

## Synopsis of Bark Beetle Webinar 2/8/2002

With the help of Alex Graff of Wildfire Adapted Partnership, Amy Lockner of the US Forest Service, an entomologist from Gunnison, presented an excellent talk on the growing Bark Beetle problem in southwestern Colorado

There are numerous species of Bark Beetles that infest trees in our area:

- Mountain Pine Beetle, Western Pine Beetle, Round-headed Beetle and Pine Ips Beetle infest ponderosa pine, lodgepole pine, limber pine and southwestern white pine. These beetles are killing trees southeast of Mancos Hill and north of Dolores.
- Douglas Fir Beetle infests Douglas fir.
- Spruce Beetle infests Engelmann and Colorado Blue Spruce. These are the beetles causing the large mortality on Wolf Creek Pass.
- Pinyon Ips infests pinyon pine.
- Cedar Bark Beetles infest Rocky Mountain, One-seed and Utah Junipers.
- Pinyon Twig Beetles infest pinyon pine, particularly the smaller branches.

All these beetles bore into the trees, specifically into the phloem layer which transports nutrients throughout the tree. They lay their eggs and the larvae which are about the size of a grain of rice, and begin eating the tree from the inside. The larvae eat across the tree bole in fan-like galleries, essentially girdling the tree. They can easily kill the tree within a year. This is especially concerning during times of drought as we are experiencing in S.W. Colorado. The lack of water stresses the tree, especially older trees, making them more susceptible to these infestations.

The primary species of beetles affecting CMR are the Pinyon Ips and the Cedar Bark Beetle. The adult Cedar Beetles typically fly in July and August, overwintering as larvae, while Pinyon Ips can produce two to three generations in a year, flying from April through October. All these beetles lay their eggs immediately on entering the tree and the larvae start doing their damage. The signs we should look for are boring dust on the outside of the tree, pitch tubes and nodules or tunnels or even the increased activity of woodpeckers. As the infestation progresses needles will start to turn brown usually from the inside of the tree outward. Then you may see entire branches turning brown. In CMR we've seen pinyon pines go from looking relatively healthy to dead in less than a year. This also presents a fire problem as we have more dead or dying trees providing fuel for a fire.

So what steps should we take in light of this problem? Obviously, we need to cut down and remove infested and dead trees asap. Just because a tree is already dead doesn't mean there aren't larvae in that tree. Also some beetles, specifically the Ips Beetles, are attracted to green slash piles. Even when we chip green slash the smell can attract more beetles. So, the best time to remove green pinyons for mitigation or lot clearing is during the late fall and winter, giving the slash time to dry out and reducing the live larvae before April. Larger pieces of the boles and branches should be laid out to dry in the sun or covered in plastic to kill adults as they emerge. Those pieces can be used or donated as firewood. We can safely burn the slash piles in the spring or early summer when there is still snow or damp ground before the adults leave the slash. If weather conditions don't allow safe burning the first spring after cutting, pile slash in open areas where the sun will dry the slash quickly, killing larvae and allowing safer burning the next winter. Another precaution is do not store firewood close to living host trees. Beetles aren't good fliers so don't make it easier for the infestation to spread.

We are going to lose trees, so the sooner you remove the dead trees and slash you're also removing larvae in those trees. Thinning the "healthy" but stressed trees helps the tree fight off the beetles in times of drought. Start at the bottom of the tree removing dead or diseased branches, especially those in contact with the forest floor. Pinyons and junipers can be pruned up 3 to 4 feet or 1/3 or less of the tree's height. This is also critical in fire mitigation to reduce ladder fuels, reducing the vertical spread of fire. Remember it isn't enough to cut down some branches but leave them on the forest floor below the tree. Collect your slash so you can safely dispose of it.

There are some insecticide bark sprays that kill emerging or attacking beetles, and licensed forest contractors that will spray your trees close to homes or structures but always consult with a forester first. Some beetles are specific to a certain species of tree and should be sprayed accordingly.

We owe a big thank you to Alex Graff and Wildlife Adapted Partnership for setting up the webinar and to Amy Lockner for sharing her expertise. We need to start treating the cause of our beetle problem not just the symptoms. We need to realize mitigation is never a "One and Done" job but is ongoing.

Watch for more information from the fire mitigation committee in the coming weeks.