

### THE TIMBER QUESTION.

BY DR. JOHN A. WARDER, OF OHIO, PRESIDENT OF THE AMERICAN FORESTRY ASSOCIATION.

This is a matter which has no politics in it, but which has already become an important question. In the new north-west part of the State, the people are yet laboring to get rid of the forest, but in the old and early settled portions it is evident to everyone that the war of the axe and the tree has been carried too far.

It is certainly one of the functions and one of the duties of the Legislature to consider this matter. It is an agricultural question also; and why that Board and the College has not given attention to it, is something of a mystery to us.

The first we heard of it, as a practical effort, came from the State Horticultural Society, in the form of a petition for a law encouraging the culture and preservation of forest trees. This was referred to the Committee on Agriculture in the House. Next came a memorial from Colonel Whittlesey, a member of the Committee of the American Association for the Advancement of Science, presented by Mr. Chapman, which had the same reference as that of the Horticultural Society. The Committee of the American Association have presented the whole subject to Congress and the Executive, so far as it has connection with the public lands. President Grant has sent in a message to Congress, and that body is effectually at work offering land bounties for tree planting on the prairies.

The future consequences of the destruction of timber will be appalling if they shall be the same here as in other countries—with our rapid modes of doing everything, this future may not be very distant. It is the object of the Scientific Committee to collect the facts respecting timber destruction as they have developed in Europe.

The papers before our Legislature refer less to the general subject than to what pertains to Ohio, for it is not in the power of Congress to do much for us. This we must do ourselves.

Mr. Chapman reported a bill which has not yet been discussed, which embraces only the encouragement of trees in the public highways. Something more than this must be done eventually; but this is a good beginning. The subject will work its way into notice from the necessity of the case, though its progress may be slow. Some two years since we cuddled the forest, trees somewhat, as may be seen by our files, but with very little effect.

People are slow to perceive the advantage of what seems to concern posterity. To show that the growth of trees does not inure to future generations entirely, we quote largely from the memorial of Col. Whittlesey, which was printed by the House. He says:

The benefits of tree planting may be felt in fifteen or twenty years, and timber cut in thirty to thirty-five years.

In Salisbury, Connecticut, on the rocky slopes of the Taconic mountain, too rough for cultivation or open pasture, the spontaneous growth is cut once in twenty-five years for making charcoal, and pays the interest on \$100 per acre. It is divided into twenty-five belts or strips, running from the base to the summit of the mountain, one of which is cut away each year. I have seen in southern Illinois, in 1832, a small growth of oak and hickory, on the borders of the prairie, which in 1848, after a lapse of sixteen years, was large enough for many uses on the farm, making two posts or two rails.

In Aurora, Portage county, there is a farm where the shell bark hickory has been allowed to grow in an old slashing. After twenty years these trees produced a profitable crop of first-class nuts; and the larger ones were cut for axe handles and pick handles. Old settlers of Stark county, Ohio, have told me that where, in the year 1800, there were openings covered with bushes not as high as a man's head, in 1850 the trees were few of them less than fifty feet in height. In Massachusetts a white pine, which had been transplanted, attained a diameter of two feet (at two feet above the ground) and a height of eighty feet in thirty-five years.

The City of Cleveland has acquired the title of the "Forest City," on account of shade trees planted in the streets and public grounds, most of them within twenty-five years. This was brought about by public opinion, cultivated by

the example of the late Leonard Case and a few other large owners of city lots. An elm set out by him 1824 still thrives near the south-west corner of the post office. Its girth two feet above the pavement, is seven feet, and consequently its diameter is two feet five inches. In 1836, the Hon. John W. Allen, John M. Sterling, and the late Charles M. Giddings planted native trees in front of lots in which they were interested. By their exertions, the village corporation authorized the same to be done in the north-east quarter of the public square, and in 1839-'40, in other parts of it, under the direction of John Willis. Those trees are principally elms, and now, after a life of thirty-five years, are from one and a half to two feet in diameter. By observations upon nineteen cultivated trees, whose age was known, I find that the average increase in diameter is about two-thirds of an inch each year; and the annual layer or ring of growth being not far from a third of an inch.

For light lumber and wooden ware, the white wood or poplar, the white pine, chestnut, and the linden or basswood may be used in thirty years from the seed. Three to five years may be gained by transplanting young trees. In a field of seedlings the less thrifty can be profitably thinned out and used as fuel, at twelve or fifteen years; and the ground will then produce pasturage. If at the expiration of thirty or thirty-five years it shall be entirely cleared, the soil will be found restored and ready for cultivation.

