

An aerial photograph of a lush green forest landscape. A dark river flows from the top left towards the bottom left. A railway track runs parallel to the river on the left side. The forest is dense with various shades of green, and a small cleared area is visible on the right side.

# The B.C. Report

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*Larch Needle Cast, near Yahk, BC*

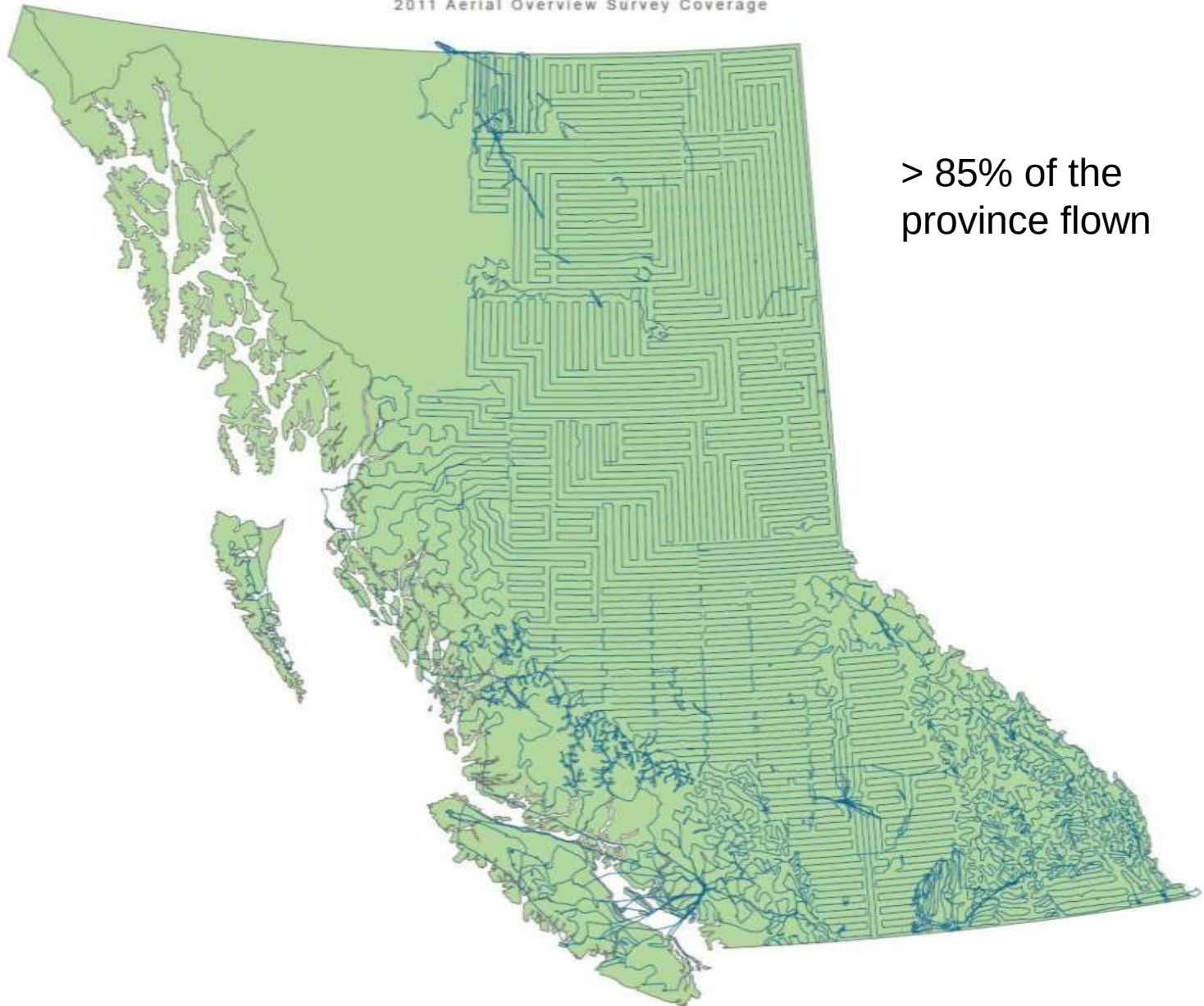
# Outline

- Survey Coverage
- Major Pest Conditions
  - Bark Beetles
  - Defoliators
  - Pathogens
- *Other Interesting Stuff*



