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PEST REPORT

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WESTERN OAK LOOPER ON SALTSPRING ISLAND

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The western oak looper, *Lambdina fiscellaria somnaria*, has killed Garry Oak and Douglas-fir trees over an estimated 50 ha on the north side of Burgoyne Bay on southern Saltspring Island. The oak looper infestations has been active at varying levels on the Island for at least 15 years in Mount Maxwell provincial park, the adjacent Ecological Reserve and nearby private lands. Scattered Douglas-fir mortality has occurred in the past two to three years and Garry Oak this year.

Defoliation of Garry Oak trees this year is mostly severe with complete stripping of trees common from Baynes Peak to southwest of Maxwell Lake. In 1994 complete stripping of the Garry Oak and moderate to severe defoliation of the current foliage on Douglas-fir was noted in the same area. This insect does not usually cause tree mortality but the extended length of the infestation in conjunction with other abiotic factors have caused extensive Douglas-fir and individual Garry oak tree mortality.

The site is poor and naturally dry, causing lack of vigor and food reserves in the mature Douglas-fir. Also mean annual temperatures have been above normal for eight of the last 10 years and the average annual precipitation has been 12% below normal for the last 10 years. Coupled with the looper defoliation this was enough to cause tree death. Larval collections are being reared at the Pacific Forestry Centre to determine the level of parasites and disease in the population.

An additional threat to the Douglas-fir is the possibility of a build up in the Douglas-fir

bark beetle, *Dendroctonus pseudotsugae*, populations in the area. This beetle is present at endemic levels in blowdown throughout the area and its other preferred hosts are overmature and decadent trees, trees damaged by abiotic factors, and trees stressed by defoliation and root disease. Where susceptible trees are abundant, the beetle can quickly become epidemic and kill nearby healthy trees.

The Garry Oak in the area are also infested with the oak treehopper, *Platycotis vittata*. Numerous colonies of this sap sucker are visible feeding on the twigs of the Garry Oaks and laying eggs in slits on the branches.

Oak looper pheromone identification work is being done at the infestation site this year by Simon Fraser University. The chemicals that make up the pheromone have been extracted, identified and synthesized, however one more season of testing will be required before the most effective combination can be determined.

For additional information these or other forest pests please phone the Forest Insect and Disease Survey at (363-0600).
