far as we know, intermittent; but it has been so often repeated that we have no reason to doubt that the wasting continents afford a complete series of aqueous deposits, since the time when the dry land first appeared.

In recent years the *Challenger* expedition and similar dredgings have informed us of still another continuity of deposition in the depths of the ocean. There, where no detritus from the land, or only a very little fine volcanic ash or pumice has ever reached, we have, going on from age to age, a deposit of the hard parts of abyssal animals and of those that swim in the open sea; so that if it were possible to bore or sink a shaft in some parts of the ocean, we should find not only a continuous bed, but a continuous series of pelagic life from the Laurentian to the present day. Thus we have continuous physical records, could we but reach or completely put them together, and eliminate the disturbing influence of merely local vicissitudes. It is when we begin to search the geological formations for fossils, that imperfection in our record first becomes painfully manifest.

In the case of many groups of marine animals, as, for example, the shell-fish and the corals, and I may add the bivalve crustaceans, so admirably worked up by my friend Prof. Rupert Jones, we have very complete series. With the land snails the case is altogether different. As stated in another paper of this series, a few species of these animals appear in the later Palæozoic age, and after that they have no successors known to us in all the great periods covered by the Permian, the Trias, and the earlier Jurassic. A few air-breathing water-snails appear in the upper Jurassic, and true land snails are not met with again until the Tertiary. Were there no land snails in this vast lapse of time? Have we two successive creations, so to speak, of these creatures at distant intervals? Were they only diminished in numbers and distribution in the intervening time? Is the hiatus owing merely