

# The Carleton Sentinel;

## AND FAMILY JOURNAL.

Devoted to Agriculture, Literature, and General Intelligence.

Published and Edited

"Our Queen and Constitution."

By James S. Segee.

NUMBER 51.

TUESDAY, JUNE 11, 1850.

VOLUME 2.



### AGRICULTURE.

REPORT ON THE AGRICULTURAL CAPABILITIES OF THE PROVINCE OF NEW BRUNSWICK.

BY J. F. W. JOHNSTON, F. R. S., S. L. & E.

(Continued from our last.)

**Kent.**—1. A stratum of good coal is reported to have been discovered on the Cocagne river, about three miles above the bridge, by Dr. Gesner's son. "The stratum was found in the bottom of a large brook, and beneath three feet of rapid water. It was estimated to be two feet thick, but might nevertheless exceed three feet in some situations. By sinking a shaft a short distance from the brook," the Dr. adds, "so as to avoid the influx of water, this coal may be opened immediately." (IV. 86.)

2. "Coal has also been discovered on the Buctouche River, and there can be no doubt that it may be obtained in this district in great quantities." (IV. 86.) "It is very evident that these coal strata are the most superficial, and therefore the least valuable in the series to which they belong; and from their small degree of inclination it may be justly inferred that the thickest and most extensive deposits are still concealed in the earth." (I. c.) Although I have not had an opportunity of observing either of these last places, still, I may be excused for observing that although these coal strata are the most superficial, they are not necessarily the least valuable of the series; that is a point which cannot be proved until borings are actually made, or the out-crops themselves have been seen.

3. Coal was discovered nearly thirty years ago upon the Richibucto River; the best known locality is on the Coal branch, about three miles above Mr. Ford's mills. I visited the locality in October last. The coal crops out about half way up the face or a high cliff on the west side of the brook, and is placed between layers of crumbling shale; the Coal cakes like the Grand Lake coal, and is about 15 inches thick; the dip is N. W. 10°. One or two hundred chaldrons of this coal have been got out from time to time, by excavating under the cliff; but unless other beds are discovered, this place can never become the seat of extensive coal mining. Judging by the quality and thickness of the seam, it may yet prove to be the same as the one at the head of the Grand Lake, from which the sand stones pass continuously, but in an undulating manner towards the Gulf Shore. Dr. Gesner remarks (IV. 90) "that it is probable that there is another stratum near the base of the cliff," though his labours to discover it were unsuccessful.

**Northumberland.**—1. About five miles below Chatham there is every appearance of the existence of workable beds of coal; a small but perfect stratum appears on the cliff on the property of Mr. Willison; "appearances," he adds, "renders it almost certain that coal may be obtained here at no great depth from the surface." (IV. 95.)

2. About eleven miles from Newcastle on the south-west branch, coal appears on the south bank of the river. It is but an inconsiderable stratum belonging to one of the superficial beds already alluded to. (IV. 97.)

3. Coal has been found on the Renous and Bartholomew's Rivers, but the water was too low to allow any canoes to pass at the time of my exploration in this quarter. (IV. 97.)

**Gloucester.**—Out-croppings of bituminous coal have been seen at New Bandon, and drift coal has been picked up near Bathurst Harbour in quantities sufficient to justify parties in boring in the neighbourhood: various shafts have been sunk under the direction of Mr. Stepher, while agent for the Gloucester Mining Company, and others; but in no case, so far as I am aware, have workable beds been attained. In Mr. Logan's elaborate section from Cranberry Cape to Point Dumai, a distance of twelve miles along the shore, only two seams were discovered, and these were respectively eight and six inches in thickness. They were both supported by an Under clay with stigmairia, and dipped with a very low angle to the N. E.

**Restigouche.**—Coal has long been spoken of on the Restigouche, between Campbelltown and Dalhousie. In 1839 I had an opportunity of examining that shore, and observed both at Haut Anim and P. a. Pin Sec, a black coaly rock,

which was said to have been used for fuel. It was a black shale, indurated and changed by the neighbouring igneous rocks. By Mr. Logan's report, it appears that the sand stones which line the margin of that river do contain a small but regular seam of coal and carboniferous shale, together measuring three inches; "it is not however to be inferred," says he, "that the group belongs to what is emphatically called the carboniferous era, or that there is much probability of discovering the mineral associated in sufficient quantity with its strata to render it profitable to mining enterprise; though seven thousand feet of vertical thickness in continuous succession have been carefully examined," nothing, he adds, "like a working seam, nor any thing but this one like a regular seam, or like a seam at all, has been met with."

**Saint John.**—Dr. Gesner remarks (II. 12) that he discovered two small veins of anthracite coal in a fine grained clay slate near the Penitentiary; "and it is probable," he adds "that a workable quantity is not very far distant from that spot." (II. 12) The occurrence of coal and vegetable fossils in the rocks of that vicinity is very curious, and requires further investigation; I have never had an opportunity of seeing the anthracite in situ.

**Charlotte.**—I am not aware of coal ever having been reported in this county. It is much more likely to become the seat of mining for ores of the metals. Search for coal has recently been made among the dark coloured slate near Saint Stephen, but these are far below the true coal measures.

**Carleton.**—Coal has not yet been spoken of from Carleton. If the gypsiferous rocks of the Tobique belong to the carboniferous series at all, they must underlie the productive coal measures. At the red rapids the western edge of the red rocks is seen to rest unconformably on the slates, and near the head of the river they are met, by igneous rocks: it is just possible the red rocks of this river have been in former times connected with the red rocks of the Bay de Chaleur from which they were first separated by the upheaval of the igneous rocks just spoken of, which constitute the highest land in New Brunswick.

