

THE DOUGLAS FIR AS A TIMBER TREE.

A correspondence has been going on in the *Scotsman* in regard to the merits of the Douglas fir as a timber tree, a perusal of which will be found interesting to many of our readers. A writer in the *Scotsman*, signing himself "British Forester" has this to say about it:

As to the Douglas fir's merits as a timber tree I can say for certain that one of the three oldest and most extensive planters of the tree in Scotland, a noted member of the Royal Scottish Arboricultural Society flatly contradicts the chairman's statement regarding its value. He told me the other day that it was the fastest growing tree in Scotland, and, consequently, as he put it, the least durable. His private nurseries are amongst the largest in the north, and the best managed, and there the Douglas fir is conspicuous by its absence—the Scots fir and larch still being the favorites. Another fact—although the supply of seed must now apparently be plentiful—in the nurseries about Edinburgh and elsewhere you still find the Scots, larch, Corsican and Austrians first propagated and sold most extensively, and the Douglas fir in small quantities, as an ornamental tree principally. How is this after "fifty years' experience"? One of the most accomplished arboriculturalists and botanists in Edinburgh—a much respected member of the Arboricultural Society—also told me, only yesterday, that the tree was quite overrated, and that the society's certificate of merit was "nonsense." Dr. Schlich, the accomplished and practical arboriculturalist, of Cooper's Hill, London, (whom the Scottish Arboricultural Society voluntarily enrolled as an honorary member at their late general meeting), wrote an exhaustive paper on the Douglas fir last spring—his data being derived from the Scone plantations principally, and other plantations in Perthshire, which he examined and measured both in single trees and in sections of the plantations—comparing the tree for profitable planting, most exactly, in every possible way, with the Scots fir and larch, and his conclusion was that the merits of the tree had been overrated, that the statements made regarding it by foresters were too vague and general to be worth anything, and that its merits for general planting were extremely doubtful, that it was inferior to the Scots fir in that respect; and, probably, of less value as a timber tree generally. In short, the Douglas tree has never been properly tested for either endurance or strength. I may add that I have been over the best Douglas fir plantations in Scotland, more than once, and only again, the other day, to correct some former observations of my own, and I am more convinced than ever that the opinions I have cited are right and the society's wrong, and I hope planters will think twice before they follow its advice.

Mr D. F. Mackenzie, of Morton Hall, near Edinburgh, writes on the same subject. I wish to say a word about the Douglas fir, than which few nobler or more profitable trees grow within our shores. I speak from experience and not from hearsay, as your correspondent "British Forester" admits he is doing. He really does not know what the markets require, nor does he know the tree if he saw it in a marketable state. All he does seem to know of timber of that sort is his experience of it in a flower-pot in the conservatory, or at most on the lawn, and from a gardener's point of view. If he would wish to confirm the chairman's opinion as to the value of the timber of the Douglas fir, I would recommend him to apply to Sir Douglas Stewart, Murthly Castle, and Mr. Young Dunis, both of whom are now using the timber for all purposes for which larch has been used, and that for some time, and by myself many years ago. If he would come here I would show him planks of the larch and Douglas fir side by side and challenge him to tell which was which.

This correspondence is also continued in the *Scotsman* by "Scottish Forester," who says. "British Forester's" comments on the merits of Douglas fir are, I am afraid, quite as likely to mislead as those of Mr. M'Corquodale in his speech at the annual meeting of the society. If the latter is too sanguine in his expectations, the former errs in the opposite extreme

and with an amount of assurance and dogmatism not warranted by his information or that of any one else. Experience of this tree, in regard to its merits for timber producing and its adaptability to the climate of Britain, is only in process of formation in this country, but Mr M'Corquodale may claim to have quite as much experience as "British Forester," since Dr. Schlich, in his report of the "Douglas fir in Scotland," published in November last, not last spring, according to "B. F." credits him with having the oldest pure plantations of Douglas fir in Scotland. Does "British Forester" question this concession? He appears to do so when he says the "statement of the chairman is accepted as being founded on second-hand report," &c. It is difficult to understand "British Forester" here. The allusion to the chairman's connection with a "ducal estate" where Douglas fir has been neither planted nor tested thoroughly, raises the old suspicion about his state of mind when he wrote. The Douglas fir plantation set out by Mr. M'Corquodale in 1860 belongs to the Earl of Mansfield, not to a duke. In conclusion I would ask "British Forester" to state where he finds Dr. Schlich say the merits of the tree have been overrated. His friend, 'one of the three oldest and most experienced planters of the tree in Scotland,' comes to a rather untenable conclusion when he says that because it is the fastest grower, Douglas fir is the least durable timber. Because larch exceeds the Scottish pine in rapidity of growth, will "B. F." and his friend assert that it is less durable than the latter? What do they or anybody know about the durability of the timber of this exotic tree as grown in this country? Nothing certainly to swear by, though that appears to be the position taken up by "British Forester."

[We should be glad to hear from any of the lumbermen in British Columbia, or anybody else who is posted in regard to the merits and durability of Douglas fir, as it is well known this wood abounds in that province in immense quantities. ED.]

