

# RESEARCH HIGHLIGHTS

Summer 2001

## RIVER VALLEY ECOSYSTEMS PROJECT

This summer the Institute began a pilot study examining the community composition, abundance, and habitat associations of forest songbirds and small mammals in two river valleys in Quebec-Labrador. The river valleys in question include sections of the Little Mecatina River and the St. Augustin River located just south of the Quebec-Labrador border. The Little Mecatina River is extensively used for low-level military jet training, whereas the St. Augustin River is located outside the Military Training Area (MTA) and will act as a control site.

The 2001 fieldwork will serve as a reconnaissance, and in some cases, a pilot study in anticipation for future research of river valleys located in the MTA. There is potential for university lead studies of cause-and-effect relationships between the abundance, diversity, behavior, and/or reproductive success of selected wildlife species and low-level overflights. The information collected will enable the Institute to design studies more directed at investigating the impact of low-level overflights on specific species.

On 18 June a field crew was transported to the Little Mecatina River valley to establish a base camp and begin fieldwork in preparation of the forest songbird censuses. Crew members established transects in open-conifer and closed-conifer habitats along the river with paired census stations situated at 50 meters from the rivers edge, in the riparian zone, and 300 meters from the rivers edge, in the interior forest. Bird surveys were conducted by ear over a 5-minute interval between dawn and 10:30am; at this time all birds recorded were identified either by sight or vocalization. Observers also noted red squirrel activity when performing songbird censuses. This data is be-

ing collected by summer student, Kathy Hogan, and will be analyzed as an undergraduate thesis at the University of New Brunswick. All stations on each river were surveyed twice with field crew switching base camps between the Little Mecatina and St. Augustin Rivers via floatplane.

After completion of the songbird fieldwork in mid-July, the field crew returned to the Little Mecatina River on 1 August to begin small mammal trapping and collection of habitat data. Both the small mammal and habitat fieldwork were conducted on a sub-sample of selected songbird survey point pairs. Small mammal sampling was conducted on a 4x5 trapping grid centered on the survey point, consisting of 2 traps per station and a spacing interval of 12 meters. Standard Victor mouse traps were used which were set and checked for three trap nights. Vegetation sampling was conducted within a 0.1-hectare circular plot situated at the center of all small mammal-trapping grids. Within this plot all trees, shrubs and ground vegetation were recorded. Over the duration of the study, noise data was collected using a programmable logging sound meter. The Little Mecatina site experienced heavy aircraft traffic with as many as 20 overflights a day, including both jet and propeller-driven low-level military aircraft. Data were also collected on the St. Augustin River and these measurements will act as background control levels for noise comparison.

The Institute plans to make comparisons of songbird and small mammal abundances between the two river valleys and among differing habitats within the river valleys. Analyses of collected data are now ongoing and preliminary results will be highlighted in the next newsletter.

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## SPRING STAGING WATERFOWL PROJECT PILOT STUDY AT FIG LAKE, LABRADOR

A project designed to study the effect of low-level over-flights on spring staging waterfowl was planned for Seal Lake, Spring 2001. The proposed project design included two study sites – a control area (no jet over-flights) and an experimental area (jet over-flights). A variety of factors contributed to the decision to change the study site location and scale down the project for the 2001 season.

This decision was made to select an alternate study location with just one study area – an experimental site. Fig Lake was chosen due to the (1) cost effectiveness as there is an existing field camp on the same lake (which allowed us to cost-share aircraft transportation) and (2) adequate numbers of a variety of staging waterfowl species were known from observations made during the previous two seasons.



View of Fig Lake Ashkui from Observation Blind, May 2001  
Photo T. Newbury

When we arrived in early May, Fig Lake was approximately 95% ice-covered with two ashkui, areas of early or permanent open water. Canada Geese and numerous duck species were present. Over the initial days of camp set-up more waterfowl moved into the area and it looked to be a promising field season. Fieldwork began in earnest 10 May. To record the behavioral ecology of the waterfowl, three sampling methods were used: 5-minute focal sample, 30-minute scan sample (focal flock), and experimentation with open-ended observations on individuals. Analyses later this fall will determine which sampling method(s) best depict the waterfowl behavior and which method will be used for sampling during the Spring 2002 season.

Unseasonably warm temperatures meant a quick spring melt and a considerable change in ashkui size over the next week. With the thaw of surrounding lakes and bogs waterfowl had more areas of open water available to them, and as a result low numbers of waterfowl were present at Fig Lake this spring in comparison to the two past seasons. Fieldwork concluded 25 May when ducks were scarce and difficult to observe. A decision was made to break camp on 26 May.

In an attempt to entice jets into the study area (for this project as well as the Harlequin Duck research), a target on a small island was erected. We anticipated low-level flights in the study area and hoped to link behavioral observations of waterfowl with noise disturbance. A programmable noise meter was utilized and logged data from 16 – 25 May, however, over this period no over-flights were experienced.

With field methods worked out and all faculties cooperating we are slated to begin a full and productive field season at the end of April 2002.

