

part of the heel to the extremity of the claw;\* and yet, it sometimes weighs eighty or one hundred pounds, and in walking, its head is as high as that of a man on horseback; or from seven to nine feet. May we not infer, that some of these ancient birds, whose feet are sixteen or seventeen inches long, must have been almost twice as heavy and high as the ostrich? I do not believe that any man will doubt this, after having examined their tracks. From a few trials, I do not believe that the legs of a bird, (including the thigh,) whose ordinary step was four feet, could have been much less than six feet.

Such must have been the feathered tenants, that once occupied the now delightful valley of the Connecticut. At that time, we have every reason to believe that valley to have been an estuary: for the organic remains of the new red sandstone, are chiefly marine, as is shown in my Report on the Geology of Massachusetts. And to show that other organic beings, that were cotemporaries with these huge birds, were their compeers in size, I would refer to a description in that work of a sea fan, (*Gorgonia Jacksoni*), found in the new red sandstone of West Springfield, that has been uncovered without reaching its limits, eighteen feet in length, and four feet in width! Indeed, the colossal bulk of these birds, is in perfect accordance with the early history of organic life in every part of our globe. The much higher temperature that then prevailed, seems to have been favorable to a giant like development of every form of life.

The enquiry is often put, by those who examine these ornithichnites, how near the spots are, where they are found, to Connecticut river: and when told, that for the most part, they occur upon its immediate banks, they often infer, that the rock was deposited by that stream; but the geologist knows that the Connecticut river, certainly not then in existence, has had nothing to do with the deposition of the new red sandstone, that forms its banks; and from the facts mentioned in the last paragraph, he infers, with strong probability, that it was deposited beneath the ocean, and has since been elevated.

Another enquiry often made, is, how deep in the quarry the tracks are found? But this in the view of the geologist, is of less impor-

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\* For this fact, I am indebted to Prof. Mussey of Dartmouth College, which he obtained from a skeleton of the ostrich in his museum. He adds, also, that "the length of the leg, viz. the distance from the hip joint to the ground, is four feet and one inch, and the distance of the head from the ground is seven feet and eight inches. The elevation of the head, it is obvious, must vary with the direction of the axis of the body, which, as the skeleton now stands, is not quite horizontal, but rises a very little anteriorly." All that is now wanting, to enable us to form a probable estimate of the size and height of the bird that produced the *O. giganteus* and *O. insignis*, is the length of the ordinary step of the ostrich. If I may be allowed to conjecture, I should say, that the head of the new red sandstone bird must have been elevated from twelve to fifteen feet above the ground!