

Scientific Investigation and the Forest

While Other Nations Forge Ahead in Research Work in Living Forests Canada Pays Small Heed

The forests of Canada are one of its leading natural resources and like forests everywhere are, as living bodies, subject to laws of development that can be ascertained by careful study. The growth and production of the forest are affected by conditions of soil, moisture, air and light, by the relations between species and their adaptability to differing conditions, by destructive agencies such as fire, insects, fungi, etc. While the forests are subject to and often succumb to destructive agencies, on the other hand they are capable of reproduction and development. They may be perpetuated for all future time and their production and value can be increased by proper management. The conditions of forest growth are therefore a subject for thorough scientific study.

Principles of Management

Every country which has come to the point where it felt the need of managing its forests for better production has seen almost immediately as a necessary consequence that special provision must be made for scientific study of the forest to determine the principles of management that must be followed. Russia, Sweden, Germany, Austria, France, Switzerland, British India, the United States of America, have all organized specially for such investigations.

Russia presents perhaps the nearest comparison to Canada in extent, climatic conditions, forest area, etc., but in the general conception of the public is not considered as a progressive country. Russia has however for many years had established a system and organization for the scientific study of its forests and the reports published by the institutions established for this purpose are among the most suggestive and valuable of any reports issued by the forest service of any country. The central organization for forest in-

vestigation is the Imperial Forest Institute at Petrograd which was founded 110 years ago at the same time that the Russian Department of Forestry was established. This institute, like most European institutions of higher learning, is a school for training foresters as well as carrying on research work. In 1915 there were employed fifty-four professors and instructors and the number of students was 648. The institute comprises twenty-three buildings, thirteen laboratories and museums and a splendidly equipped dendrological garden. The appropriation for the year was \$119,000. The results of investigations made at the Institute are published in its transactions which have now reached to twenty-five volumes in number. These include various papers on the effect of climate on forests and forest reproduction, the forest types in Russia, the technical qualities of the woods, etc. Forest investigations are carried on at other forest schools, especially at Novo-Alexandrovsk, near Warsaw, and at the Riga Polytechnicum.

Twelve Experiment Stations

There are also twelve Forest Experiment Stations in Russia, the total annual appropriation for which is about \$60,000, where special field investigations in the planting and propagating of the forests is carried on. The results are published irregularly as material accumulates.

At the central office of the Forest Department at Petrograd there is a special committee on Experimental Research Work, the chairman of which is directly responsible to the Director of the Forest Department. Every year, usually in February, there is a meeting of the Central Committee for investigative work held in Petrograd which is attended by all the Superintendents and assistants from the experimental stations. To the se