# 2011 Aerial Overview Survey

2011 Aerial Overview Survey Coverage



> 85% of the  
province flown

# Major Bark Beetles



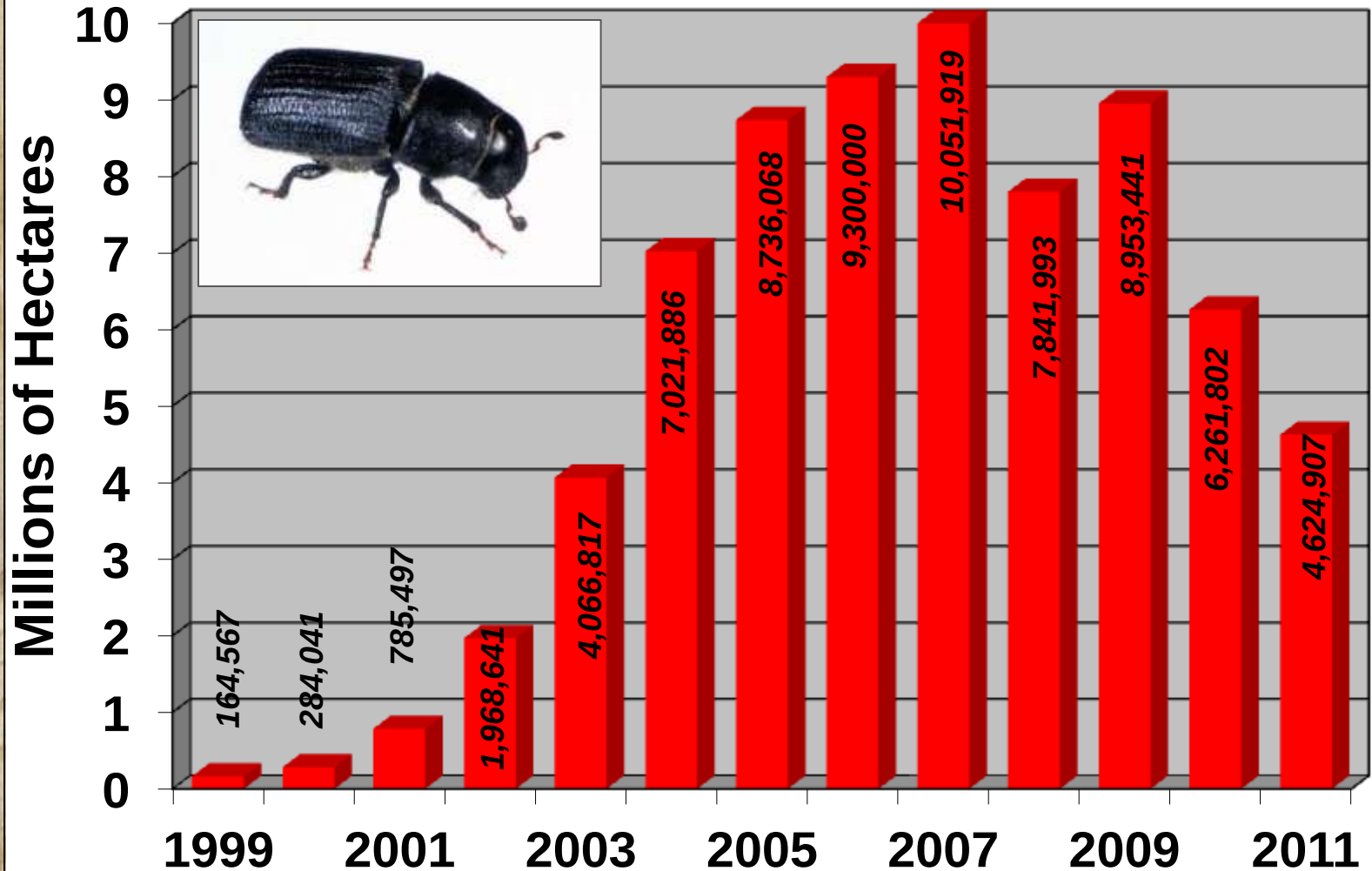
- Mountain pine beetle
- Douglas-fir Beetle
- Spruce Beetle



# Mountain Pine

- MPB continues to decline in area attacked
- New total is 4.6 million ha (vs 6.2 mill ha last yr)
- Revised estimate of cumulative volume killed now down to 58% vs 80% of mature pine volume by 2020

