

the animals in question, and so must have been growing in their immediate vicinity at a depth at which, notwithstanding the great distance from the poles, the temperature of the water approaches zero.

*Thalassiosira nordenskiöldii*, Cleve, var. nov. (Plate XXX. fig. 4.)

This figure represents a Diatom with a characteristic corona of submarginal spines which was found in the vicinity of the Bermudas; while fig. 4 *bis* of the same Plate is a reproduction from the Synopsis des Diatomées de Belgique of Dr van Heurck<sup>1</sup> of the *Thalassiosira nordenskiöldii* of Cleve, the former being magnified 850 diameters, and the latter 600 diameters. In the frustule, now for the first time recorded, the radial striation is so minute that it is difficult to observe even in dried specimens, while the number of prickles or submarginal spines is much greater than in the Arctic form. Hence, although the two might be regarded as distinct species, I prefer to look upon the deep-sea form as a variety of the surface form of Cleve until such time as the former is procured in a living condition, and its history more accurately known.

#### *Isthmia*, Ag.

*Isthmia enervis*, Ehrenb., var. *japonica*, nov. (Plate XXV. fig. 5.)

The only form belonging to this genus which has to be recorded is one from the Sea of Japan, which presented an evident analogy to *Isthmia enervis*, Ehrenb.,<sup>2</sup> yet differed from it in several respects. Thus (1.) the profile of the frustule on the zonal side is simply trapezoidal in Ehrenberg's species, while in the Japanese form the two oblique terminal lines are more or less undulating—a distinction upon which much weight cannot be placed. (2.) At the margins of the median band, and adjoining the two sutural lines, a row of larger granules occurs in both cases, as in *Biddulphia*; but the band itself is ornamented, in *Isthmia enervis*, by small round quincuncially-arranged granules, while in the present case the granules are somewhat oval, and are not arranged in a quincunx manner. (3.) It may also be observed that in the Japanese Diatom the strong granules at the two extremities are somewhat different from one another, being on the more obtuse side subquadrate and of larger size than on the other side, where they are subrotund.

Notwithstanding these differences, the frustule from the Sea of Japan must be regarded as possessing merely a varietal importance, and the distinctive name that has been applied has reference to the locality in which it has been first collected.

<sup>1</sup> Pl. lxxxiii. fig. 9.

<sup>2</sup> Ehrenb., Inf., p. 209, pl. xvi. fig. 6; Kütz., Bacill., pl. xix. fig. 4; Smith, Synop. Brit. Diat., vol. ii. p. 52, pl. xlvi. ; Jan. et Rabenh., Hondur., p. 9, pl. iv. fig. 13; Hohenack., Alg. Mar., N. 454; Ralfs, Ann., vol. xii. pl. viii. fig. 1. Compare also *Isthmia obliquata* var. *tenuior*, Ag. Conspec., p. 55, and *Conserva obliquata*, Eng. Bot., tab., 1869.