CONSERVATION

The official publication of the Alberta Conservation Association



Hunters, Anglers and Trappers The Key to Conservation

in Alberta

Recreation and Private Land Accessing Habitat and Landowner Rights Wildlife
Management
Unit 359
The Moose of Spirit River

The Raven
River Project
Understanding and Protecting
a Valued Sport Fishery



have hunted mule deer on only one occasion. Being low in priority on the draw, I was issued an antlerless mule deer tag and headed out to the lower Red Deer River, near Buffalo. After four days of seeing nothing but strapping mule deer bucks, I finally filled my tag with a "little button-buck" who seemed a bit of a cartoon version of the big deer that I had encountered the days before.

Hunting with a camera in the coulees of southeastern Alberta has been no different for me. Each year, I invariably bump into many fine specimens of adult male mule deer—undoubtedly one of the most handsome game animals in North America. I have photographed many of them, but have never enjoyed the privilege of hunting them for the sake of harvesting anything but a photograph.

Last September, my run of luck seemed to reach a peak while I was driving up from the South Saskatchewan River through the Drowning Ford Grazing Lease—a herd of eight mule deer buck sauntered across the trail in front of my vehicle. Their casual gait while climbing the ridge along the road certainly was evidence of the fact that hunting season was a good few months away. They were so casual, in fact, that I was able to position my camera on a bean bag out the window of the vehicle; I had a group of five of the herd in my viewfinder, and I let out a sharp "wolf whistle" to rivet their attention (albeit for a few seconds) for a group portrait. I got off two frames of them staring at the camera—at a frame rate of nine frames a second—before the boys returned to looking in eight different directions for a route down to the river. ■



2	On the Cover	
	Mule Deer Bucks of Drowning Ford Grazing Reserve	
5	Hunters, Anglers and Trappers	
	The Key to Conservation in Alberta	man for the party
6	Pivotal Challenges	A CONTRACTOR
	Wildlife Management and Conservation	AN INC.
10	Sandstone Ranch	
	An Inspiring Example of Conservation Partnerships	
12	Recreation and Private Land	3-94
	Accessing Habitat and Landowner Rights	T.A.
14	Managing the Land	Comment of the same
	Keeping Native Grasslands Intact	
17	Wildlife Management Unit 359	Harris I.
	The Moose of Spirit River	
21	The Economic, Environmental and Social Impact Study	A MARK
	Hunting and Fishing in Alberta	**
24	The Raven River Project	
— 1	Understanding and Protecting a Valued Sport Fishery	BY 3.24
27	Conservation in Action	
	with Michael Short	
28	Feature Creature	
	American Mink	



Our Mission

ACA conserves, protects and enhances fish, wildlife and habitat for all Albertans to enjoy, value and use.

Enjoy your free biannual subscription of Conservation Magazine by:

- 1. E-mailing info@ab-conservation.com with "E-mail Subscription" in the subject line. You will receive each new issue until you inform us differently.
- **2.** Downloading electronic copies online at www.ab-conservation.com.
- 3. Mailing: Alberta Conservation Association Magazine Subscription, 101 – 9 Chippewa Road, Sherwood Park, Alberta T8A 6J7

Telephone: 780-410-1999 **Toll Free:** 1-877-969-9091 **Fax:** 780-464-0990





From the Editor

s some of you may know by now, I grew up in the Northwest Territories where a lot of our food was harvested from our garden or the wild. When I moved to Edmonton to go to school—harvesting food from the grocery store created a whole new awareness level about what was in my food and where it was coming from. All I knew was that the meat wasn't coming from the game my dad and I hunted near our home or from our local butcher. I was now confronted with a diet of hormones, chemicals and antibiotics, which have become the food cocktail of the 20th and 21st century. This revelation combined with the fact that the tradition of hunting, and for the most part fishing, didn't reside with me influenced my shift from a "meat-a-tarian" diet.

We have been hunting and gathering for millennia to put food on the table and yet, our population shift from suburbia to cities has disconnected us from how and where we get our food. It has also seen a decrease in the number of individuals who hunt, fish or trap. You will find out how this is impacting wildlife management and the future of conservation, and the steps that are being taken to revive interest in *Hunters, Anglers and Trappers: The Key to Conservation in Alberta* on page 5; and *Pivotal Challenges: Wildlife Management and Conservation Perspectives from 2008 TWS Council* on page 6.

