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Mountain National Parks

5 Needle Pine

Update

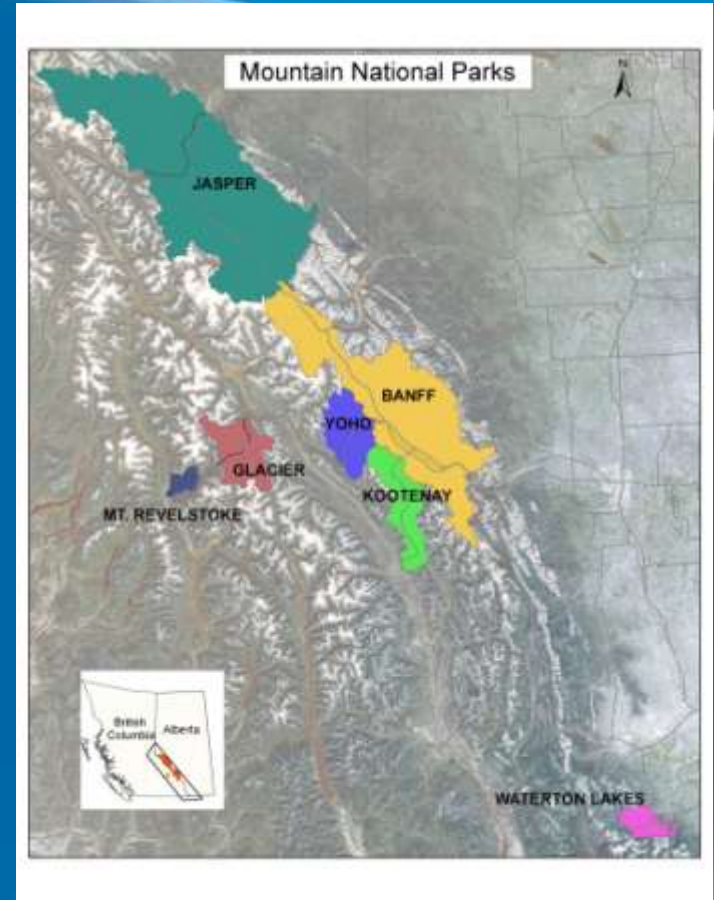
May 2012

AB/BC Intermountain Forest Health Workshop



Mountain National Parks

- Overview of activities in the mountain parks
 - White Pine Blister Rust Surveys
 - Cone caging/Seed Collection
 - Planting
 - Prescribed fire monitoring
 - Protection



White Pine Blister Rust

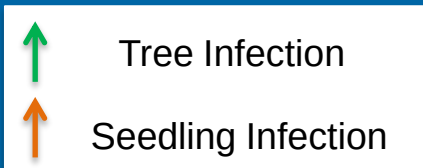
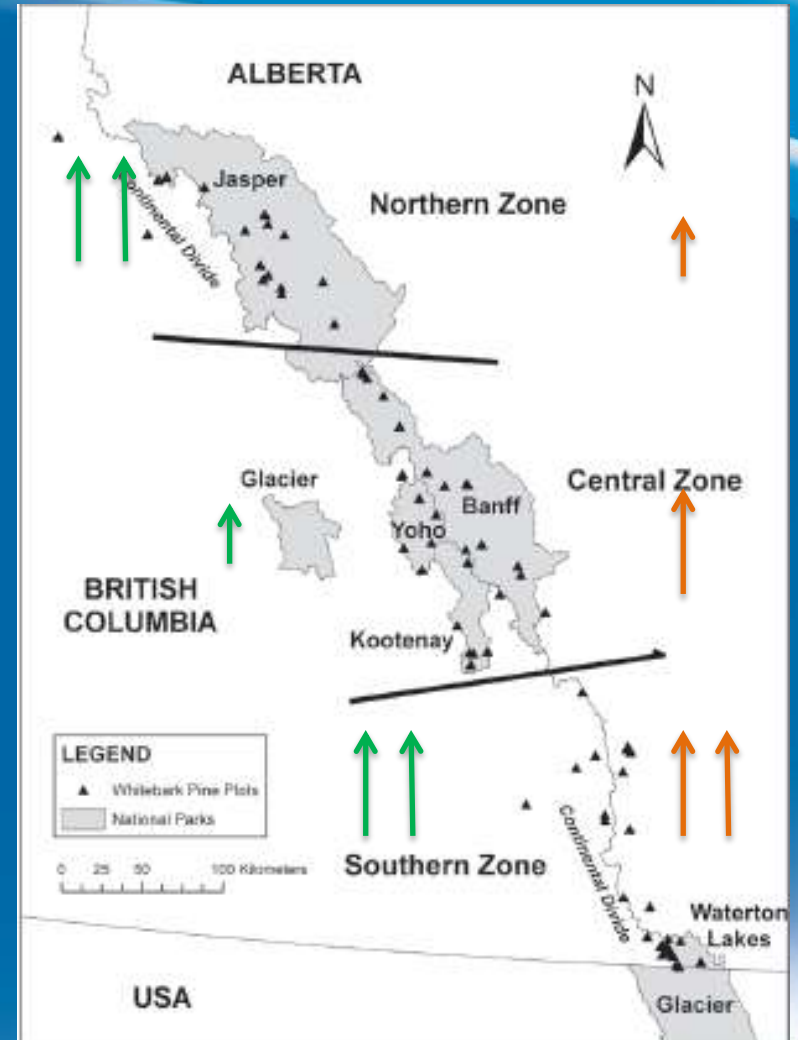
- 2009

