Sun Mountain Ranch Club Firewise Committee

UNDERSTANDING OUR PINE BEETLES

Types of beetles

There are four main bark beetles that attack ponderosa pine. Each has specific host preferences and conditions that contribute to attack.

Red turpentine beetle

Red turpentine beetles usually attack only the base (bottom 6 feet) of trees. Attack is most common in the lowest 2-3 feet of the trunk. Wounds are marked by conspicuous, gravelly-looking pitch masses. Beneath the bark, the beetles make cave-like galleries that are shared by many larvae. Woodpeckers feeding on the larvae may completely remove broad bands of bark.

Red turpentine beetles do not usually kill trees unless the tree has been weakened or wounded by something else.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5303050.pdf

MOUNTAIN PINE

RED TURPENTINE

WESTERN PINE

IPS PINE ENGRAVER

Info from the DNR

The information contained in this newsletter is excerpted from the Washington State Department of Natural Resources website:

dnr.wa.gov

Additional information regarding pine beetles can be found on their website by searching for "bark beetles."

Other sources of information can be found at:

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5343830.pdf

We're always looking for community members willing to serve on the Firewise committee. If you're interested, please e-mail smrcfirewise@gmail.com

Pine engraver beetle

Pine engraver (Ips) beetles can be found in small diameter or thin-barked portions of ponderosa pine. They prefer slash, injured or recently killed trees, but when populations are high they can attack otherwise fairly healthy trees. Their ability to produce 2-4 generations each year allows them to take advantage of large volumes of slash or damaged trees and build high populations rapidly in a single season.

Identify Ips beetle egg galleries by the two to five clean galleries that extend from a central chamber. The beetles themselves have rear ends that look pushed in from above - like a car from the 50's with tail fins.

Avoid problems with Ips. Do not create large volumes of slash during the months January to June. High Ips populations can develop in this breeding material. If you can not avoid creating slash during these times, burn it promptly in the winter; lop and scatter it in the sun to facilitate rapid drying; make small piles in sunny areas and enclose them in clear plastic tarps to "cook" beetles beneath the bark; if size permits, chip slash and scatter the chips to avoid piles that release methane.

Never pile green firewood against living trees.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5299326.pdf

Western pine beetle

Western pine beetle has two generations per year and its most likely targets are large, old ponderosa pines with low vigor. Such trees may be slow growing or have dying tops and twigs that have short, sparse foliage of poor color. They may be wounded, diseased or affected by drought. They may be the oldest trees in the stand. When beetle populations are high though, every tree is a susceptible target. These beetles make winding, crisscrossing galleries in the inner bark. The larvae mature in the outer bark, so woodpeckers merely chip the outer bark scales off when they are feeding on western pine beetle. They don't have to hammer down all the way to the wood.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5343830.pdf

Mountain pine beetle

The mountain pine beetle is associated with dense stands of pole-sized ponderosa pine. These beetles make long, vertical J-shaped egg galleries under the bark. The most important weapon for preventing successful western and mountain pine beetle attacks on trees is the trees themselves. When trees are vigorous and healthy, they can defend themselves against insects and the fungi they carry. Landowners and foresters can improve the average tree vigor of most forest stands in order to improve insect resistance. Removing the least vigorous (slowest growing, diseased, broken or wounded) trees and relieving competitive stresses on the remaining trees help ward off beetle attacks. A partial cut or thinning can remove currently infested trees (green foliage, pitch tubes or boring dust at entry holes on the bark, blue stain in the outer wood, beetles present beneath the bark), remove the least vigorous trees and, at the same time, provide space for remaining trees to grow. The important concept is "thinning from below," removing the poorest trees, and leaving the thriftiest ones in a well-spaced array.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5299324.pdf

Woodpeckers are natural enemies of bark beetles. Are there large diameter snags available to provide nesting areas for woodpeckers? Leave a few of them for beneficial wildlife. Ant nests at the base of trees probably provide some bark beetle protection too. Don't destroy them.