

FOREST CONSERVANCY

The London *Timber Trades Journal* says:—The report of the Select Committee "appointed by Parliament to consider whether by the establishment of a forest school, or otherwise, our woodlands could be rendered more remunerative," has just been issued, bearing the date of July 24th, and they express the opinion that so near the end of the session it would not be in their power to conclude their investigation. They could only report to the House the evidence already taken, and recommend that another committee on the same subject should be appointed in the next Session of Parliament. It will be inferred from this that no decision was arrived at, and the vexed question of establishing a school of forestry for educating young men exclusively for the pursuit of that science, remains practically in the same state as before.

But although the sittings of the committee were inconclusive, the mass of evidence collected from experienced authorities and from various lands, leaves little doubt on the mind of the reader of the report that the investigation will terminate in any other way than by approving the inauguration of an endowed institution, where forestry can be taught and some sort of degrees or distinctions conferred, as in the schools and colleges for other objects. The committee, under the presidency of Sir John Lubbock, was only nominated on the 8th of July, and it held its last sitting (of three) on the 24th. At the first assemblage only one witness was examined. Mr. W. G. Pedder, head of the Revenue Department of the India Office, through whose hands all the forest papers from India pass, and who has had a good deal to do with forests as Secretary to the Bombay Government.

No attention was paid, it seems, to the forests of India until 1846, when a department was organized in the Bombay Presidency, under the late Dr. Gibson, "principally with a view of providing and securing supplies of teak timber for the dock yards." In 1847 the Madras Presidency followed suit, and the organization extended to Bengal and Burmah, and from that date the systematic conservancy of the forests of India may be said to have begun.

Mr. Pedder found some difficulty in stating what the revenue derived from forests was before that time, but he understood it to be about £50,000. At all events in a year or two it rose to £150,000, and in 1859 to £182,000; the charges were £32,000, and the net revenue £150,000. In 1883-84 the gross revenue was £938,000, the charges were £367,000, leaving net revenue £571,000. The training of Indian forest officials scientifically began about 1863, since which not only has the revenue thence derived greatly increased, but the capital value of the forests has increased still more, chiefly, it is intimated, as a consequence of these appointments. These officials, it appears, were sent to Europe for their training—chiefly to France and Germany, not to England, which was not supposed to be capable of affording them sufficient opportunities of scientific forest learning, and for the last ten years the Indian forest officers have been trained at the Ecole Forestiere at Nancy. The fees, it seems—which cover board, lodging, and the requisite lectures, everything in fact but pocket-money—amount to £180 per annum; and two years' attendance are thought necessary to make an efficient forester, but only for the higher grades of the service, such as those of "conservator, deputy conservator, and assistant conservator. There is a special school in India for the instruction of the inferior grades." Now it is arranged that "young officers—from five to seven or eight a year—are to be selected, subject to a physical test, by a competitive examination held by the Civil Service Commissioners. The young officers selected are to be sent for two years to go through a course at the Royal Indian Engineering College at Cooper's Hill, and there will receive instruction in mathematics, applied mathematics, geometrical drawing, freehand drawing, surveying, descriptive engineering, inorganic chemistry, geology, French, physics, (laboratory work)," and a good deal besides, including forest subjects, botany, &c., to be studied in Windsor Forest and other places, and a holiday tour in France each year in connection with the school

at Nancy. As yet it seems there have been no applications for these honors, but Mr. Pedder remarks that "any young men whose parents will pay the fees will be able to avail themselves of the instruction given in forestry." It is also stated that since 1867, when the system began, to 1885 there have been 511 competitors in India for the forest service, of whom 110 have been appointed, all from the United Kingdom, "excepting one or two Eurasians—East Indians." From this it would appear that every student of forestry at the College, Cooper's Hill, has a fair chance of an appointment in India. The odds are not four to one against them. Here, in England, every competitor for a Government appointment is likely to have twenty to one against him; and who knows how much favoritism besides. The Indian forests, it seems, have disappeared in a remarkable manner before the advances of civilization, besides the immense demand created by the railways for timber, especially for fuel, sleepers, etc. Gingera, on the west coast of India, is a small state forty miles long by fifteen to one hundred miles wide, which, except the rice land, was entirely covered with forests as lately as twenty years ago; and seven years later, when Mr. Pedder went there as political agent he found that three-fourths of the forests had been entirely destroyed by the demands of the city of Bombay. The land, apart from creeks, etc., is about 400 miles square. The area of British India, exclusive of native states, is estimated at 865,000 square miles, and of these 48,000 have been brought under conservation as Government forests. Besides 27,000 square miles which are partially conserved as protected district or village forests, about 9 per cent of the whole country has now been reserved as woodland and saved from certain destruction, which is considered a remarkable fact, and greatly to the credit of the Indian Forest Department. At page nine of the report, question 124, we learn that India is almost entirely dependent on wood for fuel. But so was Europe ages ago.

