

which towards the base contains layers of reddish limestone interstratified with red sandstone,—marking the transition from the arenaceous to the calcareous form of deposit.

“In none of the localities of this calcareous mass which I have examined, from the flank of the Snake Mountain to near the Canada line, have I found any well-marked organic remains. This fact of itself strongly favors the idea of its being but a peculiar development of the upper portion of the Medina group. Nor can it be objected to this that metamorphic action may have caused its present destitution of fossils. Through nearly the whole of the series of exposures extending due north toward the Canada line, it presents a gentle eastern dip, conforming to the subjacent fossiliferous beds of Matinal limestone and slate, from which it is separated only by the sandstones above described. From this we infer that it must have been as little exposed as these fossiliferous beds to agencies capable of obliterating its included fossils, and that therefore it has never been in any considerable degree a fossiliferous mass.

“We are further strengthened in the opinion that this calcareous group, with the subjacent sandstone, belongs to the Medina period by the consideration that the Clinton group, with which it might otherwise be compared, is almost everywhere an eminently fossiliferous one. From Alabama to northern New York, it is marked by an abundance of fossils. According to Mr. Logan, strata of this age are found in the vicinity of Lake Memphremagog, and, although there surrounded by metamorphic masses, they include a number of fossils in good preservation.

“On the whole, therefore, I think that the limestone and subjacent sandstone of which we are now treating must be regarded as one formation, and may with the highest probability be referred to the period of the Levant rocks or the Medina group of New York.”

A careful re-examination of Snake Mountain is much required, for if the section it presents has been correctly interpreted then we must admit that palæontology is at fault, but if the displacement contended for by Emmons really does exist then the principles of the science will remain as before, unerring guides for us in our researches after truth.