

own, perishes. Varieties become species, and specific differences pass in a similar way into generic. The most successful forms are, by a process of "natural selection," made to overcome and survive those that are less fortunate, the "survival of the fittest" being the general law of nature. The present varied life of the globe may thus, according to Darwin, be explained by the continued accumulation, perpetuation, and increase of differences in the evolution of plants and animals during the whole of geological time. Hence the geological record should contain a more or less full chronicle of the progress of this long history of development.

It is now well known that, in the embryonic development of animals, there are traces of a progress from lower or more generalized to higher or more specialized types. Since Darwin's great work appeared, naturalists have devoted a vast amount of research to this subject, and have sought with persevering enthusiasm for any indications of a relation between the order of appearance of organic forms in time and in embryonic development, and for evidence that species and genera of plants and animals have come into existence in the order which, according to the theory of evolution, might have been anticipated.

It must be conceded that, on the whole, the testimony of the rocks is in favor of the doctrine of evolution. That there are difficulties still unexplained, must be frankly granted. Darwin strongly insisted, and with obvious justice, on the imperfection of the geological record, as one great source of these difficulties. Objections to the development theory may, as shown by Mr. Carruthers, be drawn from the observed order of succession of plants, and the absence of transitional forms among them. Ferns, equisetums, and lycopods appear as far back as the Old Red Sandstone, not in simple or more generalized, but in more complex structures than their living representatives. The