



Jane Hoek, Tye Photo

Newsletter #5

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DIRECTOR EMERITUS

IRVING FOX



Irving Fox, a founding member of the BV Research Centre, died peacefully on July 20th, 2006.

Irving Kingsbury Fox was born in Bolton, Michigan on December 7th, 1916.

Irving received a B.A. in Political Science in 1939 and an M.A. in Public Administration in 1940.

In 1982 Irving retired, and in 1983 he and his wife Rosemary moved to the Bulkley Valley.

Irving took an active role in many natural resources management organizations. He also pursued his love of the natural environment through hiking, canoeing, cross-country skiing, and exploration of the wilderness of northern BC.

Irving will be sadly missed by his many family, friends, colleagues, and students.

A fund has been set up in memory of Irving. His wife Rosemary Fox will advise where the donations will be directed.

Donations can be forwarded to the BV Research Centre at Box 4274, Smithers, BC, V0J 2N0.

To find out more about Irving please go to:

[www.bvcentre.ca/PDF/Articles\(Home\)/Archived%20News/IrvingFoxMemorial.pdf](http://www.bvcentre.ca/PDF/Articles(Home)/Archived%20News/IrvingFoxMemorial.pdf)

The BV Research Centre has grown over the last 5 years. From one research project in 2002 to 24 research projects for 2006-07. Moreover, our funding has grown from \$5000 in 2002 to nearly \$800,000 in funding for 2006-07.

GROWING GEOGRAPHICALLY

For several years the Centre has completed research projects with a focus on forestry and the terrestrial environment in and around the Bulkley Valley. This research excellence continues with over fifteen projects pertaining to various topics such as Mountain Pine Beetle impacts, Caribou and Grizzly bear habitat, and monitoring of the Babine River Watershed - among other interesting projects.

Last year, research began moving downstream with research on Skeena River Floodplain Forests. This year two new projects begin to link the Bulkley Valley to the Pacific coast. Dr. Allan Gottesfeld is leading a Sea Lice research project near the mouth of the Skeena River and Anne Harfenist is leading a research project on Leach's Storm Petrels on Haida Gwaii.

In addition to projects west of the Bulkley Valley, our research is expanding eastwards. Deborah Cichowski was recently awarded funding from the Forest Sciences Program (FSP) for lead research on the project: "Effects of a Mountain Pine Beetle epidemic on forest floor vegetation dynamics and regeneration in the Itcha-Ilgachuz Caribou winter range in the Quesnel TSA".

The BV Research Centre is becoming recognized as a centre for excellence in environmental research in the Northwest. In addition to continued relationships with researchers in the Bulkley Valley, other researchers interested in our programs and services are approaching the Centre requesting assistance to prepare proposals and complete quality natural resources research projects.

CENTRE HIRES THREE NEW STAFF MEMBERS

Research Program Manager

Rick Budhwa has been hired as the Research Program Manager, in place of an Executive Director position. Rick brings a range of experience to the BV Research Centre including a Masters in Archaeology from SFU, with emphasis on Anthropology and First Nations Studies.



Rick's academic, professional and personal research includes; traditional land use, human interactions with their environment, catastrophic paleoenvironmental events, geomorphology, the similarities and differences between scientific and indigenous interpretations, indigenous archaeology, First Nations cultural and natural resource management, indigenous perceptions and interpretations of past and present, oral traditions and oral histories, and British Columbia legal proceedings and government legislation regarding traditional knowledge and oral traditions.

THREE EXCITING NEW PROJECTS

SEA LICE RESEARCH

"We need to spend more money on monitoring diseases in wild fish. The discussions about how serious Sea Lice and the diseases are in wild salmon is much impeded from lack of data on wild fish", said Dr. Allen Gottesfeld at recent hearings in Terrace of the Special Committee on Sustainable Aquaculture. "The government has to quit denying that it has a problem. The science is settled. It's time now to deal with the political level and not deny that there's a problem with Sea Lice."

Dr. Allen Gottesfeld has been involved for the last few years in collecting juvenile salmon on the North Coast and examining a small number of co-occurring adult salmon to determine whether a transfer of Sea Lice is occurring. This specific study conducted through the BV Research Centre, is partially funded by Tides Canada and investigates the dynamics of Sea Lice transmission between in-migrating adult salmon and out-migrating juvenile salmon. This study also intends to establish a baseline on the prevalence and intensity of Sea Lice on migrating adult salmon and juvenile salmon on the North Coast.