Trees

- Rust infection increased from 42% in 2003-04 to 52% in 2009
- **~2%/year**
- Dominant cause of death
- Latitudinal gradient

Seedlings

- Virtually unchanged



Seed Collection

- Focus on potentially WPBR resistant trees
- *Waterton Lakes*
 - Cones collected 2006, 2008, 2010, 2011
 - Approx. 3200 cones collected (WBP, LP)
 - Seeds from 33 WBP trees part of genetic testing program with USFS in Coeur D'Alene, ID
 - Extra seed stored at Alberta Tree Improvement and Seed Centre (Smoky Lake, AB)
 - Some seed stored at National Tree Seed Centre (NB)



Seed Collection

- *Banff/LLYK*
 - Seeds collected from Yoho and Kootenay parks (N = 5; Cones: 44)
 - 2128 seeds sent to National Seed Centre (NB)
 - 170 seeds to be germinated
 - Potential for rearing in Banff
- *Jasper*
 - Seeds collected in 2010
 - 300 trees grown at private nursery in Vernon
 - Ready to plant 2012
- *Mt. Revelstoke/Glacier*
 - Field checks for resistant trees
 - No cone collection due to poor crop year



Planting

- *Waterton Lakes*
 - Almost 3000 WBP seedlings planted 2009-2011
 - Seedlings from Glacier NP (US)
 - 1/3 planted in burned areas at Summit Lake
 - Monitoring
 - Ectomycorrhizal fungi inoculations
 - 1st yr survival approx. 80%



Additional Monitoring/Research

Waterton

- Verbenone and semiochemical use for protection from MPB

Mt. Revelstoke/Glacier

- Monitoring regeneration of WBP in 2008 wildfire
- Planned prescribed fire in WBP range



Additional Monitoring/Research

Banff

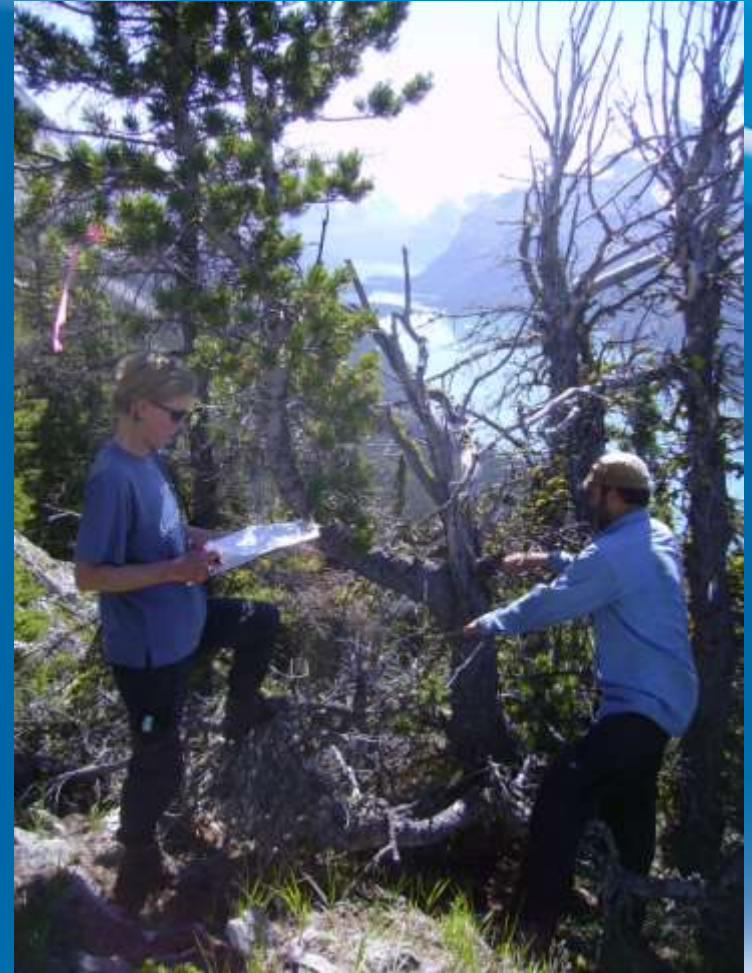
- WBP use by grizzly bears (D. Hamer)
 - Cone abundance permanent plots
 - Red squirrel midden density and use by bears
 - Grizzly bear use of WBP seeds
 - 80% sites showed evidence of WBP use by bears



Additional Monitoring/Research

Jasper

- Climate change impacts on WBP (A. Clason (Ph.D – UNBC)
- Worked with Marmot Basin to protect WBP trees in skiable terrain
- Data and Logistics provided to Greg McDermid's project on WBP distribution



Questions?



- Questions?
- Jane Park, M.Sc.
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