piece which may be present in the buccal cavity; sometimes these may be near the radula, but they are never behind it.

Furthermore, the radula is always situated in the inferior (ventral or neural) part of the alimentary canal, whilst the extra-radular horny pieces may be at any point whatever of the circumference of the buccal cavity—dorsally, ventrally, or laterally.

To these various situations of the extra-radular horny pieces must certainly be attributed the diversity of the organs which have been distinguished among them, as well as the confusion which reigns among the names which have been applied to them.

The extra-radular horny pieces are inserted directly into the wall of the digestive tract, and can only be removed along with it; the radula, on the contrary, forms an independent mobile ribbon, capable of extensive displacements, and actuated by a muscular and cartilaginous mechanism.

Finally, as to the physiological rôle of the extra-radular horny pieces: by reason of their situation being usually anterior, they have for special duty the retention of the prey, or of such portion of it as they have seized, whilst the radula discharges the function of dividing and comminuting it.

All the extra-radular horny pieces, however diverse their forms and the names by which they have been designated, appear to me on an ultimate analysis to be referable to jaws. The primitive form of these latter organs must have been a horny ring, situated in front of the radula towards the anterior portion of the buccal cavity; the origin of this ring has been the cuticularisation of this latter cavity at the place where it is most exposed.

This annular form may still be seen in a few Molluscs (*e.g.*, in *Umbrella*), where the ring is divided vertically into two lateral halves. By a transverse division into dorsal and ventral portions, the mandibles of the Cephalopoda have taken origin.

The two lateral halves of this ring are also found in the lateral mandibles of nearly all Gastropoda. These horny pieces may have remained as a single united surface, or may have become scaly or covered with spines, which might finally become isolated and independent; lastly, the separate portions may subdivide and reunite in various ways, and give rise to the numerous types of extra-radular horny pieces found among the Gastropoda.

As regards the special case of the Aplysioidea and the Gymnosomata, the scaly jaws (which are approximated in the median ventral line) and the