

specimen is a male ; even in very young females at least a trace of the ovary is always to be observed in those joints.

According to Dohrn the female glands are disposed in the same way as the testis, with the only difference, that in the ovaries of most species, the lateral excrescences which penetrate the legs and often force their way into the penultimate joint, are the only parts which develop mature eggs.

What I happened to observe agrees almost completely with Dohrn's description. I perfectly believe, however, that the occurrence of a part of the ovary in the body of a Pycnogonid is rather rare, because, as a rule, only the lateral excrescences remain. No doubt this must be considered as a secondary condition ; and seeing that, so far as I could ascertain, it is the rule in all the species of *Nymphon*, my original opinion, that the genus *Nymphon*, of all the genera of Pycnogonida, resembled most the hypothetical ancestors of our group, was severely shaken.

The genus *Colossendeis* affords a beautiful example of the original condition of the ovary. I examined a specimen of *Colossendeis leptorhynchus*, Hoek. A transverse section of the body showed the place occupied by the ovary, and convinced me of the exactness of Dohrn's assertion. However, as in the case of the testis, Dohrn's observation is incomplete in one respect ; there are not two ovaries, but only one. Immediately in front of the abdomen the two lateral parts are united by a cross-piece, and so the ovary has the very same shape as the testis, viz., that of a U with long upstrokes. That it occupies also the same position in the body as is the case with the testis, is clearly seen in fig. 14, Plate XXI., which is a drawing of a transverse section of the body. In *o.* the ovary is shown placed above the intestinal tract and its excrescences which penetrate the legs. The dimensions of the eggs in that part of the ovary which is situated in the body are, at least in this species, the same as of those eggs which are found in the thighs of the legs. The lateral excrescences penetrate all the legs, and in the specimen I studied reach the sixth joint. This, most probably, will greatly depend on the state of maturity of the animal. I often found the eggs only in the thigh, but often also (*Hannonia typica*, Hoek, Pl. XIV. fig. 11, *e.g.*) the eggs are found as far as the end of the second tibial joint. The ovary is always placed dorsally to the intestinal tract, which is also the case with those animals which have only the lateral excrescences left, and thus show several ovaries.

The structure and the formation of the ovarian eggs I will describe further on. In regard to the way in which the eggs are laid, I had the good fortune to observe the copulation of a male and female *Phoxichilus laevis*, Grube, when I was, last summer, in the zoological station of Professor H. de Lacaze-Duthiers at Roscoff. The eggs are fecundated the moment they are laid, and the copulation, therefore, is quite external, brought about by the genital openings of the two sexes being placed against each other. Half an hour after the beginning of copulation, the male had a large