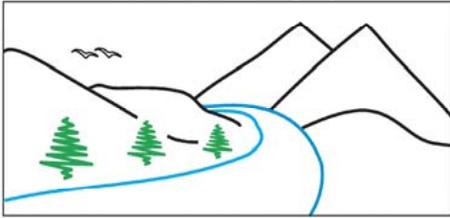


**NRESi**



"Our environment is our future"

## RESEARCH COLLOQUIUM SERIES

### Dr. Lori Daniels

Associate Professor, Dept. of Geography  
University of British Columbia



**Friday**  
**Mar. 20, 2009**

**3:30 - 4:30**

**LECTURE THEATRE**

**7 - 238**

LIGHT REFRESHMENTS  
SERVED AT 3:20 PM

### Fire History of the Southern Rocky Mountain Trench: 1540-2003

My research group and I have used tree rings to reconstruct the fire history and quantify the climate conditions associated with historic fires in the mountain forests of the Rocky Mountain Forest District. Our goal is to provide baseline data on fire frequency that can be used to guide ecologically-based restoration of the historic fire regime and fuels mitigation.

Historic fires burned during significant droughts and were most common during multi-decadal periods of warm and dry climate driven by changes in the circulation patterns in the Pacific and Atlantic Oceans. Had fires burned and scarred trees as frequently throughout the 20th century as they did over the entire fire record, we would have expected 20 fire years between 1944 and 2004. Our fire scar records included only 6 fires since 1944. The low incidence of fire during the past 65 years suggests fire suppression is having a substantial impact on the fire regime of forests in the southern Rocky Mountain Trench. We have two recommendations for managers:

1. Management decisions based on fire regime attributes must account for the full range of natural variation. In many montane forests, low to moderate severity fires burned on average every 15 to 75 years.
2. Long fire free intervals during the 20th century are the result of climate variation and fire suppression. Where fire suppression has altered the fire regime, fuels likely have accumulated and may result in severe fires. Ongoing research is designed to test for the impacts of fire suppression on forest composition, structure and fuels.