# Annual Red-Attack



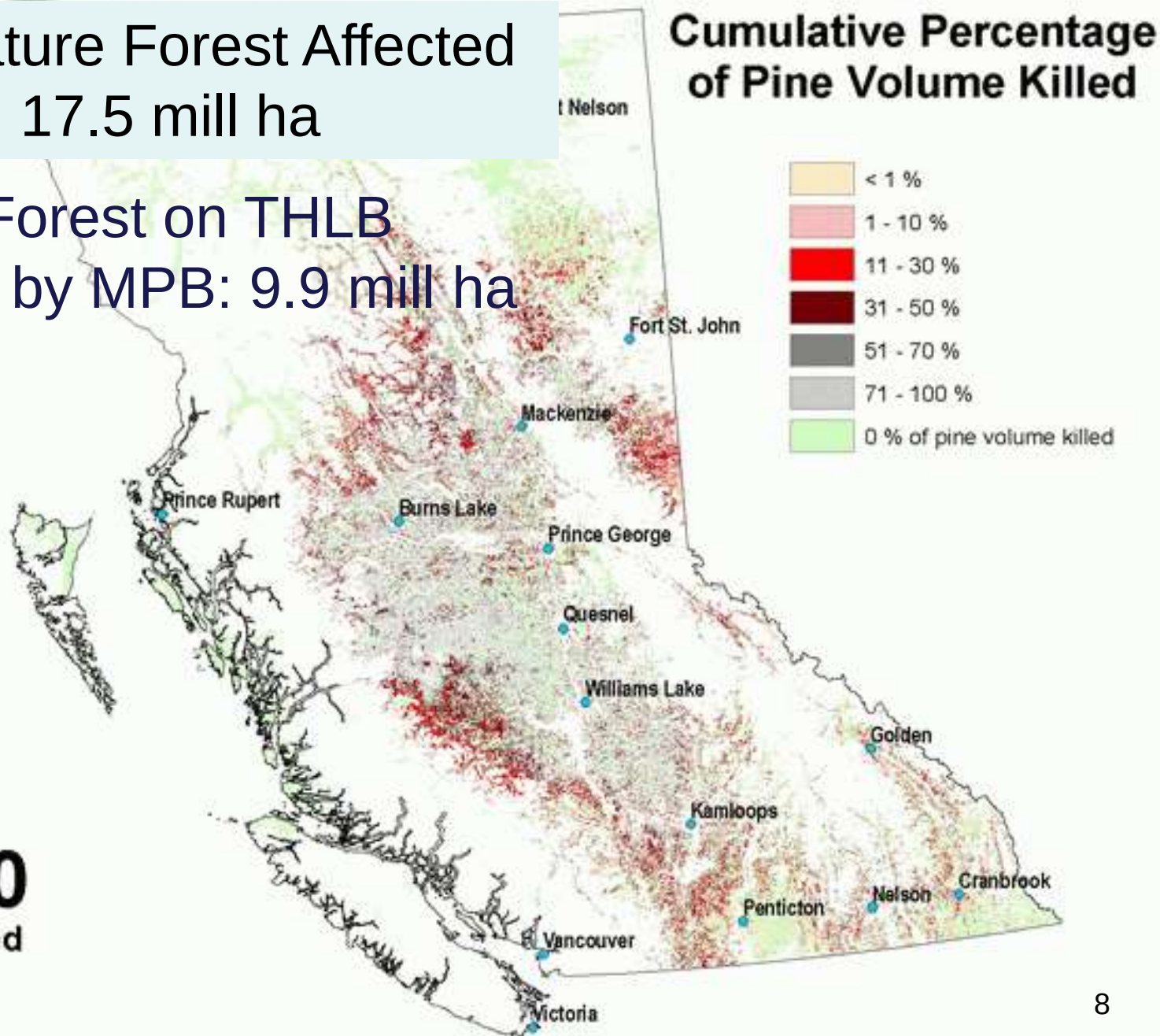


9 km NE of Germansen Landing in Mackenzie District

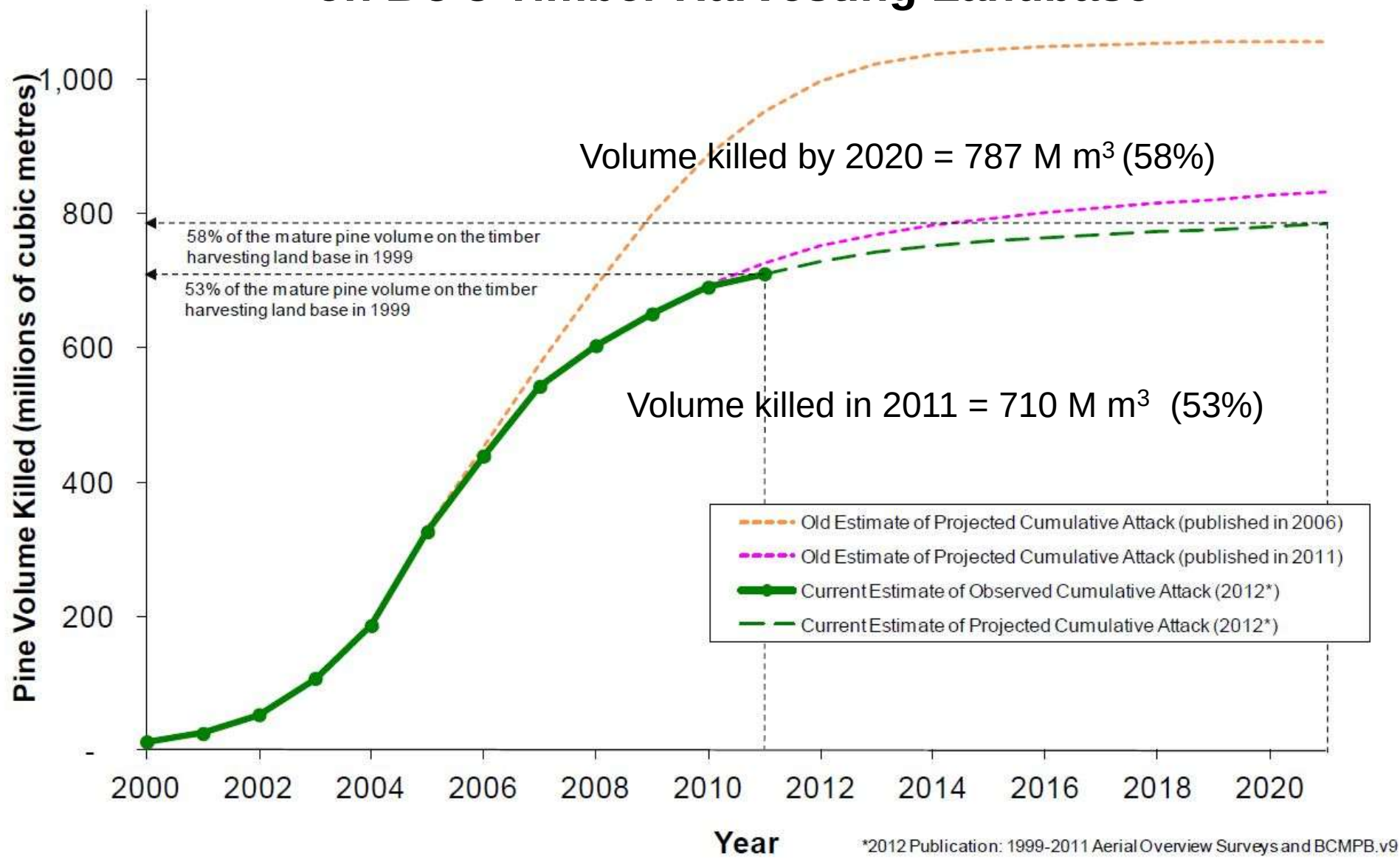
Total Mature Forest Affected  
by MPB: 17.5 mill ha

Mature Forest on THLB  
Affected by MPB: 9.9 mill ha

**2010**  
Observed



# Cumulative Volume Killed on BC's Timber Harvesting Landbase



What does 1 Million Cubic  
Meters of wood look like?

Imagine this  
pile 787 times  
bigger!

Photo courtesy Alvesta Timber, Vida Oy. ( Sweden)

# Douglas-fir Beetle

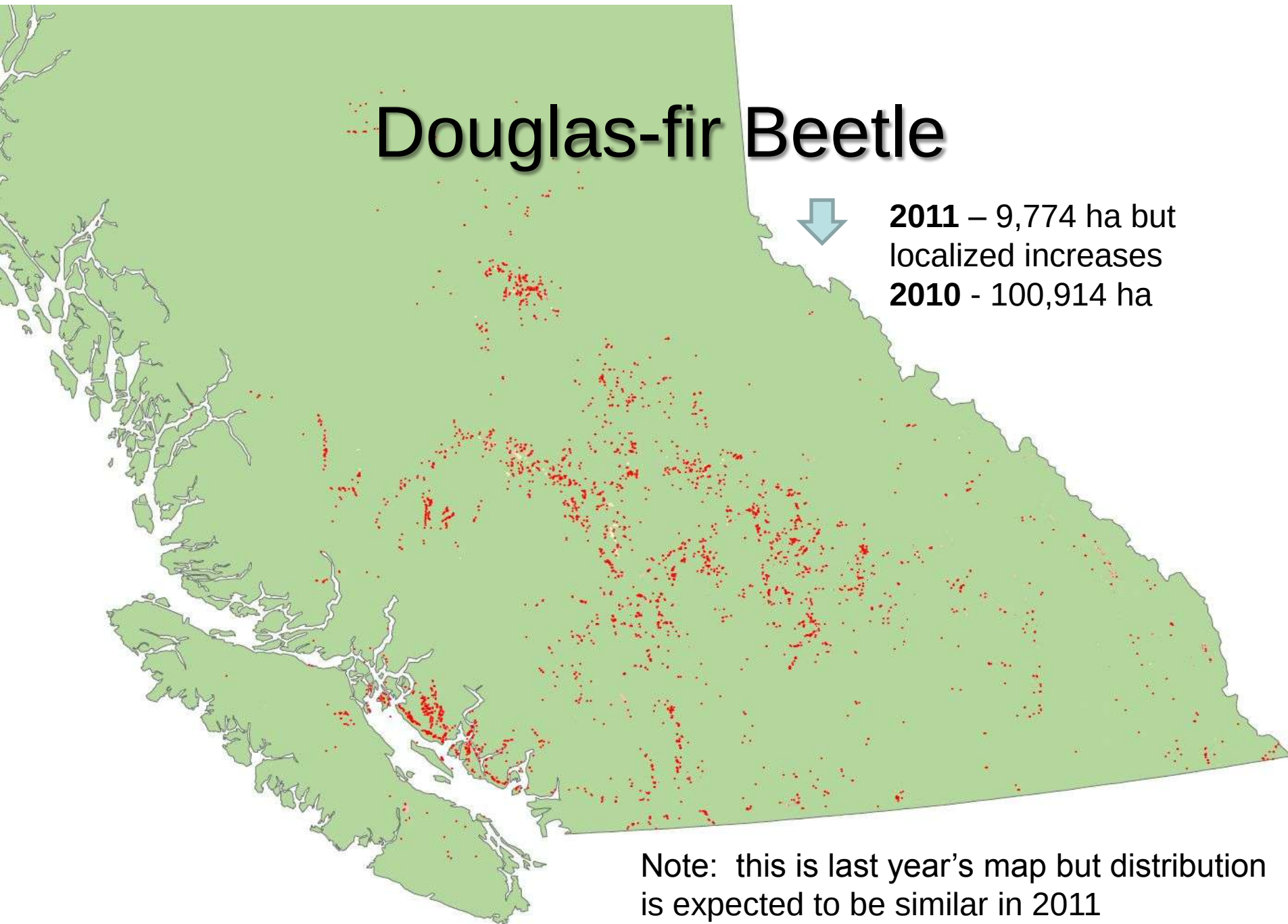
- A common bark beetle throughout the range of Douglas-fir.
- Damage is important in areas devastated by the MPB.
- Key species for wildlife habitat.



