ALRF Quick Facts:

- *Established in 1924 by the BC Forest Service as the Aleza Lake Experiment Station*
- *9,250 ha in size*
- *15,000m^3 annual allowable cut*
- *Directly adjacent to the Bowron River*
- *Habitat for diverse wildlife including wolves, moose and river otters*

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Aleza Lake Research Forest

Newsletter – Spring 2004

The Aleza Lake Research Forest Society (since 2001) is a not-for-profit organization, self-funded mainly by timber harvesting, and is co-managed by the University of British Columbia and the University of Northern British Columbia.

New Developments

The Aleza Lake Research Forest (ALRF) has now completed it's first two seasons of harvesting as a university-managed forest. A total of 13,600m^3 were harvested in blocks 1 and 2 in 2002/2003 and 10,500m^3 were harvested in blocks 4 and 5 in 2003/2004. The annual allowable cut for the forest is 15,000 m^3.

In May 2003, the ALRF expanded its permanent staff by hiring Melanie Karjala (Master of Natural Resources and Environmental Studies, UNBC, 2001) as Project Coordinator. Melanie's duties include developing the ALRF research, education, and extension programs, and assisting with strategic forest planning and monitoring.

Also in May, the research forest main office moved from the UNBC campus to the UNBC Annexe on 15th and Ospika in Prince George. The new facilities provide more space for the expanding staff and administration for the research forest. ALRF uses 8-139 (New Lab Building) at UNBC, and shares the research forest office at UBC (Forest Sciences Centre) for campus visits and meetings.

The first ALRF research funding program was launched with a call for proposals for seed grants to promote new research on the forest. Staff are currently working on establishing an endowment fund to build a long-term source of funding for this program.

A logo contest was initiated to celebrate the 80 year anniversary of the creation of the Aleza Lake Experiment Station in 1924. A $300 prize is being offered for the successful design, which is to be announced in June.

An aerial view of the Bowron River Floodplain (October, 2003). ALRF staff conduct periodic aerial surveys from a helicopter, one of many tools to monitor change across the forest.

Forest Operations

Staff completed a first draft of the ALRF Management Plan #2 which was reviewed by the ALRF Society Board of Directors. The plan is currently being revised based on these comments. University faculty and public review of this plan will begin in 2004.

A logging truck is loaded with spruce from block 4 in February 2004.

Improving the access infrastructure in the forest was a high priority in summer 2003. The ALRF acquired permits for a gravel pit and a rockpit for road material. Considerable road gravelling and grading on the West Branch (0-4km), East Branch (0-4km), and the Aleza Lake (0-11km) roads, and upgrades to several stream crossings were completed. A contractor was also hired to conduct roadside wildlife tree assessments and danger tree falling. Winter access was maintained along 6 kms of road for researcher and staff activities.

Planting of blocks 1 and 2 was completed in May 2004 by Mikegrosite Contracting. A mix of species were planted: spruce in low-lying sites; and Douglas fir and pine on higher, well-drained sites.

Research and Monitoring

This year, a project information management system was established for the research forest. A Policy and Guidelines for Researchers and project information recording tools were developed. Archival and field work for "legacy" (1924-2000) research and monitoring projects was initiated in the past year.

A searchable BC research forest project database tool was recently completed. This is a collaborative effort between all four BC university research forests. The database will facilitate internal project management for each forest. Researchers will be able to fill out project summaries online. Integration of selected database information from all research forests is also planned and will be searchable on the internet, improving accessibility of research forest-based projects and products to a broader audience.

Three UNBC projects, supervised by Dr. Art Fredeen (Ecosystem Science and Management), completed the first year of sampling in 2003:

- Measurement of carbon pools in above ground biomass and in soils (under project coordinator Claudette Bois);
- Master's candidate Rachel Botting's study examining photosynthesis of terrestrial lichen

Helicopter slinging a rebar cage, for the new wind tower base, into the climate station site (October 2003). Work on the weather station will continue in 2004.

ALEZA LAKE RESEARCH FOREST HARVEST AND PLANTING ACTIVITIES

Year (preparation/ harvesting)	Block Number	Area harvested	Timber Volume Harvested	Number of seedlings	Wildlife Tree Patches Reserved	Silvicultural Systems
2002/03	1 & 2	40.0 ha	13,600 m^3	71,000 (2004)	15.5 ha	Clearcut & Stripcut
2003/04	4 & 5	45.5 ha	10,500 m^3	68,000 (2005)	6.0 ha	Clearcut & Patchcut
2004/05	(3, 6, 7 & 9)	(47.5)	(14,000 m^3)	-	TBA	Single-tree selection, Patchcut Clearcut & Group selection

and bryophyte species in clearcut and unmanaged old growth stands; and
- Master's candidate Darren Jensen's study examining the use of satellite imagery, forest cover and field data to identify and assess management impacts on landscape level carbon stocks.