We partnered with the Nature Conservancy of Canada and other organizations to fully realize the conservation of 4,100 acres of property in southern Alberta. In *Sandstone Ranch*, *An Inspiring Example of Conservation Partnerships* on page 10, you will read about an extraordinary place and local stewardship.

Respect: what's happened to our manners? As our population and communities grow, there seems to be less land to access for recreational activities. The result is a misunderstanding and, at times, a clash between recreationists and private landowner rights. ACA has taken an old program and given it a modern twist with the help of some invaluable partners. Help us create awareness and promote the *Use Respect - Ask First* initiative by reading *Recreation and Private Land: Accessing Habitat and Landowner Rights* on page 12.

If you haven't heard him on the radio then you mustn't live in Alberta! In our feature *Conservation in Action* on page 27, we interview Michael Short, the producer and host of Let's Go Outdoors, the only radio program dedicated to the outdoors.

Read these and other conservation stories by our staff and partners in this issue of *Conservation Magazine*. Visit our new website at www.ab-conservation.com and request a magazine subscription as a gift. You can also find out where to hunt, ice fish or hike by clicking on Conservation Sites and learn about the incredible work we are doing in Wildlife, Fisheries and Land with conservation funding from corporate partners and levies on hunting, trapping and fishing licences.

Enjoy the season and remember to always use respect.—Lisa Monsees, Editor

Letters to the Editor: Address letters to *Conservation Magazine* Editor by e-mail, fax or mail. Include your name, address and daytime telephone number. Letters may be edited for clarity and length.



Conservation Magazine

Conserving Alberta's Wild Side

Publisher: Alberta Conservation Association

Editor: Lisa Monsees

Assistant Editor: Michelle Curial-Hébert

Editorial Committee: Trevor Council, Lance Engley, Ken Kranrod, Kris Kendell, Colin Gosselin, Diana Rung, Robb Stavne

Contributing Writers: Gordon Court, Michelle Curial-Hébert, Lance Engley, Shannon Frank, Hunting for Tomorrow, Ken Kranrod, Jim O'Neil, Robb Stavne, The Nature Conservancy of Canada, The Wildlife Society, Todd Zimmerling

Photo Credits: Gordon Court, Dave Fairless, Carla Koenig, Paula Kranrod, MULTISAR, Nature Conservancy of Canada, Jim Potter, Robb Stavne, Jennifer Straub, Shevenell Webb

Design/Layout: Colin Eyo and Don Myhre

President & CEO: Todd Zimmerling

Vice President: Ken Kranrod

ACA Board of Directors:

Brian Bildson, Chairman - Alberta Trappers' Association

Patrick Long, Vice Chairman – Foundation for North American Wild Sheep

Calvin Rakach, Secretary - Public At Large, East Slopes Region

Tom Bateman, Treasurer - Alberta Hunter Education Instructors' Association

Don Pike, Past Chair - Trout Unlimited Canada

Ken Ambrock - Alberta Sustainable Resource Development, Minister's Representative

Mark Boyce - ACA University of Alberta Chair in Fisheries and Wildlife

Bob Byers - Alberta Professional Outfitters Society

Randy Collins - Alberta Fish and Game Association

Keith Denoncourt – Public At Large, Northwest Region

Lee Foote - Public At Large, Academic Representative

Sandra Foss - Federation of Alberta Naturalists

J.R. Giroux - Treaty 8 First Nations of Alberta

Colin Gosselin - Public At Large, Northeast Region

Ward McLean - Pheasants Forever Alberta Council

Jeff Smith - Public At Large, Southern Region

Roger Smith - Public At Large, Industry Representative

Advertising enquiries may be directed to Ken Kranrod: ken.kranrod@ab-conservation.com or call toll free: 1-877-969-9091.

Conservation Magazine

(ISSN 1488-6235) is the official biannual publication of Alberta Conservation Association.

