tance than their situation, in respect to the formation generally. In point of fact, they occur only a few feet below the immediate surface of the rock, where the excavations are made. But they are found on the western margin of a formation some miles in extent, reckoning across the strata; and those strata dip to the east several degrees; so that in fact, all those strata whose edges crop out to the east of the quarries containing the tracks, were deposited above the Ornithichnites, making a perpendicular thickness of rock of several hundred feet, over these relics, instead of six or eight feet. Indeed, at the locality in the south west part of Montague, the layers containing the Ornithichnites pass laterally under Mount Toby, which rises six or seven hundred feet above the spot, so that it is perfectly fair to say, that these foot marks are found several hundred feet deep in the rock. But this statement, although adapted to make a popular impression, is by no means as striking to the geologist, as the fact that they occur in the new red sandstone at all; for he knows, that since the deposition of that rock, there has been time enough for the formation of those vast masses of rock, constituting the oolitic, cretaceous, and tertiary groups, each of them many thousand feet in thickness, and formed by slow processes; and the only reason that they are not piled immediately above the Ornithichnites is, that the causes, by which those particular sorts of rock have been formed, have not here operated. In other words, after the new red sandstone was deposited, no new rocks were added, in this part of the world, during the immense periods in which the groups above named were in the process of formation in Europe.

Admitting that these tracks were originally produced by birds, travelling upon mud, let us enquire in what manner the process of covering them up, and of their consolidation, would take place. Alluvial deposits, it is well known, are arranged in layers, brought on by the successive charges of mud and sand, diffused in the waters; and these will be finer or coarser, according to circumstances. If a bird be quite heavy, its foot would sink considerably deep into these layers, either breaking through them, or, if plastic, causing several of them to bend downwards. Yet, I apprehend, that the lighter birds would rarely make any such indentation, that would sensibly affect the layers of mud more than an inch deep. But as successive layers of mud were deposited, after the impression had been made, if the movement of the water were very slight, they would be scarcely thicker where the track existed, than in other places; and consequently, the impression would be continued upward for a