

specimen of fossil or living fish, whether marine or fresh-water, that has not been created with reference to a special intention and a definite aim, even though we may be able to detect but a portion of these numerous relations and of the essential purpose.

Are the present fishes superior to the older ones? As a general proposition, I would say, *no*; it seems to me even that the fishes which preceded the appearance of reptiles in the plan of creation were higher in certain characters than those which succeeded them; and it is a strange fact that these ancient fishes have something analogous with reptiles, which had not then made their appearance. One would say that they already existed in the creative thought, and that their coming, not far removed, was actually anticipated.

Can the fishes of the Old Red be considered the embryos of those of later epochs? Of course they are the first types of the vertebrate series, including the most ancient of the Silurian system; but they each constitute an independent fauna, as numerous in the places where these earlier fishes are found, as the present fishes in any area of similar extent on our sea-shore to-day. I now know one hundred and four species of fossil fish from