

original. In these the general form and habit of life are the most likely things to change, the minute structures much less so. We need not, therefore, be surprised to find its descendants diminishing in size or altering in general form, while the characters of the fine tubulation and of the canal system would remain. We need not wonder if any sessile Foraminifer of the Nummuline group should prove to be a descendant of Eozoon. It would be less likely that a Sponge or a Foraminifer of the Rotaline type should originate from it. If one could only secure a succession of deep-sea limestones with Foraminifers extending all the way from the Laurentian to the present time, I can imagine nothing more interesting than to compare the whole series, with the view of ascertaining the limits of descent with variation, and the points where new forms are introduced. We have not yet such a series, but it may be obtained; and as these creatures are eminently cosmopolitan, occurring over vastly wide areas of sea bottom, and are very variable, they would afford a better test of theories of derivation than any that can be obtained from the more locally distributed and less variable animals of higher grade. I was much struck with this recently, in examining a series of Foraminifera from the Cretaceous of Manitoba, and comparing them with the varietal forms of the same species in the interior of Nebraska, 500 miles to the south, and with those of the English chalk and of the modern seas. In all these different times and places we had the same species. In all they existed under so many varietal forms passing into each other, that in former times every species had been multiplied by naturalists into several. Yet, in all, the identical varietal forms were repeated with the most minute markings the same. Here were at once constancy the most remarkable, and variations the most extensive. If we dwell on the one to the exclusion of the other, we reach only one-sided conclusions, imperfect and unsatisfactory. By taking both into connection we can alone realize the full significance