Charitable Registration Number: 88994 6141 RR0001



The retention and recruitment of hunters, anglers and trappers is vital to the long-term survival of ACA and the long-term success of conservation in Alberta. Currently, hunters and anglers provide more resources (monetary and volunteer time) toward conservation efforts in Alberta than any other single group. Of those resources, our organization receives approximately \$10 million per year from levies on licences purchased by hunters and anglers. These funds allow us to conduct vital conservation work across the province, from fish surveys and wildlife population studies to species at risk assessments and purchasing land for conservation and recreation.

Working Together

Second, we partnered with our member groups to provide a significant level of core funding for retention and recruitment programs. In conjunction with our member groups, we have been working to discuss as a larger conservation community, what the needs are for retention and recruitment and how we, as a conservation community can work together to promote the message and make programs increasingly successful.

Numerous excellent retention and recruitment programs exist that are run by groups such as Hunting For Tomorrow, Alberta Hunter Education Instructors'

Hunters, Anglers and Trappers

The Key to Conservation in Alberta

take time for tradition

Alberta Conservation
Association

Conserving Allerta's Wila Side

www.ab-conservation.com

Everyone benefits from conservation and in order to maintain the level of conservation work that exists in Alberta or to improve on it will require the assistance of hunters, anglers and trappers. To achieve this, we have tailored a two-fold approach to promoting and supporting hunter, angler and trapper retention and recruitment:

Take Time for Tradition

First, in August of this year, we launched a new advertising campaign "take time for tradition" to remind people of the traditional values associated with hunting and fishing. For many, spending time outdoors with friends or family and connecting with nature has become a thing of the past—and yet these are often the most memorable moments someone may recount. The campaign is designed to invoke those memories and encourage those who have hung up their fly rod or tucked away their shotgun, to take the time to experience enjoyment of hunting or fishing again.

There are approximately 3,354,411 people living in Alberta. Compare this to the number of hunters and anglers in 2007-2008*:

- 110,047 hunters (295,930 hunting licences were sold).
- 240,619 anglers (243,831 fishing licences were sold).
- * Provided by Alberta Sustainable Resource Development

Association, Alberta Trappers Association, Alberta Fish and Game Association and others. The key to helping these programs succeed is to ensure they receive long-term funding.

To meet these objectives, this fall we began working with our member groups on a comprehensive retention and recruitment program. This program will see \$500,000 per vear allocated to retention and recruitment programs from our operational funds for the next three years. One of the immediate benefits of this new, co-operative approach to recruitment and retention is greater dialogue between member groups and as a result greater partnership opportunities. All groups involved have identified this new retention and recruitment approach as a way of making conservation dollars go further. The key is that these programs are now part of ACA's core business and delivered by member groups for the benefit of conservation.

ACA Member Groups

- Alberta Fish and Game Association
- Alberta Hunter Education Instructors' Association
- Alberta Professional Outfitters Society
- Alberta Trappers Association
- · Federation of Alberta Naturalists
- Foundation for North American Wild Sheep
- · Pheasants Forever, Alberta Council
- Treaty 8 First Nations
- · Trout Unlimited Canada

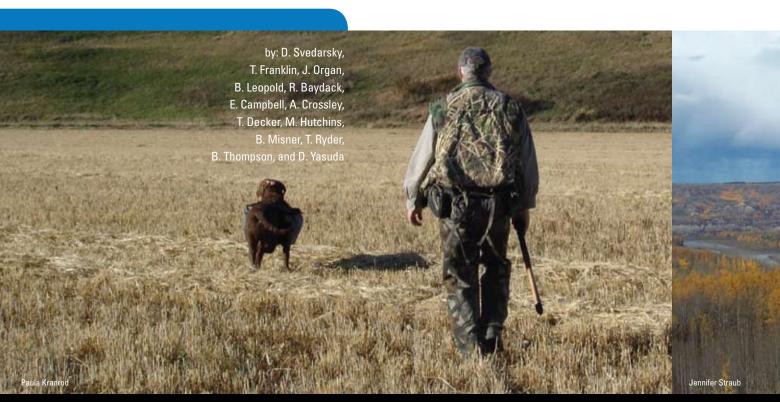
Pivotal Challenges for Wildlife Management and Conservation

Perspectives from 2008 TWS Council

This article is a condensed version of a Leadership Letter published in the Summer 2008 issue of The Wildlife Society's membership magazine, The Wildlife Professional Vol. 2 No. 2 (republished here with permission). The original version of this article is available online. The article is available open access at: www.wildlifejournals.org/archive.

since its formation in 1937, The Wildlife Society (TWS) has embraced and managed change in the profession and in our organization as a whole. This kind of adaptation has been especially evident in recent years as we have worked collectively to revise and develop our strategic endeavors.

