as already explained, adopted a distinctive term for the calcareous skeleton of the Hydrocorallinæ. In *Alcyonium* two elements are recognised by Kowalewsky as composing in the embryo the "intermediate layer" (mesoderm), viz., a homogeneous membrana propria, which lies internally and penetrates the mesenterial folds, and a peculiar thin layer of cells, which lies externally to this membrana propria. It is from this thin layer of cells that the gelatinous connective tissue, the spicules, and canal networks are formed. This special layer does not exist in other corals nor in *Cerianthus*.

The close resemblance in the histological structure of the calcareous skeleton formed by animals so different as Alcyonaria (*Heliopora cærulea*), Zoantharia, and Hydroida is a remarkable fact. The whole of the Milleporidæ at present known appear to be naturally referable to the one genus *Millepora*, unless *Porosphæra* (Steinm.), a Cretaceous fossil is, as suggested by Alleyne Nicholson, a Milleporid. I am unable to offer an opinion as to the alliance of *Stromatopora* and its congeners to the Milleporidæ, on which Mr Carter[1] insists, since I have as yet had no opportunity of studying the structure of these fossils. If *Stromatopora* is a Milleporid, the family dates back to Silurian times. Dr Dawson[2] is opposed to Mr Carter's conclusions, to which, nevertheless, I am, from the evidence adduced, inclined to adhere. Mr Carter[3] has described a species of *Millepora*, *M. woodwardi*, as occurring in the lower chalk. Apparently no older representative of the genus is known.

Vegetable Parasites of the Milleporidæ.

In my paper On the Structure of *Heliopora cærulea* (Phil. Trans. Roy. Soc., vol. lxvi. part 1, p. 116) I described certain vegetable parasitic organisms as found in the tissues of *Millepora* and *Pocillopora*. These organisms have been made the subject of memoirs by Professor Martin Duncan,[4] who summarises the results obtained by Leuckart, the original discoverer of these parasites in 1851, and subsequent observers, such as Dr Carpenter (Bowerbank), Wedl, and Kölliker. The parasites are of essential interest since they occur in deep-sea corals, and are, as far as is yet known, the only vegetable organisms occurring at great depths. Professor Duncan refers them to the genus *Achlya* (*Saprolegnia*). Both a species of *Millepora* obtained at Samboangan, in the Philippine Islands, and the *Millepora nodosa* of Tahiti were found to be infested by these parasites.

[1] *Loc. cit.* Also, On *Stromatopora*, Ann. and Mag. Nat. Hist., vol. ii. p. 85, 5 ser., 1878. On the probable nature of the animals which produced the Stromatoporidæ traced through *Hydractinia*, *Millepora alcicornis*, and *Chaunopora* to *Stromatopora*, *ibid.*, vol. ii. p. 304, 5 ser. On the Mode of Growth of *Stromatopora*, *ibid.*, vol. iv. p. 101, 5 ser., 1879. On the Structure of *Stromatopora*, vol. iv. p. 353, 5 ser.

[2] *Stromatopora* as distinguished from *Millepora*, Ann. and Mag. Nat. Hist., vol. xix., 4 ser., 1877.

[3] On new species of Hydractiniæ and on the identity in structure of *Millepora alcicornis* and *Stromatopora*, Ann. and Mag. Nat. Hist., vol. i., 5 ser., 1878.

[4] Professor P. Martin Duncan, F.R.S., On some Thallophytes parasitic within recent Madreporaria, Proc. Roy. Soc., No. 174, 1876, p. 238; On some Unicellular Algæ parasitic within Silurian and Tertiary Corals, &c., Quart. Journ. Geol. Soc., May 1876, p. 205.