The Forest Insect Problem

ONE of the most important natural resources in this country is its forests. During the last few years wood products of all kinds have become more valuable than ever. Stands long considered too remote or inaccessible for exploitation have been opened up, and tree species hitherto bypassed in commercial operations are being used. The value of commercial stands of timber has also increased. Thus there is a growing recognition on the part of timber owners and the general public of the need for protection of these resources from destructive agents of all kinds.

Insects rank high on the list of destructive forest agents. Fires are more spectacular but hardly more injurious. During the past decade insects have been more troublesome than ever. The Engelmann spruce beetle has killed almost four billion board feet of valuable Engelmann spruce in Colorado. Nearly three million acres of fir timber infested with the spruce budworm in Oregon and Washington have been sprayed by airplanes to prevent wholesale killing of trees. Extensive blow-downs of Douglas fir in western Oregon resulted in an outbreak of the Douglas fir beetle last year. This outbreak is continuing to develop and bids fair to become one of the most destructive forest-insect epidemics ever recorded before it is controlled or subsides. Extensive outbreaks of the southern pine beetle in Texas and Mississippi have caused heavy losses of pines. Other smaller outbreaks too numerous to mention have occurred throughout the forests of the country. The combined losses have been staggering.

Research and surveys conducted by the U. S. Department of Agriculture and leading to the control of forest insects, are a responsibility of the Division of Forest Insect Investigations, Bureau of Entomology and Plant Quarantine. The Division was established about 50 years ago and during the period of its existence has learned much about our major forest-insect enemies, and has obtained considerable information on the life histories, habits, and artificial control of many of them. The Division carries on its work in 12 field stations located in the major forest regions of the country. It employs about 80 forest entomologists. Half of these men are engaged in research, the remainder in survey activities.

Accomplishments in forest-insect research have been outstanding since World War II. Airplane application of as little as 1 pound of DDT in a gallon of oil per acre of forest has been found effective in controlling most defoliating insects. Costs have been so reduced that this work can be done for about a dollar an acre in large-scale operations. Control of bark beetles and wood borers, insects not amenable to control by airplane spraying, has been improved through the use of new insecticides and better methods of application. A way to prevent losses caused by the western pine beetle in certain stands of ponderosa pine in the West has been perfected. This method of control can be conducted at a profit by land-managing agencies and represents a long step forward on the road to the goal of all forest entomological research—namely, control through prevention of attack.

Preventive methods of control will be stressed in future research. However, direct control measures for the suppression of outbreaks will still be needed for many years to come. Therefore, studies will also be continued to develop cheaper and more effective methods of this nature.

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