Toward this end, the 2008 TWS Council provides a substantive—but by no means comprehensive—description of pivotal challenges in wildlife management and conservation that we now face as professionals dedicated to stewardship of wildlife and natural resources. Important in this description are many facets of game management, an area anchored in the origins of TWS. We come to this task of framing future challenges in the same ways our predecessors attacked the problems of their times: with deep personal roots in a love for wildlife, with long experience and training in wildlife management and conservation, and with commitment and dedication to TWS.



Key Issues Ahead

In the following sections, organized into themes, are the challenges that wildlife professionals will face in the coming decades. The challenges below are a small subset of the trials that will demand high levels of education, skill, and dedication from those who follow in our professional wake.

Challenge: Managing and restoring habitat and species

Many people recognize the importance of protecting, maintaining, and restoring natural habitat and threatened or endangered species. However, the resource agencies and conservation organizations responsible for these activities face myriad intersecting challenges. First, planning robust and sustainable goals for habitat and species management and restoration requires planners and policymakers to incorporate biological facts and social and economic realities, constraints that as often as not seem to compete. Managing habitat will often involve collaboration with private landowners, as well as compliance with environmental regulations, factors that take an enormous amount of time to successfully navigate. Additional challenges include managing invasive species—non-native animals and plants—that alter wildlife habitats, and are difficult and expensive to control or eliminate.

Determining how to best manage, conserve and restore habitat and species will require state, provincial, and federal agencies to be more timely and effective in directing human and energy development away from crucial habitats. This ensures that hunters can play an optimal role in controlling select wildlife populations, and designing programs and partnerships that will motivate private landowners to participate in broader efforts to protect wildlife habitats.





Challenge: Promoting and managing sustainable wildlife harvests

Hunting and fishing as recreational activities have diminished for a variety of reasons, among them that people are moving to urban areas and are less dependent on nature. As a result, the ethics of hunting practices are increasingly under public debate, and many jurisdictions and agencies have reduced hunting opportunities because of diminished access. At the same time, hunting remains a critical tool for managing game populations and perpetuating sustainable uses of wildlife. However, public understanding of the critical importance of hunting and other consumptive uses of wildlife is weak. In coming decades, wildlife managers need to draw on a wide range of biological, social, and economic data to help form regulatory decisions and shape best management practices, particularly those that incorporate adaptive approaches. Wildlife professionals will also need to help educate the public about the importance of hunting in sustainable management of wildlife and habitat.

Educating the public about the importance of hunting and other consumptive uses of wildlife is among the most pressing and perplexing challenges facing wildlife professionals, in part because social attitudes about these practices have changed in many areas. Without question, we must address the need to increase and improve education at all levels regarding the necessity, ethics and proper practices of hunting. A myriad other problems need attention, such as how to calculate the impacts of climate change when estimating harvest availability, how best to use technology to keep pace with legal and illegal hunting practices, and how to prioritize funding for research in the many areas related to sustainable models of harvesting.

Challenge: Communicating effectively and accessing needed information

As the challenges of managing wildlife and habitat become more complex, solutions increasingly need public support and engagement. Many conflicting messages arise in the media, making it critical that we create and disseminate accurate and compelling information about wildlife management and conservation. For example, the perception of hunting and fur harvest for many people comes from what they see and hear in the media, which is sometimes incomplete and inaccurate. Because the opinions of policymakers and the public may be influenced more by emotion and misinformation than science and logic, wildlife professionals, agencies, and related organizations must recognize and respond to the need for effective information and outreach services.

