

elongated sublinear form, its centre is slightly inflated, and its extremities are roundly truncated. The continuous striæ form subradiating bars, and are easily discerned. The valves are slightly depressed at the centre.

It has been named in honour of the Italian naturalist Professor Giuseppe Meneghini, one of the earliest cultivators of the study of the Diatomaceæ.

*Amphora scalaris*, n. sp. (Plate XXVII. fig. 19.)

Oblonga, truncata, lineis dorsali et ventrali late biarcuatis, centrali medio angulariter inflexa; striis continuis raris transverse parallelis. Ad portum Jackson in Australia.

Of this remarkable form, which was collected at Port Jackson, Australia, only a single valve was observed. In this the dorsal line, like the ventral profile, is singularly biarcuate, while the raphe is angularly folded at the centre. The widely separated, transverse, equidistant, and continuous striæ are especially characteristic. The extremities are roundly truncated.

The specific name has been suggested by the appearance of the transverse striæ.

*Amphora polyzonata*, n. sp. (Plate XXVII. fig. 18.)

Forma lata, medio angulariter constricta; apicibus late rotundatis, truncatis: valvis introrsum inflexis; zona connectiva in plures fascias divisa; zona et valvis quadrato ordine punctulatis. Ad portum Thaiti.

In this species from Tahiti, just as in some *Naviculæ*, well-marked constrictions occur. Thus the valval involution is so strong and acute as to simulate the staurotic dilatation of a central nodule. A strongly biarcuated line forms a raphe, and the frustule, which is twice as long as broad, is widely and roundly truncated at the extremities. The connecting zone bears several longitudinal bands which, like the valves, have the granules arranged in a quadrate manner.

Plate XXVII. fig. 8, represents a two-lobed form which is angularly constricted, but far less deeply than *Amphora polyzonata*. The raphe is also strongly biarcuate, but the extremities are round and non-truncated. The length of the frustule is more than twice its breadth. The connecting zone bears longitudinal bands which, like the valves, are punctated. It may therefore be regarded as a mere variety of the former, the distinctions indicated being such as might result from differences in development. It was obtained at the port of Tahiti.

*Amphora decora*, n. sp. (Plate XXVII. fig. 14.)

Late inflata, elongata; apicibus obtusis subproductis; valvis medio inflexis; zona connectenti in fascias divisa, binis granulorum ordinibus et striis alternis insignita. Ad mare Philippinarum.

This beautiful little *Amphora*, from the mud of the Philippine Seas, has a widely inflated profile, and obtuse, slightly prolonged extremities. Each of the two valves,