

of ice, as I am well disposed to do, we must attribute their accumulation to the melting of icebergs charged with fragments of gravel and rock, rather than to glaciers. Professor Hitchcock has, in fact, styled them iceberg moraines.

At Smith's Ferry, near Northampton, about eleven miles north of Springfield, I examined, in company with the Professor, the red sandstone on the banks of the Connecticut River, where the celebrated foot-prints of birds are beautifully exhibited. The rock consists of thin-bedded sandstone (New Red, Trias?) alternating with red coloured shale, some of the flags being distinctly ripple-marked. The dip of the layers, on which the Ornithichnites are imprinted in great abundance, varies from eleven to fifteen degrees. It is evident that in this place many superimposed beds must have been successively trodden upon, as different sets of footsteps are traceable through a thickness of sandstone exceeding ten feet. My companion also pointed out to me that some of the beds, exposed several yards down the river, and containing Ornithichnites, would, if prolonged, pass under those of the principal locality, and make the entire thickness throughout which the impressions prevail at intervals, perhaps, twenty or thirty feet. We cannot, therefore, explain these phenomena simply by supposing large sheets of mud to have been spread out by the tidal waters, as may be observed on the broad flats bordering the Bay of Fundy. These last, it is true, as will be shown in a future chapter, exhibit the recent foot-prints of birds, in many successive layers, for a depth of two or three inches; but I cannot conceive such markings to extend through a thickness of twenty-five feet without supposing a