

This genus has been named in honour of Dr Rudolph von Willemoes-Suhm, one of the naturalists on board H.M.S. Challenger, who died during the Expedition.

A more precise statement of generic and specific characters may in the meantime be omitted pending a further series of observations on this very interesting group of organisms.

*Ethmodiscus*,<sup>1</sup> n. gen.

*Frustula solitaria, discoidalia*; valvis tenuissime et inconspicue striolatis; forma plus minus convexa, quandoque diversimode denticulata; zona connectiva punctulata.

Under the genus *Coscinodiscus*, which is well adapted for the reception of species having conspicuously granulated markings, the desirability of establishing a new genus for certain forms possessing an almost invisible sculpturing was alluded to. For this new genus the name of *Ethmodiscus* is here adopted, a word which has reference to the presence on the valves of extremely delicate points, which may be compared to the fine pores of a filter. Although such forms could not have been accurately observed by the use of the relatively imperfect microscopes employed by Ehrenberg, and although it is with the greatest difficulty and by the use of the greatest obliquity of illumination that the best instruments of the present day can reveal the exquisite delicacy of their ornamentation, yet the opportuneness of establishing the genus has been proved by the discovery in surface gatherings of certain discoid forms of enormous size and extreme fragility, which are characterised by their very minute granulations.

The form of the valves of the specimens bearing these delicate markings—which cannot be made out when they are mounted in balsam, but become visible in dry preparations—is found, when they are broken by the action of the flame of a spirit-lamp, to be notably convex.

The existence of large fragments of frustules, which must also have belonged to Diatoms of extraordinary size, and which bear characteristic punctations (Plate XIV. figs. 4 *a*, 4 *b*, 4 *c*), had often been revealed by the examination of organic siliceous forms derived chiefly from soundings. These fragments, however, remained undetermined, and their true significance has only recently been disclosed by preparations made on board the Challenger. One of these preparations includes three large cylindrical Diatoms terminated by two notably convex surfaces (Plate XXII. fig. 10), and provided with hoops or connecting zones showing punctations arranged in a quadrate manner. This would lead one to believe that the fragments in question belonged to the connecting zones of Diatoms of this genus; and this belief has now been proved by the recognition in one of these fragments of converging lines of small points, along with a similar quadrate sculpturing on a portion adhering to its margin. The difficulty of finding any converging lines or any

<sup>1</sup> ἔθμος, a sieve.