

("spermaria," *sm*) form eight horseshoe-shaped or U-shaped glands, which lie adradially in the subumbrel wall of the coronal sinus. The convex arch of each horseshoe is turned distally, and nearly touches the proximal margin of the coronal muscle (*mc*), whilst the two parallel limbs of the horseshoe are directed proximally (or centripetally), and their points nearly touch the pyloric stricture (*gy*). The eight U-shaped reproductive glands therefore extend in an adradial direction through nearly the entire height of the coronal sinus (*os*), and only leave a small part of the upper (proximal) margin and the lower (distal) margin of its subumbrel wall free. The eight genitalia are connected in pairs, in such a way that a pair lies between each two perradial gastral openings (*go*). The two genitalia of each pair are divided by the intergenital longitudinal muscle (*ms*) in the upper (proximal) half, by the septal nodes (*kn*) in the middle, and by the interrarial deltoid muscle (*md*) in the lower (distal) half. The four pairs, on the other hand, are divided by the four gastral openings (*go*) in the upper half, and by the four perradial deltoid muscles (*md*) in the lower half. The lower half only lies freely in the coronal cavity of the umbrella (*hc*), whilst the upper half is concealed deep in the funnel cavity (*ie*). The four limbs of each pair run nearly parallel in the upper half (in the funnel cavity), whilst the two genitalia of each pair diverge distally (in the coronal cavity of the umbrella), as they diverge parallel to the two limbs of the interrarial deltoid muscle. The two limbs of each genitalium converge, however, at their distal end, and are connected there by the cords of the horseshoe, whose convex outer margin nearly touches the inner margin of the coronal muscle (comp. Pl. XX. fig. 8, and Pl. XXV. fig. 1). The two limbs of the horseshoe-shaped genital band are broadest below (1 cm.), and gradually narrow as they run up (0.5 cm.) towards the proximal points of the two limbs (Pl. XXIII. fig. 38). The limbs are of equal length in *Periphylla mirabilis*, whilst in *Periphylla hyacinthina* the lateral limb (next the gastral opening) is much shorter than the medial limb (next the septal nodes). (Comp. my System, Pl. XXII. figs. 13, 16.)

Structure of the spermaria (Pl. XXIII. figs. 38-48). Each of the eight horseshoe-shaped genitalia shows a projecting, nearly adradial, selvage, the genital rib ("costa genitilis, sterigma," *st*) between its two limbs. It consists of a firm selvage-like thickening of the fulcral plate of the subumbrella and of the weak axogenital longitudinal muscle (*mx*) lying on it. Gelatinous transverse selvages run, as in a pinnated leaf, from both sides of this midrib, and serve to support the separate pouch-shaped transverse folds of the genitalium (fig. 38). More minute examination shows that the testis represents a broad U-shaped arched band having many transverse folds along its whole length. The convex lateral margin of the U-shaped band is fastened to the subumbrel wall of the ring sinus, whilst the concave, medial margin projects slightly into the canal space of the ring sinus. The separate pouch-shaped, arched-out, transverse folds of the genital band, amounting to about 50 to 60 in each genitalium, are of a narrow, oval or conical shape, and bear the same relation to the midrib that the pinnæ do in a pinnate leaf. Numerous