



Bugs & Diseases

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Alberta's eye on forest health

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Tracking the mountain pine beetle flights

The potential movement of the mountain pine beetle (MPB) over the Rockies is a consideration in managing the MPB in Alberta. MPB can fly for up to 11 hours and are capable of traveling hundreds of kilometers with wind speeds of 10 metres/second found in the atmospheric boundary layer. In view of this, Sustainable Resource Development is joining with forest companies — Weyerhaeuser (Grande Prairie) Company Ltd. and Canadian Forest Products Ltd. (Canfor) — to support a research project aimed at tracking dispersal of airborne mountain pine beetles. This project is being lead by Dr. Peter Jackson, Associate Professor with the Environmental Science and Engineering

Department of the University of Northern British Columbia.

This project will track the number of MPB in long-range transport in the atmospheric boundary layer over the Rocky Mountains. MPB in flight directly captured in situ by using a fixed-wing aircraft will be compared with those recorded by using a vertically scanning X-band radar system. As well, Environment Canada's Doppler Weather Radar will be used to track clouds of MPB originating in areas with heavy infestations. The results of this project are expected to shed light on MPB flying over the Rocky Mountains into Alberta, and to provide an estimate of the flux of MPB in long-range movement.

“MPB can fly for up to 11 hours and are capable of traveling hundreds of kilometers...”

Sunil Ranasinghe

A different approach to chamomile control

Biological controls have been used for years to control various types of outbreak populations. Classical biological controls involve the release of natural enemies to control introduced pests. Once the origin of the pest is known, appropriate predators or parasitoids can be collected, imported, reared, and released.

The benefits of such a control are that it is long lasting and once established, relatively inexpensive.

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Seed weevil attacking scentless chamomile flower.

In an effort to establish insects to control scentless chamomile (*Matricaria perforata*), the northwest region has begun a small (but mighty) biological control campaign in the Peace River and High Level areas.

In total four sites were selected for their bountiful scentless chamomile crops where two separate insect releases will occur. First in late July, galled scentless chamomile plants were transplanted among existing populations of the invasive plant. It is expected that the gall midges (*Rhopalomyia tripleurospermi*) will emerge shortly after planting and begin to gall existing scentless chamomile stunting plant growth. In the southern parts of Alberta and Saskatchewan, these insects have been very successful at establishing themselves among chamomile, and in some areas have dispersed as far as 5 km in a single year.

In late August the second step of the study will begin with the release of a seed weevil (*Omphalapion hookeri*) at the same sites. The weevils attack the seed head of the plant and can gradually reduce seed production, slowing the spread of the plant population. The weevil has been observed dispersing up to 3 km a year.

“The weevils attack the seed head of the plant...”

We are optimistic about the survival and establishment of both insect species due to the widespread distribution of scentless chamomile in the north, and the possibility of ensuing mild winters. Stay tuned for updates on our progress!

Natalie Henneberry

Summer beetle update

Provincial summer mountain pine beetle (MPB) operations included aerial overview flights, heli-GPS flights, control through cut and burn or cut and peel, and pheromone bait deployment.

Beetles have begun to emerge and fly in all areas so control operations have ceased for the duration of the flight period.

Foothills Area

Aerial overview surveys were conducted in July to detect new faders. As the beetles were ready to fly shortly, 206 of the new fader sites were pheromone-baited in an attempt to limit beetle spread. Sixty-four previously surveyed sites were also baited. Bait lines were established in the Beaverdam and Pauline drainages and adjacent to an old burn in the Muddywater drainage.

As a pilot project that may protect high value stands, an 8-hectare patch of whitebark pine was baited with

verbenone. Verbenone is an anti-aggregation pheromone that repels beetles from attacking susceptible host trees.

So far this summer two large wildfires in the Willmore Wilderness Park have burned beetle-infested trees and removed significant amounts of highly susceptible forest. The combined area burned by the two fires was over 20,000 hectares.

