

*Thalenessa digitata*, n. sp. (Pl. XXII. fig. 2; Pl. XXIII. figs. 5, 6, 7; Pl. XXV. figs. 4, 5; Pl. XIII.A. figs. 7-10).

*Habitat*.—Dredged off the Admiralty Islands, March 1875; depth, 16 to 25 fathoms.

The specimen is in three fragments, the whole being about 125 mm. in length and about 5 mm. in breadth at the anterior third.

The greater part of the body anteriorly is tinted dorsally of a brownish hue so as to relieve the pale scales. The colour fades anteriorly and posteriorly.

The head (Pl. XXII. fig. 2) is remarkably indistinct, being overlapped by the nuchal fold posteriorly; and even when the latter is reflected the cephalic region is small. A pair of eyes of considerable size, and close together, occurs on each side. A short median tentacle lies in the centre anteriorly, with a short antenna close to the base on each side. Each of these organs is shaped somewhat like an awl-handle with the smaller end free. Above the palpus is a double process, the base consisting of a stout pedicle with a lamellar frill along the inner border superiorly, and splitting midway into a smaller filiform superior tentacular cirrus, and a larger inferior one, which, however, hardly reaches the tip of the first pair of feet. The palpi are long and gently tapered from base to apex.

Anteriorly the scales (Pl. XXIII. fig. 7) are somewhat rounded, posteriorly irregularly reniform. Their surface is perfectly smooth. The external margin has a series of peculiar digitate papillæ (Pl. XXV. fig. 5), the main stem being nearly cylindrical, then the process becomes bifid, and throughout the greater part of its length trifid, and some are provided with four digitations. Posteriorly one or two papillæ are visible, and the processes on the margin are few, one or two only being trifid. The nerves passing to the papillose margin and other parts of the organ are well developed in both anterior and posterior scales. The latter present a more distinctly granular region in the neighbourhood of the digitate processes. In vertical (transverse) section both cuticle and hypoderm are fairly developed. The complexity of the muscles connected with the scale and papilla is great, the most varied motions of this organ being produced with ease. Thus, for instance, depression of the scale is effectively done by the vertical or slightly oblique muscles, while elevation is accomplished by the relaxation of these and the contraction of the transverse.

The first pair of feet pass straight forward, and the second are directed only a little outward, so that the anterior margin (the palpi being curved backward inferiorly) appears to be formed of feet. The first foot (Pl. XXV. fig. 4) bears a scale, and at the tip has a large translucent lamella projecting from the anterior (or, according to position, the inner) margin. The same process occurs at the extremity of the second foot, and in