

towards its posterior border and having a basal segment and an elongated terminal region, which is purplish-brown throughout, whereas the former region is less deeply coloured, with a pale band in front. From the base of the process a fan-shaped patch of pigment extends downward and inward on the bristle-papilla. The ventral cirrus is quite pale, and lies below and rather behind the ventral tuft of bristles. A slight enlargement of the base occurs anteriorly. The cirrus is filiform, tapering, and considerably shorter than the dorsal.

About thirty-two pairs of arborescent branchiæ are ranged along the dorsum, the number varying according to the length of the specimen. Each is situated at the posterior border of the segment, a short distance from the cirrus, and slightly overlapped by the radiating dorsal bristles. Their shape is dendritic; a central stem rising from the dorsum and giving off, first, a large external branch, which generally divides into two, and these give off others, which bear the ultimate pinnules. The other branches of the main stem pass off transversely (nearly opposite in arrangement) and subdivide into pinnules. Those at the tip are simple, *i.e.*, have no subdivisions. In the ordinary condition the branchiæ fold backward, and since the pinnules are all grouped posteriorly they are thus in the most protected position. In minute structure the stem consists externally of a firm cuticular investment, a considerable layer of hypoderm, a central area of muscular and connective tissue, and the two main vessels (afferent and efferent). Each of the ultimate pinnules also carries its two blood-vessels in the midst of a considerable amount of hypoderm. The muscular fibres in the centre of the main stem are complex—longitudinal and radiating as well as transverse. If a longitudinal section of any of the larger branches be made, the transverse fibres form a series of septa.

The branchiæ continue to the penultimate segment, but diminish in size posteriorly. They are marked by a deposit of pigment, best seen in small specimens, along the main branches.

The dorsum of the animal has a very conspicuous row of brownish-purple spots, which occupy the posterior two-thirds of each segment, in the middle line. A brownish band also occurs at the anterior part of each segment, from the branchiæ outward. The anus is dorsal, with two elongated cirri behind it.

When withdrawn the proboscidian region presents three layers—an outer membranous, a denser middle portion, and an inner division of cartilaginous consistence. The latter forms two longitudinal folds, which in extrusion become transverse. In the quiescent state of the parts (*i.e.*, when withdrawn) in the Mediterranean *Chloeia* procured during the "Porcupine" Expedition, the lining tissue of the buccal cavity forms some simple folds superiorly, above the two muscular external lips. These folds gradually increase in complexity, and when the lips disappear they form a series of vertical and horizontal papillæ. The latter are covered by the usual dense cuticle, with hypoderm beneath, and followed by a complex muscular layer varying according to the situation examined.