In the past five years, Sea Lice have jettisoned into the public domain. Along the BC Coast, Sea Lice are prevalent and anyone who has fished on the coast has often seen these small miniature "sting-ray" looking creatures attached to adult salmon in relatively small numbers. Once adult salmon enter freshwater in their upstream migration the lice fall off; where the problems occur is in the out-migration of young salmon smolts. Small numbers of Sea Lice (i.e. two or three) attaching themselves to young salmon can debilitate and kill.

Salmon and Sea Lice have co-existed for eons; however, where problems are being identified is where open-net

Research Program Assistant

David Loewen is the principal of D. Loewen & Associates located in Smithers.



Raised on Haida Gwaii, David brings a range of experiences and skills to any project: from

fisheries, forestry, and tourism through the non-profit sector, youth work, and First Nations.

David has worked as a project manager and fisheries technician on stream restoration and stream inventory projects on Haida Gwaii and Vancouver Island. He also worked for the Nacho Nyak Dun First Nation in the central Yukon as their Salmon Habitat Steward, and served as an advisor to the Canadian portion of the Yukon River Panel (a component of the Pacific Salmon Treaty) and to the Council of Yukon First Nations in the Yukon Placer Mining Review. David also ran his own ecotourism company based out of Queen Charlotte City, BC.

David plans to soon begin his Masters in Conflict Analysis and Management. David is also a new Dad, and has been settled in the Bulkley Valley for a few years. He is an active volleyball coach in the valley and when not near, in, or on the river; he is in the mountains.

salmon farming is occurring in areas where salmon smolts congregate during their out-migration to the North Pacific. Outbreaks of Sea Lice are common in open-net fish farms and several drug treatments have been developed to limit the problem in farmed fish, however transference to juvenile wild salmon remains an issue.

Industrial aquaculture has occurred on the coasts of Norway, Scotland and Ireland for several decades, more recently industrial aquaculture is expanding on the BC coast. Over the last few years in the Broughton Archipelago near Campbell River, on eastern Vancouver Island, alarms were sounded, as links were determined between Sea Lice outbreaks from open-net fish farms and out-migrating juvenile pink salmon mortality due to sea lice infestation. Debate and scientific inquiries continue, as the BC Government lifted the moratorium on new fin fish farm development in 2002. In this past year, the BC Government has approved new fish farm operations on the BC Coast, and applications are pending on three sites near the mouth of the Skeena River.

Currently, the BC Government is holding public hearings on sustainable aquaculture. The Special Committee on Sustainable Aquaculture, comprised of four Liberal MLAs and six NDP MLAs was formed in April. Throughout most of June, the Committee conducted hearings in coastal communities throughout BC.

At the Terrace hearings in mid-June Dr. Gottesfeld presented some of his findings over the last few years: "We looked at a natural situation, and Sea Lice levels under a natural situation are basically 1/100 of that in the Broughton - 50 to 400 times difference in occurrence levels."

The Committee begins hearings again in Fall 2006 with Smithers as one of its stops. Visit <http://www.legis.gov.bc.ca/cmt/38thparl/session-2/aquaculture/index.htm> to read transcripts from the fourteen communities already visited and to watch for upcoming hearings.

Summer Student

Olivia Pojar has been hired for a summer student position and will be assisting on various research projects.

Raised in the Bulkley Valley, Olivia graduated from McGill University in 2003 with a degree in English Literature. In September 2006, Olivia is returning to do a second degree in Biology.

Olivia spends her summers in Smithers, hiking, horseback riding, and going to garage sales.



Olivia in the Torkelson Burn
Photo: Ruth Lloyd

2006 BV RESEARCH CENTRE SCHOLARSHIP

The Bulkley Valley Research Centre annually awards a scholarship to a promising graduate from Smithers Secondary School who is pursuing post-secondary education in a field related to the conservation and management of renewable natural resources.

We would like to congratulate Cameron Reive who is the 2006 Scholarship recipient.

Cameron has been accepted at UNBC and he will commence his studies this fall.

LEACH'S STORM-PETREL



The Leach's Storm-petrel is a small dark bird that nests in small offshore island colonies in both the Atlantic and Pacific. When not nesting, these birds move far from land in areas of ocean upwelling and downwelling foraging food while hovering or skimming the water's surface. They sometimes forage near feeding whales or seals, but seldom sit on the water to feed. They are difficult to observe on their nesting colonies since they enter and leave the colonies only at night, mainly to avoid predation.

Storm-petrels comprise approximately 27% of BC's total population of nesting seabirds, with Leach's Storm-petrels representing the majority of the two Storm-petrel species in BC. Storm-petrels are a significant indicator for marine ecosystems; however, population trends and demography of Storm-petrels in BC remain poorly described. Due to their feeding habits, Storm-petrels are highly vulnerable to offshore oil and gas development. As such, baseline studies are essential for impact assessment if offshore exploration proceeds in the future.

