

both of which many scale-like parts go to form the circumference of the tubes. These parts are in both somewhat irregularly quadrate in outline, but they are relatively much broader in fig. 11 than in fig. 14. As in the case of *Rhizosolenia arafurensis* only fragments have been observed.

*Dactyliosolen*, n. gen.

In a tow-net, which was wrought on the surface of the Antarctic Ocean on March 3, 1874, lat. 53° 55' S., long. 108° 35' E., some interesting forms, akin to the *Rhizosoleniæ*, Ehrenb., were collected. In both the form of the frustules is cylindrical, and in both it is composed of plates of trapezoidal outline—the *Dactyliosolen* cylinder (Plate IX. fig. 7) being manifestly the result of the union of a series of hoops, which, if detached along the lines of suture and spread out on a plane, would present long linear profiles terminated by oblique parallel lines. But, on the other hand, in *Dactyliosolen* there is no trace of the calyptriform extremities, which are essential to the *Rhizosoleniæ*, so that it cannot be ascribed to the latter genus. Apart, however, from this circumstance, it is of importance to observe that at intervals in the course of the filament *hyaline belts* occur. Each of these seems to be a terminal belt of union between the various frustules, any adjoining pair being separated by a space equal to about one-tenth of the diameter of the frustule. It is also to be remarked that at the lines of junction a few incipient granules or denticules may be perceived, and it is very important that the cellules, which ornament the component rings of two adjoining frustules, stand on the opposite and not on the corresponding margins of the rings.

That the combination of such characters is sufficient to warrant the establishment of a new genus must be admitted, and it has been named *Dactyliosolen*<sup>1</sup> from the circumstance that the perfect tube is composed of a series of rings or hoops.

*Dactyliosolen antarcticus*, n. sp. (Plate IX. fig. 7.)

Forma cylindrica; frustulum compositum ex pluribus annulis cellulatis; cellulis linearibus oblongis. In mari Antartico.

This is the only species of the present genus that has yet been observed, and its characters are consequently those of the genus.

*Chætoceros*, Ehrenb.

The following is the definition of this genus given by Ehrenberg (*vide* Pritchard's History of the Infusoria, p. 861):—"Frustules without striæ, united with the adjacent ones by the interlacing on each side of awns proceeding from the frustule, or from a cingulum between the frustules, and so forming a filament."

A more exact and at the same time more concise definition is found in Lauder's

<sup>1</sup> δακτύλιος, a ring; σωλήν, a channel or pipe.