

into the cavity of the mouth) into air passages. The series of the ancestors of man which breathed air through lungs began at this stage. Their organisation may probably in many respects have agreed with that of the still living *Ceratodus* and *Protopterus*, but at the same time may have been very different. They probably lived at the beginning of the Devonian period. Their existence is *proved* by comparative anatomy, which shows the *Dipneusta* to be an intermediate stage between the *Selachii* and *Amphibia*.

THIRTEENTH STAGE: Gilled Amphibians (*Sozobranchia*).

Out of those Mud Fish, which we considered the primary forms of all the *Vertebrata* which breathe through lungs, there developed the class of *Amphibia* as the main line (pp. 205, 216). Here began the five-toed formation of the foot (the *Pentadactyla*), which was thence transmitted to the higher *Vertebrata*, and finally also to Man. The gilled *Amphibians* must be looked upon as our most ancient ancestors of the class of *Amphibia*; besides possessing lungs they retained throughout life regular gills, like the still living *Proteus* and *Axolotl* (p. 218). They *originated* out of the *Dipneusta* by the transformation of the paddling fins into five-toed legs, and also by the more perfect differentiation of various organs, especially of the vertebral column. In any case they existed about the middle of the palæolithic, or primary period, possibly even before the Coal period; for fossil *Amphibia* are found in coal. The *proof* that similar gilled *Amphibians* were our direct ancestors, is given by the comparative anatomy and the ontogeny of *Amphibia* and *Mammals*.