canal of Trau, Dalmatia, for the purpose of studying the flora of the Adriatic. In this locality a perfect Cymbella was observed, in a preparation fresh from the sea, in a moving condition. Species have also been recorded in sand obtained by Gwyn Jeffreys, the well-known conchologist, in the vicinity of the Shetland Islands, although Professor Dickie, who first studied these gatherings, believed that the cymbelloid frustules were deposited on the bottom, after having been carried into the sea by rivers.

Cymbella criophila, n. sp. (Plate XXVII. fig. 5.)

Forma marina (?) elongata, sensim ad acutissimos apices declinans; linea dorsali convexa, ventrali vix convexiuscula; striis perspicuis punctulatis subradiantibus, ad centrum lineam mediam hinc inde inæqualiter non attingentibus. Ad meridiem insulæ Heard.

This interesting species, which was obtained to the south of Heard Island, has an extremely convex dorsal line, the ventral being only slightly convex. The frustule tapers at each end to a very sharp point. The striæ are well marked, and subradiating in disposition, each being formed by a series of very minute points. Those towards the middle of the frustule do not meet in the centre, where a smooth area which is notably larger on the more convex than on the less convex side of the valve is to be found.

This Antarctic Diatom may have been transported by icebergs into the sea, although the probability that it is truly marine must be borne in mind.

Cymbella marina, n. sp. (Plate XXVII. fig. 13.)

Forma marina, elongata; linea ventrali recta, dorsali late arcuata; apicibus rotundato-acutis; striis transversis parallelis, lineam mediam non attingentibus. Ad mare Japonicum, prope Yedo.

This species was obtained near Yedo in the Sea of Japan. The ventral line is straight, and the apices are rotundately acute. The valval striæ are parallel and terminate near the raphe, a non-striated nodule being left in the centre and being especially prominent on the side next the dorsal line.

That this form is truly marine cannot be questioned.

Cymbella pelagica, n. sp. (Plate XXVII. fig. 4.)

Mediocris; dorso turgido, ventre leniter convexo; linea media subcurvata; apicibus obtuso-truncatis, productis; striis moniliformibus subradiantibus.

The dorsal line, in this form, is greatly arcuate, the ventral being slightly convex. The apices are obtuse and somewhat prolonged, and the raphe is slightly curved. The striæ are subradiating and moniliform.

This Diatom, like the preceding, must be looked upon as a truly marine form, inasmuch as it has been observed in a moving condition under the microscope, and has been met with in more than one collection from the sea.