

However, it would be rather premature to draw the conclusion that the Crustacea Podophthalmata of the deep-sea do not suffer from parasitic Cirripedia.

Although Cavolini<sup>1</sup> (1787) published recognisable figures of the full-grown animals, and of the larva, and also showed the great resemblance of these larvæ to those of *Cyclops*; though different forms of these curious parasites were known long before 1854, from the papers of Rathke<sup>2</sup> and others;<sup>3</sup> though Thompson,<sup>4</sup> in 1836, speaks of a concealed affinity between these parasites and the Cirripedia, Darwin, as their true Cirripedial nature was not yet proved, could not take notice of them in his Monograph. Steenstrup<sup>5</sup> (1854) and Lindström<sup>6</sup> (1855) were, after Thompson, the first who suggested in their papers the relation of these parasites with the Cirripedia; but Lilljeborg<sup>7</sup> (1861) no doubt has the merit of having been the first to base this relation on anatomical grounds. Fritz Müller<sup>8</sup> (1863) (in the case of *Lernæodiscus* and *Peltogaster*) then showed that the second larval form of these parasites in almost every respect corresponds to the Cypris-larva of the Cirripedia, and though the same stage for *Sacculina* has not yet been observed, since his discovery the affinity of these highly degenerated parasites with the true Cirripedia has no longer been doubted. Lilljeborg regards them as true Cirripedia, and proposes for them the name of Cirripedia Suctoria. Fritz Müller, on the contrary, wishes to consider them as a distinct order of Crustaceans, which he calls the Rhizocephala, and which form an equivalent group to the nearly related Cirripedia. Since then our knowledge of these aberrant forms has not much increased. A large number of species has been added to those known to Lilljeborg, and the number of genera has also been considerably augmented.<sup>9</sup> The most important contribution to our knowledge of the anatomy of these curious parasites is contained in the papers of Kossmann. I have already pointed out (page 13) that this author considers *Anelasma squalicola* to be a link uniting the Cirripedia Suctoria with the true Cirripedia Thoracica—a view which I think requires confirmation by exact observation.

In 1865, Prof. H. de Lacaze-Duthiers published a provisional description of a parasitic animal of the Crustacean class, which he called *Laura gerardiæ*, and which was considered by him to belong to the Cirripedia.<sup>10</sup> On this same animal an elaborate memoir was published by the same author in 1882.<sup>11</sup> This very interesting parasite

<sup>1</sup> Cavolini, F., Memoria sulla generazione dei Pesci e dei Granchi, Napoli, 1787.

<sup>2</sup> Rathke, *Nova Acta Acad. Cæs. Leop.-Carol. Nat. Cur.*, xx. p. 244, 1843?

<sup>3</sup> Diesing, Kröyer.

<sup>4</sup> Thompson, J. V., *The Entomological Magazine*, iii. 1836.

<sup>5</sup> Steenstrup, J. J., Bemaerkninger om Slægterne Pachybdella, Dies. og Peltogaster, Rathke, *Oversigt o. d. K. D. Vid. Selsk. Forhandl.*, 1854.

<sup>6</sup> Lindström, G., Om larven til en art af Slägtet Peltogaster, *Öfversigt k. Vetensk.-Akad. Förhandl.*, 1855.

<sup>7</sup> Lilljeborg, W., Les genre Liriope et Peltogaster, Upsala, 1859-60.

<sup>8</sup> Müller, Fr., Die zweite Entwickelungsstufe der Wurzelkrebse, *Archiv f. Naturgesch.*, Jahrg. xxix. 1863.

<sup>9</sup> So by the papers of Anderson (*Ann. and Mag. Nat. Hist.*, ser. 3, vol. ix., 1862), Semper (*Zeitschr. f. wiss. Zool.*, Bd. xiii., 1863), M. Sars (*Nyt Magas. f. Naturvid.*, xvii., 1870), Kossmann (*Arbeit. zool. zoot. Instit. Würzburg*, i., 1872-74), Richiardi (*Atti. d. Socist. Tosc. d. Scienza. Natural.*, i., 1874), G. O. Sars (*Arch. f. Math. og Naturvid.*, iv., 1880), and others.

<sup>10</sup> *Comptes rendus*, t. lxi., 1865.

<sup>11</sup> Histoire de la Laura Gerardiæ, *Mém. Acad. Sci. Paris*, t. xlii., Paris, 1882.