

rises into a hill whose ~~most~~
maximum height is about a
hundred and fifty feet above
the plain and perhaps three hundred
above Lake Ontario; it is about
twelve hundred feet in length (from
North to South) and about four
hundred in breadth (from East to
West), and rises from the Grand
Trunk Railway track gradually to
its maximum conformably to
the rule that the southern slopes
of hills in these latitudes are
more gradual than those north-
-ern. At its north it dips down
much more abruptly to the almost
flat limestone country and the
measures are lost sight of for
fifteen miles. The strike of the
measures is twofold, $N. 10^{\circ} E.$ to $N.$ and
 $S.$, and $N. 40^{\circ} E.$, while the dips
are on the former $49^{\circ} E.$ and on
the latter $E. 40^{\circ} S. \angle 41^{\circ} 49'$. As the
strikes diverge the cause of their
divergence becomes manifest in the



Dear Sir,

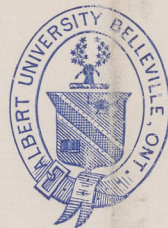
I am directed
by the President of our College
to thank you for your kindness
in contributing to our museum,
and although I regret that I
shall be unable to assist you
in the forthcoming summer still
it is perhaps as well since I
shall have enough to do in
connection with this College to
keep me busy through the coming
summer.

I would have replied to your last letter before now had it not been for the fact that I have had a great amount of work on my hands. I have been in the Lecture Room daily from eight in the morning till five in the afternoon, having lectured on Mineralogy and Geology, besides Chemistry, Chemical Physics and all the Pass and Honor Mathematics.

During the mild weather of February I walked down to Shannonville, seven miles east of here. Here is a most interesting exposure of thin-bedded gneisses and chloritic, epidotic and hornblende states, resembling lithologically the Huronian of Lake Superior Huron. The exposure

presence of a mass of gneiss which, as the gneisses were unbroken, appears to have been intercalated before the gneisses or were metamorphosed. Further research will, however, be necessary to confirm this, or to refute it. On the east and west sides of the hill the Trenton limestone dipping south (and south, varying to small beds) are seen abutting against the gneiss in one or two places and dipping at an angle of 15° , sometimes increasing to 20° . As a rule the line of junction of the two formations is concealed. As a great deal of snow lay in the woods and on my three trees limited I had only the opportunity of marking the foregoing superficial examination. I shall,

is too coarsely grained to be classed as granite or felsyte while the absence of quartz seems to remove it from granite. It is totally deficient in stratification lines and having straight, well-marked edges and sides, resembles much some of the smaller dykes of the Montreal Mountain. Whether it be a true fragment of the "mountain" itself or whether it be a piece from a dyke of the mountain I have not been able to ascertain.



Williams
Apr 17/99

However, as soon as the ground is once clear of snow, a more ^{careful} investigation there. I have sent a rough plan of the locality in question.

A still more interesting place is in the Township of Pueliasburg, Prince Edward County, about six miles from here. A mass of red rock described as porphyry and said to be intrusive & rises up through the Trenton limestone and it is added even through the sand and clay.

I intend to visit this place in question very shortly and settle the matter for myself. I was shown a piece of the rock about a foot in length, ten inches in breadth and three inches ⁱⁿ thickness. It is a reddish and red feldspathic rock; the crystals not being sufficiently aggregated differentiated to entitle it a place among the porphyries, I would call it a coarse granitic trachyte. Quartz crystals are not visible in the specimen, nor indeed is there any mineral but otherwise ~~possible~~ to be seen. It



And now, again thanking
you for part of favour,
of remain,
Yours truly,

J. F. H. Mickles

J. R. Dawson Esq, H. D., F.R.S., Dr
Principal of ~~West~~ Sidgwick College,
West College, March 29th 1877.