

Dr. Hansen's description of *Nephtys atlantica* is brief and rather indefinite, but his figure is useful.

*Nephtys phyllobranchia*, n. sp. (Pl. XXVI. fig. 10; Pl. XXVII. fig. 3; Pl. XIV A. figs. 12, 13).

*Habitat*.—Dredged at Station 45 (off the American coast, a little south of New York), May 3, 1873; lat. 38° 34' N., long. 72° 10' W.; depth, 1240 fathoms; bottom temperature 37°·2, surface temperature 49°·5; sea-bottom, blue mud.

The softened fragmentary specimen measures in length about 50 and in breadth 4·8 mm., and is therefore of considerable size.

The head (Pl. XXVI. fig. 10) is somewhat quadrate, eyeless, and with a pit at each side posteriorly. The extruded proboscis has unusually prominent longitudinal fibres. The papillæ are grouped towards the distal end, and are closely arranged. They commence as short processes, but abruptly become rather large and long.

The feet (Pl. XXVII. fig. 3) throughout are characterised by the closeness with which their superior and inferior lobes approach each other, by the comparative shortness of the bristles, and the absence of lamellæ. A noteworthy symmetry is also observed on viewing the anterior feet from the lateral aspect. The dark spine occupies the centre of a ring of bristles surrounded by a pale collar. Proceeding from before backward, this ring gradually elongates vertically, and by and by ceases to attract attention. The dorsal division of the foot bears on each side of the spine a slightly raised fold, but no distinct lamella. Another fold occurs at the base of the annulated or barred bristles. A short and slightly tapered cirrus proceeds from the anterior aspect of the origin of the branchia. Depending from the superior lobe is a large, leaf-like lamella, with a midrib formed by the branchia, the tip of which, indeed, emerges from a notch externally. The foliaceous expansion appears to be furnished with channels, and thus the whole arrangement is eminently branchial. The ribbed bristles (Pl. XIV A. fig. 12) are small, and the striæ closely arranged. They are especially narrow when viewed laterally. The long bristles (Pl. XIV A. fig. 13) are proportionally stout, with a distinct curvature at the end of the shaft, and a broad serrated and rapidly tapered tip. The serratures are characteristically bold in comparison with those of *Nephtys dibranchis* and *Nephtys verrilli*, and, moreover, they occupy only a limited portion of the edge of the broadest part of the blade.

The intestinal canal is filled with greyish mud containing sand-particles, a few Diatoms, Globigerinas, and various Foraminifera.

The noteworthy feature in the structure of the body-wall of this form is the massive condition of the dorsal longitudinal muscles, which constitute apparently a single dense muscle, only slightly narrower in the middle line. The transverse diameter of this