some measure on two diverging limbs of the tæniola.

The phacelli or the longitudinal rows of the gastral filaments (Pl. XX. fig. 8; Pl. XXI. figs. 14–18; Pl. XXII. figs. 23–28) are extremely powerfully developed both in *Periphylla mirabilis* and in the following *Periphema regina* (Pl. XXIV. fig. 1). The number of filaments amounts to several thousand, and their length to 30 or even 40 mm. They are apparently distributed over the whole extent of the basal and central stomach that they form eight continuous longitudinal rows or “phacelli,” which run divergingly from the conical basal stomach. Closer inspection, however, shows that the two phacelli of each pair originate as diverging limbs, from a simple interradiial phacellus deep in the bottom of the basal stomach. They there form a simple row of short filaments, which stand freely on the interradiial tæniola and project into the basal gastral cavity. This simple phacellus soon divides into two limbs, which diverge only slightly at first but more strongly afterwards. At the pylorus they diverge so strongly that they touch the meeting limbs of the adjacent tæniola in the four perradiial angles of the pylorus. They then run along the margin of the gastral openings (*go*) nearly to the upper margin of the palatine groove. Each perradiial gastral opening is bordered on both sides of the margin by a row of long gastral filaments, which project freely into the central gastral cavity. These filaments are generally 1–2 cm. long.; many of them, however, 3–4 cm. long; their breadth varies between $\frac{1}{4}$ and 1 mm., but often amounts to $1\frac{1}{2}$ –2 mm. They are sometimes more cylindrical in shape, sometimes flattened like a ribbon, often tongue-shaped at the end (Pl. XXII. fig. 23; transverse section figs. 24, 25). The structure of these gastral filaments is the same as usual (fig. 26). A gelatinous supporting plate (*z*), enclosing scattered cells, is covered with an endodermal epithelium, which contains three kinds of cells, (1) narrow, high, cylindrical flagellate cells (*fe*); (2) flask-shaped glandular cells with turbid contents, consisting partly of finely granular protoplasm, partly of large, strongly-refractive corpuscles (*fd*); (3) thread-shaped epithelial muscular cells containing nuclei (*fm*). These endodermal muscular cells, hitherto sought for in vain, exist, I believe, isolated here in the large contractile and very mobile gastral filaments (fig. 28).

The peripheric coronal intestine (“gaster coronaris”) includes the entire peripheric part of the gastrovascular system (as opposed to the axial principal intestine) and occupies the whole subumbrella from the pylorus to the umbrella margin. It is divided into two principal sections, which are separated by the upper or proximal margin of the coronal muscle. The upper or proximal section itself fills the large coronal sinus, whilst the lower or distal section forms the peripheric corona of pouches. This consists of sixteen quadrangular coronal pouches, which correspond to the coronal plates of the coronal muscle. Three pouches, two lateral lobe pouches, and a middle pouch passing into a tentacle or a sense club, run out from the distal margin of each coronal pouch. The