Bugs & Diseases

August 2004

info note

Premier recognizes Bow Valley co-operative beetle management team

The Premier's Award of Excellence is a corporate recognition that rewards staff for superior client service and business practices. The award was established to encourage superior performance, assess progress and identify opportunities for ongoing improvement. This year, the team of SRD, Community Development (CD), Parks Canada (PC), the Town of Canmore, Silvertip Golf Course, Three Sisters Mountain Village, Sunpine Forest Products, and Spray Lakes Sawmills won a silver award.

Top Row (left to Right): Darryl Zell (PC), Pat Guidera (SRD), Dan Lux (SRD), Sunil Ranasinghe (SRD), Ray Andrews (CD), Jean Walters (SRD), Tom Hurd (PC); Middle Row: Bill Douglas (Three Sisters), Terry Cunha (SRD), Cliff White (PC), Rod Gow (CD), Ian Pengelly (PC); Front Row: Terry Riva (Canmore), Cheryl Robb (CD), Premier Ralph Klein, Jane Park (PC), Jackie Syroteuk (PC), Dave Dalman (PC); Missing: Eldon Bruns (SRD), Rick Blackwood (SRD), Hideji Ono (SRD), Jon Jorgensen (SRD), Steve Donelon (CD), Bill Fisher (PC), Marjorie Huculak (PC), Brian Low (PC), Chris Ollenberger (Silvertip), Rod Berg (Silvertip), Tom Daniels (Sunpine), Keith Branter (Sunpine), and Ed Kulsar (Spray Lakes).

Congratulations to all!

Dan Lux

Alberta
SUSTAINABLE RESOURCE DEVELOPMENT

Defoliators down for the count

Throughout the province this year, the area and severity of broadleaf and conifer defoliation has decreased significantly.

Aspen defoliator crash in the south

The forest tent caterpillar population in southern Alberta has crashed. Heavy parasitism and predation have wiped out most of the populations, resulting in a significant decrease in the amount of defoliation observed this year. Drought has replaced the insects as the major forest health concern in southern Alberta. Several stands of deciduous and coniferous trees are showing signs of drought stress and mortality.

In addition, large aspen tortrix populations have crashed in the Hinton, Edson, and Whitecourt areas. Only small areas of lightly defoliated aspen trees were detected during the July 12th aerial survey of this area. While the defoliated area has yet to be calculated, clearly there has been a significant decrease in the area and severity of defoliation from 2003.

Where have all the good times gone in the Northwest?

It appears that large aspen tortrix and spruce budworm populations within the Northwest Region did not fair all too well this spring. Results of general overview surveys completed in late June and July show a reduction in the extent and severity of defoliation of these two pests. However, due to active fires the northern sections of the Upper Hay Area have not yet been surveyed for spruce budworm defoliation.

Surprisingly, forest tent caterpillar populations rebounded and new outbreaks were observed in two areas within the Region.

Large aspen tortrix defoliation was recorded in areas east of the Paddle Prairie Metis Settlement, in the Fort Vermilion area, southwest of Grande Prairie and within the Saddle Hills. These areas all sustained defoliation in 2003 but the extent and severity was reduced as only either light or moderate defoliation was observed this year.

Forest tent caterpillar outbreaks were recorded in areas west of High Level extending to Assumption and in areas north and east of Wabasca. The defoliation associated with these outbreaks was severe in many areas.

Spruce budworm defoliation has also been harder to find this year. No defoliation was observed in areas along the Chinchaga River, east and west Sousa Creeks, and within the Paddle Prairie Metis Settlement. Budworm defoliation has been observed in these areas since the late 1980's and early 1990's. A possible explanation could be the three nights of below zero temperatures that were recorded in the High Level area in late May. Areas near Wood Buffalo National Park and Chipewyan Lakes that sustained budworm defoliation in 2003 experienced smaller defoliation areas this year.

Defoliation Declines in the Northeast Region

Aerial overveiw surveys were conducted in the Northeast Region in July. Preliminary results of these flights indicate that the area and severity of the insect-caused defoliation have declined significantly from those observed in 2003. The most dramatic decrease noted was with regard to aspen defoliation. Patches of defoliation

were mapped along the House and Athabasca rivers.

