with the wall of the leg. The one part is filled up with the ovary, the other partly with the cœcum of the intestine. The ovarian eggs are small and are furnished with a central germinal vesicle. Most probably the females of the species of *Ascorhynchus* have an oviduct like that of the species of *Colossendeis*. The species of *Pallene* show the same disposition as in *Nymphon*. A transverse section of the thigh of *Pallene australiensis* corresponds perfectly with that of *Nymphon brevicaudatum*, figured in Plate XVI. fig. 7; there is one very large and probably mature egg with an eccentric germinal vesicle, and numerous smaller ovarian eggs, with their vesicle in the centre. Moreover, minute researches on *Pallene brevirostris* (an inhabitant of the Dutch coast) admit of no doubt as to the structure of the ovaries; they are totally wanting in the body, and take their origin in the thighs of the legs. The eggs when mature are large, and their number is limited.

In the genus *Phoxichilidium* I studied the anatomy of the body of *Phoxichilidium pilosum* (a female specimen) without meeting with the ovary. In the legs of this species, however, and also of *Phoxichilidium patagonicum*, I soon found it. The whole cavity of the leg is often filled up with eggs, and these are even observed pressed closely against the wall of the leg (Pl. XVI. fig. 17). The eggs are comparatively small and very numerous. The membrane of the eggs is much thicker than is the case with the eggs of the other genera (Pl. XXI. fig. 18). Neither in the species of *Pallene* nor of *Phoxichilidium* did I observe the least trace of an oviduct, so I think that here, as in *Nymphon*, the genital aperture communicates directly with the cavity of the leg. I think also that the circumstance I often observed of eggs free in the cavity of the leg is in support of this opinion (Pl. XXI. fig. 18). For the other genera of Pycnogonids I have, so far as the ovaries are concerned, no observations worth mentioning.

7. *Observations on the Embryology of the Pycnogonida.*—Among the Pycnogonids of the Challenger Expedition there were some species provided with eggs. On account of the great importance of embryology for the study of the affinities of a group of animals I tried to acquire as much information on this subject as possible. Unfortunately, with the exception of one species belonging to the genus *Ascorhynchus*, G. O. Sars, all the species with egg-masses belong to the genus *Nymphon*, Fabr., but of these there are out of twelve species no less than six provided with eggs.

The researches of Kröyer, Johnston, Goodsir, Dohrn, Semper, Cavanna, and myself, have shown that in the genera *Pycnogonum*, *Pallene*, *Phoxichilus*, *Phoxichilidium*, *Nymphon*, &c., the eggs after having been laid are carried on the so-called ovigerous legs. The honour of having discovered that not the females (as was believed by the older authors) but the males fulfil the duty of bearing these eggs is due to Cavanna; this observation has since been confirmed by the researches of Dohrn, Böhm, and myself.[1]

[1] The observations of Cavanna were published in the year 1875. It is indeed strange to see that neither Wilson nor Miers have heard of this discovery. These authors, in their descriptions of new species, &c., are therefore almost constantly confounding the two sexes.