# Douglas-fir Beetle



**2011** – 9,774 ha but  
localized increases  
**2010** - 100,914 ha



Note: this is last year's map but distribution  
is expected to be similar in 2011

# Douglas-fir beetle increasing in Cariboo due to:

- Extensive damage from 2010 fires
- Windthrow & ice damage (broken tops)
- Budworm stressed trees



# Spruce Beetle

- Another common native bark beetle with a repeated history of outbreaks
- Spruce beetle is hard to survey for (very short detection window)
- Need follow up aerial and ground detection
- Overall area attacked is down 22,463 ha in 2011 from 30,296 in 2010
- Infested wood is quickly salvaged

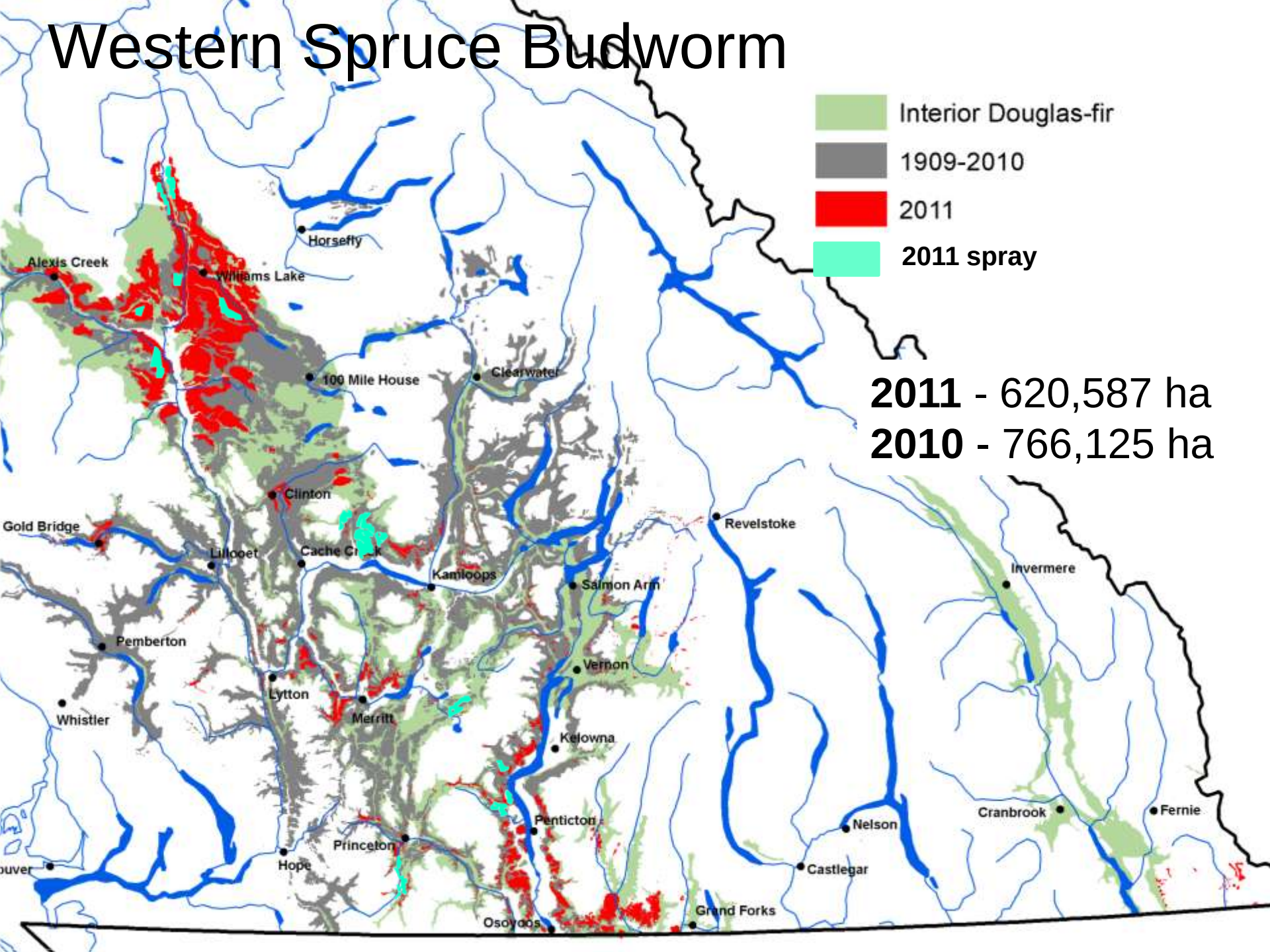


# Defoliators

- Western Spruce Budworm
- Douglas-fir Tussock Moth
- Western Hemlock Looper
- Gypsy Moth
- Blackheaded budworm
- 2 Yr cycle budworm
- Aspen Leaf Miner



