

SECOND HALF OF THE SERIES OF HUMAN ANCESTORS.

VERTEBRATE ANIMAL ANCESTORS OF MAN

(Vertebrata).

NINTH STAGE : Skull-less Animals (Acrania).

The series of human ancestors, which in accordance with their whole organisation we have to consider as Vertebrate animals, begins with the Skull-less animals, or Acrania, of whose nature the still living Lancelet (*Amphioxus lanceolatus*, Plate XII. *B*, XIII. *B*) gives us a faint idea. Since this little animal in its earliest embryonal state entirely agrees with the *Ascidia*, and in its further development shows itself to be a true Vertebrate animal, it forms a direct transition from the Vertebrata to the Invertebrata. Even if the human ancestors of the ninth stage in many respects differed from the *Amphioxus*—the last surviving representative of the Skull-less animals—yet they must have resembled it in its most essential characteristics, in the absence of head, skull, and brain. Skull-less animals of such structure—out of which animals with skulls developed at a later period—lived during the primordial period, and originated out of the *Himatega* of the eighth stage by the formation of the metamera, or body segments, as also by the further differentiation of all organs, especially the more perfect development of the dorsal nerve-marrow and the spinal rod lying below it. Probably the separation of the two sexes (gonochorism) also began at this stage, whereas all the previously mentioned invertebrate ancestors (apart from the 3—4 first