

# Community Forestry Assistant



## Newsletter October 2009

### Urban Conifers Get Buggy, Too!

*This article is excerpted from "Pacific Northwest Trees", a publication of the Pacific Northwest Chapter of the International Society of Arboriculture. The full article was written by Karen Ripley, Forest Health Program Manager, Washington State DNR.*

Huge sections of the forests in the Pacific Northwest continue to suffer from insect infestation by a variety of forest insects. These critters aren't just in rural forests. They follow the trees, moving into cities, parks and yards—wherever they can find a meal. In 2008, about 9.4 million acres of forest land across the United States had new mortality attributed to forest insects, with the most heavily affected areas being in the western US. Mountain pine beetle is overwhelmingly (66%) responsible for the most mortality.

The major forest pests always include bark beetles and native defoliators. These insects are all being found in our urban areas as well as the forests.

#### Bark Beetles

Although only about the size of a grain of rice, "bark beetles" are the 800-pound gorillas of forest pest management. As they search and communicate to locate and aggregate their attack on densely growing or weakened trees, bark beetles are usually the direct cause of tree death even when trees are stressed by other factors. When bark beetle populations are large, even otherwise healthy trees may be killed.

Most bark beetles can only successfully attack and breed in one species or genus of tree. They feed on fresh inner bark tissue (phloem) and cannot successfully feed on or breed in trees that have been dead for more than a few months.

Beetle outbreaks depend on a combination of weather and

stand conditions coming together: 1) host trees of suitable sizes, 2) forests of low vigor due to density or damage from storms, 3) sustained periods of drought or other weather extremes, 4) suitable species composition, and 5) a beetle population that produces more beetles than die while trying to infest the trees.

In an urban setting, avoiding tree injury and providing adequate water during dry months are the most important bark beetle prevention tactics.

#### Defoliators

The most important native conifer defoliators in the west are western spruce budworm and the Douglas-fir tussock moth. As summer caterpillars, these insects eat the foliage of Douglas-fir and grand fir which are major components of our native mixed-conifer forests.

Budworms primarily excavate new buds and consume the current year's foliage, which allows budworm outbreaks to persist in an area for many years, even decades,

as trees slowly decline and are unable to replace interior foliage with new needles. In contrast, the tussock moth caterpillars can eat all the foliage on a tree within one season. Tussock moth outbreaks occur and decline rapidly in a dramatic 3 to 4 year cycle.

When viewing defoliated trees, look closely at leaves and branches to identify the cause. Defoliation can be caused by drought, winter injury, pollution, foliage disease, root disease, or insects. Use forest entomology and pathology resources when investigating defoliators of conifers. In some cases, by the time urban trees are affected the situation is well developed in adjacent forest lands.



If you have questions about this Newsletter or the Community Forestry Assistance Program, please contact Tera King with Northwest Management, Inc. at 208-883-4488-ext. 133.