

condition. It seems just possible, therefore, that, as originally suggested by Sars<sup>1</sup> in the case of the first known species of the genus, *Cladorhiza abyssicola*, these sponges have some method of obtaining their supplies of nutriment which is quite different from that found in other sponges; this is, however, extremely unlikely.

As regards the genus *Crinorhiza* itself we are necessarily in doubt. It was founded by Schmidt, and all that he wrote about it is contained in the five lines in which he describes his *Crinorhiza amphactis*.<sup>2</sup> The description is too short to be of much service for identification, but inasmuch as he mentions and figures an osculum at the summit of the sponge we are quite satisfied that none of our forms are specifically identical with his. The external resemblance is however striking, and while the genus *Crinorhiza* will probably have to be abolished, we gladly make use of the name for that particular external form. In this course we are supported by the example in cognate circumstances of Haeckel in the case of the Calcarea, and of Smitt and Hincks in that of the Polyzoa. Indeed, the existence of well-marked external forms running through different genera has already been thoroughly recognised in Haeckel's classical work *Die Kalkschwämme*, and lies at the foundation of the new departure in Polyzoan classification taken by the authors we have named.

*Crinorhiza* forms also occur in the closely allied genus *Chondrocladia*, Wyv. Thomson, and in the still more closely allied genus *Axoniderma*, nobis, but to these cases we shall recur later on. They certainly have a very wide geographical range, for the Challenger brought home species of *Cladorhiza*, having this form from the North Pacific (2385 fathoms; bottom, red clay); the South Pacific (3000 fathoms; bottom, red clay); and the South Atlantic (2200 fathoms; bottom, Globigerina ooze); as will be found fully recorded under the various species.

The geographical distribution of the genus is now known to be very wide, and includes the North and South Atlantic, the Southern Ocean and the North and South Pacific.

The *Cladorhizæ* are essentially deep-sea sponges, and are not unfrequently obtained at depths of between 2000 and 3000 fathoms, and they afford some of the most striking examples known of the symmetry and beauty which characterise Monaxonida living in very deep water.

*Cladorhiza abyssicola*, Sars, var. *rectangularis*, nov. (Pl. XX. fig. 10).

1872. *Cladorhiza abyssicola*, Sars, Remarkable Forms of Animal Life from the great deeps off the Norwegian Coast, pt. i. p. 65.

Sponge (Pl. XX. fig. 10) consisting of a straight, slender, cylindrical stem, unbranched; terminating above in a rounded extremity and below in several delicate, forking rootlets. Length of stem 50 mm.; diameter 1 mm.; greatest length of roots 25 mm. All the way up the stem, coming off at right angles, from four sides, arise

<sup>1</sup> Remarkable Forms of Animal Life, pt. i. p. 68.

<sup>2</sup> Spong. Meerb. von Mexico, pt. ii. p. 83.