

Forest Insect Investigation in British Columbia

In response to a request for information in regard to the work during the past summer in British Columbia Dr. C. Gordon Hewitt, Dominion Entomologist, sends the following:—

‘The forest insect survey in British Columbia which was undertaken last year in co-operation with the Provincial Forest Branch, has been continued during the past summer. Mr. J. M. Swaine, in charge of Forest Insect Investigations, spent June and July in continuing this work, and Mr. R. N. Chrystal, Field Officer for Forest Insects, has been stationed in British Columbia throughout the season. Our knowledge of the districts infested and the extent of the more serious outbreaks has been greatly extended and valuable additional information has been obtained in regard to the habits of some of the destructive species involved. We have also been making detailed studies of the injurious insects which have brought about the present unfortunate conditions in Stanley Park, Vancouver.

‘It is found that the amount of dead hemlock in Stanley Park is now much greater than in September of last year, many trees having died during the fall and winter. The spruce trees along the drive-ways are now so badly injured by the Spruce Gall Aphid that few of them are worth saving. Fortunately the greater part of this foliage is hemlock and Douglas fir and is still (August 1st) in fair condition. The large spruce in the interior of the Park are now attacked by the Sitka Spruce Bark-beetle. This infestation is serious and control measures will be necessary this winter if the remaining large spruces are to be saved.

‘The dead timber in the interior of the Park is chiefly hemlock and of this there are large areas. The trees have been killed by repeated defoliation by *Therina* caterpillars, assisted by woolly aphides during the early season. The caterpillars are not so numerous this season and there is as yet little defoliation. It is possible that their parasites have already obtained control and that the worst of the outbreak is now over. If this proves to be true the spraying which has been recommended will not be so necessary for the present. The dying and recently killed trees are serving as breeding places for injurious insects and fungi that will later help to weaken and kill the healthy trees. The Western Hemlock Bark-beetle, a destructive species, is already established in these dying trees. It will, therefore, be necessary to remove and properly dispose

of this dying and dead hemlock during the coming fall and winter; and if the areas thus denuded are reforested to Douglas fir, the most healthy timber tree of the province, such portions of the Park will be put in perfect condition for all time. It should be made a settled policy to replace the hemlock as it gradually dies, by the much more healthy Douglas fir.

‘The Bark-beetle infestation in yellow pine in the Okanagan district is more extensive than at this time last year and appears to be spreading rapidly. The amount of new infestation for the present season will be estimated later. The infested area surrounds Okanagan Lake and extends as far west as Princeton and Nicola. In the districts which have been infested longest the destruction is enormous. Above Peachland, on Okanagan Lake, the yellow pine and the black pine have been practically killed off by the beetles, and the hillsides appear as though swept by a great fire, only the islands and strips of Douglas fir remaining green. This infestation of the yellow pine and the black or ‘jack’ pine is a very serious matter and timber owners in the infested region and about its extending margin should take due precautions to check its spread. Fortunately, such outbreaks can be controlled, if taken in time, and under favourable conditions in districts which can be lumbered profitably the control measures do not involve much expense.

‘The infestation of Western white pine by the Western White Pine Bark-beetle is reported from additional localities this season. If present conditions continue the white pine in many parts of British Columbia will soon be entirely killed off. The owners of any valuable stands of Western white pine should be on their guard against this most destructive enemy.

‘The great loss already caused by the Bark-beetle outbreaks and the apparent certainty of still greater destruction, demand vigorous control measures in many districts. The proper disposal of pine slash is a very important factor, for the beetles frequently breed to immense numbers in such abundant supplies of breeding material and spread thence into the green timber. It should be a settled policy in British Columbia to burn all pine slash each season between October and May, as an aid to Bark-beetle control. The activity of other species of Bark-beetles in Spruce and Douglas fir will apparently soon render the burning of spruce and fir slash equally necessary.