

by a commissure, so there is only one true testis, which has the form of a capital U. From the upstrokes of this U, on both sides, those parts originate which penetrate the leg, and which extend almost to the end of the fourth joint. The two parts of the testis which run longitudinally through the body are broad and flat; their course is not straight but rather undulated, being bent outwards whenever a lateral branch takes its origin. Although the organ is placed at the dorsal side of the body and legs, the male genital pores are situated ventrally towards the end of the second joint of each leg. This external opening is very small and is at the tip of a distinct conical tubercle. It leads into a canal which runs backwards almost parallel with the margin at the distal extremity of the joint and closely adheres to its chitinous covering; this canal runs along the wall of the joint till it reaches the dorsal side of the leg, here it becomes wider and turns inwards till it reaches the testis, which shows a small knob facing the beginning of the canal. Plate XXI. fig. 11, shows these particulars; the joint is figured as transparent, and the muscles which run from this to the following joint are to be considered as removed. The outer part of the canal, from the opening for about one-fourth of its length, is furnished with a thicker wall, and this shows most probably the extent to which the chitinous covering of the leg is bent inward. The remainder of the canal is formed of connective tissue,—at least I failed to observe an endothelial covering,—lined externally by a distinct muscular layer, the fibres of which run longitudinally and are not striated (Pl. XXI. fig. 13).

As seen in fig. 2, Plate XVIII., that part of the testis which penetrates the leg is in a transverse section kidney-shaped; a longitudinal duct is formed between the gland and the thin tissue or membrane which it touches laterally at two points. Most probably it is with the duct so formed that the canal which opens at the distal extremity of the second joint is in communication.

I have observed nearly the same structure of the male genital organs in the extremely transparent species of *Nymphon*, to which I have given the name of *Nymphon perlucidum* (p. 50 of this paper), and also in *Nymphon robustum*, Bell. Both species show genital pores in the male sex, only on the two hindmost legs; and quite in correspondence with this observation only two pairs of lateral excrescences of the U-shaped testis are to be seen. So when Dohrn says, for Pycnogonids in general, that the male organs penetrate each leg and open in a round pore on the ventral side (which is, no doubt, the case in all the species examined by him), he is laying down a rule which admits of a great many exceptions; for among the Pycnogonids dredged by H.M.S. Challenger there are species having their male genital pores only on the two hindmost legs; again, there are some which possess them on the three hindmost pair of legs, and, finally, there are species with pores on all the legs. My doubts about this point were cleared up by the observation of those species which bear their male genital pores at the tip of a stout cylindrical outgrowth (species of *Ammothea*, e.g.).