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Camp, Walk's Lake, Halifax Co.

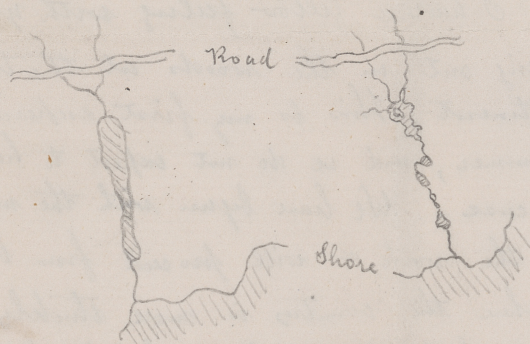
Tuesday, July 12, 1887.

My dear George,

I have a fellow feeling with you to think of our being out in the woods at the two sides of the Continent. This is my first experience of camp life this summer, and we do not expect to have much of it in any case. We have begun with the more inaccessible part of the work, & will proceed from here toward Halifax where the country is more thickly settled. We have just had dinner; bread, biscuit, hard-boiled eggs, and porridge comprising our fare; and are now enjoying ourselves before the fire. My standing party consists of an Assistant, Mr. Archibald, who has just graduated at McGill; and Innis, a man of very considerable intelligence that I will probably keep most of the summer as he is in general well acquainted with these parts. To-day I engaged also two negroes of whom there is a considerable number in this County. They are the only people who know anything about these headwaters we are now on; and they have also been useful in carrying in a light boat for me on the small lakes, and our provisions.

This Survey which I have undertaken is topographical, and is intended to form a basis for geological work in the future. I have discussed the matter with Mr. Gilpin the Inspector of Mines, and with others who have done mining exploration, and

I find that they all agree in stating that the great want in making geological explorations is the lack of a good map. The only one worth mentioning is the County Map to the scale of $\frac{3}{4}$ inch to the mile, but it is very rough; the roads are fairly laid down, but the brooks streams & lakes are merely sketched in as seen from the roads and in the interior of the country away from the roads, they are very much generalized. I give a comparative sketch below, from memory. It is intended that this



survey include the whole of the Nova Scotia Gold Field, i.e. the whole eastern half of the Province. The only geological work I attempt is the determination of the limit of the granite areas which occur in the Province. This is important to my own work, as the granite country is of much less importance than the other, in fact of no importance at all from a mining point of view, and may therefore be surveyed much more cursorily.

Wednesday July 13, '81 -

We have moved our camp about two miles to a lake called by that frequently occurring name "Grand". We have been remarkably fortunate in our work of these two days, as the chain of lakes we have followed

has proved to follow the line between the granite and the stratified rocks; and this afternoon I succeeded by climbing a hill to get a bearing through to Porter's Lake, a long narrow one, nine miles long, which has we have already surveyed. These lakes we have been following, are not even indicated on the County Map, and are at some distance from the line of the granite as laid down on that Map by Mr. Gilpin, before I started. The only clue I had to their whereabouts, was from the descriptions of the "Natives", but their knowledge of them is obtained from following foot-paths through the woods which lead past them and round them, and they have very indistinct ideas of their sizes and position. In surveying small lakes, I use the theodolite with parallel cross hairs in it, between which I take a reading on a level rod which gives the distance, as well as the bearing. I can then take as many points from one station as can be conveniently seen, and then move on ahead of the furthest point, and establish the position of my new station by sighting back on it. My assistant in doing the working, keeps a sketch of the details from point to point, after the manner of a track survey, and I keep in my own note book a general plan of the work for reference. I use precisely the same methods with the micrometer telescope on the larger lakes. It has a longer range but would be unsteady on small lakes. I also use the theodolite & level rod in road traversing, when I have to do any.

It is only necessary in getting the lines from ~~point~~
~~to point~~ one region to another, as the roads often
run in convenient directions. In getting from one
lake to another, I usually follow the stream, as
in this way there is no chance danger of missing
any tributary, & I employ in this work the
prismatic compass & a light tape. The bed of the
brook itself is generally the most open line, & with
a little clearing I get sights of 50 to 150 feet,
but the rate of advance is not more than half
a mile an hour. Distances of this kind are usually
short, as there is almost always some more ex-
peditions way of getting along in valleys of greater
importance & extent. I do not know that you will
be specially interested, however, in the details of these
methods. My object is of course to go over a region
of country completely, and must therefore differ much
in the methods used, from a single through line such
as you usually have to confine yourself to.

I have now come pretty fairly to the con-
clusion that it will be best to omit the survey
of the granite region altogether, when once its bound-
aries are established. It forms a belt some 8 miles
across, & is almost uninhabited, & would occupy several
weeks in surveying. It is really outside the scope of
a "Topographical Survey of the Nova Scotia Gold Field".

I am afraid you will find this a pretty substantial
letter, not to say dry. However it will let you know
where I am and what I am doing. With much love, be-
lieve me, Your affectionate brother
William.