



## New Developments

Three UNBC researchers were awarded **ALRF Seed Grants** this year. Congratulations to Dev Khurana (MSc candidate), Dr. Cecilia Alstrom-Rapaport (Assistant Professor, Ecosystem Science and Management) and Dr. Lisa Poirier (Instructor, Ecosystem Science and Management). Details about these projects can be found later in this newsletter.

This spring, the ALRF installed **cedar trials** in blocks 4 and 6. These will be long-term monitoring trials to be remeasured periodically by ALRF staff. Data from these and other ALRF trials are available for undergraduate and graduate student projects and classes.

A draft of the **ALRF Management Plan #2** is now complete and is currently undergoing review by the ALRF Board and peer-review. This interim draft is available at the ALRF office, on the ALRF website, or copies can be requested by contacting Mike Jull, ALRF Manager, or Melanie Karjala, ALRF Project Coordinator.

The ALRF **summer student staff** includes two undergraduate field assistants this year. UNBC Wildlife and Fisheries major, Justin Hooper, is in his second field season with the ALRF, and will be assisting with designing and implementing the ALRF wildlife inventory surveys, and demonstration trail development. ALRF also welcomes Michelle White, a UNBC Forestry major, whose duties include assisting with planting supervision, ecotyping, and harvest block and road layout.



*A beaver pond in the upland area of the Research Forest. These wetlands are important rearing habitats for waterfowl such as mallards and mergansers (Photo: J. Hooper, May, 2005).*

The ALRF now has a **new website** redesigned by Indigo Ink. The site can be found at: <http://alrf.unbc.ca>. The ALRF newsletter also has a new look, redesigned by Glenn Singleton.

The ALRF Society would like to thank **outgoing Director Bill McGill** (Dean, UNBC College of Science and Management) for his contribution to the initial development of the Research Forest. Dr. McGill's replacement will be identified over the upcoming summer.

## Forest Operations

This season's harvesting started in early December, 2004 and was completed by late February, 2005. ALRF successfully **harvested 11,600 m<sup>3</sup>** of spruce and subalpine fir, despite challenges related to rain and icy roads in January. 9,600 m<sup>3</sup> were harvested from block 6, a 40 ha clearcut with reserves; 2,000 m<sup>3</sup> were harvested from 7 ha of patch cuts in block 7.

A total of **79,000 seedlings** were planted this spring by Mikegrosite Contracting Ltd. In block 4 (2004 harvest), 56,000 spruce and pine were planted, including a 1 ha cedar trial. In block 5 (2004 harvest), 13,000 spruce and pine were planted. Ten thousand additional spruce seedlings were raw planted in block 7.

**Road reconnaissance surveys** are planned this

summer and fall to improve existing, and identify future, access infrastructure. The surveys will include detailed stream crossing assessments and stream fish inventories.



*ALRF summer student, Michelle White (UNBC Forestry major), "bags up" with cedar seedlings to plant a cedar regeneration trial (Photo: M. LeRoy, May, 2005)*

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## ALRF Seed Grants for 2005

**Three Seed Grants** were awarded this spring to researchers at UNBC.

**Dr. Lisa Poirier** will examine cattail mosquito habitat requirements and life cycles. Her previous surveys in the Prince George area revealed that 12 mosquito species were outside their known or expected ranges. Cattail mosquito larvae are unique because they acquire oxygen from aquatic vegetation, whereas other species rise to the water's surface. This makes control measures for the species challenging. By understanding habitats and life cycle, control measures can be developed that are more effective and have less impact on non-target organisms.

**Dr. Cecilia Alstrom-Rapaport** will study the reproductive ecology of willows on the Research Forest. Climate change and forest management

have impacted willow habitat resulting in less reproduction by pollination. While willows are very common, little is known about their reproductive ecology. This study will aim to fill this knowledge gap and look at comparisons between managed and unmanaged forest sites. This research is part of a larger NSERC study to examine the effects of habitat change on willow reproduction at several elevations in the Rockies.

**Dev Khurana and Lito Arocena** received their second seed grant to continue work on examining the effects of root pruning on seedling growth and development. This summer's activities will include expanding the study to implement and monitor an alternative form of root pruning treatment

The call for proposals for **2006 seed grants** will be posted in **January, 2006**.



