

## ABOUT BARK BEETLES

Bark beetles have devastated portions of Colorado forests and they are threatening the Arrowhead. What follows is some basic information about what they are, what they do and what the AIA and many property holders are doing about them.

Bark Beetles are specie specific. Pine beetles attack pine trees as in Summit County, spruce beetles attack spruce as along the headwaters of the Rio Grande and Douglas fir beetles attack Douglas fir.

Bark beetles are small. A mature bark beetle is about the size of the head of a kitchen match.

Bark beetles kill trees. They do this through a combination a fungus they introduce and clogging the host's arteries.

Bark beetles are endemic. Under normal conditions, they attack trees near the end of the life cycle, thereby making room for new growth. Factors that cause beetle populations to build to epidemic proportions include overgrown forests (especially if one tree species predominates), drought, warm winters, and downed fresh timber – either wind-thrown or felled and left to lie.

Beetle flight lasts approximately 60 days, roughly from Memorial Day to the end of July in our area. If the attack is successful, they lay eggs in the wood immediately under the bark. The larvae hatch and mine out roughly horizontally, killing the tree. Mature beetles then bore out and attack other trees. The cycle is complete in one year for Doug fir beetles. Spruce beetles require two years.

Doug fir beetles are the problem at Arrowhead. Last year (2010) the state district forester identified one area of serious infestation on the common land south of the Rim cul-de-sac and a number of smaller pockets from roughly the intersection of Rim and Crest to the north. This year we identified five currently infested trees along Aspen Trail – so far.

The causes for the Arrowhead problem include overgrowth, recent drought, warmer than average winters, downed timber, and populations built up on neighboring land.

Spruce beetles are not a problem at Arrowhead as yet. However, epidemics of spruce beetles have hit in the Pagosa Springs and Creede regions and smaller pockets have been found in the West Elks.

We began addressing the problem in the late summer of 2010 by flagging infested Dougs south of the Rim cul-de-sac. Beginning that fall and finishing in the spring, we felled, limbed, bucked to ten feet, piled and wrapped them in plastic. In all, 41 trees were felled. Six green-needle downed trees were also limbed, bucked, piled and wrapped.

The association budgeted \$2500 for 2011 and again for 2012 to purchase anti-aggregate MCH packs, seven traps, 6 Doug fir lures and one spruce lure. The MCH packs tell the beetles to go elsewhere, while the baited traps attract them, creating what

foresters call a push-pull effect. After buying the traps (a one time purchase) and the lures, we were able to buy 1230 MCH packs – enough to treat 41 acres. These were applied on the common land around the areas of known infestation. The traps were spaced out throughout the filings (away from host trees so as not to cause infestation). Samples from each trap were sent to the US Forest Service entomologist in Gunnison who reported that we did indeed have a significant number of Doug fir beetles and some spruce beetles.

We are now dealing with recent blow over, looking for currently infested trees, and ordering more MCH packs and lures – the response from property owners who have added to the AIA order has been gratifying. Distribution of the packs to property owners will began the first week of May. Packs and traps should be put out the week before Memorial Day.

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