



Spencer

Washington D.C. Dec 28th 1880

My Dear Sir,

You may be surprised to receive a letter from me at this place, but I accepted of several kind invitations for holidays, both socially and scientifically.

I was the guest of Prof. Cope for several days, and also dined with Dr Hayden and Prof. Lesley in Philadelphia.

If nothing else I am very glad that Genl. Prof. Lesley, as the survey of Penn has been working up a work the counterpart of my own

About a fortnight since Carroll's Map of Regional Rivers was issued and shows that the ancient Allegheny River and drainage of Penn. was into Lake Erie Basin.

The Cayuga at Cleveland also had an ancient bed 200 feet deep. Prof. Lesley was highly delighted at my discoveries as it is the key to

Journal

It is also strongly against Beer saying both what
 says Geo. and A. L. - ~~son~~ concerned others the ladies before
 the trial. The Mag. Beer facing the N is westward without a
 stand off from. The direction of the spectators is a small
 angle with head of observation, and not parallel with
 direction of Brindley's wall. The Niagara floor of County between
 Colchester Line and St. David's Creek has the same
 floor remains back of the house in some places to the present
 but below the ground surface, and everywhere for more than 100 feet.
 Prof. Beer will see to send him an abstract of the work in
 needful and he will read it before. An. Philom. Soc. as
 as left printing of discovery as he considers it too dangerous
 to be such an important to discovery remain unpublished.
 His also yesterday connected with work of Penn. and Army.
 I think that would read it & in as soon as possible.
 will be in Madison about the 8th of Jan.

Nothing from the complaints of the
 Jan. 1851. Geo. and A. L.
 J. W. Alden

the difficult problem how to get rid of
the waters of Erie in Pleistocene
times as the Niagara River would
not answer.

My own discoveries are —

In Dundas Valley a buried river course
more than 200 feet below surface of
Lake Erie and more than 700 below
the floor of County covered by Niagara
limestones (or the Niagara Escarpment);
that the Grand River formerly flowed
down valley of Hairchild's Creek &
into Dundas Valley. That somewhere
near the mouth of Hairchild's Creek
the Grand River turned into Dundas
Valley, and that (in all probability
from levels and drift-filled valley) it was
reversed and emptied the streams
flowing into Lake Erie.

I have such strong proofs of this that I
have no doubt of the facts. I also
observed before being the
map of Carroll that the portion
of Lake Erie just East of Long Pt
had a transverse channel double
the depth of the rest of the Lake.
This fact correlated with the discovery

in Penn. shows that the main
drainage of western Penn & Ohio
was by Allegheny River crossing over
to Grand River and thence to
basin of Lake Ontario.

There is also a buried escarpment at
level of Lake Ont. at Welland Canal.
Also another forming a cliff of Hudson
River rocks deeply submerged about
from 3 to 8 miles from south shore
of Lake Ont., extending to nearly
Eastern end of Lake.

It also appears that the Cayuga
joined the Allegheny between what
is now the shores of the Lake in Penn.
and Ontario.

The land between Lakes Erie Huron & Ontario
was drained principally by tributaries into
the Grand River.

Also, after deposit of boulder drift the
Country was subjected to erosion before
the period of Lake Genesee.

That the Onondaga valley (buried) flowed
N.E. is against the theory of glacial
origin of the deep river valleys of the
melting of glacial ice, as regarded
Dana