



President's Message

This year has been a little unusual, to say the least, in terms of Chapter business because of the parent organization's annual meeting in Calgary last September. Speaking of that meeting, all members who participated in that effort should be congratulated for their contribution to a great conference.

I would like to thank the out-going executive for their excellent work in keeping the Chapter moving forward throughout their 'watch'. In particular, thanks to Kirby Smith for his work with helping to organize our last conference in Nisku; this duty usually rests solely with the incoming president-elect. To the incoming executive, President-elect Terry Kowalchuk, Directors Jim Allen and Dave Scobie, welcome; we look forward to working with you in the current term.

From all reports, the 2005 conference was another success with about 190 participants registered of which 62 (33%) were student members. Is this successional planning, or what? Jan Ficht has summarized the conference highlights in another article of this newsletter.

I look forward to serving as your president for the coming year and see both challenges and opportunities coming. Probably our greatest challenge is convincing our governing leaders to put the same effort into repayment of our "ecological debt" as they put into the economic debt.

Our society must make an effort to be at the table to influence government policy on land use issues, wetlands policy, public lands access, etc. if we are to be effective.

The Water for Life strategy that is currently being implemented provincially, is another area that we should be involved in to ensure wildlife has a voice. As basin councils develop integrated watershed management plans we should be part of that process.

I call on all of you to support the executive with your expertise to make these challenges opportunities.

Thank you

Ernie Ewaschuk
President

Editors Note

Once again I'd like to thank those who took the time to provide some very excellent feature articles for this issue. Without their effort this would be a very short and dull newsletter indeed.

I also need to admit to blowing the photography of the award winners at the ACTWS conference in March. I've been doing this job since the start of the ACTWS conferences but the experience didn't help when I switched to new equipment and new technology. My apologies to all the winners.

Chapter News

ACTWS 2005 Annual Meeting – Nisku Alberta –
March 10, 11 & 12

Jan Ficht, Fish and Wildlife, Edson.

Registration – 187 (71 students)

38 abstracts were submitted for presentation

15 posters were displayed

Feature Articles

Beaverhill Bird Observatory Initiates NORTHERN SAW-WHET OWL Migration Monitoring in Central Alberta

LISA PRIESTLEY, Beaverhill Bird Observatory, P.O. Box 1418, Edmonton, Alberta T5J 2N5

A Northern Saw-whet Owl migration monitoring program was initiated at Beaverhill Lake Natural Area in central Alberta (53°22.8'N, 112°31.6'W). In 2002 and 2003, 145 and 151 saw-whets were captured respectively, using a standard migration monitoring protocol (Priestley and Priestley, in press). A full time program was run in 2004, with the objectives of:

- 1) determining how many Saw-whets were migrating through the Beaverhill Lake region
- 2) determining what age and sex classes of saw-whets were moving through the area
- 3) determining the timing of the fall migration of saw-whets,
- 4) providing educational opportunities for the public,

In 2004, four saw-whet owl mist nets were set. Two nets were set adjacent to each other to form an L-shaped net array, and two single nets were set on their own. Nets were opened one hour after sunset, and the solicitation call of the saw-whet breeding advertising call (Cannings 1993) was broadcast with a CD player next to the L-shaped net array. Nets were set for four hours from August 15 to October 10 and for six hours from October 11 to November 15. Nets were checked every half-hour, and any captured owls were removed from the nets and brought back to the lab for processing. The data collected from each captured owl included: age (Pyle 1997), sex (Brinker - www.projectowl.net.org/df.htm), weight, wing chord, tail length, and flight feather molt pattern. In 2004, a sample of each feather generation was clipped and four body feathers were plucked for a cooperative study on isotopes and sexing (C. Priestley, University of Alberta, pers. comm.). All data was entered into Excel and into a provincial database (BSOD).

In 2004, we caught an amazing 309 saw-whet owls, more than double the number of owls captures in any previous year. Most of the owls were hatch year birds, and most were females.

Table 1. The number of northern saw-whet owls captured at Beaverhill Lake 2002-2004.

