

IEMR Research

Highlights

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IEMR Staff

Institute for Environmental Monitoring and Research
P. O. Box 1859, Station B
Happy Valley-Goose Bay,
Labrador, NF A0P 1E0
Web Site: www.mun.ca/iemr

Telephone: (709) 896-3266
Facsimile: (709) 896-3076
E-mail: iemr@hvgb.net

Community Liaison Project with First Nations

During March and April, Natalie D'Astous, IEMR Community Liaison Officer, visited the communities of Mingan, La Romaine, St. Augustin, Sheshatshiu, Davis Inlet and Kawawachikamach, to discuss the recent work of the Institute and community concerns. As with previous visits, Ms. D'Astous met with elders to disseminate the recent work of the Institute and to hear their observations, comments and concerns.

New to these visits, however, was that Thomas Jung, IEMR Research Biologist, joined the discussions in two of the communities: Mingan and Sheshatshiu. Ms. D'Astous and Mr. Jung presented the objectives and preliminary results of the projects on the Lac Joseph and Red Wine Mountains caribou herds. Aboriginal elders assisted the IEMR in the interpretation of data obtained in both studies and commented on the general ecology of caribou. Indeed, Mr. Jung noted that the insight provided by Innu elders greatly facilitated the interpretation and utility of the data and illuminated areas where the studies lacked sufficient data.

Also unique to the visits in Mingan and Sheshatshiu was that field crew from the 1999 Harlequin duck project (Simon Andrew, Sheshatshiu) and the 2000 Lac

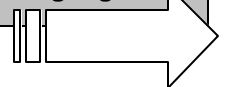
Joseph caribou project (Raynald Mestokosho, Mingan), conveyed their experiences to elders in their respective communities. Discussions between both Mr. Mestokosho and Mr. Andrews and the elders of their respective communities focused largely on the animal capture and collaring/banding procedures. Both team members conveyed to the elders their enthusiasm with the two projects.

The participation of researchers and field crew from the communities in the community liaison program appeared to be a noteworthy process, enhancing a two-way flow of current information between the communities and the IEMR. A full report on the discussions held in each of the communities will be prepared by Ms. D'Astous. *

Economic Impact of Military Flight Training in Labrador and Northeastern Québec

On July 13, 2000, Susan Sherk of AGRA Earth & Environmental Limited and Tom Pinfold of Gardiner Pinfold Consulting Economists Limited presented their study on the *Economic Impact of Military Flight Training in Labrador and Northeastern Québec*. Highlights of this study will be available in the Fall Issue. *

Please read on for the
IEMR Research Highlights



RESEARCH HIGHLIGHTS

◆ HARLEQUIN DUCKS

Ian Goudie, Ph.D. candidate with the Atlantic Cooperative Wildlife Ecology Research Network of Memorial University of Newfoundland, continues his research on the effects of low-level flying on the behaviour, body condition and survival of the *endangered* Harlequin Duck breeding at Fig River, a tributary of the Lower Churchill River in the Low Level Training Area. This year the study incorporated a NSERC M.Sc. student Kelly Squires with the University of British Columbia who is studying the role of vigilance in males toward the feeding and breeding success of female Harlequin Ducks. The study has been expanded to include a control site at Crooked River, an area outside of the LLTA with a very high density of breeding Harlequin Ducks that was recently discovered by Canadian Wildlife Service.

The Goose Bay Office of DND has designated the Fig River site as a Special Test Area for military jet over-flights, and this cooperation has improved the frequency of over-flights there. Intense behavioural watches by observers have been able to quantify responses of marked Harlequin Ducks to low-level jets. Sound level meters are successfully quantifying ambient noise levels on the study area, and record noise signatures associated with military jet over-flights. These noise levels vary considerably depending on the proximity and altitude of approach and the aircraft type.

