

Such conditions everywhere characterize the country along Lake Champlain. Wherever any bit of it has been mapped in detail, one or more faults are sure to be disclosed. They constitute the most prominent and characteristic structural feature of the region.

The faults of the Mohawk valley have been most carefully studied and described by Darton.<sup>1</sup> They are inferior to the greater Champlain faults in number and in size, and the numerous cross faults which characterize that region are less manifest or are lacking here, the faults all having a north to northeast trend, with rude parallelism. Four large faults only, cross the Mohawk valley, the Hoffman, Noses, St Johnsville and Little Falls faults, [pl. 14] though there are several minor ones of less magnitude and extent. Others occur to the northeastward in the Saratoga region, and there must be still others which remain yet undiscovered.

None of these faults have been traced to any distance on the south side of the Mohawk valley, and it is not certain whether they disappear there, owing to dying out, whether they are there but are difficult to trace, owing to unfavorable conditions, or whether they apparently disappear because the overlying Upper Siluric and Devonian rocks were not affected by them. The matter is of importance as giving evidence of the date at which the faulting took place. So far no rocks younger than the Utica and Lorraine shales are known to be involved. If it could be shown that the younger rocks to the south of the valley were also affected, the probability of their Carboniferous age would be much strengthened, or at least any correlation of their date with that of the Taconic disturbance would be rendered impossible.

The only one of these great Mohawk faults with which the writer is on terms of intimacy is the Little Falls fault. With the remainder he has but passing acquaintance. According to Darton all are normal faults with nearly vertical hade, and all down-throw to the east, with the single exception of the comparatively small Dolgeville fault. The throw of the Little Falls fault, where it crosses the Mohawk, is not far from 800 feet, and it maintains approximately the same throw for several miles to the northward. The St Johnsville fault has branched and is fast diminishing in

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<sup>1</sup>14th An. Rep't State Geol. 1894. p.33-54.