

Little Meets
Aug 24/87

My dear Sir,

Your interesting
letter of the 10th reached
at this place. I shall
be happy to see your results
as to the "terminal moraine",
though I may not be able
to give in my adherence to the
now waning doctrine of the
Continental ice sheet.

The point you mention
that it runs continuously over
hills and valleys would give
me occasion for scepticism, since
there is certainly no modern
instance of any glacier moraine
doing so. It looks more like
what might be expected
of the southern edge of the

* Much glacial moraine stuff all over the valley except a few fresh pebbled blocks.

Great ice = pack of the glacial
Submergence when the valley
of the St Lawrence the basin of
the Great Lakes & the Western
Plains were traversed by ice =
floes comparable with those
of the modern Polar sea.

The tests for your measure
would be such as these.

1 Does it consist in great
part of local debris?

2 Does it include small
ice-travelled stones?

3 Was it any drift = cord
in any part of it? Look carefully
for this however decayed.

4 Is there any stratified
structure about its bases?

5 Is it steepest on slopes
facing the north?

6 Does it present a suc-
cession of ridges or a broad

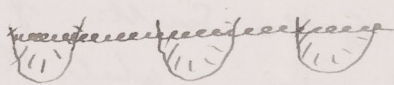
map of lakes with hummocky top?

8 & 9 it sometimes cut away
steep on the northern side.?

3 & Does it contain glacial
boulders from the Abnundak or
the Canadian mountains?

9. Is there any strong evidence of
on the cr. ^{9.} ~~is~~ ^{is} these questions or the
greater part of them can be
answered in the affirmative, for
here indications in form of
the margin of the arctic sea
and the presence of ice = flows.

Another question then comes
up. If the "moraine" goes straight
across hills and valleys then:



then there must have been a
permanent ice = foot in the
bays indicating a very extreme
climate. But if the moraine

heads in the valleys thus:—



then there must have been open water in the bays & straits leading Southward.

There are questions which I think you should answer fully before going up all other solutions. Amongst them the "ice sheet," which I am sure never had an existence in Canada, though of course if the cold was severe enough to condense all the moisture South of 45° there might be an ice ridge to the South of us especially on high plateaus, while the land was comparatively bare to the North, as it is now in Greenland & Spitzbergen.