The expense of a school of this forestry in country, as a government establishment, would not exceed, in Mr. Pedder's opinion, £4,000 a year.

At the next sitting, on the 21st July, Colonel Michael, C. S. I., was examined. He had seen ten years service in the early days of Indian conservancy, but was driven away by jungle fever, and has paid attention to forest preservation and progress ever since. He stated that he had himself seen "a well known perennial stream dried up completely on the slopes of the Neilgherries by the fact that the timber all around it had been cut for coffee planting." The circumstances of the timber being cut is but scant evidence that the stream dried up in consequence. Might not the coffee plantation have something to do with it? But all the witnesses appear to have faith in that theory, though the springs do not dry up in those parts of Ireland which have been entirely denuded of trees. And in America the doctrine is often stoutly denied by men whose experience is no less than that of those who maintain it. Col. Michael admits that he never knew the planting of a forest to have restored a spring, though he knew many springs lost from a forest being cut away. There may be other causes yet to seek for an explanation of this phenomenon. This witness thought that the establishment of a school of forestry would be of great advantage to it.

At the last sitting of the Select Committee on July 24th, Dr. Hugh Cleghorn, M.D., F.R.S.E., who was twelve years conservator of the Madras forests, and began when Dr. Brandis began in Burmah, was examined. He has since his retirement from the service in 1869 paid great attention to the subject of forestry both in England and Scotland, and he considered it marvellous that means had not been taken at an earlier period to place our forests under trained officials in order to preserve them.

Dr. Hugh Cleghorn answered very carefully the leading questions that were put to him by the members of the Committee, but through all there was evidently a steady belief in the great advantage this country would derive from a more methodical system of forest conservancy by means of an institution for

promoting the knowledge and encouraging the study of forestry.

After him Colonel Pearson was called in, who represented the Indian Government at the school of Nancy for eleven years, and has great knowledge of the system of forest conservancy as practised in France. He also is a believer in what is called an approaching "timber famine," and therefore strongly advocated the promotion of new plantations in Great Britain, and the establishment of a school of forestry. Asked if the great bulk of the woodlands were not in private hands he admitted that they were, which of course would render it difficult for the State to deal with them. But there are hundred of thousands of acres in this country still which might easily be acquired by the Government for planting as being at present entirely unproductive. We could point to thousands of acres of this sort within thirty to forty miles of London, say between Woking and Winchfield on the South-Western Railway line, consisting chiefly of a fine white sandy surface, which seems never to have produced anything since creation, except heather, but in which oak, larch, spruce, Scotch fir, and birch will grow and make fine trees if planted. In bringing these lands under cultivation, or forest culture, employment would be found for an immense number of people, and the wonder is that they have only been tilled in small patches, and by cottagers mostly, but always with success, where the experiment has been made. To bring them into cultivation is estimated to cost about ten pounds an acre in labor and breaking through the hard subsoil, about a spade depth below the surface.

The examiners asked Colonel Pearson if he did not think a good deal of useful forest knowledge might be obtained by two months' attendance at a school of forestry instead of two years which few would be able to avail themselves of except in the higher branches of the employment. He answered that in three months so much information might be acquired as would fit a student for a useful position, but not in less. Lectures might be attended at the discretion of the applicant, who might learn as much as he thought would be useful to him and no more. The institution would probably have to provide for this sort of desultory teaching, much on the system of day boys at a public school who do not obtain the same care in instruction and superintendence as the regular boarders, and pay less for it.

Mr. W. T. Thistleton Dyer, C.M.G., F.R.S., assistant director of the Royal Gardens at Kew, then gave his evidence. This gentleman's opinions of the great utility of a school of forestry in this country, after the plan of those in Germany and France, coincided with those expressed by the witnesses who had preceded him, and he thought if such school of forestry were established there would be applications, by and by, from our colonies for competent men to investigate to state of their forests, with a view to other regulations in regard to them. Cape Colony, from his testimony, has been very prodigal of its forest produce, and the amount of forest which exists there has been reduced to very small limits indeed.

