Spring 2007

Aleza Lake Research Forest

Newsletter

What's new...

A busy field season has started for the Research Forest this year. Three collaborative ALRF projects are funded through the BC Forest Science Program including long-term research installation maintenance, a remote sensing project using **LiDAR** (ALRF, UNBC, UBC and MoFR), and a **Douglas fir survival** study (ALRF, JPRF, UNBC and MoFR)

The MoFR has approved the long-term loan of regional government records related to the Aleza Lake Experiment Station to the Northern BC Archives at UNBC. The materials include maps, documents and photographs, spanning approximately 6 decades. The ALRF in partnership with UNBC has acquired funding from the Young Canada Works program to hire **Tara Rogers** (UNBC Master's candidate) as an archivist summer assistant who will preserve and itemize the records in preparation for research and public use. When completed, the materials will be searchable on the Archives' online database.

ALRF has recently hired 3 new temporary staff. **Judy Carlson** (RFT) began a 1 year term with the Society starting in April. Judy will be conducting comprehensive cut block preparation, contract supervision, operational surveys, and silviculture database management. Summer staff includes **Andrea Erwin** (UNBC Fish and Wildlife major) who will be assisting with wildlife surveys, data management, and reporting; and **Renata Woodward** (UNBC Forestry major) who will be assisting with forest operations, special forest survey projects, and research projects.

A birder in the making – UNBC summer student Andrea Erwin identifies waterfowl through a scope during a spring bird survey. Photo: M. Karjala, May 2007.

The ALRF has begun a new travel grant program "UBC Explores the Aleza Lake Research Forest" to promote UBC faculty, student and research collaborator awareness of the Research Forest. The grants are ongoing throughout the year. **Jeremy deWaard** (UBC PhD candidate) was awarded a grant which he used to conduct some preliminary field sampling of moths in various managed stands in June. ALRF also looks forward to hosting a visit from and **Jean-Claude Ruel** (Laval University) who will be touring the Research Forest in July.

Two ALRF research seed grants were awarded to UNBC faculty this year. **Paul Sanborn**'s project "Basal radio carbon dates for Aleza Lake Research Forest peatlands"; and **Cecilia Alstrom-Rapaport**'s project "The impact of beaver foraging on the ecology and genetic structure of riparian willows" each received $1,600.

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ALRF Research and Teaching Opportunities: The Bowron River Floodplain Reserve

The ALRF Management Plan outlines strategic guidance for creating research and education opportunities at the Research Forest. Seven ALRF units are managed according to one of three emphases: Intensive forest management; Intermediate forest management; Legacy research plot management; and Research Natural Areas (reserves). This issue of the ALRF Newsletter will focus on research and teaching opportunities in Bowron Floodplain reserve which is managed to preserve habitat biodiversity.

The Bowron River floodplain includes high quality wildlife and fish habitat; floodplain spruce and cottonwood forest ecosystems; and a dynamic fluvial geomorphological environment. Depressional areas away from the main channel of the Bowron River support a variety of forested, semi-forested, and non-forested communities including a mosaic of plant communities. The Bowron River, and the many wetlands, ponds, oxbows, river backchannels, forests, and herb-shrub communities, form a rich mosaic of ecosystems and diverse terrestrial and aquatic habitats. The ALRF floodplain management reserve is 1,333 ha and encompasses the alluvial floodplain and riparian zone of the Bowron River and upland areas south of the river.

Impressive interior spruce stands occupy the highest benches. Many stands have had diameter-limit or clearcut logging in the 1960s as part of a spruce beetle salvage program, though some remain unharvested. Logged stands are now dominated by interior spruce and sub-alpine fir residuals, and regenerated black cottonwood. Clearcut stands may also support shrub-herb communities dominated by young black cottonwood. Pure black cottonwood stands in several successional stages occur on terraced benches adjacent to the Bowron River. There has been no recent harvesting in this unit except for a small six hectare plantation.

