Bugs & Diseases

December 2002

info note

Bow Valley Mountain Pine Beetle Control Plan

A control plan to treat mountain pine beetle-attacked trees in the Bow Valley is being formulated. The plan will be completed by December 15 and will include the details regarding this year's beetle control efforts on provincial land near Canmore. Stakeholders and the public will be able to review the plan for 30 days before comments are compiled and integrated into the final plan. Our goal is to treat all of the known infested trees by June 2003. Please call Dan Lux for more information or a copy of the plan.

Beetles in Willmore

The presence of mountain pine beetle was detected at 10 of the 12 bait sites established in Willmore Wilderness Park this year. A total of 48 trees were attacked. In general, the number of individual beetle attacks per tree decreased from 2001, although an increase in beetle activity was found at a site located at the west end of Beaverdam Creek. At this site, all three baited trees were heavily attacked and 14 additional non-baited trees were also attacked. All attacked trees at the bait sites have been cut and burned to destroy the beetles.

Helicoptor long-lining beetle infested log to burn site.

Attacked trees in the Meadowland Creek infestation in Willmore Wilderness Park were also cut and burned to control beetles. One hundred thirteen green-attacked trees were cut and long-lined with a helicopter into an open meadow, piled and burned.

Dan Lux
Erica Mueller

Drought Stress: Who'll Start the Rain?

Here in the Northeast Region, as in other areas, the weather has not been

kind to our forests over the last couple of years. Extended dry periods, as well as above normal temperatures have placed many trees in water deficit situations. Some of the problems associated with this are readily apparent. The Chisholm and House River fires are good examples of the extreme hazard posed by dry forest conditions. Fire, however, is not the only hazard of dry conditions faced by the forests. Many trees can become "drought stressed."

Drought stress can manifest itself in many ways depending on the tree species and the severity of the water deficit. Drought stress symptoms may be common to a number of causal agents and may not be expressed until some time after the drought event. Drought stressed trees can be more susceptible to secondary or opportunistic damaging agents such as root rots, heart rots, cankers, and other diseases. Additionally, these trees have decreased resistance to insect infestations. Any of these factors could, on its own, decrease the health and vigour of trees. Often a diagnosis of drought stress being the causative agent cannot be accurately made. There is little doubt that trees in our region are suffering because of the weather.

Since forests are collections of trees they should reflect the health and vigour of their individual components over the landscape they occupy. This season in the Northeast Region, there has been a large increase in the area and severity of infestations of spruce budworm, large aspen tortrix and, to a lesser extent, yellowheaded spruce sawfly. This may indicate that the general health of our region's forests is declining after two successive years with periods of drought. Is this just a part of the natural cycle of pest outbreaks? Needless to say, it probably would help if the weather is a little kinder to the trees next year. ◘

