

Immediately behind the mouth-slit a continuous ring of the following structure is formed by the buccal wall:—Superiorly are various leaf-like glandular papillæ, succeeded on each side by an inferior dense margin composed of the two muscular processes which become terminal in extrusion. A variously folded papillose region occurs beneath and completes the ring. The chief muscles are massed at the sides of the dense superior folds. The great ridges increase in size and muscularity as we proceed backward, and the wall beneath becomes more compact. The muscular fibres moving the dense lips are evidently important, and are probably the chief agents in the biting movements which the part performs in alimentation. The fibres form a complex transverse and longitudinal meshwork, the free surface of the part having a glandular structure. Passing inwards, another fold then occurs externally on each side, and the superior papillæ occupy a larger space, while the region next them has its surface covered with pointed papillæ, and the dense portion is confined to the ventral part of the massive plait. The wall of the buccal organ presents the following minute structure:—Below the dorsal thin glandular portion the massive lateral wall is formed by an interwoven series of transverse and longitudinal fibres, the conical papillæ being on the inner surface. Beneath is a dense fold of the hard pad, which in section has the inner part of its area filled with longitudinal fibres. The secondary fold below is now made up of interwoven longitudinal and oblique fibres, and this and the former plait are bound to the dense outer wall of the organ by strong muscular bands. Instead, therefore, of forming the upper part of the lateral wall, the dense portion now constitutes the lower, the two accessory folds (enveloped in a firm layer) meeting in the middle line beneath, while the papillæ have disappeared from the wall outside them. Immediately behind, the fold on each side unites with its fellow, the larger superior mass being formed chiefly of longitudinal fibres within the glandular layer, and the inferior of a complex interlacement of longitudinal and transverse fibres, the latter forming spaces for the former. The upper lateral wall is boldly papillose, while the dorsal margin has a row of blunt papillæ. The lower part of the organ gradually merges into the upper, with similar radiating and circular fibres, the whole (with the exception of the dorsal arc) forming a dense muscular tube. Beneath is a great retractor of longitudinal and vertical fibres. Internally the long papillæ of the lateral surface are continued over the ventral curve. The outer wall of the rounded tube is composed of a well-marked series of longitudinal fibres, which gradually increase in thickness from the dorsal to the ventral median line. The papillæ on the inner surface then have a tendency to form ridges, and the thin glandular wall is greatly extended dorsally; while the canal diminishes in calibre, assuming a uniform outline, the inner surface being covered with the glandular rugæ and papillæ resting on a coat of circular muscular fibres—externally bounded by the longitudinal layer.

The whole muscular mechanism of the organ is suited for performing the functions of a pair of fleshy biting pads, for the extrusion and retraction of these in varying degrees,