

some respects to the upper part of the Stony Mountain section, but the fossils found are quite distinct. They evidently belong to a higher horizon. The gap in the series is evidently made up of soft shaly beds with possibly some sandstone at the base of the Niagara.

The section given by Dr. G. M. Dawson for the Rosenfeld well* I would be inclined to interpret as passing through the equivalent of the Stonewall beds as well as the Hudson River, of Stony Mountain, referred by him to the Maquoqueta shales of Wisconsin, and would arrange part after the following :

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| 7—limestone, | 15 feet | } Niagara. |
| 8—red shale | 5 feet | |
| 9—grey shale | 10 feet | |
| 10—limestone | 30 feet | |
| 11—fine grey sandstone, | 40 feet | } Hudson River of Stony Mountain. |
| 12—chalky limestone | 30 feet | |
| 13—red shale | 160 feet | } Winnipeg limestone, Trenton and Galena Winnipeg sandstone and associated shales. |
| 14—cream colored limestone, | 305 feet | |
| 15—red shales | 75 feet | |
| 16—soft sandstone | 50 feet | |

This would leave the Hudson River section with a thickness of 190 feet, which is not far from the probable thickness in the southern part of the province as this formation thins out toward the north, and is not seen in the section on either the Little Saskatchewan or Great Saskatchewan rivers. If we had a series containing several successive beds of limestone, there would, in all probability, be something seen of it on the northwest shore of the lake, between Saskatchewan river and Selkirk Island, where we have the Silurian or Niagara beds, and the top of the upper mottled or Galena limestone. On the Little Saskatchewan the probable representative is in the shales recorded by Dr. Bell at the head of the four mile rapid. A summary, then, of the several beds could be placed in the form of a section, in descending order, giving the total thickness for the Cambro-Silurian of this district, as less than six hundred feet :

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| Cambro-Silurian | { | Hudson River Shales | 190 feet |
| | | Upper Mottled Limestone | 150 feet |
| | | Cat Head Beds | 70 feet |
| | | Lower Mottled | 70 feet |
| | | Winnipeg Sandstone | 100 feet |
| | | | 580 feet |

*Trans. Royal Society of Canada, Vol. IV, 1886.