

- the periphery of the œsophagus, partly in the maxillæ, in which in point of form and structure they repeat the leg-glands.
5. The function of these glands is the preparation of the ferment (Enzyme), which is mixed with the food at its entrance into the œsophagus, to facilitate the digestion of starch and albuminoid substances.
  6. The alimentary canal (Darmcanal) is devoid of every form of gland-cells. To the muscular œsophagus of complicated structure, lined with chitinous *Intima*, succeeds the œsophageal stomach (Schlundmagen, Vormagen), with two cæca (Nebentaschen), stretching into the crop (Magendarm). In this digestion is carried out. The crop which surrounds it, situate in the head and the two first peræon-segments is, like its two forward-directed pairs of so-called liver tubes, lined with a deep cylindrical epithelium, which repeats the structure of the epithelium of the mid-gut (Dünndarm-epithel), and serves for resorption. The narrow intestinal tube (Darmrohr), is lined with a polygonal pavement epithelium, and in the sixth pleon-segment passes over into the short rectum (Afterdarm), which is fastened to the integument by means of dilators. [At page 23, in the *Munddarm* of *Phoronima* three sections are distinguished as *Mundhöhle*, *Schlundkopf* and *Schlundrohr* or œsophagus.]
  7. The annular muscles of the intestinal tube correspond to single muscle-cells, the nuclei of which follow one another in a median row on the dorsal side of the intestine.
  8. The heart stretches from the boundary of the head to the middle of the sixth peræon-segment, and possesses, besides the three pairs of ostia provided with valves and the two aortas, two pairs of lateral arteries.
  9. Each artery arises over an oblong slit bounded by two side-flaps (Seitenklappen) while at the base of each aorta lie two obliquely set ostia with a pair of flaps (valve-opening) to each.
  10. The obliquely transverse muscle-rings of the heart are developed from two lateral rows of cells, between which a dorsal and ventral median-suture remains.
  11. Under the heart, adjoining the ventral wall of the heart, there stretches across through the body-cavity a septum composed of large cell-plates. Besides this there is a second septum which occupies a similar position in regard to the intestine, so that the space of the body is divided into three blood-channels bounded by connective-tissue, and communicating with one another by definite openings. Besides these main channels, which are continued on into the head, there exist a number of more peripheral accessory channels, likewise bounded by connective-tissue, which represent the blood-courses of the regular circulation.
  12. The ventral ganglionic chain contains, excluding the subœsophageal ganglion-mass, nine ganglia, of which five belong to the peræon, four to the pleon. The last peræon- (thoracal) ganglion, just as the last pleon- (abdominal) ganglion, follows the next preceding ganglion immediately. The last pleon-ganglion has arisen out of the concretion of three ganglia for the fourth, fifth and sixth pleon-segments, these ganglia in the embryo being separate.
  13. The subœsophageal ganglion-mass corresponds to six ganglionic nuclei, or to seven if we take into account the ganglionic centre belonging to the commissures which provides for the nerves of the second antennæ. Besides the nerves of the second antennæ also all the maxillary nerves are derived from the œsophageal commissure, to which their place of origin has shifted itself.
  14. The peripheral nerves are rooted, not in the so called "Punktsubstanz" [Dietl's *Marksubstanz*, p. 57, *myeloid substance*, Packard], but derive their fibres from ganglion-cells partly of the corresponding ganglion—as well crossed as uncrossed fibres—partly of the preceding ganglion, partly from the brain.
  15. The fibre-tracts of the so-called œsophageal commissure which enter the brain pass partly to the ganglion-layers of the same half of the brain, partly in crossed course to those of the