In addition, wildlife managers, policymakers, researchers, and others need to be able to find and use an ever wider range of information to plan and make decisions. Building information infrastructures to serve the broadest range

of users and needs is critical to the future of wildlife management. In this age of media influence and extremes of both openness and barriers to information access, we need to address questions such as: How can we ensure that everyone can access data and information needed to make sound management and policy decisions? How can news media be engaged in positive ways to promote dissemination of accurate information about all aspects of wildlife management? How can we develop and distribute correct and compelling information that can be used in schools and universities?

Challenge: Assessing and addressing socioeconomic dimensions

The economic, social, and biological realities that must be incorporated into sustainable plans for wildlife and habitat conservation are increasingly intertwined, diverse, and complex. At the same time, a growing body of research shows that people are increasingly detached from nature, making it more difficult for them to understand the critical importance of healthy ecosystems and the need to invest in managing natural resources. In addition, educational trends have moved from the natural sciences to hard sciences, leading to fewer people entering the profession trained in understanding the relationships among wildlife, habitat, and human uses—skills and values that are at the core of North American conservation.

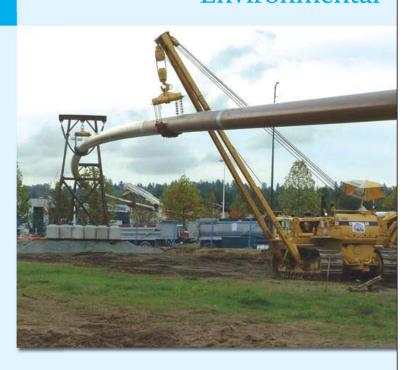
Fewer people are hunting and fishing or visiting parks, a shift that impacts the funding needed for ongoing protection of wildlife resources and perhaps even the long-term availability of these recreational activities. The lack of experience in natural settings is, in turn, impacting the public's understanding and acceptance of the need for active management of natural resources, and, with that, their willingness to provide the economic resources needed to support these activities.

With so much at stake, wildlife managers must address questions that lie at this intersection. What roles do managers play in promoting better public understanding of the value of wildlife and other natural resources? How should wildlife management agencies allocate resources to respond to conflicting values and needs among traditional stakeholders, such as hunters, and other social sectors interested in non-utilitarian uses of wildlife and habitat? How can funding models for fish, wildlife, and habitat conservation be updated to provide support from the full range of those who benefit from conservation efforts?

COMPLETE CROSSINGS INC.

Engineering Construction Environmental

Leaders
in Pipeline
Crossings
Pipeline
Work



ENGINEERING – The leader in the design and planning of HDD projects

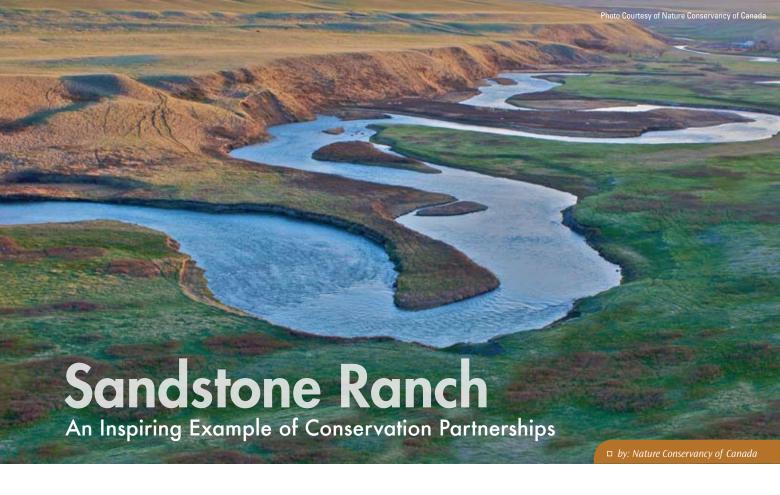
CONSTRUCTION – Full range of technical field and inspection services

ENVIRONMENTAL – Innovative environmental solutions

Edmonton Area Office 780.960.5115

Calgary Area Office 403.932.0560

www.completecrossings.com



he Sandstone Ranch, located 10 kilometres northwest of Del Bonita, Alberta is an inspiring example of conservation partnerships. Encompassing more than 4,100 acres (1,700 hectares), this property was conserved to maintain and enhance important habitat for species at risk in the area, as well as provide recreational access for hunting and wildlife viewing. The conservation of this property provides a unique opportunity for further stewardship and support for the local community.