# Western Spruce Budworm

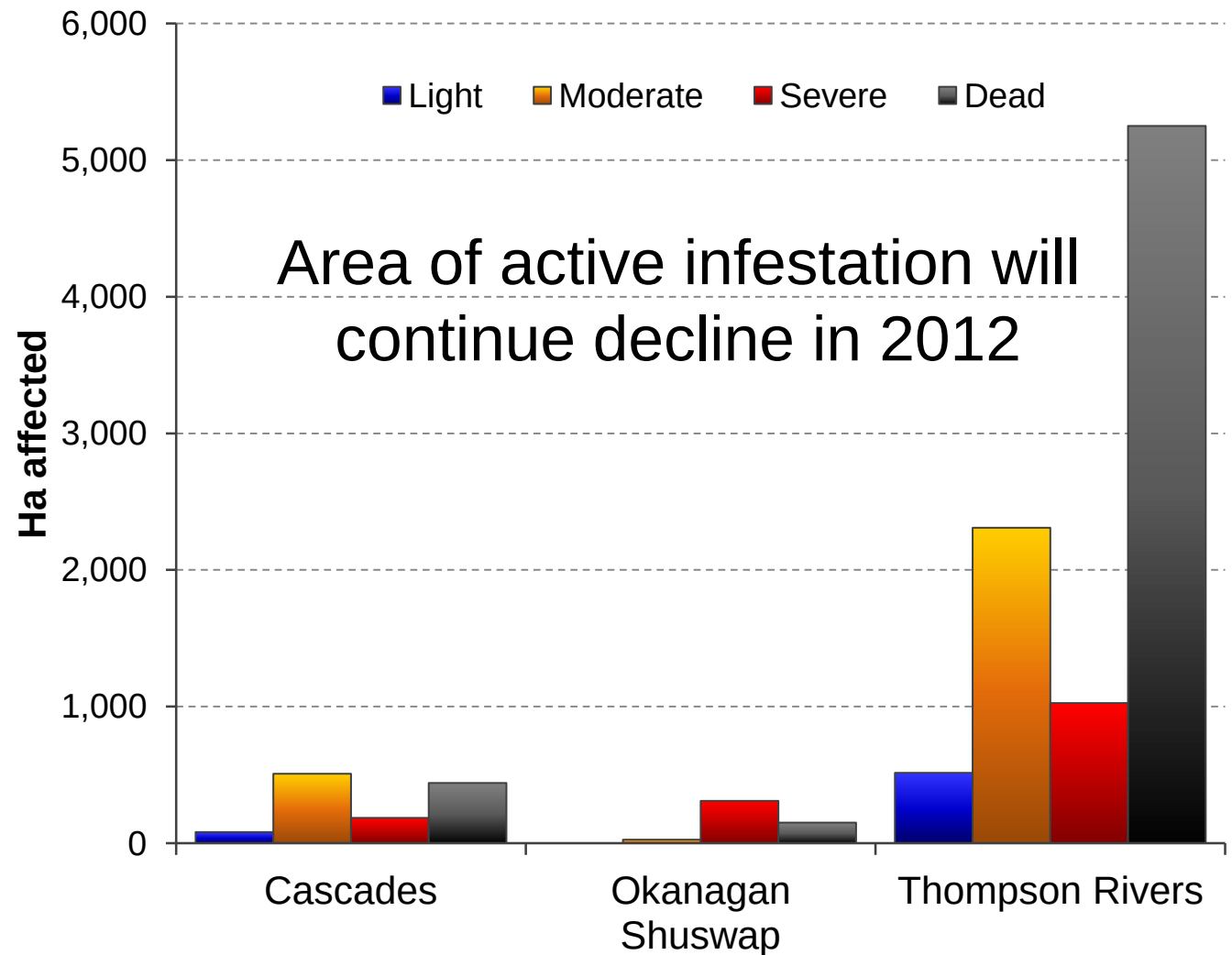


# Douglas-fir Tussock Moth Frass



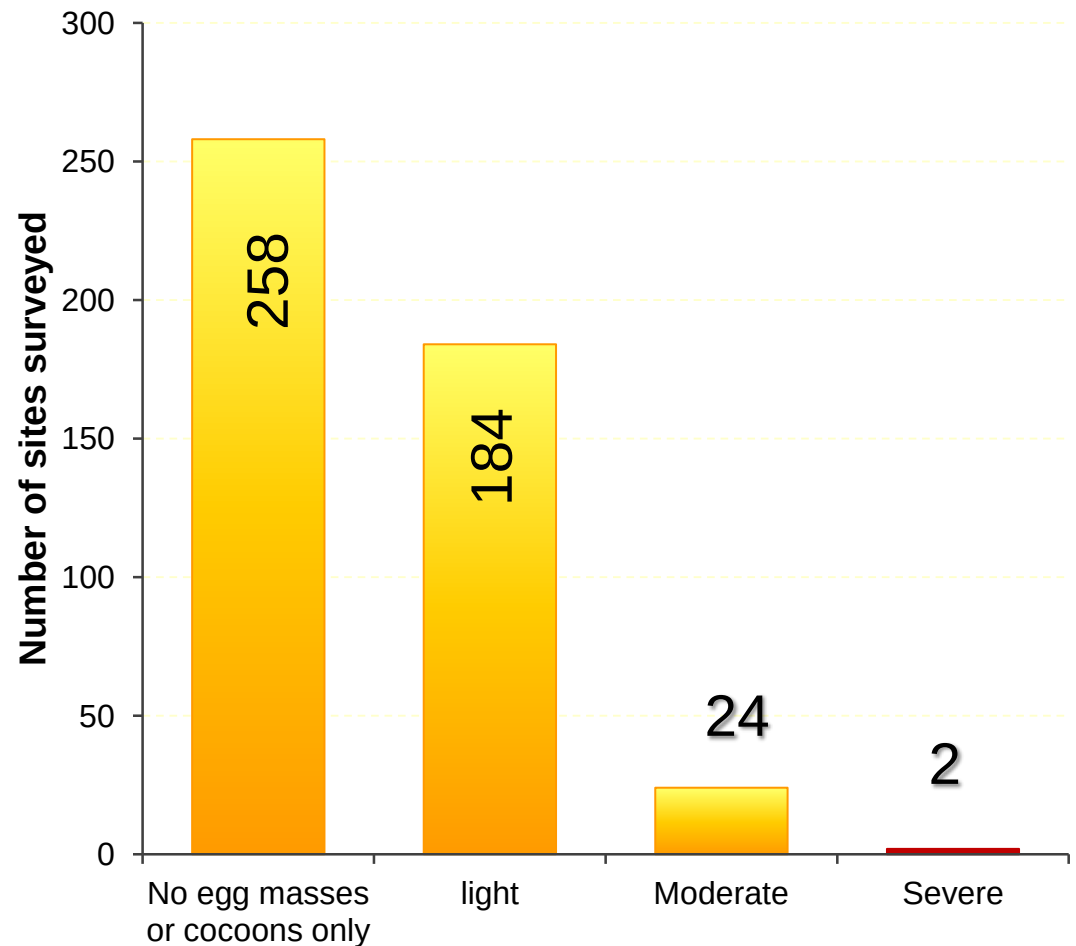
# Douglas-fir tussock moth

5,841 ha of dead Df



# 468 sites surveyed for presence of viable DFTM egg masses

- Only 5% of sites surveyed show populations warranting treatment



# Defoliator spray programs 2011

**57,763 ha** of defoliators treated in BC

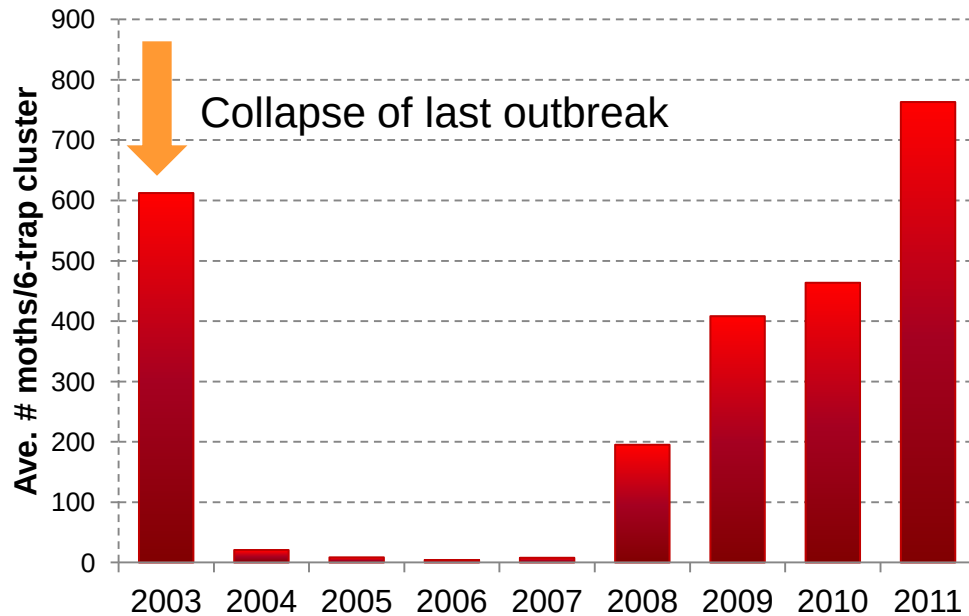
Conducted under a PMP and PUP

| District          | Ha sprayed with <i>B.t.k.</i>                                                       |                                                                                      |
|-------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                   | Western spruce budworm                                                              | Douglas-fir tussock moth                                                             |
| Thompson          |  |  |
| Okanagan Region   |                                                                                     |                                                                                      |
