very obscure though not altogether wanting, and it is chiefly remarkable as forming the base of the system, and as occupying the entire area between the foot of the slope of the mountain and the lake shore for the whole distance from the Niagara River to Oakville.

The second stratum is a bed of very hard light grey quartzose sandstone, marked frequently with ferruginous spots, but forming an excellent building material, and quarried extensively at Lewiston, Hamilton, Dundas and other places. This bed is about fifteen feet thick at Queenston, and contains the remains of fuci or sea weeds. I have also observed it to be distinctly ripple-marked in some localities. Above this for a thickness of about sixty feet occur alternate layers of red shale or marl, similar to No. 1, and of sandstone or limestone, the former principally near the top of the formation. The harder rocks here are particularly rich in organic remains, some in a beautiful state of preservation, and all remarkably characteristic of the geological epoch to which these formations belong, consisting of corals, brachiopods of various species, tentaculites, encrinites and trilobites. Of the trilobites, a remarkable crustacean genus strikingly characteristic of the Silurian system all over the world, I have only detected a few fragments, but they are sufficiently unequivocal.

Next in succession is a grey and mottled sandstone about fifteen feet thick, forming the upper member of what is called by the New York State Geologists the Medina Sandstone group. Encrinites, corals and broken shells prevail in great abundance at the top. Overlying this bed is a band of light green shale five feet thick, turning into clay on exposure to the atmosphere. This stratum forms the lower member of the Clinton group of New York, and is remarkable as being traceable for vast distances east and west in precisely the same relative position, and of identical mineral character. Next in order occurs a compact bed of light grey, very hard limestone, about sixteen feet in thickness, copiously charged throughout its entire mass, but chiefly towards the top with the bivalve shell *Pentamerus* (a genus also found extensively in a corresponding position in the Silurian systems of England and Russia) as also with a few species of *Atrypa*, a remarkable coral called *Favosites gothlandicus*, &c. This bed forms the upper member of the Clinton group, and wherever it is found is an exceedingly handsome and durable stone for building purposes. Owing to its hardness it forms a distinct escarpment wherever exposed for any length of time to the weather. Then