

which are added all the unstratified crystalline rocks forming the centre of the Laurentine Mountains, such as granite, syenite, diorite and porphyry, mixing together strata and eruptive rocks, an attempt which was unexpected from a stratigraphical geologist. His Huronian system is formed of a mixture of the St. Albans group of the Upper Taconic, with the Triassic rocks of Lake Superior, the trap native-copper bearing rocks of Point Keeweenaw, and the dioritic dyke containing the copper pyrites of Bruce mine on Lake Huron.

The different dislocations which have affected the rocks of the vicinity of Quebec have not brought to light the complete series of the Taconic nor of the Lower Silurian, and the difference of opinion that exists between Mr. Logan and myself is partly owing to this want. In his *Remarks on the Fauna of the Quebec Group of Rocks and the Primordial Zone of Canada*, Jan., 1861, and in his *Considerations relating to the Quebec Group*, May, 1861, Mr. Logan gives the following series for the vicinity of Quebec:—

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|--|-----------------|
| u ² . — Dark gray shales and sandstones (Hudson River). | |
| u ¹ . — Black shales (Utica). | |
| b. — Limestone (Birdseye, Black River, and Trenton). | |
| q ⁶ . — Sandstone and red shales (Sillery). | } Quebec Group. |
| q ⁵ . — Red and green shales. | |
| q ⁴ . — Green and gray shales and sandstones. | |
| q ³ . — Sandstones and magnesian conglomerates. | |
| q ² . — Green shales. | |
| q ¹ . — Magnesian conglomerates and shales. | } Potsdam. |
| p ² . — Sandstones. | |
| p ¹ . — Black shales and limestones. | |
| g. — Gneiss (Laurentian). | |

All the fossils found at Point Levi are placed by Mr. Logan in a single group of strata, which he calls the *Quebec group*. He speaks also several times of shales and limestones beneath the Quebec group, which he considers as deep-water deposits of the Potsdam Sandstone. Unhappily he does not give any precise localities or section at Quebec or Point Levi where that Potsdam may be found, and I was unable to discover what strata he thus names. But wherever these strata may be located, he says that he found no fossils in them in Canada, "but that the shales resemble those in which *Oleni* have been found in Georgia." So that Mr. Logan considers the *Georgia Slates* and the *Potsdam Sandstone* as the same group, one being a deep-water deposit and the other a coast deposit. I will only remark that at Mr. Parker's house, in Georgia, the two groups are found one above the other.

Mr. James Hall, in his last descriptions of the Georgia Trilobites (*Thirteenth Annual Report of the State Cabinet of Natural History*