Highlights of the Harlequin Duck Study to date include: (i) the recapture in coastal SW Greenland by Dr. Greg Robertson of Canadian Wildlife Service in August 1999 of a male banded at Fig River by Ian Goudie in 1999 (ii) the

return of over 90% of the marked individuals in same pair combinations to the Fig River study site in 2000 (iii) detected behavioral responses of birds to aircraft over-flights, and (iv) quantification of noise generated from low-level jet flights significantly above background levels of the riverine habitat of this sea duck.*

◆ LAC JOSEPH CARIBOU

The IEMR, in conjunction with its partners (Robert Otto, Senior Wildlife Biologist, Government of Newfoundland and Labrador; Serge Couturier, Senior Wildlife Biologist, Government of Quebec; Tony Chubbs, Mitigation Officer, GBO-DND; and several members of the Mamit Innuat), recently completed field research on the woodland caribou south of the Churchill River. Field work was concentrated on deriving the density and distribution of woodland caribou and moose, obtaining a population estimate, determining overlap between caribou distribution and the Military Training Area (LLTA), and deploying satellite-collars on female Lac Joseph caribou in and adjacent to the LLTA.

Caribou were scant east of Lake Winokapau, with most of the few observations obtained belonging to the Red Wine Mountains herd. Although two groups of caribou were observed between the Petit Mecatina and Natashquan rivers, an area once occupied by the Dominion Lake herd. This herd has not been observed for some years and whether these caribou are remnants of the Dominion Lake herd, or simply small bands of caribou that lack a definable herd designation, is a point of debate.

A total of 482 caribou thought to belong to the Lac Joseph herd were observed. Early examination of the data has revealed interesting information. First, the herd is currently estimated to comprise of 1025 caribou – much

higher than previously thought. The initial population estimate was obtained through rigorous scientific methods, but consultation with Innu elders suggests that the estimate should be adjusted slightly upwards.

Demographic parameters suggest a herd that is stable or slowly increasing, as suggested by a good recruitment rate (21 calves per 100 adults) and fairly balanced adult sex ratios (92.1 males per 100 females). However, evidence gathered since 1998 by the two provincial resource management agencies and DND suggests that adult mortality may be high due to wolf predation and human harvest. During the present survey we observed 3 adult caribou killed by wolves and 5 harvested by humans – all belonging to the Lac Joseph herd.

Moreover, 37% of the groups and 32% of the number of caribou observed were located within the Military Training Area. Thus, it appears that there is much more use of the Military Training Area by the Lac Joseph herd than previously thought, at least in late-winter. Virtually all of the caribou observed within the Military Training Area were within the Romaine River watershed, the area designated for proposed hydro-electrical development. Clearly, the potential for cumulative impacts (predation, hunting pressure, and disturbances related to hydro development and low-level aircraft activity) are great. With respect to low-level flight training, mitigation strategies may need to be developed for this herd, depending on further study of their seasonal use of the LLTA. Over the next two years, satellite-collars attached to 14 adult females should give us a more complete picture of the use of the LLTA by this herd, from which mitigation strategies may be recommended, if warranted.*

DND OSPREY MONITORING PROGRAM

On April 3 and 4, 2000, the IEMR convened a workshop to discuss DND's long-term osprey monitoring program. The objectives of the workshop were to:

- ◆ review past research efforts on osprey;
- ◆ determine future research needs;
- ◆ review the question(s) posed in DND's long-term monitoring program and methodology to answer these questions;
- ◆ and, provide an assessment and further recommendations to strengthen the monitoring program.

Several research routes were proposed to increase our understanding of how

low-level flying might affect raptorial birds at the population level. Two research avenues generated general approval, including satellite-tracking the movements of osprey breeding in the LLTA, to obtain an indication of adult survival and territorial fidelity.

Also, it was agreed that the IEMR Research Biologist should lead a multi-agency team in developing a population model of osprey breeding in southern Ungava. The end product of the population model will be an estimate of the productivity of osprey required to sustain the osprey population at a stable level over the next 10-50 years. The utility of the model will be that it provides a quantitative measure of the population status of osprey both within and outside of the LLTA. It is anticipated that the initial model will be developed and presented in Fall 2000.*

COMING IN THE FALL ISSUE:

- ➔ Economic Impact of Military Flight Training in Labrador and Northeastern Québec
- ➔ Update on the Harlequin Duck project at Fig River
- ➔ Highlights from the Effects of Noise on Wildlife Conference
- ➔ Update on the 9th North American Caribou Conference
- ➔ Waterfowl Technical Committee

**** Note **** Due to recent staffing changes at the Institute, there was no April Issue of the *IEMR Research Highlights*.