Two UBC projects, supervised by Dr. Collette Breuil (Wood Science), completed a second year of sampling at the ALRF in 2003:

- Master's candidate, Sepideh Alamouti's study examining fungi associated with *ips* beetle in spruce; and
- PhD candidate Philippe Tanguay's participation in a study looking at the use of an "albino" (i.e., colourless) version of the *Ceratosystis resinifora* fungus as a biological control for the typical sapstaining version.

A government/industry project, implemented by Craig DeLong (Prince George Northern Interior Forest Region), used information from ALRF permanent sample plots (in addition to information outside the research forest) to determine how numbers of snags and coarse woody debris, in different states of decay, change over time and space in response to forest management practices at both stand and landscape scales.

Ongoing long-term research project installations at the ALRF include:
- monitoring of forest development in old-growth and partially-cut stands (established in 1926);
- soil rehabilitation research on treated forest roads and landings (est. 1995);
- MoF tree improvement trials (est. 1970); and
- spruce shelterwood systems (est. 1995).

The research forest is continuing to work with Dr. Bob Sagar to maintain and monitor the ALRF climate station which has been collecting data continuously since 1993. This complements the climate data collected from 1953-1980 at the former experiment station site. In 2003, upgrades to the ALRF climate station included clearing 0.4ha around the site and slinging a rebar cage to the site for the new wind tower foundation. Work on the weather station will continue in 2004.

Three new ALRF staff projects focus on wildlife inventory and monitoring:

- A pilot winter tracking survey to identify species presence/absence – data from 10 km of transect was collected in winter 2004.
- An ongoing "wildlife sighting card" project to record wildlife observations by staff and field researchers.
- A bear den inventory project in cooperation with the John Prince Research Forest (UNBC/Tl'azt'en Nation) – spring 2004

The ALRF is also supporting John Revel's written history of the Aleza Lake Experiment Station 1940s-60s. This project includes oral histories of several people who worked in the area during this period.

2004 Seed Grants

The ALRF Society launched its research funding program by announcing a call for seed grant

ALRF research and forest operations work hand in hand. Left: Dev Khurana (UNBC MSc candidate) plants root pruned trees in block 1 in plots specifically set aside for his study. Right: Sepideh Alamouti (UBC MSc candidate) collects ips beetles from her spruce log samples, removed from slash piles and protected from slash piling activity.

proposals in March 2004. The seed grants were for amounts ranging between $250-$1000. Six proposals were submitted and four were accepted for funding:

- Dev Khurana, MSc candidate & Dr. Lito Arocena (UNBC) "Does root pruning containerized stock alter growth rate and development of planted forest seedlings?"
- Dr. Dennis Proctor - "The diversity, densities and functional roles of soil-living nematodes in mature stands of White Spruce and Subalpine Fir at Aleza Lake Research Forest: A preliminary study."
- Dexter Hodder (John Prince Research Forest) & Roy Rea (UNBC) – "Bear den site selection and forest management."
- Dr. Art Fredeen (UNBC) & Jocelyn Campbell – "Arboreal macrolichen and species diversity at the Aleza Lake Research Forest: Effect of soil types and host-tree species."

Students from DP Todd secondary explore a spruce plantation at the ALRF (September 2003).

Education and Extension

A DP Todd Secondary grade 8 science class visited the ALRF last September to learn about trees and forest ecosystems. The students collected plant samples, pictures and generated art work to use for projects in the classroom.

With the support of UNBC and the John Prince Research Forest, a one-day Introduction to Field Skills Course was held in late April specifically for graduate students and university field staff. Students learned the basics of compassing and map reading, bear safety, vegetation measurement and identification, and forest measurements techniques.
Trail development in 2003 focused on upgrading 4 km of existing interpretive trails (North Ridge and South Knolls trails). To date, 90% are cleared and 30% danger tree felled. A new, 1.8 km trail (Camp Creek Trail) was also located. In 2004, staff will work on a trail-based and road-based education and demonstration strategy. Staff will also focus on continuing to develop the existing trails by adding signage and water crossings.

A new Aleza Lake Research Forest website was also recently completed:

www://researchforest.unbc.ca

Other News

The ALRF hired two temporary employees to assist with field work in fall 2003. Co-op student Laurel McDonald (UNBC, 3rd year wildlife management), and Matt LeRoy, FIT (UBC, BSc, Forestry, 2002), prepared 2004 harvest blocks, monitored slash burning, established wildlife monitoring transects, developed an ALRF photo database, and maintained trails. Kathleen Olson joined the ALRF in April 2004 as the part-time administrative assistant. Justin Hooper (UNBC, 3rd year wildlife and fisheries) was hired as field assistant for summer 2004.

Staff Contacts

Research Forest staff are happy to answer questions and provide field tours of the forest:

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