Hoodoos, coulees, wildlife and species at risk

Sandstone Ranch features almost six kilometres of Milk River frontage and a series of five coulee systems flowing into the river. Upland birds such as sharp-tailed grouse, ring-necked pheasant, and grey partridge are common due to the great topographic diversity of the property and coulee systems. Carnivores and ungulates such as grizzly and black bear, elk, mule deer and pronghorn antelope have also been observed using this wildlife corridor. Dramatic cliffs and hoodoo rock formations line the Milk River, and provide important nesting habitat for prairie raptors. The Sandstone Ranch property is particularly important for the survival

of species at risk such as Sprague's pipit, prairie falcon and ferruginous hawk, since these species depend on open, arid habitats dominated by native grasses. The threatened Western silvery minnow also inhabits the North Fork of the Milk River, which runs through the property.

The Sandstone Ranch property is particularly important for the survival of species at risk such as Sprague's pipit, prairie falcon and ferruginous hawk, since these species depend on open, arid habitats dominated by native grasses.

Conservation of native grasslands

Grasslands are considered one of the most imperiled ecosystems in North America. It is estimated that less than five per cent of native fescue prairie remains in Canada, and the Foothills Fescue Subregion is considered one of the most threatened geographic areas of Canada. Foothills Fescue grassland

once occupied almost four million acres (1,540,000 hectares) in southwestern Alberta. Today, only 17 per cent of the original Alberta Foothills Fescue grassland remains, primarily on ranching operations where foothills fescue is prized as winter forage. The largest remaining and most viable tracts of foothills fescue grassland in North America occur in the Milk River Ridge region of Alberta. The native grasslands on the Sandstone Ranch have been particularly well managed as winter forage in recent years; the Public Lands Division of Alberta Sustainable Resource Development has used the property as a demonstration site to measure the impacts of winter grazing of Foothills Fescue on grassland health.

Partnerships

The Sandstone Ranch project is a remarkable example of conservation partnerships. It was acquired with support from the Government of Canada through the Natural Areas Conservation Program, Nature Conservancy of Canada, Alberta Conservation Association, Alberta Fish and Game Association, EnCana Corporation, the David and Leslie Bissett Fund through The Calgary Foundation, and a private donor.

The property will be jointly managed by the Nature Conservancy of Canada; Alberta Conservation Association; Alberta Fish and Game Association; Alberta Sustainable Resource Development, Fish and Wildlife Division; and Alberta Sustainable Resource Development, Public Lands Division; as well as MULTISAR—a collaboration between government, Alberta Conservation Association and other non-government organizations and landowners to manage habitat for multiple species at risk.

Local stewardship

The MULTISAR process combines the sciences of Range Management and Wildlife Biology with local landowners' knowledge of the landscape to conserve native habitats for species at risk. The Sandstone Ranch Grazing Co-operative was recently created to hold the provincial grazing lease land associated with the property and will manage the deeded portion of the property as well. MULTISAR will devise a management plan for the entire property taking into account the multiple species at risk found on the property and the goals of the partner agencies and the Grazing Co-op members. These members will have the opportunity to participate in a proposed Stewardship Credit Program in which they will receive credits for positive stewardship projects and practices on their own ranches. Credits can be put towards grazing fees in the Co-op.

For more information on the Sandstone Ranch, please visit the Nature Conservancy of Canada at www.natureconservancy.ca.





