

are a series of quadrate genital masses (Pl. VIII. fig. 10) along each side of the body projecting into the peribranchial cavity. Each mass (Pl. VIII. fig. 11) is composed of a central testis, around which is the ovary. The testes are all connected by a conspicuous winding vas deferens, behind which is a wider oviduct.

In *Cynthia* the testes and ovaria are usually united into one or more ramified or lobed masses, which are placed between the inner surface of the mantle and the lining membrane, which is pierced by the ducts opening into the peribranchial cavity.

In *Pelonaia* there are two elongated genital masses, one upon each side and attached to the mantle. Each consists of a tubular ovary, bent in a wide loop, with the oviduct opening in front, and of a series of testicular vesicles arranged along the sides at right angles to the ovary, and having ducts which pass across it to join a central vas deferens terminating anteriorly along with the oviduct.

In *Styela* various arrangements are found;—usually one or two long sausage-like masses are formed, each of which is composed of a number of small ovaria and testes, while in the nearly allied *Polycarpa* all the small glands are distinct, so that there are a very large number of small ovaria and testes projecting from the inner surface of the mantle, and each opening separately into the peribranchial cavity. In some species a number of these small testes are arranged around each of the ovaries, and their ducts join to form a common vas deferens opening beside the short oviduct. In several genera of the Cynthiidae there are projections from the inner surface of the mantle, sometimes pedunculated and rather like the genital glands, which have been described under the name of “endocarps.” They are formed chiefly of the connective tissue of the mantle, and contain a large number of blood sinuses. Kupffer has noticed that they are especially developed in species with a powerful musculature in the mantle, and hence he considers that they are reservoirs into which the blood in the mantle sinuses may be injected when the body is forcibly contracted. Possibly, as suggested by Hancock, they serve merely as pads to keep the branchial sac and the genital glands apart.

In *Ascidia* the ovary and testis are single racemose glands lying in the fold of the intestine on the left side of the body (fig. 9, p. 40, and fig. 13, *ov.*, p. 52), and sometimes extending partly over the wall of the intestine and stomach. The ovary is usually a branched organ, the different branches uniting at a point near the centre of the intestinal loop where the oviduct commences. This duct runs along the posterior border of the intestine, and the dorsal edge of the rectum, to open into the peribranchial cavity near the anus. The testis is formed of a large number of delicate white tubules which branch dichotomously over the ovary, the stomach, and the intestine, and end in small pyriform or elongated enlargements. A vas deferens, commencing like the oviduct at the point of union of the tubules, runs alongside the oviduct during its entire course, and terminates beside it in the peribranchial cavity.

In *Clavelina* the genital glands lie in the abdomen, on the left side of the intestine,