

ples of geology. He sees that the rock on which the impressions are made, is composed of mud and sand; and although he may not be able to explain how these materials were consolidated, yet he can hardly doubt but this rock was once in a soft state, and that these tracks were then made.

Thus far, it seems to me, all must agree. And when, as already remarked, we see upon the mud that covers these rocks, where they pass under the waters of the Connecticut, the tracks of living birds, exceedingly analagous to those upon the dry rocks, can we doubt that we witness the precise mode in which the ornithichnites were produced;—and especially when we find that the character of the foot, and the length of the step, indicate that most of the birds that formed them, must have had the habits of the existing waders or Grallæ, we cannot but infer that the impressions on the ornithichnites were made by the birds of the new red sandstone era, that frequented the margins of estuaries, streams and lakes, whose muddy shores, where they trod, were afterwards converted into the existing rock.

I know it has been usual, to regard the early geological changes on the globe, as having taken place in a very different manner, from those which are now going on; and I cannot resist the conviction, that the intensity of the causes has varied exceedingly at different times; but this could affect only the magnitude, not the similarity, of the results; and I have been struck with the remarkable resemblance between the state of things, as shown by these ornithichnites, to have existed so many thousands of years ago, and that now passing before our eyes. Our imaginations are carried back by these relics, to that immensely distant period, when the new red sandstone birds were travelling along the shores of the then existing estuaries or lakes, just as is now done by congeneric races.

There is, however, one striking point of difference between the ancient and the modern races. I refer to the enormous size of many of the former. Some, indeed, appear to have been no larger than the smallest of existing birds of their class: but what shall we say of those that produced the *O. giganteus* and *ingens*, taking strides of four feet, as their ordinary step! As to their real size, we may forever be left to conjectures. But I am not sure that a practiced comparative anatomist, could not determine the size of a bird, having the size of the feet, and the length of the step given. I shall not attempt the problem any farther than to state one fact by way of comparison. The African ostrich, (*Struthio camelus*) the largest of known birds, has a foot only ten inches long, reckoning from the back.