IEMR OFFICES

Moncton, New Brunswick Office of the Chair

Louis LaPierre, Ph.D.
Institute Chair

Gloria Belliveau
Executive Assistant

Happy Valley-Goose Bay, Labrador

Research

Thomas Jung
Wildlife Biologist

Tony Parr
GIS Specialist

Colin Jones
Wildlife Biologist

Alain Fontaine
Wildlife Biologist

Mark Dalton
Assistant Wildlife Biologist

Administration

TBA
Managing Director

Maureen Baker
Administrative Manager

Natasha Voisey
Administrative Assistant

Rexanne Hopkins
Conference Coordinator

IEMR Research Highlights

Information for this issue of the IEMR Research Highlights was provided and compiled by Thomas Jung, Rexanne Hopkins and Maureen Baker. If you have any suggestions or comments on the highlights or if you have information you would like to see included, please get in touch with Maureen at the address provided on the front of the newsletter. *

Effects of Noise on Wildlife Conference

Planning is progressing for the Effects of Noise on Wildlife Conference which will be hosted by the Institute on August 22 and 23, 2000, in Happy Valley – Goose Bay. Samples of scheduled presentations are:

- *Summary of the Osprey research relating to the low-level flying program in Labrador*
Speakers: Peter Thomas, Environment Canada, and Perry Trimper, Jacques Whitford Environment Ltd., Canada
- *An overview of studies to assess the effect of aircraft training activities on waterfowl at Piney Island, North Carolina, USA*
Speaker: Dr. James Fleming, U.S. Geological Survey, USA
- *Responses of caribou to overflights by low-altitude jet aircraft in Alaska*
Speaker: Dr. Julie Maier, University of Alaska Fairbanks, USA

There is a *Welcoming Reception* being held at Maxwells on August 21, 2000, at 6:30 p.m. All are welcome. Proceeds from the Silent Auction will be donated to the Paddon Memorial Home.

Information on the conference can be obtained from the Institute through Rexanne Hopkins, Coordinator, at iemr@hvgb.net / (709) 896-3266 or by visiting the IEMR website at: <http://www.mun.ca/iemr>. *

Don't forget to register early. Space is limited for the conference and tours.

Caribou (Aboriginal) Technical Committee

The members of the Committee are:

Mr. Kevin Head, Innu Nation
Mr. Andr's M<k, Mamit Innuat
Ms. Josée Brunelle, Naskapi Nation of Kawawachikamach
Ms. Micheline Manseau, Boreal Forest Ecologist, Parks Canada
Mr. Stas Olpinski, Inuit of Nunavik

It is the mandate of the Caribou (Aboriginal) Technical Committee to examine existing traditional environmental knowledge datasets and to incorporate aboriginal knowledge into caribou research. The committee is working together to collate a caribou database using aboriginal knowledge and to develop a project to examine caribou range use and movement and migration patterns to identify gaps in our present knowledge. The committee met in Montreal in January 2000 with Dr. George Wenzel, the newly appointed member of the SRC and professor of anthropology at McGill University. Data has been transferred from the Innu Nation and the Labrador Inuit Association to the Institute. The Mamit Innuat and the Inuit of Nunavik have agreed to share their TEK databases with the Institute and transfer is expected to take place within the coming months. A contract was recently awarded to the Naskapi Nation of Kawawachikamach to digitize existing data. This will be transferred to the Institute upon completion. *

Administrative Manager

In July, Maureen Baker assumed the position as Administrative Manager for the Institute. Since 1987, Maureen has worked in a variety of business environments and has proven capabilities in office administration, post-secondary education, sales and marketing. Previous to accepting this position, Maureen worked as the Admissions Representative/Secretarial Instructor with CompuCollege in Happy Valley-Goose Bay for four years. In this capacity, Maureen won several national and Atlantic awards based on providing excellent customer service.

Maureen has an honours diploma in Secretarial Studies and has completed a Certificate in Business Administration through Memorial University of Newfoundland. Presently, she is working towards completion of a Diploma of Business Administration through distance education. In 1981, Maureen successfully completed her RN examinations and worked for a short period as a staff grad at the Grace Hospital in St. John's, Newfoundland. Since moving to Happy Valley-Goose Bay in 1996, Maureen's community involvement includes being a Business Consultant with Junior Achievement, a Board Member for the Early Childhood Development Association and a member of the Big Land Fair Steering Committee.

Maureen is looking forward to her work with at the Institute and to working with the members of the Board. *