

The specific name has reference to the occurrence of this frustule in the frozen Antarctic Ocean.

Plate XXVII. fig. 9, probably represents a variety of this species differing from the typical form in the following respects—(1.) the dimensions are much greater, (2.) the appearance is more swollen, and (3.) the striæ are relatively much finer. The arrangement of these striæ and the character of the stauros show its close affinity with *Stauroneis glacialis*, n. sp.; nevertheless, apart from its sublanceolate profile, its true varietal or specific character must at present remain somewhat doubtful.

*Stauroneis pygmea*, n. sp. (Plate XXIX. fig. 7.)

Parva, elongata-elliptica; apicibus rotundatis; area transversa sublineari marginem non attingente; striis moniliformibus subradiantibus. In mari Arafura.

This small form from the Arafura Sea possesses an elliptical outline and rounded extremities. The raphe is somewhat bent, and the stauros terminates in an irregular manner at a notable distance from the edge of the valve. The striæ are moniliform and radiating, and near the middle line they form a well-marked double somewhat irregular area.

*Pinnularia*, Ehrenb.

Nomenclature being nothing more than a means employed to facilitate the work of the naturalist in the description of the innumerable organic types with which he has to deal, Ehrenberg wisely divided the genus *Navicula*, Bory, which was already extremely rich in species, into two, and included under the generic name of *Pinnularia* those naviculoid forms whose valves were ornamented with pinnulæ or costæ and not by rows of granules. It is true, indeed, that some refuse to admit this distinction on the ground that the sculpturing of all naviculoid forms is ultimately reducible to granules, but, although some species, such as *Pinnularia peregrina*, Ehrenb., have been attributed to the genus *Navicula* because of the recognition of longitudinal lines which are made up of a dense series of oblong granules, all similar forms are not really granulated, there being many *Pinnulariæ*, which, when observed with the best object-glasses, with the most accurate manipulation of the light, and by the use of monochromatic illumination, have exhibited no granular structure.

*Pinnularia raëana*, n. sp. (Plate XV. fig. 3.)

Lanceolata; valvis spiraliter inflexis; linea media sigmoidea in area lævi lanceolata; costis circum radiantibus. Ad Zebu, ex insulis Philippinis.

This very singular and elegant species was discovered by Dr Rae in a collection brought from Zebu in the Philippine Islands. It possesses a very graceful lanceolate form. The central line or raphe is slightly sigmoid. The radiating continuous costæ do