

stituted the genus *Pinnularia*, are included, but apart from this the species already recorded as belonging to the genus *Navicula*, properly so called, are so numerous as to tend to bring about confusion in the science, and to render difficult if not distasteful the work of one who introduces new types. Yet such a course is inevitable when a minute examination of marine micro-organisms is made, and it becomes of the greatest importance to subdivide the larger genera, and above all the genus *Navicula*, distinguishing in them groups based on some common and more salient characteristics, in order to make it possible to remember the different forms. Hence, although recognising the weight of the authority of Kützing and Brebisson, who join together the genera *Navicula* and *Pinnularia* because some of the latter are found to be granulated, and because there is perhaps no specimen the costules of which, according to these distinguished naturalists, may not be resolved into points, still, as this assertion has not yet been proved, I am unable, resting on the authority of W. Smith and Rabenhorst, to adopt their arrangement. Still less can I agree with those who join the genus *Stauroneis* to that of *Navicula*, although both are naviculoid, because, in that case, many other genera which are likewise constituted on navicular forms would have to be abandoned.

One of the most extensive group of the genus *Navicula* is that in which the valves are more or less contracted in the middle and which Ehrenberg designated by the name of *Diploneis*.¹ In this section the species, on account of their number, are the most difficult to define.

Navicula abnormis (?), n. sp. (Plate XXVIII. fig. 19.)

Panduriformis; apicibus cuneato-rotundatis; striis subradiantibus moniliformibus; nodulo centrali quadrato; area centrali medio subconstricta.

This singular frustule is remarkable on account of the different magnitudes of the two halves of its valves, and should probably be regarded as an anomalous and monstrous form were it not that several specimens have been found in the same collection. If it should ultimately prove to be a monstrous frustule it will be especially liable to sterility, and although a few generations may come and go its long survival in the struggle for existence cannot be expected; it may, however, for the present receive a specific name. Its shape is panduriform, its apices cuneately rounded, and its moniliform striæ are subradiating. It possesses a quadrate central nodule, and the central area is slightly constricted at the middle.

Navicula thaitiana, n. sp. (Plate XX. fig. 5.)

Bilobata, arcte constricta; lobis subcordatis; apicibus cuneato acutis; striis moniliformibus radiantibus, medio evanescentibus; linea media tenui, nodulis parvis. Ad portum Thaiti.

¹ Pritchard, *loc. cit.*, pp. 892 *et seq.*