Smoky Area

Aerial overview surveys detected 276 fading trees in the Wapiti River, Narraway River, Kakwa River, Copton Creek and Bank Creek drainages. Seventeen pheromone bait sites were set up to determine where the beetles might be potentially expanding.

Southern Rockies Area

Aerial surveys in the Southern Rockies detected faders in several areas. Ground surveys were conducted in the areas to determine the number of infested trees.



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Twenty infested trees were detected near Spray Lakes. Dead adults were found in these trees and there were no larval galleries. Three faders were found and controlled in the Bow Valley.

In the Dutch Creek area 99 infested trees were found. Of those trees, 45 were controlled. Forty-seven baits were deployed at the uncontrolled sites.

Throughout the Crowsnest Pass approximately 80 baits were placed at infested sites in the Tent Moun-

tain and Star Creek areas. In the Allison Creek area, 102 baits were deployed. These baits are in areas approved for harvest this year as part of the C5 management plan.

For more MPB details, maps and future updates please visit our website:

<http://www.srd.gov.ab.ca/forests/health/mpb.html>

Erica Lee

International weed conference hits Alberta

The Alberta Invasive Plant Council will be hosting the 2006 North American Weed Management Association (NAWMA) conference in Calgary, September 18th - 21st at the Coast Plaza Hotel.



The conference theme this year is “Invasive Plants - Risk Assessment and Ecological Integrity.”

Topics on the agenda include:

- Risk assessment models
- Invasive plant strategies in Canada
- Perspectives on the impact of invasive plants in urban, natural & agricultural settings
- The latest in control and mapping options
- and field school

Don't miss the evening banquet with entertainment in a real western setting!

Mike Undershultz

Predictions are tricky (an update)

Last December, in my newsletter article “Predictions are Tricky,” I forecasted that populations of spruce budworm (SBW) and forest tent caterpillar (FTC) would increase in the North-east Region this season. The results of our summer surveys aren't in yet, but preliminary indications are that I was correct. Although, initial observations from our overview flights show that the gross area of SBW caused defoliation hasn't increased as much as I expected it to. All I can say is “pick up the pace, budworm, you're making me look bad!”

“...preliminary indications are that I was correct”.

In my defence, I never really stated how much the area defoliated by SBW and FTC would increase by – just that they would increase. That being said, I'm still sticking with my predictions from the December 2005 newsletter.

I look forward to sharing the results as soon as the all the spruce stands are netted out from our overview polygons, and the last moth is counted from our pheromone traps.

Tom Hutchison

Athabasca invasive plant workshop a success

On May 31, SRD hosted an Invasive plant workshop in Athabasca. The workshop was part of the Ministry's contribution to the Northeast Regional Co-operative Invasive Plant Management Working Group and was open to both industry and SRD staff. This was not only a forum for sharing information about Invasive Plant Management issues, but also a training session for field staff. Topics covered included:

- Why Invasive plants are a problem
- Invasive Plant ID
- Applicable Legislation and stakeholders responsibilities
- Inventory techniques and data management
- Invasive plant management techniques
- Invasive plant disposal
- and much, much more...

Presentations on the above topics were delivered by SRD representatives Marion Jones, Mike Undershultz, Tom Hutchison, Martin Robillard, and by Athabasca County's Shaun Gauy. Additionally, a lively panel discussion was held where Ace Vegetation's Ian McDonald, Marian Jones and myself sat up front and centre to field questions on control techniques.

The session was also interactive with contests to gauge the attendees ability to apply knowledge from the presentations. These included challenges such as "name the invasive plant" and "estimate the percent ground cover." Prizes (kindly donated by Al-

Pac and SRD's Forest Protection Division) were awarded for each of the competitions.

Approximately 60 people attended the workshop and feedback was very positive. Events like this are



Workshop participants applying their skills during the "name that invasive plant" competition.

important "for getting the word out" about invasive plant management. I want to thank all those that contributed to this occasion through presentations, donating prizes, or participating on the panel. Thank-you very much, and thanks everyone that attended.

