

## INFLUENCE OF FORESTS UPON STREAMS.

The *Kaffarian Watchman* says.—The above is the topic of one of the sections of a very interesting report upon forestry, prepared by Dr. F. B. Hough, under the direction of the United States commissioner of agriculture. Dr. Hough collects the facts in support of his line of argument from a variety of sources, and we shall here avail ourselves of his labourious industry and make use of his examples to show the "influence of forests upon streams." "Mr. James Brown, of Sterling, Scotland, a standard authority upon forestry" (runs the report), "in speaking of the effect of tree planting upon moisture, says:—'I have frequently been surprised to find (on examining woods which had been planted some ten or twelve years, all the land under which had been considered dry at the time the plantation was made) wet spots, spreading wider and wider every year, and some of them even beginning to throw out runs of water; thus proving that under the shade of the trees the larger portion of the moisture of the land is retained, and therefore accumulates in spots, according to the nature of the subsoil.'" The reference is made to a volume, entitled "*Influence des Forêts sur les Climats et les Sources*," and published at Montpellier in the year 1874, which contains an account of certain observations prosecuted by one M. Jules Maistre de Villeneuve during a period of 18 months in a wooded basin and in one that had been cleared, but other wise similar in soil and conditions. The former, with an area of seven hundred and seventy hectares, delivered one hundred and ten litres of water very regularly; the other, with 6,766 hectares, had a drainage of only ten or twelve litres a second, and was very irregular. He found the temperature in the open field at least 10° C. above that in woods. He noticed that, in the southern region, the cultivation of cereals is becoming more uncertain and less profitable, and that the injuries by the *Phylloxera* upon the vine roots were more destructive." Then the report enlists in its service Mr. R. U. Piper, from whose work on the "Trees of America" the following extracts are made by way of illustrating the return of water by restoring the woodland shade: "Within about one half-mile of my residence there is a pond upon which mills have been standing for a long time, dating back, I believe, to the first settlement of the town. These have been kept in constant operation until within about twenty or thirty years, when the supply of water began to fail. The pond owes its existence to a stream which has its source in the hills which stretch some miles to the south. Within the time mentioned these hills, which were clothed with a dense forest, have been almost entirely stripped of trees, and to the wonder and loss of the mill owners, the water in the pond has failed, except in the season of freshets, and, what was never heard of before, the stream itself has been entirely dry. Within the last ten years a new growth of trees has sprung up on most of the land formerly occupied by the old forest, and now the water runs all through the year, notwithstanding the droughts of the last few years." Next a fact is mentioned in connection with the Ohio River. "About 1871-72," runs the report, "the waters sank lower than had been known before, and at South's Ferry, where the Kentucky and Ohio crosses, a ledge of rocks was laid bare that has not been seen before by the present inhabitants. On this surface, from fifty to one hundred feet and several hundred yards long, inscriptions have been made, such as are assumed to be those which densely populated the country before the advent of the recent Indian tribes. It is possible to conjecture that the clearing of forests by an agricultural race may have brought about the condition now existing, a long interval of neglected culture and forest growth having since intervened." Nine years ago at a meeting of the International Congress of Land and Forest Cultivators held in Vienna, it was shown that the Rhine, the Elbe, and the Oder were all shallower than they had been in the past, and it was pointed out that this was directly traceable to the destruction of forests. And our last extract shall be from a paper read before the Royal Academy of Sciences at St. Petersburg, in January, 1876, and for which also we are indebted to Dr. Hough's report. "As a warning example,

the author cites Palestine, Persia, Greece, Sicily and Spain, which countries are suffering on account of the devastation of their forests. To this list may be added a portion of southern Russia, where one hundred and fifty or two hundred years ago there existed large forests, now changed into naked plains where the hills are without water, and the population is forced to settle in the valleys. We may also mention the Volga and the Dnieper in Southern Russia, where the forests around their sources have been cleared to such an extent that in the middle and lower portions, where these two rivers, so important to the commerce of Russia, pass through a wholly cleared country, the high water reaches points never before attained when the upper forests were standing. Every one knows of the changes made yearly in the beds of these rivers by the floods, and the consequent inconvenience and even danger which these occasions to navigation. The fact is also generally known that the deep gulfs which in summer and winter are without water, become wild torrents after heavy rains, and in the melting of snows in spring, carrying with them acres of the finest soil. We believe that these evils would have appeared in less degree if the country adjoining these rivers had not been cleared of its woods." Nor does our author in this section of his report fail to insist upon and to illustrate how the cutting away of forests tends to produce great irregularity in the rain fall and to bring about torrential rains, which run off the surface of the ground from their very impetuosity, and carry with them the best of the soil. As coal is brought more and more into ordinary and general use in this country, and the consequent necessity to burn wood as fuel is lessened, we may hope to see some restoration of the forests and of the seasons to something of the regularity observed in regard to them for some years after the landing of the British settlers.

