

named *Biddulphia weissflogii* by Grunow, who gives South Africa as its locality. The Challenger Diatom must accordingly be designated by the same specific name.

Biddulphia (*Amphitetras*) *ornata*, Shadb., var. *hirsuta*, nov. (Plate XXIII. fig. 9.)

The frustule here shown recalls the *Amphitetras ornata* of Shadbolt,¹ as it agrees with the latter in its quadrate form, its concave sides, the evident granulation, and the reticulate linear veining. On comparing the present form, however, with the specimen of *Amphitetras ornata* of the Typenplatten of Möller, it may be observed to differ in the somewhat greater concavity of the walls and the consequent prolongation of the extremities, and also in the presence of a corona of spines or puncta. Moreover, the precision with which the details of sculpture are represented in the Typenplatten show that the valve is not flat, a feature which could not be seen in the present case. Notwithstanding these differences, the Challenger frustule, which was collected in the Sea of Japan, can only be viewed as a variety of Shadbolt's species, which, however, should receive the generic designation *Biddulphia*, instead of *Amphitetras*.

Biddulphia (?) sp. (?) (Plate XIX. fig. 1 ; Plate XXX. fig. 9.)

A very singular Diatomaceous frustule is shown on Plate XIX. fig. 1, and again under a somewhat higher magnifying power on Plate XXX. fig. 9. The two figures have been given because of the omission of a character of great importance in the former, namely, the occurrence of a small area, ornamented with small crowded granules, at each of the rounded angles of the slightly concave side, a peculiarity which occurs in *Triceratium arcticum*, Bright. As only one specimen of this form has been observed, it has been found impossible accurately to determine to which genus it belongs. The slight prominence of the two adjacent extremities of the concave side seems to point to its being a *Biddulphia*, but the marked want of symmetry in the two valves opposes this view, although this last circumstance may point to the fact that it may have formed part of a seriate Diatom, of which it may have represented the terminal frustule, thus recalling the irregular appearances that are found in many forms of *Chatoceros* and *Bacteriastrum*. The characters of the frustule are the following:—Zonal profile of frustule subquadrate, with one side slightly concave; angles rounded; two transverse diaphragms or septa dividing the frustule into three approximately equal parts; surface of parietes covered with thinly disposed subparallel rows of oval granules; granulation becoming abruptly crowded and more delicate near the angles on the concave side. Locality: Sea of Japan.

The frustule was found in a preparation generously placed at my disposal by Dr James Rae, R.N.

¹ *Trans. Micr. Soc. Lond.*, vol. ii. p. 16, pl. i. fig. 10.