

SERPENTINES OF CANADA.

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The study of serpentinous rocks and other serpentines is certainly one of much interest and has been followed with great enthusiasm by several of the most eminent geologists.

As serpentines are met with in almost every country where geological work has seriously been taken up, scientists of all schools took part in the great discussions which ensued from their geognosy and geogeny. Such being the case it may be well to enunciate the views of a few of the best known writers on the subject before describing the mode of occurrence of our Canadian serpentines. The divergence of opinion as to the mode of formation and occurrence of serpentine did not originate until the view was expressed that they were of eruptive origin, and this is not so very long ago, as the most distinguished scientists were all of the opinion, at the beginning of this century that serpentines were stratified contemporaneous deposits. In 1826, Maculloch, in his geological classification of rocks, separated the primitive rocks into two groups, stratified and unstratified, and placed the serpentines and granites together in the latter. But subsequent studies led him to announce that like gneiss or mica-schist, the serpentines are stratified rocks. The great objection then, to classing serpentines with the unstratified rocks was that unlike granite and trap, they had not been found to present dykes or ramifying veins. However, De la Beche, Brongniart, Elie de Beaumont and many others regarded them as an eruptive rock, and Professor Hitchcock, in 1835, speaking of serpentine says :

“Dr. Maculloch considers it as sometimes stratified ; and accordingly enumerates it in both these classes and also as a veinous rock. It occurs in connection with granite, gneiss, micaceous, chloritic and argillaceous schists.”

These characters apply to the serpentine of Massachusetts, according to Professor Hitchcock, who places it along with the limestones in the stratified class. Favre and Stapff regard the serpentines as of aqueous and sedimentary origin. Dr. T. Sterry Hunt in 1859 and 1860 speaking of these rocks said they were undoubtedly indigenous