

has no bony skeleton, but not even a head, properly speaking. Yet the fact that it possesses a dorsal cord, extending from one extremity of the body to the other, proves that it belongs to the type of Vertebrates. But as this peculiar structure is found only at a very early period of embryonic development, in other fishes, we conclude that the Amphioxus holds the very lowest rank in this class.

386. Nevertheless, the metamorphoses of animals after birth, will, in many instances, present but trifling modifications of the relative rank of animals, compared with those which may be derived from the study of changes previous to that period, as there are many animals which undergo no changes of great importance after their escape from the egg, and occupy, nevertheless, a high rank in the Zoölogical series, as, for example, Birds and Mammals. The question is, whether such animals are developed according to different plans, or whether their peculiarity in that respect is merely apparent. To answer this question, let us go back to the period anterior to birth, and see if some parallel may not be made out between the embryonic changes of these animals and the metamorphoses which take place subsequently to birth in others.

387. We have already shown that embryonic development consists in a series of transformations; the young animal enclosed in the egg differing at each period of its development, from what it was before. But because these transformations precede birth, and are, therefore, not generally observed, they are not less important. To be satisfied that these transformations are in every respect similar to those which follow birth, we have only to compare the changes which immediately precede birth with those which immediately follow it, and we shall readily perceive that the latter are simply a continuation of the former, till all are completed.

388. Let us recur to the development of fishes for illus