

the shape of a spinal cord. (b) The use of the anterior portion of the gut for respiratory purposes. (c) The larval development of the Tunicata is essentially the same as that of the Vertebrata in its early stages. Only the free-swimming Copelata or Appendicularia among the Tunicates retain most of these features. The others, which become sessile—namely, the Ascidia, or sea-squirts—degenerate and specialize away from the main line.

10. Stage of the *Acrania*, represented by *Amphioxus*. The early development of this little marine creature agrees closely with that of the Tunicates; but one important feature is added to its organization—namely, metamorphism, segmentally arranged mesoderm. *Amphioxus* still possesses neither skull nor vertebræ, neither ribs nor jaws, and no limbs. But it is a member of the Vertebrata if we define these as follows: Bilateral symmetrical animals with segmentally arranged mesoderm, with a chorda dorsalis between the