

Navicula mirabilis, n. sp. (Plate XXX. fig. 10.)

Rhomboidea-elliptica; striis binatis moniliformibus radiantibus ter utrinque interruptis; nodulo centrali subrotundo. Ad Zebu, ad insulas Philippinas.

This magnificent elliptical form seems at first sight to be identical with *Navicula smithii*,¹ Breb., which, on the whole, resembles it in its general characteristics. In the latter, however, each half of the valve is divided into two unequal parts by a single longitudinal line, whilst in the present case there are three longitudinal lines on each side of the raphe and cutting the transverse and subradiating granulated striæ. Moreover, the shape of the present valve is rhomboido-elliptical rather than elliptical, so that it must be viewed as specifically distinct from *Navicula smithii*. *Navicula mirabilis* was obtained at Zebu near the Philippine Islands.

Navicula cyclophora, n. sp. (Plate XXVIII. fig. 18.)

Minima, elliptico-subinflata; apicibus obtuso-rotundatis; striis radiantibus; cyclo laterali ad nodulum centrale. In mari Antartico.

This form was gathered between Kerguelen and Heard Islands. It is remarkable in having on one side of the central nodule a very small circle, which is not due to any casual superposition, but is a part of the valve itself. A similar phenomenon occurs in *Cocconeis cyclophora* as made known by Grunow.²

In a most interesting collection from Bahia given to me by Mr Weissflog I have observed another species of *Cocconeis* with a lateral mark, and two years ago in the Gulf of Naples a third form was recorded as possessing the same peculiarity. Hence, instead of being viewed as of specific value, this character may be regarded as being analogous to the craticular condition of some *Naviculæ*. This view is confirmed by a micro-photograph of a *Navicula lyra*, Ehrenb., which has been furnished by Mr Weissflog, inasmuch as the valve, which has its centre marked by small circles, is distinguished by possessing a lateral hyaline area.

Navicula, sp. (?) (Plate XX. fig. 6.)

In this figure there is delineated a small naviculoid frustule which differs slightly from the preceding in the form, direction, and perhaps also in the fineness of the striæ. Moreover, instead of the small lateral circle found in *Navicula cyclophora*, n. sp., it possesses a non-striated space on one side of the central nodule. Both forms, however, agree in having the two sides of the valve unsymmetrical. Its specific value must at present remain uncertain.

¹ See note on this species in Smith's Synopsis of the British Diatomaceæ, vol. ii. p. 92; Pritchard, *loc. cit.* p. 898.

² Dr. H. van Heurck, Synopsis des Diatomées de Belgique, pl. xxx. figs. 24 and 25.