

the lung cavity, is smooth. Otherwise the walls of the cavity are thick, yellowish-grey coloured, spongy on the surface. Along its length the middle part of the right wall stands out somewhat, and is prolonged backwards, being traversed by the respiratory tube. In front, above and below, the wall for a certain space projects somewhat above the general level, and is here of a yellowish colour;¹ these parts, however, are only produced by the peripheral development of the *kidney*. On transverse sections being made through the thicker parts of the walls of the lung, the yellowish kidney is clearly visible in its interior with a roundish lumen; the cavity of the kidney could be followed beyond the pneumostome; the renal pore is said to be situated "behind the anus" (Semper),² but I did not succeed in discovering it; it seemed much more likely that the kidney opened by a cleft within the respiratory cavity, and thus into the lung. I was unable to detect a renal syrinx.

The *hermaphrodite gland* is about 10·5 mm. long by 15 mm. broad and 11 mm. high, of yellowish colour; it is made up of two equal halves, each of which is again composed of numerous smaller parts; in the lobes were large oogene cells and zoosperms. The *hermaphrodite duct* arises by two branches from the hilus of the gland, and is coiled in a cork-screw fashion; when unwound it measured 6 cm. long by 8–1 mm. in diameter; it enters the hinder part of the anterior genital mass.—The *anterior genital mass* is 22 mm. long by 14·5 mm. high and 16 mm. broad; it is irregularly heart-shaped, flattened obliquely behind by the hermaphrodite gland; the right margin is convex and crenate, the left margin straight and flattened; the upper side is a good deal covered by the hinder liver, and is somewhat flattened; the under side is arched. This genital mass is made up of a larger yellowish part, which by a notch on the right margin is divided into two equal parts (*mucous gland*), and a smaller whitish portion (*albuminiparous gland*) which occupied the middle of the left half, especially on the under side. The female branch arising from the hermaphrodite duct opens near the albuminiparous gland. In the mucous duct, near its origin, opens the duct of the *seminal bladder*. This last lies behind and below the anterior genital mass, filling the apex of the visceral cavity; it is yellowish and of a somewhat flattened-spherical form, about 10 mm. in diameter, filled with detritus and fatty matter. The duct of the seminal bladder is rather thin and much coiled; when unrolled it measures at least twice as much as the bladder. The *mucous duct*, which runs along the outside of the rectum, is thin; for the first 8 mm. it runs obliquely backwards to the right side of the body, held in position by several obliquely crossing bundles; the duct, about 5 mm. in length, then passes further out, just under the lung, and extends as far as the vulva, which forms a small slit just (about 7 mm.) in front of the respiratory cavity, about the hinder end of the genital furrow; this vagina has folds on

¹ H. v. Jhering, Ueber die system. Stell. von Peronia, 1877, p. 18. He regards this last portion as an additional kidney, which only has a delicate covering of spongy (lung) tissue.

² Semper, Einige Bemerk. über die Nephropneusten, *loc. cit.*, p. 486.