

Douglas-fir Tussock Moth (DFTM) Information for Landowners



DFTM larva



Cocoon & larva



Egg mass



Male and female with egg mass



Tussock moth defoliation

Douglas-fir tussock moth, *Orgyia pseudotsugata*

The Douglas-fir tussock moth is a destructive native defoliator of Douglas-fir. Outbreaks of tussock moth occur every ten to twelve years causing significant damage and mortality to Douglas-fir stands in the interior of the province. These outbreaks tend to last up to four years before natural controls such as predators, parasites, pathogens, and starvation lead to population collapse.

Host trees: Primarily Douglas-fir, occasionally ponderosa pine and western larch.

Description and life cycle: The tussock moth has a one year life cycle. Adults appear from late July to early September. The adult female is stout bodied, wingless and sedentary, usually remaining camouflaged on her cocoon. Males are slender bodied with about a 30 mm wingspan. Males emerge before females and fly in search of females. Females attract males by emitting a sex pheromone and mating occurs on the cocoon, typically, on the same day that the female emerges. Each female lays approximately 200 eggs in a single mass on her empty cocoon. The action of depositing her eggs dislodges hair from her abdomen which mixes with a frothy cement produced during oviposition. The egg masses overwinter. Larvae hatch in late spring and feed voraciously on the current year's foliage. As the larvae mature, they feed on both old and new foliage. In late July the larvae pupate in cocoons on the underside of foliage and emerge two weeks later as adults to begin the cycle again.

Damage symptoms: The upper part of the crown and the branch tips are defoliated first. The remainder of the foliage is destroyed as the larvae migrate down the crown. By July, defoliated trees appear scorched. Trees may die after one or more years of severe defoliation. Frequently, the top third of the crown is completely defoliated, which leads to damage in the form of top-kill and branch dieback. Douglas-fir trees that have been weakened by tussock moth defoliation may also be susceptible to attack by other insect pests, such as the Douglas-fir beetle.