How to Get the Greatest Amount of Clear Lumber from a Log.

A sawyer who is not careful to take every advantage from the log, so as to get the greatest amount of clear lumber out of it, cannot be considered a first-class sawyer, no matter what his other attainments may be. Logs are never round, and most of them are decidedly flat-sided, and in placing the log on the carriage for the first cut, the sawyer must so place it that in squaring it up, the flat side will not be thrown on the corner, but will be true to the corner of the cut. Very few logs are perfectly straight, and many of them are very crooked, so the sawyer must be very careful to so place the log that the bow of the log will be exactly square to the cut, otherwise if he so place the log as to throw the bow of the log on the corner of the square cut he will not get near so much clear material from it, and in whatever degree he fails to observe and conform to these conditions, just in that degree he will fail to get the greatest amount of clear material from the log. There are but few perfectly sound logs, most of them are affected with heart crack, wind shakes or cracks from felling the trees, or rotten knot holes. After squaring the log and sawing from that side the sawyer may find a part of the defect in many of the planks, if so he should turn the log and cut from the other side, thus cutting the entire defect out in one plank and making lumber of the balance of the log. All good sawyers know this, but the most of them conclude that the time lost by so much painstaking will amount to more in the end than the loss of material from not properly placing the log on the carriage and taking advantage of the defects, but this is a great mistake, for it is safe to say that the cost of logs delivered at the mill amounts to from two-thirds to three-fourths of the whole cost of manufacturing lumber, and surely where the cost of material is so out of proportion to the cost of time and labor expended in its manufacture, it will pay to put all the time and labor into it he possibly can, so long as he can enhance its value by so doing. This is equally true of all kinds of manufacturers. No manufacturer expects to make his profits out of the raw materials as such, but he expects to make the profit out of the time, and

labor he puts on the material. The manufacturer who puts a pound of iron into a plow-share, only enhances its value a few cents, because he has expended but little time and labor upon it, while he may take a pound of the same iron and by expending sufficient time and labor on it, put it into harsprings for watches and thereby enhance its value more than two thousand dollars. The sawyer or mill owner who estimates the day's work by the number of logs he has slashed up, nine times out of ten, fails to realize a legitimate profit out of the amount of raw material consumed, and I know of very many mills where the day's run is estimated in this way. To all such, my advice is, stop just where you are, and begin at the other end, count up the amount of clear merchantable lumber made in the day's run, and you are apt to find right away, that there is something wrong, it does not tally with the scale column of logs used up in a satisfactory manner, and a little further investigation shows that just here is that leakage which he has long been satisfied existed somewhere, but could never find before, and very often he finds that his leakage alone is sufficient to eat up all of the profits of the business. After all there is no time lost by the careful painstaking sawyer, for carefulness soon becomes a habit with him and extends to every part around the mill, the machinery is handled with care, and if anything gets wrong he sees it at once, stops and applies the remedy before any damage is done, and if you would count up his work, one day with another, you will find that he has done more and better work than the slasher, made more first-class lumber out of the same amount of logs, cut up as many logs, with less than half the wear and breakage in machinery.

Black Walnut.

This very superior wood has nearly disappeared from the Western forests; but so earnest is the inquiry for it that its cultivation is becoming a matter of great desirability. To that end Daniel B. Emerson, of Beloit, Wis., has given his experience in its culture as follows: He prefers shallow planting, seven feet apart each way if planted in a field, or sixteen feet apart if planted around fences, as wire fences can be attached to the trunks without injury. Under favorable circumstances, the trees begin to bear in about seven years. One bushel contains from four hundred to six hundred nuts, or fifteen pounds of kernels, which will yield seven and one half pounds of oil. He has trees fifteen years old which are thirty feet high and a foot through at the base. They yield ten bushels of nuts each annually, worth \$4. The leaves and the husks, when boiled, furnish liquid which will kill worms and insects on lawns, without injuring the grass.

Agatized Wood.

In the wilds of Arizona is a place called Chalcedony Park, which may be considered one of the greatest wonders of the world. Here, thousands of years ago, were giant trees of pine, cedar and red wood. How long ago the trees fell and were covered with lava from volcanoes now extinct and moisture from the earth, which had the effect of making them hard as steel, yet clear and of the most exquisite colorings, it would be impossible to tell, yet it is supposed to be 10,000 years.

The action of the elements is all accounted for by scientific men, but those who understand little about silicification can but wonder and admire when seeing the beautiful blocks, which can be used as table tops in the place of marble and onyx, clock cases, mantels and paperweights, knowing they were once parts of the living, growing green trees.

Almost every color can be found in this chalcedony; sometimes they are spotted distinctly, again having a mottled appearance. But on every piece the layers of the trees can be seen and at the edge the peculiar ragged look of the bark. It is supposed that the sap flowing through the tree from the top gives the color.

The wood is more than beautiful with the naked eye, but a microscope shows the wonderful cells of the bark, and also gives the amethyst and green tints and added beauty. It is said to be more durable than granite, and the strongest acids have no effect whatever on the high polish of the surface, and can only be cut by diamonds.