As upper trophic level predators, marine birds are considered useful indicators of changes in marine ecosystems. Much seabird research has examined reproductive parameters and population trends of species representing a range of feeding guilds in relation to oceanographic conditions. Over the last decade, the emphasis has shifted to incorporate adult survival estimates - a key demographic parameter for long-lived species with low annual reproductive output such as seabirds.

This study will determine annual adult survival estimates for Leach's Storm-petrel (*O. leucorhoa*). Comparisons of

BV RESEARCH CENTRE AWARDS

Congratulations to the Winners and Nominees of the 2006 BV Research Centre Awards.

IRVING FOX AWARD - Project or Lifetime Contribution

www.bvcentre.ca/PDF/Documents/Archived-News/IrvingFoxAwardNewsReleaseFeb2006.pdf

Winner - Jim Pojar

More than any other individual of over the past 25 years, Jim has contributed to the scientific and public knowledge of the natural resources of northwest B.C. and their sustainability both in the region and outside.

JIM POJAR AWARD - Publication

www.bvcentre.ca/PDF/Documents/Archived-News/JimPojarAwardNewsReleaseFeb2006.pdf

Co-winner Richard Daly

*Our Box Was Full: An Ethnography
for the Delgamuukw Plaintiffs.*

Co-winners

**Alex Woods, Dave Coates, and
Andreas Hamman**

*Is an unprecedented Dothistroma
needle blight epidemic related to
climate change?*

www.bvcentre.ca/HTML/Documents/Archived-News/DothistromaNeedleBlight.htm

demographic parameters of other seabirds nesting in different oceanic current systems have assisted in understanding relationships between ocean conditions and seabird populations. As such, the present study will be conducted at two geographically dispersed sites along the B.C. coast: Rock Islets off the east coast of Moresby Island, Haida Gwaii and Cleland Island, an ecological reserve located off western Vancouver Island. The two study sites lie within different oceanographic domains: coastal Haida Gwaii is influenced by the downwelling Alaska Current, whereas Vancouver Island is located within the upwelling California Current.

Nesting burrow examination and banding of adult birds will be the primary methods for research. Re-sightings of banded birds between years will be used to estimate adult annual survival. Data will be collected for four to five years at each site.

ITCHA-ILGACHUZ CARIBOU

The Mountain Pine Beetle continues its onslaught through the BC Interior. There is now over 1 000 000 hectares of forests moderately or severely attacked in west-central BC. A large portion of this area comprises the winter range for the Itcha-Ilgachuz Caribou one of the largest and highest density Caribou populations in the Province, which was recently listed as "Threatened" by the Committee on the Status of Endangered Wildlife in Canada.



These Caribou select mature lodgepole pine forests within the very dry, very cold subzone of the Montane Spruce (MSxv) biogeoclimatic zone and forage primarily by cratering through the snow to obtain terrestrial lichens. As Debbie Cichowski explains, "A number of studies are currently examining regeneration and advanced regeneration in a post-mountain pine beetle landscape, however few studies have focused on forest floor vegetation dynamics. Because Caribou select primarily low

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productivity stands during winter, advanced regeneration on these sites is generally lower than on more productive sites and are good candidates to examine understory vegetation dynamics and regeneration in response to the mountain pine beetle epidemic.”

Preliminary work began in 2005 approximately 100 km west of Quesnel, in the Quesnel TSA. Permanent sample sites were established to examine effects of the Mountain Pine Beetle epidemic on understory vegetation dynamics, terrestrial lichens and regeneration. This study will expand those sites and establish three additional sample sites. It is believed results from this study will be applicable in the Southern Interior and Northern Interior Forest Regions.

ONE EXCITING NEW BOARD MEMBER

We are pleased to welcome Dave Bustard as our newest Board Member.

Dave Bustard is a fisheries consultant working in the field of freshwater fisheries inventory, population monitoring, and impact assessment. Dave started his career in the early 1970's as a field assistant working at Carnation Creek, a long-term logging and fisheries study. He arrived in the Bulkley Valley in 1974 as the first regional habitat biologist, and has been working as a consultant involved in land-use fisheries projects for the past 30 years. Project experience has been wide-ranging with major hydro, highways, forestry, and mining projects taking him to all corners of the Northwest.

THANK YOU TO OUR DEPARTING BOARD MEMBERS

We would like to extend a big thank you to Frank Doyle and Steve Gordon who both served as Board Members over the past years. Their contributions were significant and much appreciated.

WE HOPE YOU HAD A GOOD SUMMER

Bulkley Valley Centre for Natural Resources Research & Management

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