Every farm of one hundred acres should have at least fifteen acres in growing woodland, in which, by proper care, the crop may always be kept good.

As the primitive forest is thinned out for timber, or by natural decay, by a proper and well advised attention to the second growth it will renew itself perpetually.

In this State, besides the ordinary uses for timber on farms, there is an extraordinary demand for fuel and ties, by railroad companies. Their fuel may be obtained from coal mines, but no substitute is known for wooden ties. The roads of the State now require for repairs, without regarding the laying of new lines, about a million and a half of ties annually.

What is necessary here is the preservation of a proper proportion of wooded land, which is not only valuable property, but is indispensable to the full enjoyment of the remainder. When the growth of native timber is wholly destroyed in the ancient States of Europe and Asia, the region becomes, in process of time, a desert, or so near it to be of little value. The reasons why growing trees have such an important influence upon the increase of inundations, and consequently of low water and of drought—the diminution of atmospheric moisture, which affects vegetation of all kinds, the increase of heat in summer, and of cold in winter, rural beauty, shade, health, and numerous consequences that come on slowly, but in time produce prodigious results, I do not at this time propose to give.

J. A. W.

### TIMBER IN BRAZIL.

Within an area of half a square mile, Agassiz counted 117 different kinds of wood, many of them admirably fitted by their hardness, tints and beautiful grains, for the finest cabinet work. The maira-pinima, tortoiseshell wood, undoubtedly the most precious wood in the world, is found in large quantity on the tributaries of the upper Amazon, where the water can be easily used as a motive power. The pau de sangue, the rosewood, the pau de ferro (iron wood), or apuleia ferrea, the various species of jacaranda known to natural history students under the name of dalbergia nigra, mecherium violaceum and platypodium elegans, the white and black mara-quantiara, the macacauba, the pau santo or holy wood, and the sabuarana, both of which are rivals of the most beautiful walnut—are wasted yearly on the Amazon in amounts ample enough to veneer all the palaces of Europe. Maurice Mauris, the explorer, believes that with the facilities which the Brazilian Government is ready to impart to enterprising industry, the export of these commodities would develop immense profits in the shortest time, while the capital invested need not be enormous. It is only necessary that these woods be introduced into the market to obtain a decided preference

over those now most sought after in the two hemispheres. Still richer is the country in timber for the purpose of construction. The acapu (*Voucapoua Americana*) is most plentifully found there, and often in the most imposing proportions. Mr. Mauris has seen dining tables six feet in width made wholly out of one piece. The wood, like all its kindred macaranduba and itauba, or stone wood, furnishes ship timber as durable as teak. The longer these remain in water the stronger and harder they become.

### A SUBSTITUTE FOR WALNUT.

BLACK BIRCH TO BE THE WOOD OF THE FUTURE—AS DURABLE AND HANDSOME AS WALNUT.

A short time ago a local sketch appeared in the *Globe* deploring the exhaustion of the supply of walnut. Since that time the subject has been discussed in most of the Canadian papers, and many suggestions have been offered as to the kind of wood that might be used as a substitute.

A *Globe* reporter interviewed several extensive furniture dealers and lumber merchants on the subject, and all were unanimous in saying that the only good substitute is black birch, which is rapidly coming into favor. Black birch is a close-grained, handsome wood, and can easily be stained to resemble walnut exactly. It is just as easy to work, and is suitable for nearly, if not all, the purposes to which walnut is at present applied. Birch is much the same color as cherry, but as the latter wood is now so scarce, and consequently so dear, the dealers do not take much stock in it. It is with difficulty that cherry wood can be obtained at \$50 a thousand feet, while birch wood can be purchased at any saw-mill for \$16 per thousand feet. When properly stained, it is almost impossible to distinguish the difference between it and walnut, as it is susceptible of a beautiful polish, equal to any wood now used in the manufacture of furniture. When it became known throughout the States and Canada that the supply of walnut was almost exhausted, the dealers set their brains to work to find a substitute, and now since birch has been thought of the price is slowly advancing.

### AMPLE SUPPLY.

In the forests throughout Ontario birch grows in abundance, especially if the land be not too boggy. There is a great difference in the wood of different sections. Where the land is high and dry the wood is firm and clear, but if the land where the wood is grown be low and wet, the wood has a tendency to be soft, and of a bluish color. In all the northern regions it can be found in great abundance, and as the tree grows to such a size, little trouble is experienced in procuring a large quantity. The forests of the Manitoulin Islands abound with it, as well as those of the Peterborough and Haliburton districts. The Muskoka district also contains a plentiful supply.

