

B

ugs & Diseases



December 1998

info note

Budworm news from NWB

Within the Upper Hay Forest Area, 169 spruce budworm second instar (L2) plots were sampled in 1998. High Level Forest Products, through the Forest Resource Improvement Association of Alberta (FRIAA), provided funds used to charter the aircraft. Information from this survey in combination with information from the 1998 aerial defoliation survey will be used to determine potential spray areas for 1999.

Spraying results mixed

An area located 20 kilometres west of the Steen River, within Cameron Hills, was sprayed with the biological insecticide, Foray 48B®. The main objective of the spray program was to reduce budworm populations to levels that would cause nil-light (0 – 35%) defoliation the following year (i.e. less than 188 budworms per 10 m² of foliage). Low L2 counts, i.e. less than 188 budworm larvae per 10 m² of foliage, were found in one of the four sprayed plots with the remaining plots having moderate counts. These results indicate that the program objective was not fully met. However, in comparison to the unusually high prespray larval counts (as much as 183 larvae/45 cm branch), residual populations were significantly reduced

indicating that the spray program had some success.

Population levels to rise in 1999

Of the remaining L2 sample plots, 64 plots (39%) are expected to have severe defoliation, 41 plots (25%) are expected to have moderate defoliation and 60 plots (36%) are expected to have nil-light defoliation in 1999. These results indicate a significant increase in budworm populations in many areas. Areas of concern for 1999 are along the Chinchaga River, along West and East Sousa creeks, north of the Paddle Prairie Metis Settlement, northwest of Zama City and along the Cameron Hills near the Northwest Territories border. In comparison, results from the 1997 L2 survey showed that only 23 plots (17%) indicated severe defoliation and 18 plots (13%) indicated moderate defoliation in 1998.

In the Mackenzie Forest Area, seven L2 plots were sampled in 1998. Five plots were sampled in the Paddle Prairie Metis Settlement and two plots were sampled in the Hawk Hills along Highway #35. Results indicate that severe defoliation can be expected in both of these areas in 1999. ■

*Mike Maximchuk
Northwest Boreal*

SBW area larger than expected in NEB

Following the aerial survey, it is now apparent that the spruce budworm activity in the region has increased. The areas of defoliation follow the same general areas as last year; however, in 1998 the affected area along the Athabasca River has become more continuous. Similarly, the defoliated area west of House River has extended by approximately one township south. The L2 surveys indicate an increase in severity of defoliation in the affected area in 1999. Jeff Scammell of Millar Western Forest Products Ltd. assisted with the field portion of the L2 surveys. ■

*Sarah Schwartz
Northeast Boreal*

Increase in SBW & aspen defoliators in NWB

Within the Northwest Boreal Region an estimated 82 265 hectares of budworm-defoliated white spruce stands were recorded in 1998. Of this area, 7131 hectares were moderately (35%-70%) defoliated and 75 134 hectares were severely (>70%) defoliated. The defoliated areas recorded in 1998 were significantly higher than those recorded in 1997 (24 606 hectares).

An estimated 234 408 hectares of defoliated deciduous stands were mapped in the region in 1998. Of this area, 104 103 hectares were defoliated by the forest tent caterpillar, and 130 305 hectares were defoliated by the large aspen tortrix. Defoliation was concentrated around the town of Peace River, south of Grande Prairie, along the Peace River and west of Fairview along the B.C. border. These areas of defoliation were

significantly higher than those recorded in 1997 (51 852 hectares). ■

*Mike Underschultz
Northwest Boreal*

1998 SES survey results

To monitor the mountain pine beetle, 33 pheromone-baited plots were established. The highest number of beetle hits was 30 per tree; no adjacent trees were attacked. The number of hits is in the average range. The only difference was an increase in the length of galleries. In previous years, the gallery length ranged from 6-12 cm; this year it was 30-50 cm.

Twenty-four spruce budworm pheromone traps, and fourteen gypsy moth pheromone traps were set up throughout the Southern East Slopes Region. The budworm moth counts were low (below 500 moths per trap) in all the traps. No gypsy moths were found.

