case, none of the long thorns characteristic of *Biddulphia aurita* occur. The valves are hirsute, convex, and ornamented with quadrately disposed punctations, while the angles are of conical form.

The series, which is formed by the direct union of the frustules, was collected in the Sea of Japan.

Biddulphia japonica, n. sp. (Plate XXIII. fig. 14.)

Forma parva; valvis convexis, areolato-punctulatis; apicibus productis acutiusculis, ad basim inflatis; cingulo cylindrico punctulato. In mari Japonico.

This frustule, from the Sea of Japan, is not much larger than those of *Biddulphia pumila*, n. sp., from which, however, it is at once distinguishable by its areolate ornamentation, and by the fact that the angles which are equally prominent are not simply conical, but present a protuberance near the base. The cylindrical cingulum is punctated.

Biddulphia, sp. (?) (Plate XXVI. fig. 1.)

The valve here shown is from the Arafura Sea. It possesses an elliptico-lanceolate form, with rounded, somewhat mammiform vertices, while the surface has distinct granules which radiate from a very excentric point. Near the extremities there are two small pseudo-openings. Although this valve cannot be identified with any species hitherto recorded, it does not afford the means of fully determining the characters of the new species which it represents.

Biddulphia, sp. (?) (Plate XXIII. fig. 13.)

This organism, like the one last mentioned, cannot be identified with any known species, and is insufficient to enable a complete conception of the new species, which it typifies, to be obtained. It is of elliptical form, and its punctations radiate from the centre, at which a small group of more salient granules or denticules occur.

Biddulphia weissflogii, Grun. (Plate XXVI. fig. 2.)

Forma subquadrata, decussatim punctulata; apicibus parum productis linea axiali vix perspicua unitis; valvis ellipticis, ad centrum subinflatis, duplici brevi cornu excentrico ad apices instructis.

This perfect frustule is adorned with very minute granules, disposed in a quincuncial manner. Its extremities are slightly prolonged and rounded, and, when seen from the zonal aspect, each presents two short strong conical and slightly curved points, which are quite characteristic of the species.

In Plate c. figs. 1 and 2, of the Synopsis des Diatomées de Belgique, by Dr H. van Heurck, there is represented a frustule which is identical in its principal characteristics with that brought home by the Challenger which is now being considered. It has been