

not reach the raphe, but leave a smooth somewhat lanceolate area around the centre of the valve.

The specific name is given out of respect to its discoverer.

*Pinnularia criophila*, n. sp. (Plate XV. fig. 2.)

Anguste rhomboidea, transverse costata; costis lineam mediam attingentibus; apicibus rotundatis; valvis transverse convexis. Ad mare Antarcticum.

This form was brought from the glaciers of the Antarctic Ocean. The valve, as may be noted by comparing the figures representing the valval and zonal aspects, is not flat but transversely convex, so that its form somewhat resembles that of the diatom<sup>1</sup> shown in Plate xlvii. fig. 1 of Dr. A Schmidt's Atlas, although it is at once longer and narrower than the latter, which, moreover, is not transversely convex. It is rhomboidal in general outline, transversely costate—the costæ reaching the median line—and its apices are rounded.

*Pinnularia* sp. ? (Plate XV. fig. 1.)

We have here represented a bilobate form in which the striæ are continuous. The frustule is elegant in general appearance, elongated in shape, and provided with a wide central contraction. The two lobes into which it is thus divided are elliptical. The radiately disposed lateral costæ are interrupted by two wide longitudinal bands. Between these and the median raphe there is a long sublinear and elliptical area on which, towards the middle line, the terminations of the costæ may be traced. The central nodule is oval, its long axis being directed transversely. The fact that navicular bilobate frustules are apt to present a difference of structure according to the stage of development at which they have arrived renders it difficult to decide on the true taxonomic value of this type, hence it has been provisionally recorded as an undetermined species of *Pinnularia*.

Navicula, Bory.

The examination of the navicular forms in the Challenger collections has been the means of still further augmenting this already extensive genus. In Pritchard's History of the Infusoria 303 species have been described, in A. Schmidt's Atlas of the Diatomaceæ—a publication which unfortunately was interrupted—more than 200 forms are figured, while in Habirshaw's Catalogue of the Diatomaceæ a still greater number of specific names have been registered. It is true, indeed, that in both of these lists forms possessing continuous striæ, upon which characteristic Ehrenberg con-

<sup>1</sup> With respect to this frustule Schmidt says: "1. G. v. Mexico, 2. Spitzbergen, 3. St. George's River, 4. Yokohama, Formen, welche weder mit *N. (i.e., Navicula) directa* noch mit *N. longa* verbunden werden können."—*Loc. cit.*, Explanation of Plate xlvii.