

appearance of being surrounded by a very thick and concentrically stratified membrane (ovarian egg of *Nymphon brevicaudatum*, Pl. XXI. fig. 15). In other species (*Nymphon robustum*, Pl. XXI. fig. 16) this membrane is perfectly transparent, while in both cases the granular protoplasm of the egg within this thick membrane or capsule seems to be surrounded by its vitelline membrane. In a third case, which I observed in *Nymphon longicoxa* (Pl. XXI. fig. 17), the membrane of the egg does not seem to be thick, but irregularly folded and crumpled; yolk-particles are here very numerous in the central part of the egg, which surrounds the germinal vesicle; and the protoplasm of the egg extends beyond this central part till it reaches the crumpled membrane. However, it is very probable that the condition of the eggs has suffered from their having been so long in alcohol, only I wish to point out that from what I observed it is almost certain that any one studying the formation and the development of the animal egg, will find a very interesting object in the egg of the Pycnogonida. The dimensions of the mature ova are very different. Of the specimens I studied they are largest in *Nymphon longicoxa*, *N. brevicaudatum*, and *N. robustum*, a great deal smaller in *N. brachyrhynchus* and *N. hamatum* (the number of eggs united in an egg-mass being always in inverse proportion to their size).

While in the younger ovarian eggs the germinal vesicles as a rule are placed in the centre of the egg, in the very large mature egg the vesicle is placed close to the wall. Sometimes (*Nymphon longicoxa*) it has the shape of a sand-glass, and once I observed an extremely small micropyle canal in the membrane of the egg, just opposite the place occupied by the germinal vesicle. As a rule there is only one germinal spot, but I once observed two distinct spots in the germinal vesicle of the egg of *Nymphon longicoxa*. In the ovarian egg of *Nymphon robustum* one distinct nucleolus may be observed almost exactly in the centre of the rounded and granular germinal spot. As for the manner in which the eggs make their way to the genital apertures in those cases in which no true oviduct is observed, I think there can be no doubt that the body-cavity itself performs the function of an oviduct. The absence of such a duct at the genital pores, and the fact that I repeatedly observed detached eggs pressed against the connective tissue surrounding the ventral ganglia or other parts in the interior of the body admits of no doubt in this respect.

All I have said about the ovary and the formation of the ova in the genus *Nymphon* also holds good in the case of the other genera. The limited quantity of specimens prevented me from making a section of the body of species of these genera. Most probably *Ascorhynchus* will show the same disposition as *Colossendeis*. A transverse section of the thigh of one of the legs of *Ascorhynchus orthorhynchus* is figured in Plate XVI. fig. 11. The thigh is much more dilated than one of the other joints of the leg, yet it is not round but flattened, and the contents are almost divided into two unequal parts by the large chitinous thickening, which at the one side is in connection