

at the lake, the timber became larger. Copper and iron ore were found here in a bed of ochre. Limestone and building stones were abundant everywhere.

Turning to the North East, 16 miles from Lake Abatogomaw, and over 200 miles from Lake St. John, is Lake Chibogomou. This lake stretches to the N. E. some 25 miles, and empties by two outlets into another parallel lake, on the N. W. side. These lakes flow into the Notaway river, which empties into James Bay. From Lake Abatogomaw to Lake Chibogomou, the country is undulating, in some places rocky, in others sandy. Most of the wood has been burned, and blueberry bushes producing very large fruit, covers the surface. A berry, like the blueberry, except in colour which was that of a white currant, was found here.

On the S. E. side of Lake Chibogomou and the N. E. end, a sandy loam prevails, and where openings were found in the woods, there was a good growth of wild grass. Green woods surround the lake except where the forest has been burned.

Continuing in the same direction about 4 miles further is Lake Wakinitche, 24 miles long, 1440 feet above the sea level. On the S. E. side the trees are of good size and the soil is a sandy loam well fitted for agriculture. On the N. W. and S. E. are rocky ridges, but half a mile back green woods are seen.

Another 4 miles to the north brought the party to the Abatogoush Bay, a part of Lake Mistassini. This Bay was surveyed for 30 miles. The length of this lake as well as could be ascertained was 160 miles, but no certain information could be got as to its breadth. The whole distance from Lake St. John was 290 miles. The country between Lakes Wakinitche and Mistassini is a level plain with a fertile calcareous soil. The surface in no place rises more than 30 feet above the lake.

At the H. B. Co.'s Post on Abatogoush Bay, they had fair-sized new potatoes on the 7th of August. On that day, the thermometer at midday stood at 90°. This Post is 333½ miles N. of Montreal and 1381 miles above the sea level. At half past 10 P. M. the thermometer had fallen to 58°.

Returning from Abatogoush to the Nikouban, the party passed through Foam Falls River and several lakes to the height of land between the Nikouban and the St. Maurice, a distance of 41 miles to the S. W.

Continuing the same course down Clear Water River to the St. Maurice, 42 miles more, brought them to Lake Traverse, only 18½ miles in a direct line from Lake Nikouban. The country is level, showing an alternation of green and burnt woods and barren sandy soil. Lake Traverse is 1289 feet above the sea level. Going down the St. Maurice to Kirkendatch, a distance of 20 miles, there were extensive flats of sandy loam producing abundance of wild grass.

From Kirkendatch they crossed to the Gatineau, between whose head waters and those of the St. Maurice the distance is only half a mile, and the difference of level only 10 feet. The country was mostly a level sandy plain 1335 feet above the level of the sea, in part well wooded with spruce, tamarack and white birch.

Descending the Gatineau as far as the Desert River, the party left the river and crossed to Ottawa. The country up the Gatineau is well fitted for settlement, 230 miles North of Ottawa, and 1083 feet above the sea, the

last pine trees were found. Good spruce and tamarack 100 to 30 feet in height were found at White Bear Lake, 35 miles further North.

Another branch of the survey was engaged during the summer of 1870 in the examination of parts of the counties of Frontenac, Leeds and Lanark, in Ontario, visiting the mines, and the deposits of apatite and mica. Forest fires put an abrupt termination to the survey. Details of minerals are promised in a future report.

Mr. Robert Bell again proceeded to the country north of Lake Superior, examining the country for 170 miles north from the mouth of the Pic River, and defining for some 100 miles the height of land that separates Ontario from the Hudson's Bay territory.

The Indian name of Pic River is Peck-ting or Muddy River, from the large quantity of light-colored clay which it holds after every rain. It rises in McKay Lake, near the height of land, and flows into the N. W. angle of Lake Superior. At its mouth and for some distance it is 700 feet wide, but at its source it is less than 100. The valley of the river averages about a mile in breadth. On either side rise rounded hills from 100 to 400 feet high, the highest being nearest the Lake. 53½ miles from Lake Superior in a straight line, the valley is every where filled with clay and sand, arranged in terraces, the highest being 150 feet over the river. For 63 miles from the mouth of the river, the river flows swiftly with a smooth gliding current. It averages 5 feet in depth at low water, and 10 to 15 at high. At low water, the banks are very steep and muddy and thickly covered with brush.

McKay's Lake is 12 miles long by 2½ wide. The country immediately around it, especially to the north, is hilly and rather barren. None of the elevations appeared to be more than 100 or 200 feet above the water. The height of land between the waters flowing into Lake Superior and those flowing into Hudson's Bay is 21 miles N. of the Lake.

A mile north of this is Long Lake, out of which flows Black River. The valley of this river and of Long Lake form one continued depression, the sides lined with long moraines, composed of well rounded boulders; numerous ponds lie among these. Around the southern part of Long Lake the country is rugged and mountainous. Northward the hills become lower, and the country assumes a comparatively level aspect.

The Kenogami River flows from this lake into the Albany. For the first two miles it winds among open marshes on which the H. B. Company's men cut hay for the use of their cattle. The country is level all the way to the Albany. Banks or terraces of brown loam and gravelly earth averaging about 20 feet in height, occur nearly all along the sides of the river, in some parts, coming to the water's edge, and at others, receding for a short distance. The soil on the top of the banks to some distance from the river appeared very good. The timber was spruce, balsam fir, white cedar, tamarack, white birch and aspen. The average diameter about 13 inches. The last 20 miles or so, the ground became swampy on going back a short distance from the river. The Indians report the same conditions to exist over a very large section, growing still lower and more swampy nearer James Bay, and interspersed with large shallow lakes, bogs and marshes covered with wild fowl. Some of the bogs are said to be so wide that one cannot see across them.