

which are very transparent, presents a central inflection which seems to indicate a depression in the raphe and in the plane of the valve. The connecting zone is distinguished by bearing linear bands, which are decorated in a special manner, being marked by striæ alternating with double files of granules.

The specific name has reference to this zonal sculpturing.

Amphora philippinica, n. sp. (Plate XXVII. fig. 2.)

Valvis ad dorsum arcte sinuato-constrictis, apicibus productis acutis; linea media recta ad polos vix deorsum inflata; striis transversis perspicuis punctulatis. In mari Philippinarum.

An acute constriction also occurs in this bi-lobed species from the Philippine Sea. Its apices are very prolonged, sharp, and slightly bent, and its transverse striæ are well defined, granulated, and subradiating.

By referring to A. Schmidt's Atlas¹ (Plate xxv. fig. 62) it may be observed that the present valve resembles the *Amphora coarctata* of Grunow, of which no description has been given. The latter, however, possesses capitated apices, and the striæ are thin, non-granulated, and not subradiating.

The specific name has reference to the locality in which it was found.

Amphora thaitiana, n. sp. (Plate XXVII. fig. 15.)

Elliptico-oblonga, polis rotundatis; valvis cymbiformibus, dorso late convexo, ventre inflato, apicibus obtusis; striis transversis validissimis per sulcos longitudinales interruptis. Ad portum Thaiti.

This type seems to be akin to the form represented in Plate xxviii. fig. 15 of the Atlas of A. Schmidt, which is a novelty if it be not the *Amphora egregia* of Ehrenberg. The present form, however, may be distinguished by its rounded extremities—in the form represented by Schmidt the ends are roundly truncated—and by the ornamentation of the valves. This consists of continuous costæ interrupted by longitudinal lines, while in Schmidt's frustule, and in *Amphora crassa* of Gregory,² which it resembles, the valves are distinguished by continuous costæ, and the dorsal areas by numerous longitudinal lines separated by rows of spots or small lines.

The distinction between the appearance of the extremities, apart from other structural differences, might have been explained by supposing that the frustules had attained different stages of development.

This new form is very abundant in the rich flora of Tahiti, and its specific name is intended to indicate this fact.

¹ Atlas der Diatomaceenkunde, in Verbindung mit der Herren Grundler, Grunow, Janisch, Weissflog und Witt, herausgegeben von Adolf Schmidt, 1875. See also a reproduction of the above about one-half the linear dimensions of the original, by C. Henry Kain, Camden, N.J., 1884.

² *Op. cit.* p. 52, pl. vi. figs. 94, 94b, 94c, and 94d.