

the forms just named, being less sinuately incurved than the former and somewhat more so than the latter. All three possess transversely disposed continuous striæ which are parallel to each other in the middle, but are directed in a radiating manner at the extremities, and in all the striæ are interrupted by two longitudinal furrows, while their central extremities are placed in close proximity to the raphe. Such considerations point to the conclusion that we have here a form which is very probably identical with the *Navicula grunowii* of Rabenhorst.

*Navicula janischii*, n. sp. (Plate XXX. fig. 5.)

Biloba, profunde constricta, lobis cuneato-subcordatis; structura dense et inordinate granulata; plicis a margine radiantibus, hinc evanescentibus. Ad insulas Bermudas.

This frustule, from the neighbourhood of the Bermudas, possesses an exceedingly elegant, bilobed form. The lobes are subcordate and cuneiform, and the margins are marked by a row of well-defined dots, while the surface is irregularly granulated and carries radiating lines which proceed inwards from the periphery but become indistinct and disappear before reaching the raphe.

It bears a considerable resemblance to a frustule from Samoa which occurs in a superb preparation by Möller, but in the latter the middle plica is absent and the granulations of the surface are much less marked. It is also somewhat similar to the *Navicula jamaicensis* described by Greville, but in the Grevillean species the points or granules are disposed regularly instead of being agglomerated without order.

This new species is named in honour of Mr Charles Janisch the Diatomist.

*Navicula bullata*, Norman, var. *carinata*, nov. (Plate XXVIII. fig. 7.)

The specimen here represented is evidently closely related to the *Navicula bullata*<sup>1</sup> of Norman. This is indicated by its elliptical form, its obtuse apices, and by the radiately disposed rows of granules, which are interrupted by two distinct bands upon which a small number of large rounded dots occur.

The apices of the frustule are clearly hollowed and the valves are longitudinally plicated; the longitudinal bands do not present any constriction in the centre, and the granules are much less numerous than those of *Navicula bullata*.

*Navicula bullata*, Norman, var. *obtusa*, nov. (Plate XXVIII. fig. 10.)

This frustule is elliptico-rhomboidal and not simply elliptical like that established by Norman, nor, and this is a matter of greater importance, are the apices of the former in any way elongated or sub-produced, but are merely rounded. The significance of this fact becomes more apparent when it is borne in mind that, among navicular Diatoms in

<sup>1</sup> *Micr. Journ.*, 1861, p. 8, pl. ii. fig. 7.