

Instead of the preoral folds the minute head of the animal forms the anterior border of the snout. In shape it is somewhat ovoid or occasionally lozenge-shaped, from the pointed nature of the anterior edge. It bears on the dorsal surface four eyes, all nearly equal in size, and forming a rectangle, those of each pair being close together, thus diverging from the ordinary type in the *Amphinomidæ*. Somewhat behind the posterior pair of eyes is the long median tentacle, a simple subulate process which projects backward as far as the middle of the second body-segment. A little in front of the eyes at each side is a tentacular cirrus, considerably shorter than the foregoing; while on either side of the tip of the snout is another of similar length. The mouth opens on the under surface at the anterior border of the second body-segment, and a flat surface, marked by two narrow longitudinal ridges, leads forward to the tip of the snout. The posterior end terminates in a bulbous anus, which in some appears pediculated, from the constriction immediately in front.

The branchiæ commence on the fourth body-segment as a considerable tuft in each case, and when fully developed consist of a slightly divided arbuscle richly coated with cilia, and thus diverging from the condition in the *Amphinomidæ*. Moreover, the hypoderm of the organ presents a lax and cellular appearance, while the cuticle is very thin on the distal processes. In transverse section the translucent areolar hypoderm is especially marked at the base of the organ. The central area is occupied by large granular globules, apparently coagulated blood, and the latter also occurs in the two channels in the distal branches, which are irregularly dichotomous. The cilia appear to form several rows on the sides of the processes. The branchiæ in the *Hipponoë cranchii* of Baird are decidedly larger.

The dorsal bristles form a broad fan-like tuft at the anterior border of each segment, extending from the dorsal to the ventral aspect of the foot, and with the slight concavity of the curve directed backward. The bristles are translucent, simple, and tapering (Pl. IIIA. fig. 13). The outline of the lower part of the shaft (Pl. IIIA. fig. 16) is slightly irregular, from indications of the points or spikes, which become more distinct distally, and there is a single median streak probably due to a ridge externally, the rest of the surface being marked by fine longitudinal lines. In the figure the shaft is compressed and cracked, but the spikes are thus rendered more evident. In its normal condition the lower part of the shaft appears as a clear tubular bristle (Pl. IIIA. fig. 15), only a slight roughness along one of the margins indicating the spikes. The mere evaporation of a small portion of the water between the cover and the slide suffices to destroy the outline by breaking the tube and causing it to resemble fig. 16. The tips of some are peculiarly bifid (Pl. IIIA. fig. 14). Acetic acid has very little effect on these bristles except in rendering them more translucent. No bubbles of gas escape, and they are less brittle than in the *Amphinomidæ*; so that on the whole they do not seem to be of the same characteristic calcareous nature.