

*Chætoceros dicladia*, n. sp. (Plate VIII. fig. 1, and Plate XIX. figs. 7 and 8.)

Frustulis in latere zonali transverse triplo longioribus, undulatis, in series per spatium medio constrictum divisis; quæ binis utrinque cornubus breviusculis subclavatis quater costatis connectuntur, setarum costis spinulosis. Inter Kerguelen et Heard.

The species of *Chætoceros* in which specimens of *Dicladia capreolus*, Ehrenb., have been repeatedly observed, was often found in gatherings made between Kerguelen and Heard Islands, near the polar ice-barrier in the Antarctic Ocean.

The frustules have their zonal sides three times as long as broad, while the transversely directed bounding line is undulating, so that an oblong space with a central contraction is left between the adjoining frustules. The setæ, which spring from the surface of the valve, are somewhat short, and are provided with somewhat club-shaped outer extremities which bear four thorny ribs.

#### Bacteriastrum, Shadb.

This very remarkable genus was instituted by Shadbolt in 1860 to embrace several curious small sun-like organisms, which are surrounded by a few radiating protuberances of considerable length, and which are very often met with in the stomach of Mollusca. Shadbolt defines his genus in the following words:<sup>1</sup>—"Frustules awned, united into a jointed conferva-like cylindrical filament, valves discoidal, with marginal radiating awns."

Although there is a great analogy between the present genus and *Chætoceros*, I am of opinion, notwithstanding the opposite view of Professor H. L. Smith, that the differences are sufficient to warrant the preservation of both, apart altogether from the less important question already referred to of the desirability of avoiding too great multiplication of the species belonging to any given genus. Among these differences may be noted the following:—(1.) In *Bacteriastrum* the valves are always perfectly round, while in *Chætoceros* they are generally oval; (2.) in the former there is a greater number of awns, which always radiate round the border, than in the latter; and (3.) in seriate *Chætocerotidæ* the frustules constantly interlace by the alternate crossing of the awns—a character which is not found in *Bacteriastrum*.

Only a few species belonging to this genus are yet known, and these were diminished when Lauder,<sup>2</sup> after observing that *Bacteriastrum curvatum*, Shadb., constantly terminated the series of *Bacteriastrum furcatum*, Shadb.,<sup>3</sup> united the two forms under the name of *Bacteriastrum varians*. This important observation, however, increases the difficulty of determining the exact limits of specific forms; and, although among those

<sup>1</sup> Pritchard, *op. cit.*, p. 863.

<sup>2</sup> *Trans. Micr. Soc. Lond.*, new series, vol. xii. p. 7, pl. iii. figs. 1–6, 1864.

<sup>3</sup> = *Actiniscus sexfurcatus*, Ehrenb., *Mikrogeol.*, pl. xxxv. B. 4, fig. 15; *Actiniscus biseptenarius*, Ehrenb.; *Actiniscus bisoetonarius*, Ehrenb., *loc. cit.* See also Pritchard, *op. cit.*, p. 863, pl. vi. fig. 26; *Trans. Micr. Soc.*