An infestation of Bruce spanworm was found in Bow and Clearwater Forest areas. Some of these locations were infested already in 1997. Clearwater Forest Area reported major defoliation; forest tent caterpillar is the main suspect. A survey on both pests will be done in the spring of 1999. ■

*Eva Zidek
Southern East Slopes*

NES surveys: MPB increase in Willmore

Woodlands Forest Area set up spruce budworm and gypsy moth traps this year.

The spruce budworm counts were low throughout the area. No gypsy moths were found.

Yellowhead Forest Area set up spruce budworm and gypsy moth pheromone traps, as well as mountain pine beetle pheromone baits. Spruce budworm counts were low in this area, and no gypsy moths or mountain pine beetles were found.

Foothills Forest Area also monitored the above three insect pests with pheromones. No gypsy moths were found in the area. The majority of the other traps were set up in Willmore Wilderness Park. Spruce budworm counts were moderate and mountain pine beetles were present at 14 of the 18 sites. ■

*Erica Lee
Northern East Slopes*

Bug roast in Willmore

In the 1998 survey year there was an increase in mountain pine beetle activity in the Willmore Wilderness Park. A total of 42 trees at 14 mountain pine beetle pheromone sites in Willmore required control. This is an increase of 4 sites and 19 trees requiring control, compared to 1997 survey results. As well, the number of hits per tree at each site increased substantially.

The Land and Forest Service, Weldwood of Canada Ltd. and Weyerhaeuser Canada Ltd. worked together for four days to cut and burn 38 trees and peel the bark off four trees. Trees that required burning were felled, cut into approximately 3' lengths, piled, and burned. Logs were rotated in the fire to ensure that bark on all sides was completely burned off. Once all the bugs (and marshmallows) were roasted, the burn piles were extinguished.

The pheromone monitoring program will continue next season. Aerial surveys and ground surveys will also be completed to determine the exact extent of the beetle attacked areas. ■

*Erica Lee
Northern East Slopes*

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about current forest health issues.

*Articles and ideas are welcome!
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Where is MPB coming from?

A significantly high number of mountain pine beetle (MPB) flights was observed in Willmore Wilderness Park due to a major infestation located in BC about five kilometres south of the Alberta-BC border. The Foothills Forest Area, with support from Weldwood of Canada Ltd. and Weyerhaeuser Canada Ltd. increased MPB surveillance in the park to ensure no MPB infestation will be left untreated.

In Banff National Park a dozen pockets of MPB-killed trees with live insects were surveyed this summer. The park has been requested to take control action, and has been assessing the situation. ■

*Hidejo Ono
Forest Health Branch*

Budworm trapping in NWB

In 1998, spruce budworm moth counts from pheromone traps indicate an increase in budworm populations in most areas of the region, particularly the Upper Hay and Mackenzie Forest Areas. Of the 73 sites set up in the Northwest Boreal Region, 32 had average moth counts indicative of a moderate risk of an outbreak (500-2000 moths), and eight sites had an average moth count indicative of a high risk of an outbreak (over 2000 moths). Areas in the high-risk category include Dizzy Creek, Little Rapids Creek, Adair tower/Zama, Chinchaga River, north of Paddle Prairie Metis Settlement, Hawk Hills and east of Dunvegan bridge along the Peace River. Four sites along the Wabasca River showed a moderate risk of an outbreak, an increase of population compared to previous years. These pheromone trap results will assist in spruce budworm management decisions. ■

*Mike Underschultz
Northwest Boreal*

NEB ground survey results

The region continued with monitoring spruce budworm, gypsy moth, and forest tent caterpillar activity in 1998. Millar Western Forest Products Ltd. was again involved in the spruce budworm pheromone monitoring program. Of the 35 budworm pheromone traps

established, 17 plots were rated as low, 12 plots were rated moderate, and one plot was rated as high. Bears either knocked down or destroyed traps in five plots.