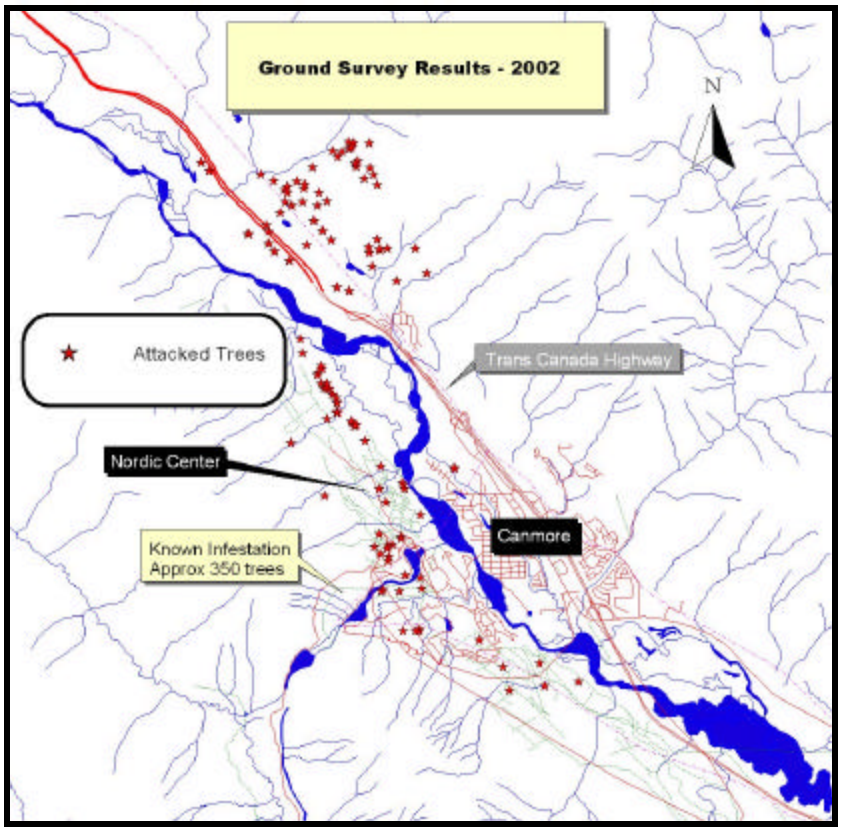
Tom Hutchison

Pine Beetle Ground Surveys Completed

A big "Thank You" to all of the volunteers who helped to survey for mountain pine beetles this year. There were 12-25 people each day assisting in the ground surveys carried out from October 28 to November 1, 2002. In total, over 876 km of trail was surveyed (approximately 174 hectares of land), over 135 patches of infested trees were discovered, and over 74 person-days were utilized. The results of the survey will help in developing the control plan for the Bow Valley.

Special thanks to:
Community Development
Banff National Park
Bow Valley Provincial Park
Sunpine Forest Products
Spray Lake Sawmills
Calgary Fire Center
Morley Indian Reserve
And our own Sustainable Resource Development staff.

See a map of 2002 ground survey results on page 3.



Bugs & Diseases *info note*

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Bugs & Diseases informs LFD, Industry and other forestry-related personnel about current forest health issues. Articles and ideas are welcome! Submission deadline is the 15th of the month before publication.

In addition to the ground surveying conducted by Sustainable Resource Development personnel and volunteers, Whitebark Environmental is surveying the Grassi Lakes, Nordic Center and Harvie Heights areas. Whitebark is completing a comprehensive survey of the area and is painting, flagging and measuring the diameters of all infested pine. Results of the detailed survey will be available before Christmas. ◘

Dan Lux

Munch Madness

Considering the warm, dry weather in the northwestern part of the province this spring and summer, it is not a surprise that defoliator populations expanded compared to the previous year. Spruce budworm and large

aspen tortrix populations significantly increased in the defoliated areas and expanded to new areas.

Spruce Budworm

Spruce budworm defoliation within the Upper Hay and Peace areas was 110,000 hectares in 2002 (preliminary estimate) compared to over 78,596 hectares in 2001. Areas of defoliation were recorded along Sousa Creeks, the Chinchaga River, the Hay River and its tributaries, the Yates River, near Zama City, southeast of John D'or Indian Reservation and north of and within the Paddle Prairie Metis Settlement. These areas all had significant increases in the extent of defoliation compared to the area defoliated in the previous year. New areas of defoliation were recorded at the confluence of the Wabasca River and Peace rivers, along the western border of Wood Buffalo National Park both south and north of the Peace River and near the confluence of the Mikkwa and Peace rivers. As well, a new area of defoliation was recorded within Notikewin Provincial Park along the Peace River. Some defoliation was also recorded in the Hawk Hills woodlot north of Manning; defoliation had not been recorded in this area since 1999.

Spruce budworm defoliation was reported by Vanderwell Contractor staff along Buffalo Creek and Buffalo Lake, northeast of Wabasca near Livock Fire Lookout Tower. This area will be monitored during the aerial defoliation survey in 2003.

Aspen Defoliators

Aspen defoliation within the Smoky, Lesser Slave, Peace and Upper Hay areas was estimated at a gross area of 3,594,951 hectares. This is a 13% increase from the area recorded in 2001 (3,192,512 hectares). Results of ground-truthing surveys indicate that large aspen tortrix populations caused most areas of defoliation. Severe defoliation was recorded in Fort Vermilion, John D'or Indian Reservation, Chinchaga Fire Lookout Tower and Sulphur Lake areas. Moderate defoliation was recorded in areas around Chipweyan Lakes, Peerless Lake, Cadotte Lake, Keg River, south of Grande Prairie and south of High Prairie. Forest tent caterpillar larvae were found intermixed with large aspen tortrix larvae in a few areas about 30 km south of Grande Prairie. As well, contractors working for Ainsworth Lumber reported infestations of forest tent caterpillar in the southern end of the Saddle Hills in township 75, ranges 10, 11 and 12. Finally, a small number of aspen leaf roller (*Pseudexentera oregonana*) larvae were found intermixed with large aspen tortrix larvae in an area 5 km west of Sexsmith. ◘

Mike Maximchuk

Southwest Style Tortrix

Large aspen tortrix defoliated over 262,659 hectares in Southwest 3 and 4 in 2002. Of the total area, severe defoliation was observed over 3,003 hectares, and moderate and light defoliation was observed over 152,045 hectares and 107,611 hectares respectively. The total defoliated area in 2002 was greater than that observed in 2001, although the severity of the defoliation decreased this year.