Year	Number of Nights	Number of Net Hours	Number of Owls Captured	Number of Owls/Net Hour
2002	74	1097.00	145	0.132
2003	64	903.00	151	0.167
2004	75	1172.00	309	0.264
Total	213	--	322	--

Public response to the Saw-whet migration research was high. In 2004, 104 members of the public attended public events over two evenings. An additional 42 people came out to the lab to observe the work on various other nights during the season. If you would like more information on this program or would like to visit our site so see the research, please visit our website at www.beaverhillbirds.com and click on raptor monitoring.

REFERENCES

Brinker, D.F. 2000. Sex Criteria for Northern Saw-whet Owls. Website: Project OwlNet - <http://www.projectowl.net/org/df.htm>

Cannings, R. 1993. Northern saw-whet owl (*Aegolius acadicus*), in The Birds of North America No. 42 (A. Poole and F. Gill, eds.), no. 42. Acad. Nat. Sci., Philadelphia.

Pyle, P. 1997. The identification guide to North American birds: part 1. Slate Creek Press, Bolinas, CA. 732 pp.

ACKNOWLEDGMENTS

I am grateful for funding and in-kind support from Shell Environmental Fund, Alberta Conservation Association, Beaverhill Bird Observatory, Alberta Sustainable Resource Development, and the Canadian Wildlife Service. Many individuals helped with field data collection at Beaverhill Lake in 2004, including BBO staff Matt Hanneman, Jill Thompson, and Tessa Vesak. Many thanks to ALL 12 volunteers (120 person-nights), in particular: Chuck Priestley, Bryn Spence, Martina Frey, and Juanita Mumby.



Evaluation of Stewardship Delivery from Cows and Fish

Lorne Fitch, P. Biol. Provincial Riparian Specialist, Cows and Fish

Norine Ambrose, Program Manager, Cows and Fish

“It’s not only what you do, it’s how you do it and, does it count”. The Cows and Fish program has been in the business of delivering the elements of stewardship for over a dozen years. The elements of stewardship (awareness, ethics and action) are delivered in a circular process involving five linked and repeated steps. This pathway begins with awareness and follows through team building and tool building to community-based action and monitoring. Dozens of community and watershed groups have found this a useful format to follow, to build a cumulative body of information, to empower and motivate community members and to provide measuring sticks of progress. Cows and Fish has a commitment to evaluating program success. The results of the latest evaluation may be of interest to those involved in conservation initiatives.

Programs are delivered by people, to people; it is crucial to understand what characteristics program deliverers should have and if those characteristics function to enhance learning and practice change. Through an independent evaluation we asked three questions:

- Do the deliverers of Cows and Fish achieve trust and credibility to enable messages to be accepted?
- As a result of the way messages are delivered, does that enhance or increase awareness?
- As a result of using the Cows and Fish process, and characteristics of staff, is a change in management occurring, what is the rate of change and over what time span does it occur?

Participants in the evaluation were landowners (both rural and urban), agency staff (municipal, provincial and federal), conservation agency staff and industry. Over 200 people participated in the exercise. Representation included all parts of Alberta. The evaluation was conducted in 2003.

What are the key findings of the evaluation that relate to stewardship delivery?

1. The community-based approach used by Cows and Fish is a constructive forum to effectively work with landowners (and others) because it appears the format allows more interaction, better relationship building and greater acceptance and adoption of new information. Consistently, people part of watershed/community groups rated Cows and Fish staff higher on key characteristics, acquired new information at a greater rate, and made more management changes based on the information and interaction than did people not part of these groups.
2. There is successful engagement and interaction with people when message deliverers are trusted and seen to be credible – understanding the practicalities, knowledgeable about management and able to motivate. There are nine key characteristics that respondents viewed as essential for Cows and Fish staff to demonstrate in interactions with people. Cows and Fish staff scored highly on all these necessary characteristics.
3. Building a foundation of awareness/education is a fundamental step in the Cows and Fish process. Awareness programming is formed from basic ecological principles and processes and is delivered in non-threatening, non-controversial ways. On average, 82% of respondents learned new information or raised their awareness as a direct result of contact with Cows and Fish. Respondents noted that most of the knowledge acquired related to ecological function, relationships between land use and function, and vegetation attributes. The most important strategy learned about was how to recognize and assess riparian health.
4. The ultimate goal of a stewardship initiative is to achieve stewardship – people using information to make responsible decisions about how to use and protect landscapes. On average, 58% of respondents adopted new management, or changed management as a direct result of

contact with Cows and Fish (64% of landowners who were part of community groups made land use changes). The majority of practice change described how people stood back, saw a larger landscape picture and then planned and applied the principles of riparian management.