### AN ARTICLE OF EXPORT.

During the past few years large quantities of this wood have been exported from the Province of Quebec at a low figure, but this will be stopped when it is known that it is to take the place of walnut in the near future. It is very easily detected among other trees on account of its height, large trunk, and the peculiar color of its coarse bark. Most of the perforated chair bottoms now in use are manufactured from it. There is a species of bird's-eye birch, but it is very scarce, and is not more valuable commercially than the plain woods. In consequence of the prospect of its speedy substitution for black walnut, it should be husbanded with the greatest of care.

### HARD TO FLOAT.

An evidence of the weight and solidity of the wood is the fact that it will sink after being a few days on the water. This fact is a slight drawback to the work of having it conveyed to saw-mills. One of the principal means resorted to is binding it together with pine logs, and thus it is brought to the mill, but pine cannot always be found where birch grows, and it is then necessary to haul it, sometimes a great distance, with the aid of horses.

The golden age—the present—when Esterbrook's popular Steel Pens are within the reach of all. The stationers can supply them. Wholesale by the leading Toronto stationers.

### SAW MILL BURNED.

A large lumber mill belonging to White, Clarkson & Co., New Haven, Conn., stood close to the frontier line, between Abercorn and Richford, but was totally destroyed by fire in the forenoon of Saturday, August 6th. The fire began a little after 7 a. m. in a building adjoining the engine room, packed with shavings for use in heating the boiler. Its cause is not certainly known. It is supposed to have originated from heating of the damp shavings, or to have been set on fire by a spark from a locomotive, the railroad track being close by. Explosion of the boiler was feared, but did not occur. The flames were carried by a south wind directly over the main building, and all was consumed, together with 700,000 feet of lumber ready for shipping, which was piled up behind it. By noon there remained only the brick walls of the boiler-house, its blackened engine and tall iron chimney. It is said that this engine has now passed through the fire for the fourth time. Long rows of black beams marked where the great flame building stood. Nearly all the machinery was destroyed, or too much damaged for use. The planing machine is sound, the fan or blower injured. Happily no lives were lost, nor not any serious accident occurred among the 150 or 200 volunteers who gathered from Abercorn and Richford. The burning sun of that morning, however, intensified by fire, prostrated Lyman Smith, of Richford, and two or three others. Dr. Smith was present aiding the sufferers, who were taken to Richford. Several adjacent buildings caught fire, but all were saved except the frame of an old barn. Nearer to the fire than this stood a small house occupied by the fireman, Dane. It was saved, but all hands being occupied, his wife (who can speak but little English) was alone with her baby, and fainted from terror and excitement. The only water available was a small pond near by. Mr. Priest, the manager, did all that could be done with great coolness and energy, and constant exertion. He expects it to be rebuilt immediately. —*Covansville Observer*.

### AMERICAN BARGES.

A recent determination of the United States authorities to enforce the strict letter of the law concerning lumber barges, in the carrying trade between the Canadian rivers and New York, is likely to benefit barge owners. Hitherto it has been customary for large American barges loading lumber at Ottawa for New York to take a full load, which averages about 175,000 feet. A barge with such a load as this cannot pass through the Champlain canal, owing to the insufficient depth of water. The custom, however, has been for years past to transfer a portion of the barge's cargo to scows drawing little water, and bring the lumber into this country in different portions. According to the strict letter of the United States law, when a vessel clears from a foreign port, with a certain quantity of any kind of freight, it must arrive with the same quantity specified in the clearance papers. With regard to the lumber laden barges passing through the Champlain canal, this has, for years past, been winked at for the convenience of shippers, but the United States authorities have now decided to rigidly enforce it. This will have a detrimental effect on shippers, but will benefit barge owners, as under the new regime they will be unable to take more than 125,000 feet of lumber to the barge load, thus necessitating a greater number of trips. It is believed that toward the close of navigation, when there will be a large lot of lumber to come forward from Canada, the barge owners will take advantage of the new state of affairs to raise their rates. —*Northwestern Lumberman*.

### Buttermilk as a Summer Drink.

An American physician asserts that for a hot-weather drink nothing equals buttermilk. It is, he says, "both drink and food, and for the laborer is best known. It supports the system, and even in fever will cool the stomach admirably. It is also a most valuable domestic remedy. It will cure dysentery as well and more quickly than any other remedy known."

**Burdock Blood Bitters** cures all diseases of the blood, liver and kidneys, female complaints, nervous and general debility, and builds up the entire system when broken down by disease.