

thereby showing the uncertainty which must often exist in the definition of species when these have not been established upon living forms. Its valves and connecting zone exhibit a slight striation.

*Ethmodiscus wyvilleanus*, n. sp. (Plate XIV. fig. 6.)

E maximis; subcylindricum; valvis convexis medio complanatis, radiolatis; zona connectenti punctulata. Diametrum æquatoriale = 1000  $\mu$ . : polare = 1457  $\mu$ . In Oceano Atlantico.

Although smaller than *Ethmodiscus gigas*, this species is still of colossal size. Its valves are convex, and each has a flat slightly compressed centre. The connecting zone is greatly developed, so that the frustule is cylindroidal, the ratio of the equatorial to the polar axis being approximately as 2 to 3. This zone is clearly punctated in a quadrate manner, and the valves are ornamented with radiating striæ or rows of small points.

*Ethmodiscus tympanum*, n. sp. (Plate XIV. fig. 3.)

E maximis; exacte cylindricus; valvis annulatis cingulo inclusis. Ad superficiem maris Japonici.

This curious type is not so large as the two preceding. Its form is exactly cylindrical. It possesses, like *Biddulphia*, a distinct belt superposed to the hoops of the two valves.

The specific name has reference to its cylindrical outline.

*Ethmodiscus* (?) *sphæroidalis*, n. sp. (Plate XXII. fig. 10.)

Frustulis spherico-compressis, binatim conjunctis; valvis convexis inæqualibus, una scilicet convexo-complanata, altera convexa et medio concava. Diametrum = 882  $\mu$ . In mari Pacifico.

This species is interesting not only on account of its size, but also because two similar frustules were found associated together—a circumstance which renders the generic determination doubtful. Both forms are of a compressed spheroidal outline and are united by a common belt, which exhibits a very delicate line of suture in the middle. This belt is somewhat analogous to that which occurs in some *Melosiræ* and *Podosiræ*. On each frustule two other lines, which probably indicate the incapsuling of the two valves, occur.

It is to be noted that, although the character of the belt seems to indicate a relationship to the *Melosiræ* and *Podosiræ*, its size and fragile nature point to an affinity with *Ethmodiscus*.

Plate XIV. figs. 4, 4a, 4b, 4c, represent fragments of various species.