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Western Winter Moth Defoliation in the Vancouver Region, 1990

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Forest Insect and Disease Survey

Defoliation of deciduous trees and shrubs by the western winter moth, Erannis tiliaria vancouverensis, is increasing for the fourth consecutive year. Infested foliage already has a shot hole appearance as of late April and feeding will continue into June. Large numbers of early instar larvae were observed feeding on broadleaf maple, vine maple, birch and to a lesser extent on poplar and alder at Cultus Lake, Kent, Harrison Lake, Sasquatch Park and north of Hope to Boston Bar.

An expansion in area from the several hundred hectares defoliated in 1989 is expected due to increased larval numbers. The single largest infestation last year covered over 500 ha in Sasquatch Park with broadleaf maple, vine maple and western white birch totally defoliated.

In conjunction with the western winter moth, but at much lower levels is the presence of the winter moth and/or bruce spanworm, Operophtera spp., causing light defoliation of the understory vine maple. The winter moth/bruce spanworm feeding has almost finished feeding as of late April and will appear insignificant in most natural stands when compared with the damage caused by E. t. vancouverensis.

The western winter moth infestations were expected to collapse in 1989 based on historical records which state that infestations only last three years. As well, mass collections of larvae from the Kent area in 1989 showed high levels of the disease Beauvaria bassiana which has been responsible for insect population collapses in the past. However a large moth flight that was reported in October of 1989 near Hope raised the possibility of another infestation year for 1990, which has proven to be correct. The present populations could still be affected by disease and/or parasites and predators before feeding is completed. Mass collections of larvae have been made at Sasquatch and Cultus Lake Parks to monitor the populations for parasites, disease and viral infection.

Growth loss will be the main impact to severely defoliated trees, which should re-foliate by mid-July. Only trees under severe stress are likely to die.

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