| Cariboo Region    | 20,889                                                                              | 7,282                                                                                |
| <b>B.C. Total</b> | <b>50,763</b>                                                                       | <b>7,282</b>                                                                         |

# Western hemlock looper

Ave. hemlock looper moths/6-trap cluster

27 6-trap monitoring sites - trap catches increased from an average of 543 to 732



North Thompson larval counts doubled from 2010 levels at two sites



In 41 3-tree beating sites: Western hemlock looper and sawflies were the most common and equally abundant defoliators

# Gypsy Moth

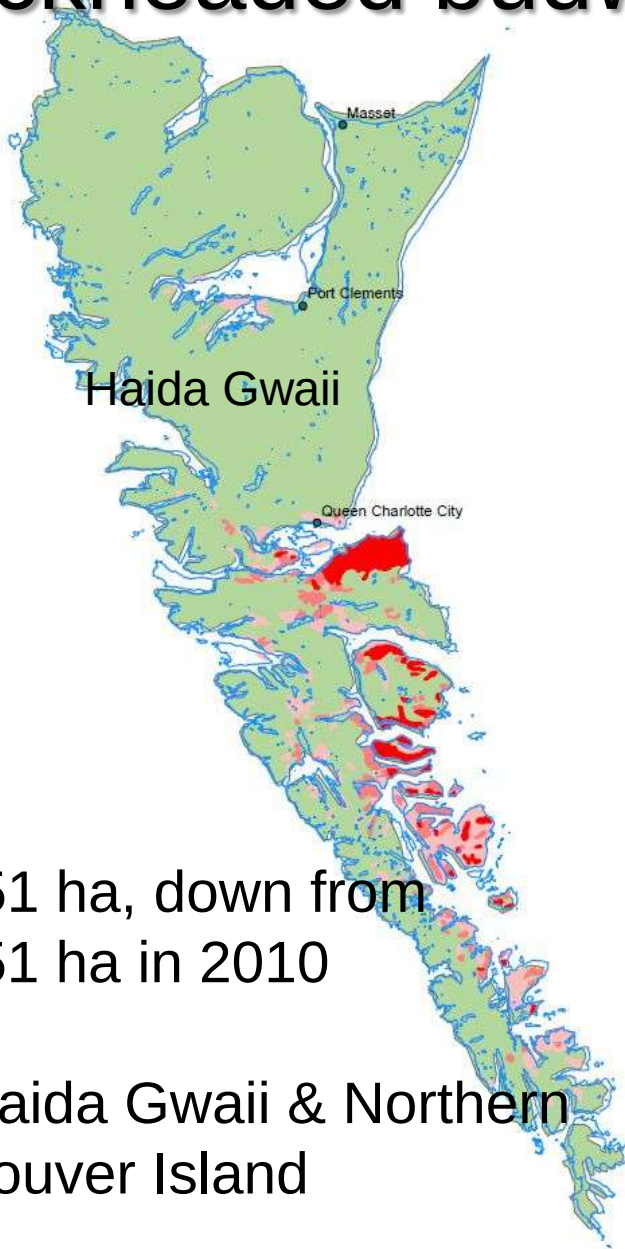
- No Treatments in 2011
- Results:
  - Another low year: 6 moths in total in BC, no AGM
  - 1 moth found in Richmond
  - 2 moths in Victoria
  - 2 in Langley
  - 1 in Revelstoke
- No treatment plans for 2012 – yeah!
- CFIA will continue to trap in 2012

