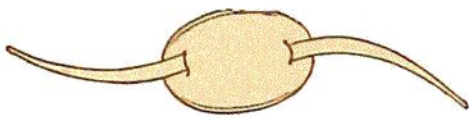


This Diatom was obtained in a surface collection made in the Antarctic Ocean between Kerguelen and Heard Islands. The frustules are subquadrate, and arranged in a series. The valves are oval, the one being convex and the other flat. The setæ originate in the centre of the valve, and, after curving round each other, diverge horizontally. In the figure only two awns are seen between two adjoining frustules, the remaining two being either broken off or shortened. On the terminal valve the setæ are seen in an embryonic form as a pair of short protuberances. At their origin they are always convolute, a characteristic which is referred to in the name of the species.

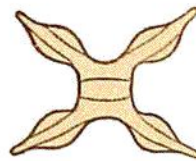
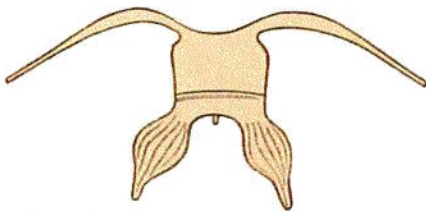
*Chætoceros radiculum*, n. sp.

Frustulum solitarium; valvis ovatis, bino processu submarginali, inflato, costulato, brevi. Ad meridiem insulæ Heard.

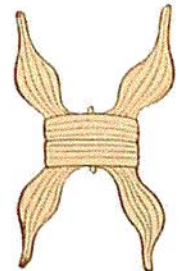
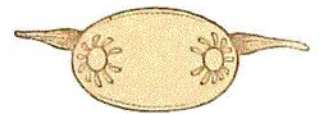
This very puzzling form was collected to the south of Heard Island in the Antarctic Ocean. It is always solitary, and its setæ, instead of extending in a long line, form short swollen appendices, like bulbous roots, which are to a greater or less extent marked by longitudinally directed costæ that sometimes have their origin on the plane of the valve. To increase the difficulty of fully understanding this type it is to be noted that in addition to two setæ or cornua of the form just described there are in some cases



*Chætoceros radiculum*, n. sp., var.  $\alpha$ .



*Chætoceros radiculum*, n. sp.



*Chætoceros radiculum*, n. sp., var.  $\beta$ .

protuberances, which are twice as long, but are provided with less pronounced swellings, and are devoid of costæ. Such forms may be provisionally characterised as constituting variety  $\alpha$  of the typical species. In a second group—variety  $\beta$ —there is found a transversely striated median zone and a single median projecting knob between each pair of large bulb-like marginal protuberances. Whether these differences from the typical species are to be regarded as varietal or as indicative of so many distinct species it is difficult to decide, although probably the former view is the more correct, and has been here adopted.