

to believe in the existence of  
an intrusive mass. The difference  
of strike in the ~~mass~~ conglomerate  
appears to be due to ~~corrugations~~  
in the strata before upheaval to  
their present position. It is  
worthy of note that Prof. Chapman  
of Toronto told Mr. W. Wallbridge  
here that the entire mass of slate  
conglomerate, covering some forty  
acres, had been brought here by  
ice, and in fact was merely a  
huge boulder. The objection to  
this is that the Trenton limestone  
is deposited in bays of the irregular  
intercrop of Huronian rock and that  
hence if the latter be exotic, the  
former is also. It is also note-  
worthy that the line of junction  
between the two formations is  
everywhere concealed by a small  
grassy hollow. However, on



Wilkes  
Apr 177

Dear Sir,

I delayed answer-  
ing your note till I  
could make a more detail-  
ed examination of the  
Shannonville group, as I  
have <sup>sr</sup> named the rocks referred  
to in my previous letter.

The snow having melted  
from the rocks as early as  
Thursday, 5<sup>th</sup> inst., I proceeded  
to Shannonville and carefully  
examined the whole outcrop,



part of which had been concealed by the snow. I found that my first view of the rocks needed modification, for the entire group is seen to consist of the slate conglomerate referred to in my previous note, the syenite mentioned therein being merely boulders enclosed in the rock. I may add that I was as much led to place the syenite in my drawing where I did, on Prof. McClellan's assertion as on my own observations, he having visited the place before. The syenite pebbles and boulders in the place where I thought the intrusive mass to occur are certainly by my numerous and careful observations ~~in~~ lead me

Saturday next I left instead (P.M.) to bring my classes in geology to Hammondville with me. I will be carefully submerged on the same day and return and a map of the group. I visited "Sisson's Mountain" in

since toward town on Sunday, ~~that~~ 9<sup>th</sup> inst. This description given by Sisson of the most striking of the Hartings. It is a very fine syenitic granite,



sides  
edges while there are plenty  
on its southern and western  
sides. The highest part of the  
mountain is about a hundred  
and ten feet above the plain.

Albert College stands on  
a ridge running in a general  
east and west direction intersected  
by two beds of the Moira,  
an old one and the present one.  
Excavations having been made  
in the cellar of the college have  
shown that the ridge is composed  
of "hard pan," ~~or~~ a gray and  
brown clay full of Trenton  
limestone angular boulders of all  
sizes, a great many having the  
typical ice triangular shape  
due to ice moving. The gray clay is  
very calcareous, the brown less so,  
the two intermingle irregularly and



consisting of flesh-red and  
darker red orthoclase principally,  
a small percentage of trachyte  
quartz, a smaller percentage of  
green hornblende, and a very  
little mica, the two latter  
minerals being generally absent.  
At its northeast end the mass  
is decidedly porphyritic and  
presents the usual bold bluff  
face dipping down to the south-  
west. Its strike is  $S 20^{\circ} W$  and  
the limestone is seen deposited on  
it on its southeastern side dipping  
to the southeast  $\angle 33^{\circ}$  and on its  
southwestern side dipping to the  
southwest  $\angle 25^{\circ}$ . Thus the stratifi-



cation is, to say the least, very obscure and in fact is only plainly visible in one place. It ~~is~~ <sup>seems</sup> there the dip appears to be  $85^{\circ}$  ~~to~~  $E < 85^{\circ}$ . The mass is nearly divided into two by a narrow or depression running from  $N 20^{\circ} E$  to  $S 20^{\circ} W$ , i.e. parallel to the strike of the mass. Those who hold the mountain to be a relic of a volcano see in this the crater, while to me it appears ~~to~~ <sup>due</sup> to erosion by icebergs; especially as there are well-defined ice-markings on the summit in the same direction as the valley. A bed of gravel is found on its northwestern edge and on its western, the former part being stratified, the latter not or doubtfully so. No boulders of the rock are found on its northern or eastern

the boulders and pebbles are dispersed & much after the manner of concretion and raivins in a plume-pudding but much more plentifully. The depth of the clay is not constant, the rock often coming to the surface while perhaps within twenty feet of an outcrop we have as many feet of clay. The quantity of boulders is also variable.

There are several other facts of interest I intend to bring out in a paper very shortly; in the mean time I send these notes (not for publication) to show that with my many engagements I have not been idle in physical work.

Yours truly  
D. F. H. Perkins

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Mass. College, April 21<sup>st</sup>, 1877