

many of the masses of black slate and limestone were found to be fossiliferous, but the determination of their organic remains showed that these clearly belonged to a lower system and that they were in fact of the same horizon as the limestones and slates of Richmond and vicinity, whose Cambro-Silurian age had been determined some years before, while the stratigraphical working out of the district proved that these rocks were clearly superimposed upon the quartzites and slates of the Chaudière gold series and upon a similar set of rocks which extended along the border of Maine and New Hampshire.

Although for a long time after the first discovery of the gold in the Chaudière district its source was unknown, a series of investigations and assays, conducted by Dr. Hunt and Mr. Michel and published in 1866, clearly proved the auriferous character of many of the quartz veins of this district. Subsequent investigations have shown that the principle now recognized in the gold fields of Nova Scotia, viz., that the rich gold leads are for the most part confined to the vicinity of the anticlinals, in all probability applies to the similar rocks of Quebec; since at Ditton, where rich alluvial workings also exist, the gold is generally found in the greatest quantity in close proximity to the anticlinal areas which are there well defined. On the Chaudière the same principle will doubtless be found to apply, though here probably some of the anticlinals are overturned and their location will in consequence be more difficult.

The establishing of the horizon of these gold-bearing slates and quartzites as the equivalent of those so long worked in Nova Scotia is very important, since it should tend to make more simple the location of future operations in this direction. In the area occupied by these rocks most of the coarse gold yet found has been obtained in close proximity to well defined quartz leads, and much of it has without doubt been derived from the decomposition of these veins, some of which can be traced for a considerable distance; while over the great area of the overlying Cambro-Silurian sediments of the eastern basin, though gold is found at a number of points, and in fact can be washed from the gravels of nearly every stream, this gold is always fine in character, and its distribution is apparently due either to glacial action or to the conditions that succeeded that period, by which the sands and gravels