In conclusion, it is sufficiently obvious—

1. That though very many out-crops of common coal, well adapted for blacksmith's use, are known to exist in the country, yet none of them exceed eighteen or twenty inches in thickness.

2. That though the beds of cannel coal reported to exist have a very considerable thickness, they hardly come up to the average standard of purity.

3. That the importance of the beds which are known has been over-stated, while the probability of finding others of greater thickness and improved quality, has been much exaggerated.

Most respectfully, Sir,

Your obedient humble servant,

(Signed)

J. ROBB.

Prof. Chem. & Nat. History,  
King's College,

To PROFESSOR JOHNSTON, &c. &c.

The sum of the reasoning and information contained in this chapter appears to be—

1. That in reference to the agricultural resources of the Province, and its population-sustaining capability, the supposed existence of fossil fuel is of great importance.

2. That without fossil fuel, manufactories can be established and maintained only at the expense of its agricultural and future population-sustaining capabilities.

3. That Dr. Gesner, whose knowledge of the Province is very extensive, has predicted the discovery of valuable beds of coal, which shall prove of great benefit to the mercantile, manufacturing and agricultural interests of New Brunswick; but

4. That Dr. Robb and others, who have had opportunities of examining many parts of the country, do not participate in this opinion.

5. That the decision of the question would be of great moment to the Colony, not only in setting a disputed matter at rest, but in diffusing throughout the community distinct and positive notions as to the real resources of the country, and the line which ought to be taken to develop them—and in pointing out to the purely agricultural settler the mode of clearing he ought to adopt, with the view of securing to himself and to the future occupants of the farm if necessary, the benefits of an abundant and economically available supply of fuel, with as little loss of available land as possible.

I venture therefore to suggest to Your Excellency, as likely to promote all the material interests of the Colony, that means should be taken to secure a survey of the coal measures of the Province—with reference especially to their positive and economical value, as available sources of fossil

fuel. This survey should be made by a person who is not only familiar with the principles of geology but with the practical economy of coal mining also—and if with a knowledge of England or of the United States, he possessed some familiarity also with those of Prince Edward Island and Nova Scotia, the prospect of advantage to the Province from his labours would be greatly increased.

That the advantage to the agricultural interests, in so far as it affects the rearing of timber, is concerned, would be general also, will appear from the numerous places in which coal has been detected. An inspection of the Geological Map in which these places are distinguished by large black dots, will show how many parts of the Province would be benefited directly by the exploration. Let it be proved that coal exists in available quantities in these localities, and clearings may proceed without regard to future provisions of fuel. Let it be established on the other hand, that no reasonable expectation of fossil supplies can be entertained, and every proprietor will see the necessity of reserving ten acres of accessible wood land for his household fuel. The Legislature may even think it necessary to enact some compulsory statute upon the subject.

It has been proposed to institute borings at the public expense, with the view of determining whether more valuable beds of coal do not exist at a greater depth. It would not be prudent, I think, to do so to any extent, till further positive information is obtained.

#### CHAPTER V.

State of the Roads as connected with the development of the Agricultural capabilities of the Province.

The state of the roads in any country may be regarded as a very fair index of its material development; and the efforts making to improve them, of the desire of those who govern to advance its most positive interests.

I have already in a previous part of this Report, alluded to the generally excellent condition of the high roads and numerous bridges of the Province, as both interesting and striking to a stranger who passes through it. As the repairing, maintaining, and extending of those roads are most material circumstances in connection with agricultural progress, I requested Mr. Brown, during the course of our tour, to make such notes and observations regarding them, as from his long experience in planning and surveying the roads of the Province, he thought it might be desirable to lay before Your Excellency. Since our return to Fredericton, he has drawn up from these notes the following observations, which I have much pleasure in being able to incorporate in my Report.

"The Roads of New Brunswick are by law divided into two classes, called Great Roads, and Bye Roads. The Great Roads are specially described by Legislative enactment, made and kept in repair by annual grants of the public money, and are intended to connect the most important Towns and Districts in the Province. They may be arranged in the following order, viz:—

1. Saint John to Fredericton,	65 miles.
2. Saint John to Saint Andrews,	65
3. Saint John to Quaco,	31
4. Gondola Point to Fredericton,	70
5. Saint John to Nova Scotia line,	136
6. Dorchester to Shediac,	16
7. Cole's Island to Cape Tormentine,	31
8. Bend to Richibucto,	48
9. Richibucto to Chatham,	40
10. Chatham to Bathurst,	48
11. Bathurst to Campbelltown,	71
12. Fredericton to Newcastle,	106
13. Fredericton to Woodstock,	62
14. Woodstock to Houlton,	12
15. Woodstock to Grand Falls,	71
16. Grand Falls to Madawaska,	40
17. Saint Andrews to Fredericton,	78
18. Waweig to Saint Stephen,	12
19. Oak Bay to Eel River,	74
20. Nerepis to Gagetown,	24
21. Newcastle to Bathurst, via Pocomouche,	115
22. Salisbury to Harvey,	42
23. Hampton to Bellisle,	4
24. Pickard's to American Boundary,	5
25. Grand Falls to American Boundary,	3
<b>Total,</b>	<b>1269 miles.</b>

The opening and making of these Great Roads, the erection of bridges, with the allowances to explorers, surveys, and supervisors, cost the Province, in the first place, a sum exceeding £150,000, and an average sum of at least £10,000 per annum for the last fifteen years has been expended to keep them in repair.

When a new Road is projected, a Com-