## Research and Monitoring Update

**Final reports for two 2004 seed grants** were submitted this spring, and are available on the ALRF website. Jocelyn Campbell and Art Fredeen's (UNBC) project compares the occurrence of arboreal macrolichen species found in fine and coarse textured soil sites. Dev Khurana's (UNBC) project reports on one season's assessment of the growth and development of root pruned spruce, pine and Douglas fir seedlings.

The ALRF will be contributing to **tree climbing** training for Dexter Hodder (John Prince Research Forest). Dexter will travel to Oregon where the US Forest Service provides specialized training for canopy research. Dexter will bring his skills back to ALRF and use them to **assess cottonwood tree dens** along the Bowron River.

This summer, Dr. Art Fredeen's (UNBC) forest **carbon storage project** will expand sampling to bog sites at the ALRF. This will contribute significantly to the project's unprecedented intensive measurements of carbon in unmanaged, and managed forest stands in the Research Forest.

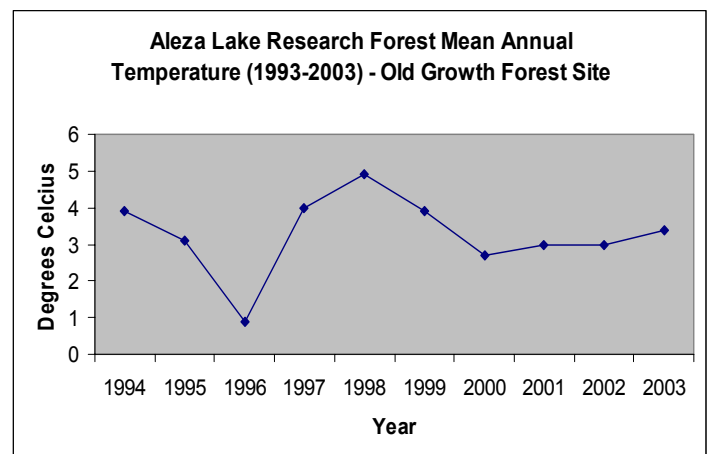
Paul Sanborn will be collecting 5 year remeasurements of his **landing rehabilitation study** (established in 1995) at ALRF. Research Forest summer student, Michelle White, will be gathering the data for her NREM 420 student project.

ALRF staff also have a busy year in research and monitoring. The Research Forest was awarded funding from the BC Forest Science Program's **Long-term Research Installations** to upgrade the current research project database (in cooperation with Malcolm Knapp and Alex Fraser Research Forests) to include GIS capabilities. The funds will also be used to upgrade and maintain the ALRF climate stations.



*Left to right: UNBC Master's candidate, Rachel Botting, field assistant, Debra Taiton, and research associate, Jocelyn Campbell, examine lichen at ALRF. Rachel will be completing her degree this year (Photo: A. Fredeen, May 2003).*

Intensive work is underway in developing **wildlife inventory** protocols and implementing pilot surveys at the ALRF. Activities with operational trials include a cedar regeneration trial installed this spring; a **pine pruning trial** planned for the fall; and remeasurements for the **shelterwood trial**, also scheduled for this fall.



*Data from one of two long term climate monitoring stations at the Research Forest. The second station is located within a forest plantation.*

## Education and Demonstration Update

The **UNBC Continuing Studies** Biogeoclimatic Classification Course, taught by local consultant Leisbet Beaudry, visited a teaching site on the South Knolls trail in May. Students used the site to practice identifying site changes in unharvested, partially cut, and clearcut stands.

A group of representatives from the **Ministry of Forests** Prince George District toured the forest with Mike Jull and Melanie Karjala. Ken Hodges, Larry Badowski, and Judy Thomas, visited a variety of research sites and historical harvesting sites across the forest.

The ALRF and FORREX co-hosted an **ALRF field tour** for natural resource professionals in May. Participants included representatives from the Ministry of Forests, MacGregor Model Forest, and FERIC, with some coming from as far as Victoria, Vancouver, and Fort St. John. The visitors were provided with an overview of research forest management, demonstrations in

innovative operational and university research, and a history of the ALRF. Many thanks to Claudette Bois, Darren Janzen, Dev Khurana, Paul Sanborn, and Trevor McConkey for discussing their projects on the tour.



*Far left: Forest carbon researchers Darren Janzen (Msc candidate) and Claudette Bois discuss their project results at an ALRF field tour this spring (Photo: C. Wainwright, May 2005)*

### Aleza Lake Research Forest

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### Aleza Lake Research Forest Society

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