

to a great extent have been saved under a better system.

Again, M. Joppe calls attention to the presence of sheep, as in his judgment inflicting a great injury on the Scotch forests, because they effectually prevent the trees from renewing themselves. Not that he would exclude them altogether. He observes that a forest requires 120 years to come to maturity, and that sheep ought to be excluded during the first twenty, when the trees are still small, and also during the last thirty, when they ought to be renewing themselves. This, however, leaves seventy out of the 120, or more than half the period during which sheep do no injury, and may safely be admitted. Moreover, he points out, that in a forest so treated, the young trees kill off the heather and gorse, and the herbage is thereby so much improved that he believes sheep can be more profitably kept in a forest so treated, than if they are allowed to be continually present.

Another point of the greatest importance is the association of suitable species. No foreign forester would think of planting oak by itself. But in our country, sometimes side by side and on identical soil, you may sometimes see oak alone, sometimes larch alone, sometimes oak and Scotch pines, sometimes oak and beech, oak and larch, or oak and chestnuts. It is clear that most of them are economical errors.

Now where, let me ask, can a country gentleman who owns woodlands obtain practical advice as to their management, or procure trained assistance? Where can he send his son so that he may learn something of forest management? We have no forest school in this country, nor any class of persons specially trained and instructed in the formation and management of woods. Private enterprise cannot supply the want, because it is necessary that a forest school should have forests connected with it. In this respect, therefore, the concurrence of Government is essential.

It appears to be a very strong argument in favor of the establishment of a forest school in this country that at present the young men who are going out to manage our Indian forests have to be sent for instruction to the great French forest school at Nancy. No doubt that is a most excellent institution, and we are indebted to the French Government for the courtesy with which they have received our English students; but the system of education given there naturally contains some branches—as, for instance, the study of French law—which are not adapted to English students, while there are many other considerations such as climate, which render a continental school less suitable for English requirements. I may add that no young Englishmen, as a matter of fact, go there excepting those intended for the Indian service.

All the great countries of Europe have established forest schools. Austria, Italy, Switzerland, France, Germany, Hungary, Russia, Sweden, Denmark, Spain, even Roumania, have done so. Great Britain is the only exception, and it is surely very remarkable that it should be so, when we consider that this Empire is probably the most richly endowed with woods and forests of all the countries of the world. Our Colonies contain immense tracts of forest land, much of it of very great value, and estimated on high authority at not less than 340 millions of acres.

The great influence exercised by forests on climate seems now to be generally admitted. It is mainly by the destruction of trees that Asia Minor, Palestine, Northern Africa, and so many other countries, once rich and populous have been reduced almost to the condition of cinders. In this country, indeed, we need apprehend no such danger, but as regards India the case is different.

Sir Richard Temple, speaking of Indian famines, has recently expressed the opinion that "one of the causes, probably the main cause, of the drought was the destruction of forests in past times." He added that "when he went to India he was supposed to have had a liberal education, but he had never heard a word about forestry, and he feared that many of those who came after him were not much better off in this respect."

For our colonies, then, the establishment of a good forest school here would be of very great

importance. A judicious management of their woods would add considerably to their income. French foresters have recently been sent to the Cape of Good Hope and Cyprus, it having been found impossible to obtain any countrymen of our own with the necessary knowledge.

The arguments in favor of establishing a forest school in this country seem, then, to be very strong.

Perhaps, however, I shall be asked why the establishment of such a forest school, if it be so urgently needed, should not be left altogether to private enterprise. The reason, however, is obvious. A properly equipped forest school must have attached to it a large extent of forest, in various stages, and having a variety of climates and soils. This, it is obvious, no private institution can supply. I do not, however, say that a forest school must necessarily be a Government institution. On the contrary, I should be glad if such colleges as Cirencester and Downton could be made available for the purpose. Possibly some arrangements might be devised by which under careful regulations the professors and students attached to them might periodically visit our national forests, just as the French and German students are taken to their great national forests. There is one substantial difficulty, which only, however, brings out more strongly the necessity for some such step. We have, M. Joppe declares, no single pieces of woodland in the country which would serve as a model. Of all our national woodlands those known as Lord Gage's woods are perhaps most suitable; and if the authority in charge of them could be appointed Professor of Forestry at Cirencester or Downton, perhaps that might be the best course to adopt. This, however, I only throw out as suggestion.