It is a mistake, though, to assume that because a country imports timber from Scandinavia or America it is a sign of a scarcity of timber at home. Timber once afloat can be carried long distances by sea at less expense than to cut and haul a few miles by land, and the system of the timber-exporting countries is so complete that every convenience and facility for its transport, once is reduced to the smallest cost, and it is delivered, as it were, at your doors ready for use without any care or personal superintendence of yours till you actually see it there. Set this against going into the woods, if only ten miles away, and cutting down and getting home through every sort of inconvenience a hundred loads of timber which you are permitted to take for nothing where it grows.

The evidence of Mr. Julian C. Rogers, secretary to the Surveyor's Institute, closed the sitting, and was to the same effect as the others.

Eruptive, Breach or Hernia
permanently cured or no pay. The worst cases guaranteed! Pamphlet and reference two three cent stamps, World's Dispensary & Surgical Association, 663 Main Street, Buffalo, N. Y.

FORESTS OF THE DOMINION.

With the assent of Lord Derby to a suggestion of our Governor-General, the governments of the various provinces of the Dominion were, during the summer of last year, applied to for information regarding the condition of their respective forests. The replies received, which have been submitted to the Imperial authorities, enable us to form a general notion of the state of the forests of the Dominion. The settler and the lumberman has left little of value in Prince Edward Island. In Nova Scotia there was still a fair quantity of hemlock, though in many sections inroads have been made on it for tanning bark. The supply of pine and spruce was disappearing, and much of the heavy birch had been exported in recent years. It was to be regretted that, notwithstanding the manifest decrease in the timber wealth of the province, the farmers and lumbermen did not show the care that was desirable for its preservation. Forest fires, moreover, had done tremendous damage, large tracts of country, once covered with pine, spruce and other growths, being almost entirely denuded. In a report furnished by the ex-Deputy Commissioner of Crown Lands for the province the interesting statement was made that up to 1783 the utmost precautions had been observed by both the aborigines and early French settlers against the destruction of forests by fire, but in that year there was influx of refugees and discharged soldiers, who, not being so careful, lit fires in the woods by which (the weather having previously been remarkably dry) some two thirds of the province were burnt over. Were it not for the devastation occasioned then and by subsequent fire, a great part of Nova Scotia would still be covered with trees. For the protection of the forests it was proposed that stringent regulations against fires and against cutting trees below a certain diameter should be enforced. In that case the ex-Commissioner believed that Nova Scotia would continue to be a timber producing and timber exporting region.

Very little information was gleaned regarding New Brunswick in reply to the questions submitted, but Mr. Ira Cornwall, who represents the province in the United Kingdom, has collected some valuable statistics as to its timber production and industries. The statement concerning Quebec is satisfactorily full. It was pointed out in the memorandum that the portion of the province north of the St. Lawrence contained a considerable quantity of timber, but that the trade could only be carried on with profitable results if due regard was had to the preservation of the forests from waste by fire and otherwise. This was especially true of the white pine, which was the most valuable feature in the trade, and of which there was no new field to fall back upon if the present area was exhausted. In the course of the memorandum reference was made to the good results accomplished by the Montreal Forestry convention of August, 1882, and to the association then formed for continuing the work which it had initiated. The consumption of timber for railway ties, which, in the States was enormous and increasing, had prompted the proposal to plant trees along the lines of railways—the black walnut, on which the Hon. Mr. Joly had successfully experimented, being recommended for the purpose. The institution of Arbor Day, which that gentleman and the Hon. Mr. Lynch had so zealously promoted, was also mentioned as among the signs of progress.

The report on the state of the timber supply and the means to preserve and increase it in Ontario and the other provinces were in most respects similar to those already referred to. The statement of Mr. White, M. P. for Renfrew, was quoted to the intent that the Ottawa district alone lost at the rate of twenty million dollars annually. Sometimes, however, the thinning out of the larger trees by the lumberman gave room for the growth of the younger trees that were to take their places. We have already more than once given summaries of the reports of Mr. Phipps on the forests and forestry movement of Ontario. In Manitoba, where, as we learn from the last report of the Department of Agriculture and Statistics, a forestry association was formed in 1883, earnest efforts have been put forth for the prevention of destruction