Millions of large aspen tortrix moths migrated into the town of Hinton in June and covered the sides of buildings and cars. Moths also invaded the Hinton Shopping Centre, Hinton Hospital and Weldwood's mill where they eventually died and covered the building's floors. The bright outdoor lights at the Canadian Tire

parking lot attracted moths in such high numbers they were collected with snow shovels and disposed of.

Erica Mueller

Woodborers Beware

Dr. Ken Fry and Dr. Alec McClay of Alberta Research Council are proposing to undertake a study, in collaboration with Sustainable Resource Development, on the feasibility of using a comprehensive approach to manage woodborers attacking logs in wood decks. This approach includes the use of physical or behavioural barriers and/or chemical deterrents either to prevent exposure of logs to egg laying or to kill the woodborers attacking the logs. As well, the use of fungal pathogens such as *Beauveria spp*. to control the woodborers will be studied.

We are looking for industry partners who are willing to take part in this study and/or provide assistance. Please contact either your Forest Health Officer or the Forest Health Section (780-427-8474) if you are willing to support this project. ◘

Sunil Ranasinghe

Moth Counts Higher Along the Wabasca River

Within the Smoky, Peace, Upper Hay and Lesser Slave Areas, 69 spruce budworm pheromone plots were sampled in 2002. Fourty seven plots had moth counts indicative of a low risk of defoliation, 17 plots indicated a moderate risk of defoliation and 5 plots indicated a high risk of defoliation for 2003. Of the 17 moderate rated plots, 5 were in the Lesser Slave Area north of Red Earth and 12 were located in the Upper Hay Area. All five high-risk plots were located in the Upper Hay Area. Two plots were located in the Zama City area, two plots were located near the Lawrence River and one plot was located along the Wabasca River south of Tall Cree.

Pheromone plots established along the Wabasca River, north of Red Earth had the biggest increase in trap catch numbers in comparison to the previous year. Traps established along this drainage in 2001 had average trap catches of 692 moths. In 2002, the average trap catch increased to 1485 moths. ◘

Mike Maximchuk

Southern Survey Contest Winner

Congratulations to this year's winner in the Southern Rockies/Clearwater Forest Area Survey Contest – Randy Axani. Randy is a Conservation Officer with Community Development in Canmore. He spotted some "red-attacked" trees near the Grassi Lakes Trail while walking near Quarry Lake. Randy will receive either binoculars or an engraved leatherman tool for his efforts. 'Atta boy Randy! ◘

Dan Lux

Forest Health Monitoring System A-Go-Go

After the completion of the forest health monitoring system pilot project in 2001, members of the Northwest Integrated Pest Management Group spent this year preparing for its long-term implementation in 2003.

Forecasting budgets, updating survey manuals and confirming participants were the main goals of the group this year. Confirmed participants in the monitoring system include Alberta Sustainable Resource Development, Buchanan Lumber, Canadian Forest Products (Grande Prairie), Manning Diversified Forest Products and Slave Lake Pulp Corporation. The project is expected to begin in May of 2003. For more information call Mike Maximchuk.

Mike Maximchuk

Forest Health Website Has The Goods

Curious about this year's maps or survey data? Check out the Conditions and Maps section and the Survey Data section of our forest health website.

You can download the latest forest health publications, including annual reports and *Bugs and Diseases* Info Note from the Publications section of our website!

The mountain pine beetle is one of the hottest forest health topics today. Want to stay on top of this topic? Check out the Pest Alert section of our website.

Visit the forest health website at: www3.gov.ab.ca/srd/forests/health/index.html.

Christine Kominek
Cody Crocker

An Exotic's Christmas Carol

O' Christmas tree, O, Christmas tree!
How I hope you'll transport me.

Yuletide is the perfect time,
To seek a new and foreign clime.
O' Christmas tree, O, Christmas tree!
Won't you please help vector me?

To a new place where I can thrive,
And my old foes just can't survive.
O' Christmas tree, O' Christmas tree!
Won't you please help vector me?

O' Christmas tree, O, Christmas tree!
Please take me where I'd like to be.

Tom Hutchison

Seasons Greetings!

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