# 2 Yr Cycle Budworm (*C. Biennis*)

182,798 ha up from 91,844 ha  
proposing a *Btk* trial in Quesnel



# Blackheaded budworm (*Accleris gloverana*)



39,851 ha, down from  
87,651 ha in 2010

On Haida Gwaii & Northern  
Vancouver Island

# Aspen Leaf Miner



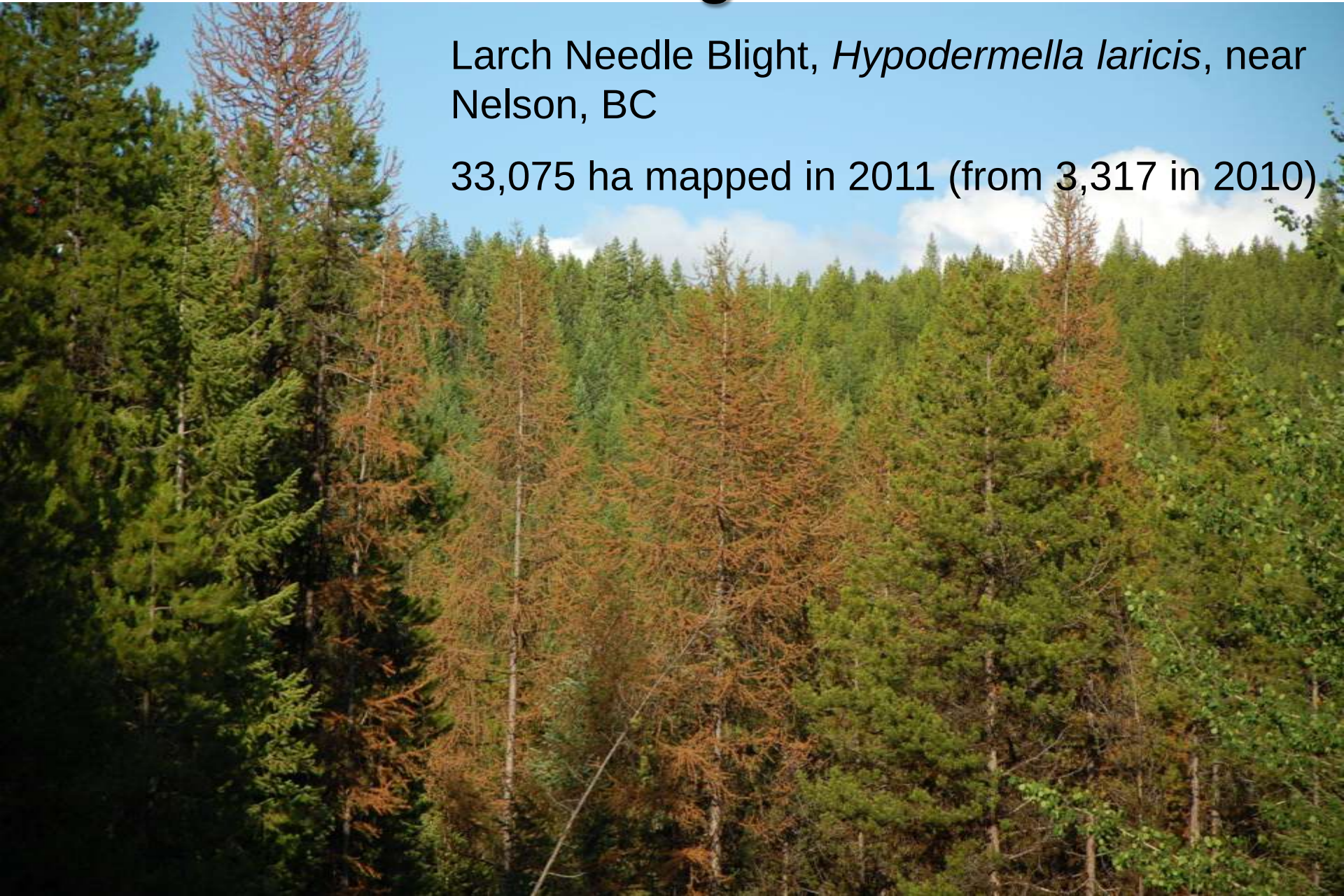
637,082 ha in 2011 up from  
209,604 ha in 2010



# Pathogens

Larch Needle Blight, *Hypodermella laricis*, near Nelson, BC

33,075 ha mapped in 2011 (from 3,317 in 2010)