Spruce Budworm caused defoliation also appears to have had an overall reduction regionally. Virtually no defoliation was observed south of Fort McMurray. Somewhat bucking this year's trend were areas north and west of Fort McMurray as well as in and around the city itself. To the northwest of Fort McMurray between the Birch Mountains and the Athabasca River a fairly extensive area of budworm defoliation was noted. There has been defoliation delineated in this neck of the woods over the past several seasons. In and around Fort McMurray, a lot of the spruce trees were severely defoliated this year raising concerns from many of the city's residents. ◘

Dan Lux
Erica Lee
Mike Maximchuk
Tom Hutchison

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Tel: (780) 427-8474; Fax: (780) 427-0084

Editor: Mike Undershultz
Assistant Editor: Sunil Ranasinghe
Technical Support: Linda Joy

Bugs & Diseases informs PLFD, 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.

So far so good near the Oldman River

In February, while laying out a cutblock, an employee from Spray Lakes Sawmills discovered MPB-attacked trees near the Oldman River Road. SRD crews felled and burned the trees. There is some concern of undetected attacks occurring in the valley. In late July the Dutch Creek and Oldman River areas were surveyed from the air looking for fading MPB-attacked trees. Good news! We did not find any patches of beetle-attacked trees. Another aerial survey of these areas will be conducted this fall.

The beetle population on the British Columbia side of the Oldman drainage is growing. There are an estimated 2000 fading trees there now. SRD has contacted the British Columbia Ministry of Forests and is working on a proactive solution before the beetles have a chance to spread into Alberta.

Please continue to report any suspect pine trees in these areas and any others along the eastern slopes of Alberta to your local SRD office. ◘

Dan Lux

Be our eyes in the skies

In an effort to increase the early detection of mountain pine beetle-attacked pine trees, SRD is encouraging Albertans, especially those using aircraft to be on the look out for yellow-green or red-brown crowns of pine trees along the eastern slopes. Report the GPS locations of suspicious findings toll-free to 1-877-927-BUGS or email fh.info@gov.ab.ca. Alternatively you can contact your local SRD

office toll-free by dialing 310-0000. Help protect our pine forests! ◘

Christine Kominek

Woodborer Study

The operational portion of the study to assess the impact of woodborer vs. checking damage on fire-killed timber was completed in July. St. Jean Lumber out of Breynat did the harvesting and processing of the logs. Thanks to Odean, Jennifer, Stacy and all of the mill's workers for the exemplary service they provided. From the initial selection of the sites to the harvesting and processing of the timber, your assistance has been invaluable and much appreciated. I also want to thank Millar Western Forest Products Ltd. for providing the areas for this study from their House River fire salvage blocks, especially Jeff Scammel for his help selecting and laying out these areas in the different burn intensities.

Technical assistance for sampling was provided by Dave Mosley, Marty Robillard, Michelle Wambold, Ed Barnett and Mike Undershultz. Dr. Herb Cerezke provided technical expertise in identifying the woodborer species.

The data are being summarized for analysis. A preliminary report is expected in late fall. ◘

Tom Hutchison and Sunil Ranasinghe

Beetle mortality moderate last winter

This spring SRD, the Canadian Forest Service, and Parks Canada completed surveys to determine the over-wintering mortality of mountain pine beetles in Banff and Jasper national parks, and the Wilmore Wilderness Area. The trees that were sampled showed that 100% of adults and 40% of larvae died during the last winter. This is better than it has been over the last several years where a significant number of adults and a higher percentage of larvae survived the cold of winter.

In the Bow Valley, we expect a doubling of the number of attacked trees in several areas. This means that any trees that were not controlled last winter will produce enough brood to kill two more trees.

Continued control success

Early indications suggest that last winter's control program in the valley was excellent. The team that consisted of representatives from SRD, Community Development, Parks Canada, the Town of Canmore, Three Sisters Mountain Village, and Silvertip Golf Course controlled almost all of the infested trees from the Banff town site to Burnco Mine.

