

between organized beings." Following this comparison closely, he shows how the early embryonic condition of the present fishes is recalled by the general disposition of the fins in the fishes of the Old Red Sandstone, and especially by the caudal fin, making the unevenly lobed tail, so characteristic of these ancient forms. This so called heterocercal tail is only known to exist, as a permanent adult feature, in the sturgeons of to-day. The form of the head and the position of the mouth and eyes in the fishes of the Old Red were also shown to be analogous with embryonic phases of our present fishes. From these analogies, and also from the ascendancy of fishes as the only known vertebrate, and therefore as the highest type in those ancient deposits, Agassiz considered this fauna as representing "the embryonic age of the reign of fishes;" and he sums up his results in conclusion in the following words: "The facts, taken as a whole, seem to me to show, not only that the fishes of the Old Red constitute an independent fauna, distinct from those of other deposits, but that they also represent in their organization the most remarkable analogy with the first phases of embryonic development in the bony fishes of our epoch, and a no less