

Plate XXV. fig. 11, represents two *Fragilarian* valves, the first of which belongs to the new *Fragilaria linearis*¹ above described, but the determination of the second, which is of lanceolate form and differs markedly in its striation, is uncertain, as nothing except the valve is known.

The frustules seen at fig. 17 of the same plate must also remain undetermined. They possess a very elegant oblongo-lanceolate form, are provided with acute apices, and are transversely marked with alternating light and dark zones. These rare specimens were found in mud obtained from a sounding in the neighbourhood of Japan, and their characteristic features are not yet fully known.

Diatoma, De Candolle.

Diatoma rhombicum, O'Me. (Plate XXV. fig. 22.)

We have here represented a small elliptical valve, which was found in a gathering made to the south of Heard Island. In a paper on the Diatomaceous Gatherings made at Kerguelen Island, by O'Meara, and published in the Linnean Society's Journal (Botany), vol. xv., this frustule is seen on Plate i. fig. 2. Of the accuracy of the generic determination there can be no doubt, especially as O'Meara has also figured a series of many frustules disposed in a zig-zag manner, nor can there be any question as to the identity of the Diatom now represented with O'Meara's specimens. The definition given of the typical Diatom is as follows: "Frustules small, about .0006 in length. On front view quadrangular, the costæ appearing as a narrow band of puncta. On side view rhombic; costæ very fine, pervious."

Grammatophora, Ehrenb.

Grammatophora stricta, Ehrenb., var. nov. (Plate XXIX. fig. 12.)

We have here represented the only frustule belonging to this genus which calls for particular attention, and which was collected in the Sea of Japan. It is closely related to the *Grammatophora stricta* of Ehrenberg,² as figured by Kützing in his work entitled *Die kieselschaligen Bacillarien oder Diatomeen*, Plate xxix. fig. 76; but the latter is somewhat larger, the septa are not so straight, and at the polar extremities these are not flanked by a small appendage. Such points of difference, however, cannot be regarded as of more than varietal importance.

Cyclophora, n. gen.

In February 1878 I read before the Pontifical Academy³ a communication, in which I made known a new *Tabellaria*, which I had met with some years before adhering to

¹ Compare Plate XIX. fig. 9.

² Ehrenb., Verb. T. I. i. fig. 22, and T. III. vii. fig. 31; Rabenhorst, *Flora Europæa Algarum*, p. 305.

³ *Atti. Accad. Pontif. d. nuov. Lincei*, 1878.