secrete a thin viscous fluid which envelops the eggs. When no eggs pass through the oviduct the secretion continues incessantly, and in this way a thick mass is formed.

It is not my opinion that this little sac is a useless organ, and I believe that, after all, the interpretation of Krohn is more in accordance with the facts than that of Kossmann. The latter author, moreover, made an elaborate study of *Anelasma squalicola*,[1] with the intent to show that this Cirriped is not "in an embryonic condition," as Darwin supposed, but in a rudimentary state in consequence of its parasitic mode of life. The root-like ramifications of the peduncle—observed by Darwin—do not serve only to attach the animal to the skin of the shark (as was supposed by Darwin); with their aid the Cirriped sucks the greater part of its food out of the skin of the animal in which it is embedded. The simple, degenerated, condition of the parts of the mouth and of the cirri is a rudimentary state in consequence of disuse. No details are given as to the condition of the intestinal tract in the animal in question: whether it is in open communication with the connective tissue of the peduncle, &c. The root-like excrescences of the peduncle of *Anelasma* are compared by Kossmann with the roots of the parasitic Cirripedia, and according to this author *Anelasma squalicola* is an intermediate form uniting together *Lepas* and the parasitic Cirripedia.

Embryological papers have appeared in great variety since the publication of Darwin's book. It is not my intention to enter into details upon each of them; I only wish to trace the present condition of our knowledge concerning the Cirripedia. The curious metamorphosis of the Crustaceans of this Order discovered by Thompson,[2] is amply discussed in Darwin's Monograph. The researches made and published during the last thirty years bear almost entirely upon the segmentation of the egg and the formation of the blastoderm, which processes, since the publication of the papers of Filippi,[3] Münter and Buchholtz,[4] Hoek,[5] and Lang,[6] are tolerably well known. On the contrary, we are quite left in the dark as to the way in which the different organs are formed, what we are to understand by germinal layers in the case of the Cirripedia, &c.

Again, the result of the development within the egg is well-known. The Nauplius-larva, considered by the older observers[7] as a full-grown animal, has been recognised since the discovery of Thompson, as the larval form presented by the Cirripedia when first hatched. A second series of papers treats of the metamorphosis this larva undergoes before reaching the adult state, and compares the development of the Cirripedia with

[1] Kossmann, *loc. cit.*, p. 180.

[2] Thompson, J. V., Discovery of the metamorphosis in the second type of the Cirripedes, viz., the Lepades, completing the natural history of these singular animals, &c., *Phil. Trans.*, 1835.

[3] Filippi, F. de, Ueber die Entwicklung von Dichelaspis darwinii, *Moleschott, Untersuch.*, Bd. ix. 1865.

[4] Münter und Buchholz, Ueber Balanus improvisus, Darw., var. gryphicus, Münter, Abth. 2 *Mittheil. a. d. Naturwiss. Verein. v. Neu-Vorpommern u. Rügen*, i. 1869.

[5] Hoek, P. P. C., Embryologie von Balanus, *Niederländ. Archiv f. Zool.*, Bd. iii. 1876.

[6] Lang, A., Die Dotterfurchung von Balanus, *Jenaische Zeitschr.*, Bd. xii. 1878.

[7] O. F. Müller and others.