5. It takes time to build relationships in which barriers, and solutions to practice change, can be identified; contact with Cows and Fish was an important fixture in this process. Patience and persistence are virtues of Cows and Fish. It takes about 3 to 5 years from initial contact for most people to make the first practice change. In that time span, and beyond, Cows and Fish staff provides a diverse array of mechanisms to accommodate change inclusive of information, encouragement, motivation and reinforcement.

For those engaged in stewardship delivery, this evaluation provides important lessons about the mechanisms of delivery that may aid you in your particular initiative. More information can be provided by contacting Cows and Fish (403-381-5538; riparian@telusplanet.net).

Spatial ecology of northern flying squirrels in Alberta's foothills.

Matthew Wheatley, University of Victoria (E-mail: mtw@uvic.ca)

For the last 25 years northern flying squirrels have been of keen interest in applied ecology. They are one of a few forest species known to feed almost exclusively on hypogeous fungi (underground mushroom truffles) and disperse these fungal spores through the forest in their feces. Hypogeous fungus is required for proper tree growth, and relies completely on animal vectors for spore dispersal, so flying squirrels are thought to facilitate an ecological mechanism essential to forest health and regeneration, and are thus of particular interest in forest management.

Unfortunately, flying squirrels remain largely unstudied outside the coastal forests of the Pacific Northwest where they rose to ecological notoriety as the primary

prey for the threatened northern spotted owl. We know little about their ecology in non-coastal systems, even though their natural range extends throughout the northern forests of North America. They are nocturnal, and their relatively low densities make them a challenge to study. However, for the last 2 years Hinton Forest Products has been supporting a flying squirrel research program in western Alberta.

Using data collected across the northern and western forests of the province, this research began as a collaborative effort between Weldwood (now Hinton Forest Products), Alberta Pacific Forest Industries Inc., the University of Alberta, and the Alberta Research Council. The initial objectives were to relate flying squirrel abundance to landscape structure at multiple spatial extents using GIS-based habitat data of relatively large grain and extent. Thirty-two study sites were sampled from areas between Fort McMurray, Manning, and Hinton and squirrel captures were assessed based on habitat type and proximal landscape structure. We found flying squirrel abundance to be essentially equal in all habitat types within a continuum from pure deciduous to pure coniferous forest. Similarly, abundance was not explained at all by large-scale landscape structure (e.g. forest height, forest age, area heterogeneity, and anthropogenic disturbance). The initial conclusion is that flying squirrels are responding to the landscape at a finer grain (and a smaller extent) than what is available in provincial GIS inventories, and that these features when identified will be unrelated to habitat type (see Wheatley *et al.* 2005). Hinton Forest Products is continuing this research to further explore this hypothesis.

To date we are still unable to predict where flying squirrels will occur on a landbase. In the foothills around Hinton I am now focusing individual flying squirrels to explore habitat components that explain fine-grain space use of this animal. I am conducting nocturnal walk-in radio telemetry and using GPS to acquire spatial locations to identify foraging areas for resident adults, and exploratory foray areas of dispersing juveniles.

Unexpectedly, I have found that flying squirrels are using Black Spruce bogs frequently for both foraging and nesting to rear young. Further, I have found that flying squirrels are using residual leave trees (live trees left standing as patches through cutblocks) as glide trees to cross cutblock areas that, if cleared completely, are clear barriers to their movement.

The summer of 2005 will be the second season of radio telemetry for this project. Future questions are being formed around juvenile dispersal, and what habitat features young flying squirrels require for “leaving home” versus what adult squirrels rely on as settled residents. Initial results from this project indicate that northern flying squirrels in Alberta show some fundamental ecological differences compared to coastal populations.



Photo: M.Wheatley

Juvenile flying squirrel located pre-emergence via his mother's radio collar, summer 2004.



Photo: Cy Hampson

Adult flying squirrel in full glide. Photo taken by the late Cyril Hampson in 1965 for his doctoral thesis at the University of Alberta.

CITED:

Wheatley, M., J.T. Fisher, K. Larsen, J. Litke and S. Boutin (2005) Using GIS to relate small mammal abundance and landscape structure at multiple spatial extents: Northern flying squirrels in Alberta, Canada. *Journal of Applied Ecology* (in press).

