

pothesis. In the year 1837, when fishes were not discovered in the Upper Silurian rocks, the theorist would have rightly predicted the existence of lower fossiliferous beds; but when they are discovered, and their fossils examined, they furnish the strongest argument that could be desired against the theory they were expected to sustain. This fact, no doubt, is so far in favor of the supposition that there may be still lower fossil-bearing strata; but, as Mr. Miller observes, "The pyramid of organized existence, as it ascends into the by-past eternity, inclines sensibly towards its apex, — that apex of '*beginning*' on which, on far other than geological grounds, it is our privilege to believe. The broad base of the superstructure planted on the existing scene stretches across the entire scale of life, animal and vegetable; but it contracts as it rises into the past; — man, — the quadrumana, — the quadrupedal man, — the bird and the reptile are each in succession struck from off its breadth, till we at length see it with the vertebrata, represented by only the fish, narrowing as it were to a point; and though the clouds of the upper region may hide its apex, we infer, from the declination of its sides, that it cannot penetrate much farther into the profound."

In our author's next chapter, the *twelfth* of the series, he proceeds to examine the "Lamarckian hypothesis of the origin of plants, and its consequences."

In his *thirteenth* chapter, on "The two Floras, marine and terrestrial," he has shown that all our experience is opposed to the opinion, that the one has been transmuted into the other. If the marine had been converted into terrestrial vegetation, we ought to have, in the Lake of Stennis, for example, plants of an intermediate character between the algæ of the sea, and the monocotyledons of the lake. But no such transition-plants are found. The algæ, as our author observes, become dwarfish and ill-developed. They cease to exist as the water becomes fresher, "until at length we find, instead of the brown, rootless, flowerless fucoids and confervæ of the ocean, the green, rooted, flowering flags, rushes, and aquatic grasses of the fresh water. Many thousands of years have failed to originate a single intermediate plant." The same conclusion may be drawn from the character of the vegetation along the extensive shores of Britain and Ireland. No botanist has ever found a single plant in the transition state.

The *fourteenth* chapter of the "Footprints" will be perused with great interest by the general reader. It is a powerful and argumentative exposure of the development hypothesis, and of the manner