University of New Brunswick, with Mr. R. A. R. Campbell as assistant, and Mr. R. K. Shives with Mr. G. S. Laughlin will be working in the vicinity of Battleford and Prince Albert, respectively. The men assigned to this kind of work in the Railway Belt in British Columbia are Messrs. F. B. Robertson, C. R. Mills, E. B. Prowd and H. A. Parker. The two first-named will be the men in charge of the parties.

Mr. W. N. Millar, District Inspector of Forest Reserves for the Province of Alberta, has outlined extensive trips in connection with his inspection work in the Rocky Mountains forest reserve. Mr. Millar spent a very large proportion of his time last summer in the field, but he was able to cover only about half of the very large area under his jurisdiction. The trips that he has planned for the present season will complete his personal inspection of all the Rocky Mountains forest reserve lying south of Grand Trunk Pacific Railway. the The most extensive single trip will be a journey with pack train from Laggan to Fitzhugh.

Prof. R. B. Millar, of the University of New Brunswick, Dept. of Forestry, has accepted an appointment to do consulting work with the Canadian Pacific Railway forest service during the summer.

CROSS TIES PURCHASED IN 1912

A very interesting report on the cross ties purchased in Canada in 1912 has been issued by the Dominion Forestry Branch. Statistics were based on reports received from 51 steam railways and 36 electric railways operating in Canada in 1912.

The total number of ties, 21,308,571, were valued at \$9,373,869. Part of these were imported, but the bulk of the ties used on Canadian railways were cut in Canada. The imports of ties in 1912 reached approximately \$1,697,431, which would indicate that less than one-fifth of the ties purchased in 1912 were imported.

There were purchased in Canada in 1912 a total of 21,308,571 cross-ties; this was an increase in actual numbers of 6,919,347 or a 48,1 per cent. increase over 1911. This increase took place on almost all the railways in Canada and was especially notice able on transcontinental lines.

Nineteen different kinds of wood were used with jack pine still leading. The use of each material increased from 1911 with the exception of Eastern spruce and red pine. Balsam fir and Western spruce were added to the list of 1911 and poplar and black ash were dropped.

The use of the cedar tie has varied greatly from year to year. In 1908, 1909 and 1910 cedar ties headed the list although the numbers purchased showed decreases each year. In 1911 cedar ties formed only 10 per cent. of the total and fell back to fourth place on the list. In 1912 the use of this material increased by some 1,898,710 ties and this wood moved up to second place on the list, forming 15.6 per cent. of the total.

Douglas fir has steadily increased in use since 1909, when data concerning its use were first obtained. Oak and the other five hardwoods—chestnut, beech, maple, birch and elm—have also increased remarkably. There seems to be a tendency on the part of the management of older established steam railways to reduce the use of soft, light material for cross-ties, especially where fast trains and heavy rolling stock are used. Some of the Eastern roads have ceased to purchase cedar, pine, hemlock and tamarack ties and use only the hardwoods. The use of imported hard pine has increased with the hardwoods and was used in making 3.1 per cent. of the ties purchased in 1912. Western larch formed 5.6 per cent. of the total number, over a million ties of this wood having been purchased.

The average value of ties, at the point of purchase, increased from 39 to 44 cents in 1912.

It is interesting to note the increased use of hardwoods by steam railway companies. In 1911 woods such as oak, chestnut, beech, maple, birch, elm and black ash together formed only 1.8 per cent. of the ties purchased. In 1912 this percentage increased to 6.7 per cent.through increased purchases of 1,148,578 hardwood ties.

Many Canadian railway companies are now beginning to realize the value of preserving at least a part of their tie material from decay and insect injury. The practice of chemical treatment of railway ties has been carried on by railways in the United States for some years with apparently satisfactory results.

The practice in Canada is just beginning, but it is increasing rapidly with the increasing cost of tie material and the constantly decreasing supply. In 1910 practically no treated ties were used by Canadian railways. In 1911 some 206,209 ties received chemical treatment before being placed in the roadbed. This number, while forming only 1.4 per cent. of the