## CONSERVATIVE FORESTRY.

A co-respondent of the *Northwestern Lumberman* speaking of a projected railroad says:—I mention this enterprise again particularly because it is the initiative that is bound to open up the Adirondack timber region in a way it was never before. Other railroads will be built. The Adirondack Company's road, projected from Saratoga north through the wilds, and to strike the St. Lawrence at some point, is now under a management that is likely to carry the project to completion. It would be a pity if the western craze for cleaning up stumpage should ever get hold of the Adirondack woods, because the country is nearly worthless for agricultural purposes, and should be everlastingly preserved for timber growing. The Racket river lumbermen are right in one thing, that of economizing their standing timber. While a little more enterprise in developing the hard wood utilization and the benelock wealth of the region would be commendable, there is but little doubt that the spruce is being handled wisely by the present method. Be this as it may, when capital becomes interested in the Adirondack forests, they will melt away like grain before the sickle of the reaping machine, and the men who now advocate the "North Woods" for a state park will be sorry by and by that they did not persist in it more strongly and persistently. The cutting away of the Adirondack woods would be a great damage to the surrounding country, no doubt, on account of the effect it would have on the streams of the region. Already they carry less water than formerly, in the summer after the spring flush has passed off. Were the woods cleared up entirely, or much land denuded of trees, the effect would be to reduce the volume of water in the streams still more.

## FOREST GROWING.

That the great prairies of the Canadian Northwest were at one time covered with forests has been proved beyond a doubt, and a discussion is now taking place all along the line concerning the possibility of repairing the ravages created by fire from heaven or the careless hand of the hunter. Gentlemen who, like U. S. Consul Taylor, have devoted much attention and study to the subject are perfectly satisfied that no serious obstacles stand in the way of ameliorating the climate and ministering to the

necessities of the country by forest growing. It may be of service to farmers who intend to make experiments to know that the standard work upon the subject is "The Forester," a practical treatise on the planting, rearing and general management of forest trees. A fifth edition almost entirely re-written, has just been issued by Blackwood & Sons, the British publishers. The work is written by Mr. James Brown, Inspector of Woods and Forests, Port Elgin, Ontario, assisted by his son, Mr. George E. Brown, forester, Cumloden, Newton Stewart, N. B. In a review of the edition, the *Farmer's Gazette*, an Irish Agricultural paper of high standing, says that there is no other book of its kind published in the English language so comprehensive and complete, so practical and so satisfactory, or so calculated to meet the wants and requirements of all engaged or interested in planting or having to do with woodlands or woodland work, as is this valuable and generally recognized standard work. The *Gazette*, in the course of its ably written review, has something to say of the value of tree planting to the farmer and gardener, for transcribing which to the columns of the *Times* from such a high authority no apology is needed. "In the improvement of farms, judicious tree planting is calculated to be of the highest service. In the reclamation and improvement of waste lands it is calculated to play an all-important part, and the attempt to improve such without planting to afford shelter, is sure to be a failure. A knowledge of trees and planting should not, therefore, be ignored by the farmer. It is nearly as indispensable to the better class of gardener as it is to the professional forester, the head gardener in places of moderate extent having mostly to combine the care of woods with his other duties."—*Winnipeg Times*.

## SEIZURE OF LOGS.

For a series of years there has been more or less dissatisfaction at the way the assessments have been made by the Tittabawassee Boom Company, and last week a suit in attachment was begun to test its validity. The Boom company has been in the habit of requiring so much per M. feet for booming and rafting the logs, and at the close of the season of allowing a rebate to the owners of logs rafted. This has caused the dissatisfaction, some holding that the company had no right to fix the price of handling logs higher than was absolutely necessary. Edmond Hall, of Detroit, has a large quantity of logs in the river and refused to pay the regular assessment. He offered, however, to pay the amount of actual cost of booming, and tendered the same, which was refused, and the company also refused to deliver Hall's logs. To test his rights, Hall canceled all his logs to be replevined, and yesterday the sheriff was busy visiting the boom and taking Hall's logs into his custody. The outcome of the suit will be watched with great interest. Edgett & Brooks are the attorneys for Hall, and John Moore for the boom company.—*Saginaw Herald*.