The Bowron Floodplain is recognized regionally as a very high value wildlife habitat area. Large mammal presence includes moose calving and winter habitat, and seasonal grizzly bear use. Recent exploration of black cottonwoods in the area reveal evidence of black bears denning within the larger diameter trees, some of which reach more than 2m across. ALRF boat surveys of the river and back channels reveal nesting, rearing and feeding habitat for kingfishers, mergansers, Canada geese, teals, bank swallows, sandpipers, and robins amongst others. The Bowron River has substantial sockeye and Chinook salmon runs, and a wide assemblage of Fraser Basin fish species, including white sturgeon in the lower reaches, which attract raptors such as bald eagles and osprey.

Both a local licensed guide-outfitter and trapper make use of the river by boat. Boat access to floodplain habitats for research and teaching purposes is provided commercially by Bowron River Guiding and can be arranged by contacting ALRF staff.

The Bowron River floodplain is reserved for its diverse habitat, shown here with coniferous, shrub, and partially submerged large woody debris habitats. Photo: J. Hooper, 2005.

Research Feature

Documenting Owl Presence at ALRF

Melanie Karjala and Andrea Erwin

Although the Aleza Lake Research Forest has a long history of forestry research, little information was documented about wildlife species in the area. In 2004, the Society began formal inventory and monitoring of wildlife, using presence/not detected surveys, and has completed 3 years of surveys so far. Included amongst these is an owl survey. The objectives of this survey are three-fold: to document owl species present at the forest, to monitor species presence in relation to forest management activities at specific locations, and to collect baseline information for future research opportunities.

The Barred Owl (Strix varia) is frequently detected during surveys at ALRF. Photo website: 50birds.com

The owl survey uses a call playback methodology as described by the BC Resource Inventory Standards Committee. Surveys are conducted during the months of May and early June starting ½ hour before sunset and ending around 3am. Species called over the past three years included Northern Pygmy, Northern Saw-whet, Boreal, Short-Eared and Barred, Great Horned, and Great Gray owls. Calls for all seven species are played from a truck stereo system at six stations along a road transect (Aleza Lake Forest Road) running north-south through the middle of the forest. Stations are located 2 km apart from each other, and are adjacent to a variety of forest habitats such as young plantations, old growth reserves, partial cut harvest blocks and floodplain forest. Both spontaneous and callback responses are noted. Owl species, time of call, general direction, and approximate distance from the station are also documented.

Six of seven species were detected somewhere along the transect in the past three years. The Short-Eared owl was not detected because, according to the current literature, it does not respond well to call playbacks or it is simply not present. There was only one station where all five detected species were present which is in the vicinity of 40-60 year old partial cut stands. The most total individuals were detected at a station located within the Bowron River floodplain. The highest total number of individuals detected for any one species was the Barred Owl.

This three-year data review has resulted in adjustments to the survey protocol. For instance, the Short-Eared Owl will no longer be called as they require a different survey method to be detected and may not have suitable habitat at the Research Forest. Also, the literature documents that Boreal Owls are most likely to respond before midnight. ALRF surveys have confirmed this, with all boreal owl responses occurring before 1AM and only one of 16 occurring after midnight. The survey modifications from these results will allow ALRF to improve efficiencies in implementing the survey in future years.

Other news...

Congratulations! To Dev Khurana for successfully completing his UNBC master's thesis on the effects of root pruning containerized seedlings at ALRF and Red Rock Nursery. Best of luck to Dev in his future endeavours!

Field Tours: In June, Russian foresters Rudolf Sungurov and Viktor Sidorenkov toured partial cuts and a newly planted harvest block at ALRF as part of a cross Canada tour hosted by the Canadian Model Forest Network.

Field Courses: On June 6th, UBC profs Steve Mitchell and Ken Zielke held a two day course on windthrow management in the PG area. One day was spent in block 9 at ALRF where windthrow pockets occurring over the past winter, providing an excellent teaching opportunity!

ALRF's 3rd annual Introduction to Field Skills and Hazard Awareness was held in May with a record 12 participants including student field assistants, graduate students, post docs and faculty members.

We are moving! The ALRF offices are moving out of the Annexe on 15th Ave and onto the main campus at UNBC. Keep an eye on our website for details on our new location.

UBC Prof Dr. Steve Mitchell instructs a group of forestry professionals on the finer points of windthrow management at ALRF. Photo: M. Jull, June 2007

Aleza Lake Research Forest

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BC Research Forest Project Database:
http://www.rpd.forestry.ubc.ca