

tubular nervous system and the gut, and with respiratory organs which arise from the anterior portion of the gut. We do not assume that *Amphioxus* stands in the direct ancestral line; it is probably much specialized, partly degenerated, and represents a side-branch; but it is, nevertheless, the only creature, hitherto known, which satisfactorily connects the Vertebrata with their invertebrate ancestors. Many other efforts have been made to solve the mystery of the origin of the Vertebrata—all less satisfactory than the present suggestion, or even absolutely futile. This remark applies especially to the attempts to derive them from either Articulata or Echinoderms. The other great and highly developed phylum, the Mollusca, is quite out of the question. We have to go back to a level at which all these principal phyla meet, and there we find the Vermalia, the lower of which alone permit connection in an upward direction with the higher phyla.

II. Stage of *Cyclostomata*. This now