

Memoir on the Marine Diatoms of Hong-Kong, annotated by Ralfs, and printed in the Transactions of the Microscopical Society, new series, vol. iv. It runs thus:—"Frustules smooth or minutely punctated, united with the adjacent ones by the interlacing of awns proceeding from the frustule."¹

All the members of the genus *Chætoceros* are extremely fragile, so that it is very difficult to distinguish them in deposits, especially in marine mud, in which only the more robust forms are to be recognised, such as sporangial *Goniothecia*, *Di cladia*, or *Syndendria*. On the other hand, filaments of *Chætoceros* are much more abundant in surface collections, being perhaps even the predominant forms, and among those collected in the Challenger tow-nets, specimens belonging to the greater number of known species have been observed.

Chætoceros protuberans, Lauder, var. nov. (Plate VIII. fig. 2.)

That a form of the *Chætoceros protuberans* of Lauder² is here represented is indicated by the mammillar swelling on each valve, the outline of this protuberance being clearly seen in the oval space intervening between two adjacent frustules. This species is described by its founder as possessing minute bristly awns, but these are not to be observed in the present frustule, and on consulting the plate of the typical form given by Lauder minute bristles are only seen in connection with the terminal valves. If this is the normal condition the specific definition given must be regarded as imperfect. Since, however, the series of frustules represented in our plate may be incomplete, the precise differences between the two organisms cannot be definitely fixed, although the varietal character of the series at present in question may be provisionally accepted.

Chætoceros dispar, n. sp. (Plate VIII. fig. 6.)

Frustula compressa, in seriem per longas setas teretes connexa a valvis procedentes, et ad originem constrictas; valvis alterne concavis et subconcavis. In mari Antartico.

This form shows several analogies to the *Chætoceros decipiens* of Cleve,³ but no traces of striation or of punctation are to be found in the filaments or awns as in the allied type. Moreover, the awns arise, not from the angle of the frustule, but exclusively from the plane of the valve. At a short distance from their origin each filament presents a slight swelling, and one of the valves is always more concave than the other, a circumstance which has suggested the specific name.

This species was found in the Antarctic Ocean.

¹ This latter definition, which does not exclude punctated forms, again illustrates the necessity that frequently arises and that has already been referred to, for extending original definitions.

² Remarks on the Marine Diatomaceæ found at Hong-Kong, with descriptions of new species, *Trans. Micr. Soc. Lond.*, new series, vol. xii. p. 79, pl. viii. fig. 11, 1864.

³ Diatoms from the Arctic Sea, *Bihang k. Svenska Vet. Akad. Handl.*, Band 1, No. 13, p. 11, pl. i. figs. 5 a and 5 b.