

It possesses the form of a disc with an undulating (almost dodecahedral) margin. A triangle of smaller granules occurs in each of the protuberances, and hence I am of opinion that the frustule originally was discoid, and that its subsequent development did not take place uniformly all round the circumference, but only in a few circumscribed areas. During this process small granules have been formed; these have gradually increased in size and become disposed in the large regular lines, which occupy the spaces lying between the protuberances. A similar condition obtains more or less markedly at the extremities of triangular frustules, as will be pointed out below.

Between the lines of the quadrately disposed granules radiating folds arise and extend towards the centre. The compartments circumscribed by these folds are furnished with sparsely arranged granules, and a beautiful corona of smaller points occupies the centre.

After this frustule had been figured and described I received the nineteenth part of A. Schmidt's Atlas, in which the same form is figured at Plate lxxv. figs. 6 and 7, under the name of *Triceratium eulensteini*, Grun. Although therefore recognising the right of precedence of the well-known Austrian microscopist in the case of the specific determination, I cannot accept his generic name, but assign the organisms, for reasons already quoted, to the genus *Stictodiscus*. The frustule was gathered both in the Sea of Japan and in the Philippine Sea.

#### *Stictodiscus radfordianus*, n. sp. (Plate XVII. fig. 10.)

Forma octogona, lineis undulatis, et angulis subproductis rotundatis inclusa; zona regulari ordine quadrato granulata, plicis a margine radiantibus; granulis medio raris; punctulorum corona umbilicali. In Archipelago Philippinarum.

This frustule, which is still more elegant than that last referred to, belongs to the *coronate* section of the genus. It possesses an octagonal form with undulating sides, while the angles are rounded and scarcely elongated. A belt formed of four regular rows of granules runs round the periphery of the valve. These granules are disposed in a quadrate manner, and folds extend between them in a centripetal direction. In the middle region small granules are sparsely disseminated, and the centre is marked by a beautiful corona of small points. Here too, as in the case of *Stictodiscus eulensteini*, rows of small granules occur at the angles, and as in the former case seem to indicate points of gradual increase.

The specific name has been given in honour of Dr Radford, to whom, in part, I am indebted for being invited to examine the Diatoms brought home by the Challenger Expedition.

## II. RADIATO-AREOLATE FORMS OF *Stictodiscus*.

In all these types, folds of greater or less length radiate from the circumference towards the centre, and the central space is subdivided into areoles in a reticulate manner.