### WHAT'S NEW?

- In May 2001, Ms. Hilda LeTemplier resigned her seat as a Board member. Ms. Carol Best, Executive Director for the Central Labrador Economic Development Board has assumed the seat. Additionally, Ms. Isabella Pain resigned as the member for the Labrador Inuit Association and is replaced with Mr. Leroy Metcalfe, Lands and Resource Management Officer for the LIA.
- On July 11, 2001, Institute staff and representatives from Innu Nation were guests at 5 Wing Goose Bay for a briefing and tour of the wing. The afternoon was very interesting and informative. Thank you to Wing staff for their efforts.
- Best wishes are extended to Tom Jung who will be leaving the Institute in September to pursue a career opportunity with the Yukon government as a Senior Wildlife Biologist.

## 9<sup>TH</sup> NORTH AMERICAN CARIBOU WORKSHOP KUUJJUAQ, QUEBEC

More than 200 participants from around the world gathered in Kuujjuaq in April 2001 for the 9<sup>th</sup> North American Caribou Workshop. Biologists, social scientists, harvesters and aboriginal experts from the entire circumpolar region came together in this small northern village of 1300. Experts attended the conference from Québec, Ontario, Alberta, Northwest Territories, Yukon, Nunavut and Alaska; as well researchers from Sweden, Norway, Finland, and Russia were in attendance.

The Institute sent three delegates to the conference, Board Member John Chiasson, Community Liaison Officer Natalie D'Astous, and Wildlife Biologist Colin Jones. Two posters on recent Woodland Caribou initiatives conducted within Quebec-Labrador and an informative poster of the Institute's Community Liaison Program were presented.

Among the many topics on the agenda were the relationship between humans and caribou, traditional knowledge, the impact of human activity on caribou, and conservation efforts. Special emphasis was placed on traditional Aboriginal culture and knowledge, delving into the

long relationship that the Inuit, the Cree, and Naskapi and Innu Nations have maintained with the caribou along the Ungava Peninsula. In total

de. However, actual estimates from the recent aerial survey conducted this summer will not be released until later this fall.



Oral Presentation at NACW  
Photo C. Jones

more than 50 talks and 40 scientific posters were presented over the duration of the workshop. Much discussion took place during the week about the present status of the

was also supplemented with informal events and field excursions in and around the Kuujjuaq area.



Community of Kuujjuaq, Nunavik  
Photo C. Jones

Overall the workshop was an important gathering for those concerned with caribou, hosted in a beautiful venue rich with culture and hospitality. Kenny Blacksmith, the former deputy grand chief of the Grand Council of Cree, underlined the importance of scientists and hunters working together to improve knowledge about caribou stating, "In as much as we respect and understand the need for scientific data, and the technical approach of studies taken, we believe traditional knowledge to be all insight and understanding gained from life's experiences...and it is of equal importance."

George River herd. Indeed, preliminary data suggests that the herd has begun to decline, part of a natural cy-

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**WOODLAND CARIBOU: BIRTHS AND DEATHS**

Two animals of the 14 Lac Joseph caribou fitted with satellite collars by the IEMR and project partners during March 2000 were found dead during aerial telemetry surveys conducted late this spring. The mortalities were discovered during May and June near Atikonak Lake, Labrador. One animal was the victim of a wolf kill, whereas the other appears to have died from natural causes. At the present are 9 satellite-collared females distributed within the Lac Joseph Herd.



Lac Joseph Mortality, May 2001  
(Satellite collar still attached)

Although we receive a location of collared animals every 4-5 days, we have limited knowledge of their seasonal group dynamics or if collared females have a calf. By performing somewhat regular group composition surveys we can get a sense of how many animals are associated with a collar over the course of a year, localized habitat and monitor the progress of collared-females calves. In July, calf classification surveys were conducted for collared females of the Lac Joseph Herd. Of the 9 collared Lac Joseph animals observed 5 (56%) had a calf.

**WOODLAND CARIBOU: RECOVERY TEAM**

In response to boreal populations of woodland caribou being deemed a *Threatened Species* by COSEWIC (Committee on the Status of Endangered Wildlife in Canada) in July 2000, the Newfoundland and Labrador Inland Fish and Wildlife Division undertook to form a Labrador Woodland Caribou Recovery Team (LWCRT) in December 2000. The first goal of the LWCRT is to establish team members and draft a Recovery Plan for woodland caribou in Labrador.



Photo T. Jung

The Chair of the LWCRT, Mr. Robert Otto, Senior Wildlife Biologist with the Inland Fish and Wildlife Division, called the inaugural meeting of the team in January 2001. At this meeting the team made plans for the completion of a draft Recovery Plan. Members are currently drafting that plan and it is expected in the coming months. The Recovery Plan will detail the distribution, status and potential threats to woodland caribou in Labrador, and list priorities for research and management aimed to improving the health of the herds. Colin Jones and Thomas Jung of the Institute participate in the efforts of the LWCRT. Watch for more interesting news from the LWCRT!

**THANK YOU**

The success of this year's field season would not have been possible without the efforts and commitment of our summer staff. Thank you to Kathy Hogan, Roland Kemuksigak, Coreen Michelin, Ted Parady, Joseph Townley, and Bonnie Wall.

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**Research Highlights**

Information for this issue of Research Highlights was provided and compiled by Institute staff. If you have any comments or if you have information you would like to see included, please contact the Institute's office.