Tom Hutchison

New SRD MPB staff member

Training for SRD staff, industry, and contractors on MPB surveying, controlling and auditing is in high demand. To meet these needs SRD hired a Forest Health Training and Operations Assistant, Anina Hundsdoerfer.

Working out of provincial headquarters, she will be developing and providing training courses on sur-

vey, control, and audit methods. Anina graduated from the University of Alberta with a Masters in Forest Biology and Management on MPB infestation risk.

Erica Lee

Get to know your FHO

Finally, I conclude this series of articles that has hopefully allowed you to get to know a bit about your forest health officer. In this last installment, I chat with Brooks Horne, the latest addition to the forest health officer line-up.

Brooks has been working for SRD out of the Hinton office since he signed on earlier this year. His jurisdiction covers both the Woodlands and Foot-hills areas.

Mike: Before I start asking a bunch of forest health related questions, can you give me a quick run down of your background?

Brooks: Sure... I'm 37, born and grew up in Langley BC. I received a Forestry Diploma from BCIT in 1991, and a Forest Business Management Degree from the University of Alberta in 2004. As for forestry work experience, I have done many years of consulting and industry work.

Mike: When you were younger, what had you chosen for a career when you grew up?

Brooks: Professional fisherman! Oh yeah, or a forest health officer.

Mike: Any nicknames from the old days?

Brooks: I was called Horned Toad... Once.

Mike: Any hobbies or interests?

Brooks: Fly fishing, fly tying, hiking and traveling.

Mike: What would you say is your most and least favorite forest pest and why?

Brooks: My favorite is armillaria root disease, as it is both interesting and edible... the honey mushrooms. Least favorite is probably lodgepole pine beetle because the fading foliage resulting from attack is the same as MPB and I must walk great distances to confirm!

Mike: How are you enjoying your job thus far... any highlights?

Brooks: I have great team of people to work with, and I have enjoyed the summer programs. I love summer! One recent highlight was slapping up the last MPB bait and now not having to see an MPB for a



Forest health officer Brooks Horne, partaking in his favorite pastime.

whole month... hopefully.

Mike: Being responsible for the extermination of countless mountain pine beetles in hopes of saving our forests, you must have quite a hate on for the little creatures? Do you eat beetles for breakfast?

Brooks: And lunch?

Mike: Last question. What are one or two of your favorite Alberta plants or trees?

Brooks: Bog orchid... it smells oh so good! And alpine larch... crisp September day, a golden mountain side... it's as good as it gets.

Mike: Thanks Brooks for agreeing to the interview. I'll be seeing you again soon, take care!

Brooks: My pleasure Mike.

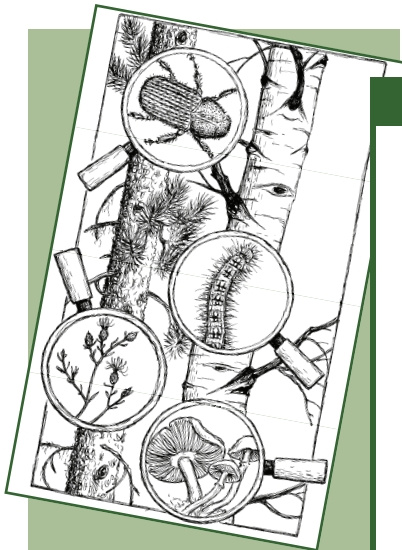
Brooks Horne & Mike Undershultz

"My favorite forest pest is armillaria...it is both interesting and edible".

Forest tent caterpillar caveat

Tremble now, aspen trees,
but not because of any breeze.
Tremble now, for we're returning,
for a foliage feast that we've been yearning
Tremble now, at our arrival,
and hope we don't cost your survival.
Tremble now, as we expand,
over more, and more forest land.
Tremble now, aspen trees,
but not because of any breeze.

Tom Hutchison



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