In addition to the forest tent caterpillar pheromone plots that were monitored over the summer, egg band surveys were carried out this fall; however, the results are not yet available. Gypsy moth pheromone traps were set up in the Marten Hills and Lakeland Forest Areas at recreation sites and public areas. As in 1997, no moths were found at these sites. ■

*Sarah Schwartz
Northeast Boreal*

1998: bad budworm year in Saskatchewan

Those of us who think that 1998 was a bad year for budworm infestations in Alberta should look at the situation in Saskatchewan. We can take solace in doubling of budworm infested area from 150 000 ha in 1997 to 300 000 ha in 1998 in our neighbouring province, as well. Mind you, this is just the budworm-infested area in their productive forest land. This year, they sprayed Btk over 90 000 ha making it their largest aerial spraying program (Doug Campbell, pers. comm.). It would be interesting to find whether their spray strategy of protecting current year's foliage was successful. ■

*Sunil Ranasinghe
Forest Health Branch*

Weeds: SES Regional IPM Working Group's focus

The SES Regional IPM WG met on Nov. 19, 1998 in Rocky Mt. House. A guest speaker, Kim Nielsen from MD Clearwater, gave a presen-

tation on their weed control policy. The next meeting, scheduled for March 11, 1999 in Sundre, will be held in a conjunction with a workshop on dwarf mistletoe and pest identification. ■

*Eva Zidek
Southern East Slopes*

Salt: the silent killer

One of the most notable signs of damage observed this year was the red foliage on various tree species along the major highways. This damage was attributable to salt accumulation in low-lying areas adjacent to the highways. Salt accumulation occurs as a result of the repeated use of salt on our highways during the winter. The salt gets transported into the ditches by snowplows and meltwater. This results in acidic soil conditions, stressful to many tree species. Aspen poplar, balsam poplar, white spruce, black spruce and willow were species commonly seen affected by this condition. Observed areas of damage were along Highway #35 from Peace River to High Level and along Highway #2 from Valleyview to Peace River and from Peace River to Cleardale. ■

*Mike Maximchuk
Northwest Boreal*

The Pine False Webworm: *Acantholyda erythrocephala*

The pine false webworm is an exotic sawfly introduced from Europe. This sawfly has been an important pest of young red, and white pine plantations in Ontario. However, in this summer, it has defoliated a large area of mature white pine stands. In Alberta this sawfly was first reported in Edmonton in 1989 as a new introduction. The City of Edmonton has been treating the sawfly

infestations on lodgepole and mugo pines since 1996. It appears that lodgepole pine is a suitable host for this pest in Alberta. ■

*Hideji Ono
Forest Health Branch*

Conference on SBW in Saskatchewan

This conference, organized by Saskatchewan Environment and Resource Management (SERM) was held in Prince Albert, Sask., on October 22, 1998. It was attended by representatives from provincial agencies in Alberta, Manitoba, Ontario and Saskatchewan as well as Canadian Forest Service, forest industry, Btk manufacturers, Bioforest consultants, environmental groups and the University of Regina. Among the topics discussed were the aerial spraying program in Saskatchewan, successes, failures and future plans of the other provincial programs; impact of Btk on songbirds; remote sensing of budworm infestations; and budworm data management.

The proceedings of this conference will be available shortly. For further details, please contact Doug Campbell of SERM (306-953-2458). ■

*Sunil Ranasinghe
Forest Health Branch*

Exotic pests: a growing concern

The introduction of exotic pests is a growing concern among forest pest management specialists in North America. In US over 400 species of exotic tree insect species and 20 species of tree diseases were discovered from crating (49%), dunnage (36%), and pellets (8%). Green logs used in a granite container shipment from China were inspected in B.C.; they con-

tained over 2000 live insects and 50% of the logs had blue stain fungus. Live insects were found in 40% of inspected spools from China. Asian long-horned beetle infestations in N.Y. and Chicago destroyed thousands of trees in both cities. Entomologists now discovered evidence that the beetle infestations in these cities were going back several years, and estimated up to 20 cities in US may already have an Asian long-horned beetle infestation. For more information, check out the following site:

<http://willow.ncfes.umn.edu/asianbeetle/beetle.html> ■

*Hideji Ono
Forest Health Branch*

Forest Health Website

The internal and external websites for Forest Health are finally completed. The internal government site is now up and running. The external public site should be available by mid-December 1998.

Internal site:

<http://edmgwb1g/forprot/index.html>

External site:

<http://www.gov.ab.ca./env/forests/fpd/>

For both sites, click on "Forest Health."

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COMING UP NEXT ISSUE...

- ◆ 1999 Projects