

whorled arrangement exists in the tuft, but the main trunk divides into three, and then each division splits into various processes. The ultimate twigs, which are thicker than those of *Pista cristata*, are dichotomously divided. The whole somewhat resembles the branchia of a *Terebella*, being sparsely branched, and situated at the summit of a long pedicle.

The bristles are much longer and more tapered than those of *Eupista darwini* or other allied form, a considerable portion beyond the slightly developed lateral wings being extremely attenuated. A greater amount of the whitish glandular tissue surrounds the first four hook-rows than in *Pista cristata*. The dorsal processes that occur behind the third, fourth, and fifth, however, are less developed than in the latter form.

The hook-pads (uncinigerous eminences) are much shorter than in *Pista cristata*. The hooks (Pl. XXVIIA. fig. 34) differ from all the previous types in the comparative flatness of the crown, which in profile shows about three teeth, in the proportionally small space below the great fang, and in the boldly convex nature of the anterior inferior prominence, which is so developed as to give great massiveness to the base of the hook. The posterior or dorsal outline, moreover, is characteristic, being only slightly indented about the middle, and devoid of the usual projection at the base of the long process. The latter is comparatively slender, and issues only from the posterior angle, instead of having the usual wide connection with the adjoining base. The latter presents a firmer condition than is common, and is marked by minute crenations. The characters of the entire organ are constant and easily defined.

The intestine contains a little sand, in which are a few Diatoms and fragments of sponge-spicules. The Gregarinæ in the canal are well formed, the larger presenting distinct longitudinal bands, apparently of a contractile nature.

The dark greyish or somewhat olive tubes (Pl. LI. fig. 2) are tolerably firm, rounded, chitinous structures, tapering from the anterior to the posterior extremity, and armed all over with long spinous processes. The majority of the tubes seem to have been free, but others have been immersed in sponges, a position which has favoured the preservation of the long external spines. In intimate structure the wall of the tube is marked by close wrinkles, which are so fine as almost to be linear, a feature partly due to its composition, for it consists of a vast number of needle-like glassy spicules of sponges, held together by secretion and mud. This composition gives a gritty feeling on touching the tube, while it more readily enables it to retain its circular form. Arranged somewhat alternately all over the tube, though more sparsely at the wide or anterior end, and gradually disappearing at the narrow one, are a series of spinous processes, which give the tube a characteristic appearance. They project outward in some instances a considerable length, equalling indeed several times the diameter of the tube. These appendages are lighter in colour than the latter, but are composed of similar materials, viz., sponge-spicules, secretion, and sand-grains, the latter occurring in greater quantity than in the tube proper. The proportionate diminution of the mud probably renders the