The control team will meet later this fall to plan this winters activities. SRD plans to continue with extensive ground surveys this winter and control all infested trees on provincial lands. We can't stop now; we are seeing real progress controlling the infestation. ◘

Dan Lux

Forest health project summary

SRD's Forest Health Section is currently involved in the following research and technology development projects.

Establishment of silvicultural treatments to control spruce budworm damage in northwestern Alberta

Objective: To determine the extent to which a) the pattern, b) the intensity of cutting stands and c) their interaction effects affect stand vulnerability to budworm damage; and to determine the extent to which budworm populations are affected by changes in their dispersal, natural enemy complex, host conditions and fecundity induced by cutting patterns and intensities.
Co-operators: Canadian Forest Service (project lead) and Tolko Industries Ltd.
SRD contact: Mike Maximchuk

Forest tent caterpillar pheromone monitoring

Objective: To, in part, to use pheromones to monitor population trends of the forest tent caterpillar throughout and entire outbreak cycle.
Co-operators: University of Alberta (project lead) and Alpac
SRD contact: Tom Hutchison

Impact of browsing on pine seedlings

Objective: To determine the effects of 1, 2, and 3 years of consecutive browsing on the height and growth form of pine seedlings.
Co-operator: Rocky Wood Preservers
SRD contact: Dan Lux

Impact of woodborer vs. checking damage on fire-killed timber

Objective: To follow timber affected by wildfires of three different intensities through all the stages from harvesting to grading of resulting lumber for two consecutive years to compare the impact of woodborer damage vs. checking damage.
Co-operators: St. Jean Lumber (1984) Ltd.
SRD contacts: Sunil Ranasinghe and Tom Hutchison

Variability of spruce budworm outbreak dynamics in the Boreal Plains region of Canada

Objectives: a) Develop spruce budworm chronologies through dendrochronological samples and relate the identifiable climatic events to outbreaks so as to evaluate the climatic influence on spruce budworm dynamics, and b) prepare outbreak variability maps of the boreal region.
Co-operators: Canadian Forest Service (project lead), Saskatchewan Environment and Resource Management, Manitoba Conservation
SRD contact: Sunil Ranasinghe ◘

Faders - already?

In the Meadowland Valley in the Willmore Wilderness Park, six fading pine trees were detected during a mid-June flight. While the faders are not unexpected, the time of year they were discovered is. Trees attacked by the mountain pine beetle tend to fade in August or later. This may be an indication of the overall stress levels of the trees. The valley will be ground surveyed later this fall. ◘

Erica Lee

Forest health crossword

Here are the answers to the crossword puzzle from the April 2004 issue.

Down	Across
1. Frost	3. Dunnage
2. Hypoxylon	10. Drought
3. Dendroctonus	11. Knapweed
4. Pitch	12. Pupae
5. Lightning	13. Conk
6. Viscin	14. Burl
7. Xylem	15. Armillaria
8. Galleries	16. Weevils
9. Beaver	17. Monochamus
	18. Budworm ◘

Who am I?

Basidiomycete I may be,
but I'm not your average mushroom, you see.
I've got a life cycle so complex,
seasoned mycologists I can vex.
Sporotypes - I've got a few, you know,
basidio, aecio, telio & uredinio.
I can use a different spore,
to infect one host, two hosts, maybe more.
And when I find my final host.
The one that I affect the most.
The consequences are quite dire,
most who meet me soon expire.
I may, some day, have the distinction,
of driving some hosts to extinction.
I'm quite important ecologically and commercially.
Do you know who I might be? ◘

Tom Hutchison

Forest Health Officers:

Mike Maximchuk
Peace River
780-624-6221
Mike.Maximchuk@gov.ab.ca

Tom Hutchison
Athabasca
780-675-8168
Tom.Hutchison@gov.ab.ca

Erica Lee
Edson
780-723-7963
Erica.Lee@gov.ab.ca

Dan Lux
Rocky Mountain House
403-845-8360
Daniel.Lux@gov.ab.ca