Surely also it would be very desirable that professors of forestry should be appointed at our great universities. Considering that most of the landed proprietors of England are educated at Oxford or Cambridge it is, to say the least of it, unfortunate that their attention should never even be directed to a subject in which they are so vitally interested. I do not mean that they should receive necessarily any thorough system of instruction in forestry; but the devotion of a very short time would suffice to give them an idea of the nature and the importance of the problem, of the manner in which it affects their interests, and the sources from which they might subsequently derive more definite information.

There is another incidental advantage which may just be alluded to, although I will not dwell on it—namely, the new career it would afford to young men. More than one of us, I dare say, have asked ourselves, "What shall I do with my son?"

I have just mentioned in illustration that lately the Cape of Good Hope Government determined to appoint a forestry Commissioner with an income of £300 a year. They could not, however, find any qualified Englishman, and were obliged to appoint a French gentleman even though he could not speak English.

Until some such course is adopted it will, I fear, continue to be true that, as the House of Commons Committee of 1854 reported, timber is "everywhere worse managed than any other species of property." On the other hand, the high authorities whom I have quoted have expressed a very strong opinion that we might make our woodlands much more profitable, and they show one step which is a necessary preliminary.

Last year, when I called attention to this question in the House of Commons, Mr. Courtney, on behalf of the Government, promised that they would give it their serious consideration. If they cannot themselves take up the question, I would urge them to appoint a Committee or commission to inquire into the whole subject. Averse as I am on general principles to Government interference with private enterprise, the objection does not seem to apply here. I repeat that I do not at present ask for a school; it would be preferable, I believe, if it be found possible, to utilize the national forests in connection with Cirencester, Downton, or some other similar institution; but I would earnestly press on the Government and the country the great need of some such step, the

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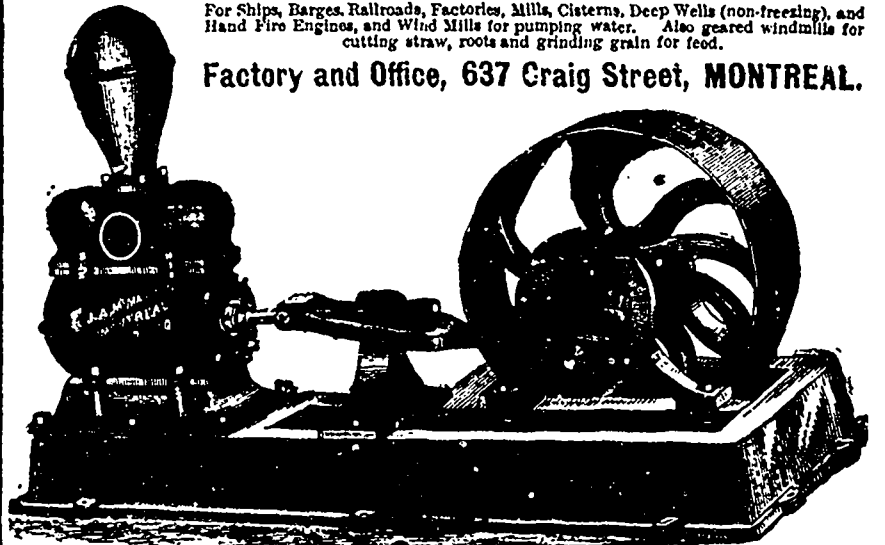
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the result of which, I feel satisfied, would be made more remunerative; large tracts would be profitably planted; we should create additional employment for the people; considerably increase the incomes of our land-owners; and make a substantial addition to the wealth and resources of the nation.—Sir John Lubbock, in the *Contemporary Review*.

LOGGING CAMP ROMANCE.

The *Menominee Herald* relates the following curious incident which may give variety to the monotony of lumber and logging news: "Richard Gorman of camp 17, of the Menominee River Lumber Company, killed a 200 pound buck in the woods without a gun. He was at work in the forest and while in the act of jumping over a log a huge buck sprang up in front of him and started to run. There was but little snow on the ground and the king of the forest slipped and fell as he passed over an icy spot, when Dick caught him by the caudal

appendage. The deer gathered himself quickly and the two sailed through the woods at a lively pace when the buck again slipped and fell on his side, his horns catching under a rut, from which he was unable to release himself. Dick held fast to him and howled like a wolf in hopes to obtain aid, but no one came to his relief. In his efforts to extricate himself the deer pinioned his captive and was about to make the best in the fight for life, when Dick pulled out his pocket knife, opened the blade with his teeth, one hand being hold of the buck's head, and with the other succeeded in cutting the throat of his victim, who, after a desperate effort to get away, finally had to succumb to death. It was a hard fought battle, but Dick was equal to the emergency and with help, brought his venison to camp."

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