

near the coast of South America. Between *Coscinodiscus craspedodiscus*, O'Me.—which is represented on Plate III. fig. 5, and in which the areolation corresponds exactly to that of the original except in the case of the margin, where the details could not be adequately portrayed—and the present frustule there is no risk of confusion, while the latter may be distinguished from *Coscinodiscus arafurensis*, O'Me.,¹ in the following respects :—(1.) It is of smaller size ; (2.) its radiating rows of cellules regularly diminish from the circumference to the centre, where there is (3.) a smooth area somewhat smaller than that of *Coscinodiscus craspedodiscus*, and terminated less irregularly than that of *Coscinodiscus arafurensis*. Notwithstanding, however, the difference in size, in the character of the areolation, and in the condition of the central areola, I am of opinion that we are here dealing with nothing more than a variety of O'Meara's typical species.

Coscinodiscus mirificus, n. sp. (Plate III. fig. 6.)

E maximis ; granulorum lineis, radiantibus ; area centrali, irregulari, grandiuscula ; cellulæ punctulorum lineis circumducuntur. Diametrum = 326 μ . Ad Hong-Kong in mari Sinensi.

This singular species is closely allied to the above-mentioned *Coscinodiscus arafurensis*, O'Me. Its diameter is 326 μ ., and its large central areola has a very irregular outline. The granulation is radiating, but the granules are at the same time disposed in excentric curves which resemble the guilloché of a watch. When examined with a homogenous immersion lens and accurately adjusted light each cellule or areole is found to be bounded by a hexagonal margin of extremely minute punctiform granules (Plate III. fig. 6 a). This curious frustule is from the neighbourhood of Hong-Kong.

Coscinodiscus papuanus, n. sp. (Plate III. fig. 3.)

E maximis ; granulis minimis radianter per nonnullas lineas distinctiores in totidem denticulos submarginales exeuntes divisus ; centrum nonnullis rarioribus granulis notatur. Diametrum = 152 μ . In mari Arafura.

This large disc (152 μ . in diameter) is covered with radiating lines of small granules. These are separated by rows of very minute granules which pass centripetally from as many submarginal points or denticules, but disappear towards the centre. Here a few less crowded granules occur, and this circumstance serves to distinguish the present form

¹ The original observations published on *Coscinodiscus arafurensis*, O'Me., are as follows : "The form is large, diam. 0.015", however, considerably smaller than the very striking species exhibited . . . by Mr. O'Meara under the name of *Coscinodiscus craspedodiscus*, a comparison with the leading features of which would best portray the characteristics of the present. Here the broad margin so remarkable in the former is absent. In the present form as in it the radiate lines of areoles terminate some distance from the centre ; the central blank space, however, is much smaller, and the lines of areoles are of more equal length. Areoles of margin sub-hexagonal, diminishing in size towards the ends ; they are shorter, broader, and much more robust than in *Coscinodiscus craspedodiscus*."—*Quart. Journ. Micr. Sci.*, vol. xvii. p. 463.