Upcoming Events

Biodiversity in a Changing Climate: Assessing Uncertainties Biodiversity in a Changing Climate: Assessing Uncertainties

July 21-24, 2005 / Aspen, Colorado, USA

<http://www.agci.org/conference/index.cfm?cid=117>

90th Ecological Society of America (ESA): Ecology at Multiple Scales

August 7-12, 2005 / Montreal, Quebec

<http://www.esa.org/montreal/>

Earth System Processes 2: Ancient Earth Systems, Modern Earth System Processes, and Earth System Futures

August 8-11, 2005, Calgary, Alberta

<http://www.geosociety.org/meetings/esp2/>

135th Annual Meeting of the American Fisheries Society: Creating a Fisheries Mosaic: Connections Across Jurisdictions, Disciplines, and Cultures

September 11-15, 2005 / Anchorage, Alaska, USA

10th International Specialist Conference on Watershed and River Basin Management

September 13-15, 2005 / Calgary, Alberta

http://www.calgary.ca/docgallery/bu/cww/iwa_2005/iwa_call_for_papers.pdf

Recently Published

Please send any references of recently published articles to dave.hobson@gov.ab.ca. Articles of interest include those authored by ACTWS members on Alberta wildlife.

- Aldridge, C. L., M. S. Boyce, and R. K. Baydack. 2004. Adaptive management of prairie grouse: how do we get there? *Wildl. Soc. Bull.* 32: 92-103.
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- Boyce, M. S. 2004. *Wildlife Research Needs in Alberta: A Report to the Alberta Conservation Association*. Technical report (T-2004-001) produced by Alberta Conservation Association, Red Deer. 84pp.
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- Bradbury, S. 2004. Understorey plant communities in boreal cutblocks with different sizes and numbers of residual tree patches. *Canadian Journal of Forest Research*. 34: 1220-1227.
- Frair, J. L., S. E. Nielsen, E. H. Merrill, S. Lele, M. S. Boyce, R. H.M. Munro, G. B. Stenhouse, and H. L. Beyer. 2004. Removing habitat-induced, GPS-collar bias from inferences of habitat selection. *J. Appl. Ecol.* 41:201-212 .
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- Hebblewhite, M. (2005) Predation interacts with the North Pacific Oscillation (NPO) to influence western North American elk population dynamics. *Journal of Animal Ecology*, 74, 226-233.
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- Nielsen, S. E., M. S. Boyce, and G. B. Stenhouse. 2004. Grizzly bears and forestry I.: Selection of clearcuts by grizzly bears in west-central Alberta, Canada. *Forest Ecol. and Manage.* 199:51-65.
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- Nielsen, S. E., S. Herrero, M. S. Boyce, B. Benn, R. D. Mace, M. L. Gibeau, and S. Jevons. 2004. Modelling the spatial distribution of human-caused grizzly bear mortalities in the Central Rockies Ecosystem of Canada. *Biol. Conserv.* 120:101-113.

ACTWS Executive Contact List - 2005

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ALBERTA CHAPTER OF THE WILDLIFE SOCIETY

FINANCIAL STATEMENT – 2004

Prepared by Jan Ficht and Chris Shank

Opening balance as of December 31, 2003 **\$5232.24**

Income – 2004

Membership dues	\$1601.41	
94 regular members & 15 student members in 2004		
TWS Conference donations	\$10350.00	
Other	\$46.52	
Total Income		\$11997.93

Expenses – 2004

Bank Account Fees	\$185.18	
Supplies and postage	\$48.11	
Mailbox rental	\$199.02	
Conference expenses student volunteers	\$4917.71	
Other Conference expenses	\$750.00	
Student Scholarships	\$4500.00	
ACTWS awards	\$726.94	
2005 AGM – deposit for Nisku Inn	\$1000.00	
Contribution to Univ. of Alberta Symposium	\$500.00	
FOIP Request	\$47.54	
Total Expenses		\$12874.50

Opening balance + Income - Expenses **\$4355.67**

Closing Balance as of December 31, 2004 **\$4355.67**

Total GIC Assets December 31, 2004

Principal	\$48127.50
At maturity	\$58235.85
Interest earned in 2004	\$2222.80