# Other “interesting” stuff



# Flooding



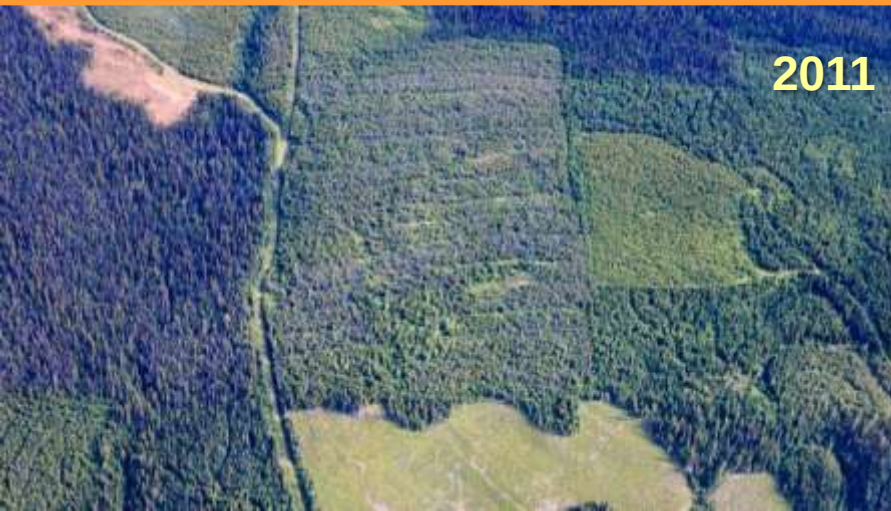
Chetwynd, BC



2007

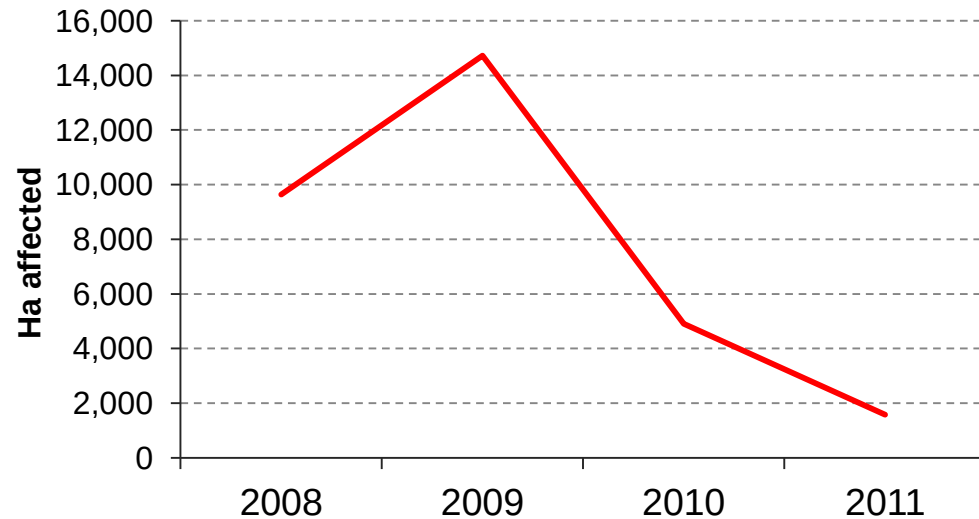


2008



2011

## Ha young pine attacked by MPB in Thompson Okanagan Region



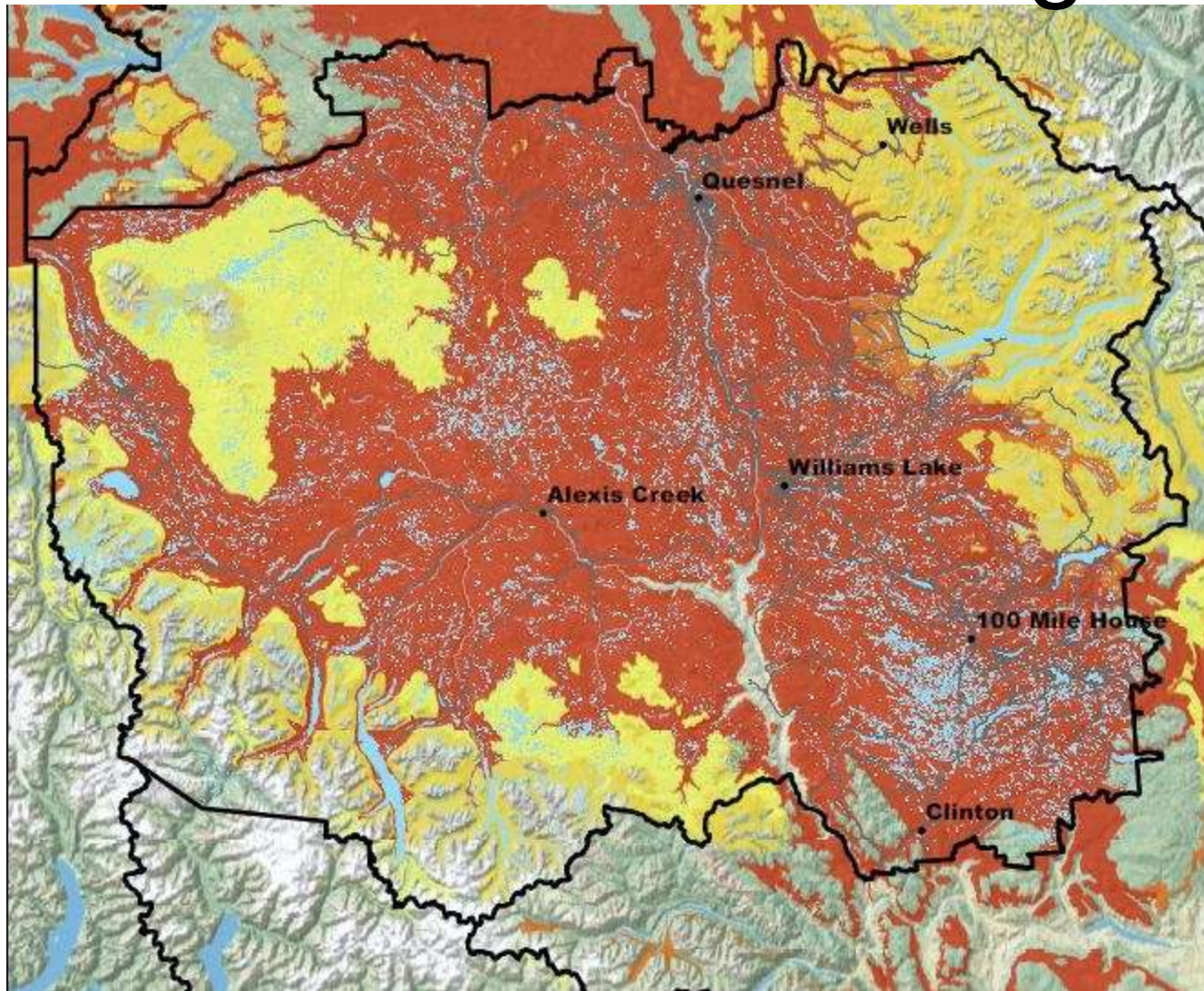
MPB attack in young stands has declined largely due to the decline in mature pine (e.g. DTR)

Young pine still *at risk* but to secondary beetles.

*Pityophthorus*  
*Pityokteines*  
*Pityogenes*



# SEDA Hazard Ratings



*Endocronartium harknessii*



# NFPS MPB Risk Analysis reveals a new method of long-distance dispersal

