

APPENDIX No. 1

Ontario, which have been found to be so rich here, and they are known to contain a certain amount of gold and copper. Mr. Tyrrell saw them himself there, and he has every confidence that that area too will produce minerals of value, workable ores. There was no indication of nickel in any part of the country.

CLIMATE.

As to the climate of the great belt of arable land, two hundred miles wide that he had described, Mr. Tyrrell said that at Nelson the snow leaves the ground in May. There is little or no summer frost in that wooded country. He understood gardening commences the end of May, and the frost does not appear in the fall until about September 20. He had never known the potato crop to be lost through summer frost.

Asked as to the isothermal line, Mr. Tyrrell remarked that the isothermal is a line connecting points that have the same annual mean temperature for the year round. It has nothing whatever to do with vegetation. Things do not grow in the winter time. People have got to put the winter temperature absolutely out of the question. The summer temperature is the only temperature that counts for growth in the northern country where there is frost. In dealing with that, you have to take into consideration as between two places in different latitudes, the length of the day and the amount of sunlight, in order to get at the summer temperatures. Of course the sunlight has a great effect on the growth, and where the days have 18 hours' sun a plant will grow faster than where the day has only 14 hours.

The effect of the large body of water in Hudson bay and James bay on the temperature, summer and winter, of the surrounding country, was the equalizing of it very much, making the summers colder and the winters milder. There is a foggy climate around the bay. It is without much sunlight, so that it has not a chance to dry. The mean temperature of the summer within 100 miles of the bay will not be as hot as it is back of that. The thermometer does not fall as low in winter at Churchill. At the same time any person will find it terribly cold on that coast, although the thermometer does not fall. There are a great many different matters in connection with temperature and climate that have to be taken into consideration. There is the amount of moisture in the air, whether it is heavy, whether the barometer is standing low or high, and there are a great many of those things that have to be taken into consideration in any question that arises of frost or of climate. You may have frost with a north wind, while if that north wind were blowing up over a wooded country, where all the leaves were giving out their vapour from the ground into the air, you would not have a particle of frost.

Mr. Tyrrell produced the following memorandum he had obtained from the superintendent of the Dominion Meteorological Service:—

MEMORANDUM.

METEOROLOGICAL OFFICE,

TORONTO, March 9, 1907.

To J. B. TYRRELL, Esq.,
Toronto.

The temperature conditions of the district between Lake Winnipeg and Split lake in the several months, May-September, may be compared with Europe as follows:—

May—50°-40°, with north of Scotland and southern Norway.

June—56°-54°, with Scotland.

July—63°, with south of England.

August—57·5° to 55° with Scotland.

September—50°-45°, with northern Norway and Sweden.

(Sgd.)

R. F. STUPART.