## TREE PLANTING.

A great deal has been said and written on the subject of tree planting, and suggestions, as thick as blackberries, have been advanced in regard to the best methods to be adopted, and the kinds of trees that are the most likely to prove remunerative because of quick growth and the value of timber. The government has even adopted measures to ensure timber growth on the prairies of the great west by accepting as remuneration for the land taken up by the settler an affidavit to the effect that he has a certain number of trees under cultivation on his land. While all these suggestions are worthy of consideration, and each may be possessed of considerable merit from its peculiar standpoint, yet there is ordinarily a serious impediment, so far as tree planting is concerned. The young trees before being planted cost quite a considerable sum of money, which very often puts them beyond the reach of the settler whose capital is generally his bare hands and plucky determination. There is one view of this subject, however, which has as yet received no consideration, and which appears quite feasible from a superficial consideration at least. It is nothing less than this for the government to take hold of this subject itself, through a "forestry depart-

ment," the principal duties of which shall be tree planting on the public domain. The trees thus planted would certainly enhance the value of the lands to a much greater extent than the cost, and would be annually increasing in value as the years passed by, and any person purposing settlement would very willingly pay the increased cost. This would also put the lands within the reach of the settler who was devoid of capital, as he would thereby be enabled to attend strictly to the agricultural development of the land; and the surplus value of the crops, over and above what might be absolutely necessary for the support of himself and family, could be applied to the remuneration of the government for its investment. If a few of the millions of dollars annually squandered by the government in appropriations of a very doubtful character, to say the least, were expended in the direction indicated, it would tend very much to the solution of the problem which is bothering the brains of many of our best citizens, viz.: forest production. Besides the climatic considerations involved are of inestimable value, and absolutely beyond the range of computation.—*Lumberman's Gazette*.

## CANADA AND THE UNITED STATES.

The *Chicago Northwestern Lumberman* says:—At the time a representation of Chicago lumbermen appeared before the United States tariff commission at the Grand Pacific Hotel, this city, considerable was said about the low rate of wages in Canada as a reason why the lumber tariff should be abolished. Mr. Van Schaick alluded to it in strong terms, and asserted that there was so much difference between the cheap labour of Canada and the comparatively high rate of wages in the States, that the removal of the duty on lumber would make it very hard, if not impossible, for the lumber producers of this country to compete with those of the Dominion. The argument would have been a strong one if it had any basis in fact. But the truth is that since the Manitoba boom began, labor in Canada has been neither plenty nor cheap. A representative of the *Lumberman* was lately in Ontario, and was informed by the best authority that the supply of labour was positively not equal to the demand in that province, and that leading industries have been considerably crippled the past season because of that fact. It was also stated that the operators in logging camps and mills have been unable readily to obtain all the help they have required this season. This scarcity of men has enhanced wages, which are nearly or quite double what they were two or three years ago. The truth is, a great industrial change has come over the Dominion, on account of the opening up of the new North West to settlement, and the building of the Canada Pacific road, and it will not do hereafter to judge of the tariff or any other question affecting our relations with the Dominion by old time standards. The Canada of the future is to be a very different thing from that of the past.

## Polished Woods.

Black woods have come into great demand, and are growing in popularity. Ebony is imitated and excelled by a charcoal polishing process, which of course adds to the demand for other woods than ebony. Carefully selected woods of close and compact grain are used, and carefully polished, a chemical process quite complicated being followed, and when finished the woods have a dead black color, sharp, clear cut edges, smooth surface, and apparently the density of ebony. The polished wood is held to be more serviceable than ebony, and will not tarnish like gilding, or grow yellow like woods that are not so polished, while it is always a neat finish, agreeing happily with the other decorative elements.

The construction of the branch of the Canada Atlantic Railway to the Chaudiere lumber yards is being rapidly pushed forward.

A London Druggist says. "during the many years I have been in the drug business, I have never had a medicine that gave such general satisfaction, or for which there was such a large sale, as there is for Mack's Magnetic Medicine, advertised in another column of your paper."