

In Victoria, where the Forestry Department still adheres to the excellent idea of experimental co-operation with private persons situated in localities where silvicultural knowledge is desired, trees are established free of charge for the purpose, although the Department exercises the right through its officers to direct the actual planting or subsequent work associated with any such experiment. Needless to say that in this way an immense amount of valuable information has been secured at a comparatively trifling expenditure.

EDUCATIONAL.

The educational facilities afforded many forestry students in each country visited are such that any intelligent, persevering man of fair education may become proficient by a moderate expenditure, although there can be no doubt that the making of an ideal expert—a man who combines the theory of silviculture with experience in actual management—can scarcely be anticipated from solely a university training, where usually facilities for conducting any extensive practice in general forestry work are meagre. Students generally are not, however, compelled to spend much of their time at the actual practical forestry work, and at each of the schools and universities visited every opportunity was afforded the young men of becoming most valuable officers, many of whom subsequently specialize in certain branches.

Several of the delegates familiar with the educational aspect in Scotland, England, Ireland, and Germany unreservedly discussed the question with me, but as full details of the regulations applying to forestry education have been printed in a recent report published in Scotland, I am appending same herewith, assuming that perhaps this recent document has not yet reached you. In Great Britain untiring efforts are also being directed to improve the status of the working forester by the publication of well-written journals and pamphlets. At schools connected with the nurseries and forests at Parkend, England, and Avondale, Ireland, an excellent theoretical and practical training is possible; but, of course, in each centre the instruction in theory is imparted by a specialist.

At Creswick, Victoria (and this is the first forestry school in Australasia), a similar arrangement is in existence. Students are accepted of from fourteen to sixteen years of age, after passing a competitive examination. They receive free board and residence and a training, extending over three years, in all branches of forestry, including English, botany, algebra, geology, chemistry, physics, and surveying, and after three years are usually given positions as Assistant Ranger, commencing at a salary of about £150 per annum. The school adjoins the nursery and plantations, and, although a comparatively small institution—at present only six students attend—the value accruing from the training of foresters is appreciated by the State.

In Canada about three years' study at the Toronto University is sufficient for a fairly-well-educated youth to secure his B.Sc. (Forestry) degree, and such a graduate then generally receives an appointment as either—

- (1.) Instructor in the Forestry Branch (devoting his time to the compilations of statistics and pamphlets and office-work generally, in addition to advising private persons and public institutions regarding suitable planting schemes):
- (2.) Ranger of Native Forests (protecting the dominion's interests generally and the supervision of timber-cutting, fire-prevention, &c.).

After having looked into the measures adopted elsewhere towards the educating of forestry officials, I am convinced of the advantages that would be derived by the State in the addition to the staff of one or two officers possessing special scientific qualifications. The duties of one such officer might include—

- (1.) The theoretical education of our most promising young officers and cadets:
- (2.) Investigating and reporting upon tree-diseases, abnormal growths, &c.:
- (3.) Survey-work in connection with plantations:
- (4.) Assisting with the compilation of afforestation statistics.

During my stay at Edinburgh a Mr. Fraser, a young New-Zealander, who recently obtained his B.Sc. degree in forestry and had finished his education in Germany, signified his desire to join the New Zealand Forestry Branch, and I believe his services as an assistant at a moderate salary should also be secured by the Department, believing that the infusion of his knowledge with that already gained in the Dominion might be helpful in many ways. There can be no doubt that a vast amount of valuable knowledge has been acquired by certain tree-planting enthusiasts throughout the Dominion, and every effort should be made to secure the co-operation of these gentlemen in diffusing knowledge gained through the medium of a forestry journal or pamphlets periodically issued. The ways and means of organizing a thoroughly efficient service to meet the future demands of the fast-expanding afforestation scheme surely requires much consideration, and I feel sure the inclusion of an officer on the staff advanced in scientific matters will tend to strengthen the position of the present management, and have at the same time a more satisfying effect upon those who are ever ready to criticize harshly the efforts of the Department.

UNDERPLANTING.

Realizing the early necessity of introducing shade-bearing trees into our artificially formed forests if the desired density is to be retained, all information possible was secured relative to underplanting. An opportunity was afforded me of inspecting, at Sir Ronald Munro Ferguson's Novar Estate, Scotland, what was considered by the visiting delegates to be one of the finest examples of underplanting in the world.

Briefly, an area of approximately 600 acres was planted with larch, which after twenty-seven years became so seriously affected with *Peziza wilkommii* that immediate steps to introduce such shade-bearers as *Tsuga Mertensiana*, *Abies grandis*, *Thuja gigantea*, *Pseudo-tsuga taxifolia*, *Chamaecyparis Lawsoniana* were taken. A sufficient number of standards of *Larix europæa*