Recreation and Private Land

Accessing Habitat and Landowner Rights

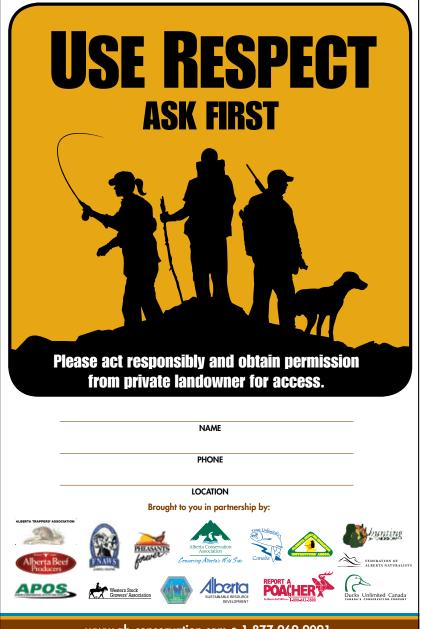
ockey legend Lanny McDonald and the most successful coach in Oilers' history, Glen Sather provided their fame and small town Alberta roots to promote the popular Use Respect program in 1986. Sporting the message of "use respect" was likely similar to implementing a player's code of conduct, only this one involved encouraging proper land-user etiquette on private land.

The Alberta Fish and Wildlife Division of the Alberta Department of Forestry, Lands and Wildlife piloted the original Use Respect program in 1985 and then implemented it province-wide in 1986. Numerous organizations endorsed the program including the Alberta Fish & Game Association, the Outdoor Observer program, the WISE Foundation, Unifarm, the Alberta Cattle Commission, the Western Stock Growers Association and Report A Poacher.

The Message

The program was designed to encourage recreationists to "use respect" and seek the permission of private landowners before accessing private property for responsible recreation. Essentially, the program supports the rights of private landowners to determine how their land will be used and by whom, while providing hunters and other recreationists with an opportunity to improve their behaviour towards landowners. The end result is co-operation between two groups and potentially, an increase in the number of landowners granting permission to access and hunt on land that was previously inaccessible.

The Use Respect program was by all accounts successful and well received, yet over time awareness of the original program



www.ab-conservation.com • 1-877-969-9091

dwindled. Twenty years later, Alberta's population has surged from 2,365,825 to 3,354,411 accompanied by increased pressures on land available for recreation and in particular hunting, which has led to escalated landowner and access-related issues.

Individuals with a keen interest in the program and understanding of the current land user/landowner challenges wanted to revitalize the basic principles of Use Respect in one form or another. In the past year, we took the lead and met and spoke with

numerous individuals and organizations about developing and launching a new version of this important program. The support we received was remarkable, proving that the 'use respect" message is as relevant today as it was in the '80s.

Use Respect - Ask First

A new logo was created to capture the variety of people seeking access to private lands, whether they are hunters, anglers or simply outdoor enthusiasts. Consequently, the name of the program was revised to Use Respect - Ask First to retain the

connection with the original title yet underscore the overall intent of the program; namely, encouraging land users to co-operate with and respect landowners rights before accessing private property.

Signs Available

Signs are now available, free of charge to private landowners to post so that potential users know who to contact to get permission for access.

Signs can be picked at all ACA regional offices, the County of Warner, Bow Irrigation District and the Municipal District of Taber and through these supporting organizations:

- Alberta Beef Producers
- Alberta Fish and Game Association.
- Alberta Hunter Education Instructors' Association
- Alberta Professional Outfitters Society
- Alberta Sustainable Resource Development
- Alberta Trappers' Association
- **Ducks Unlimited Canada**
- Federation of Alberta Naturalists
- Federation for North American Wild Sheep
- **Hunting For Tomorrow**
- Pheasants Forever
- Report A Poacher
- **Trout Unlimited Canada**
- Western Stock Growers Association

For more information on *Use Respect - Ask First*, please visit our website at www.ab-conservation.com or call us toll free

Public Land Access use Respect - Contact First

Leaseholders must provide reasonable recreational access as specified in the Recreational Access Regulations.

On agricultural public land, the leaseholder may refuse you access if:

- You are travelling by any other means than by foot.
- Livestock are present in a fenced pasture.
- There is an un-harvested crop.
- A fire ban has been issued by municipal or provincial authority.
- You intend to camp.
- The proposed use is disallowed by the recreational management plan or a condition set by the government.



For further information please visit:

Public land: www.srd.gov.ab.ca/lands

Leaseholder information and conditions: www.srd.alberta.ca/accessagpublicland

You may also contact the lands office of Sustainable Resource Development by calling 310-0000.



Managing the Land

Keeping Native Grasslands Intact



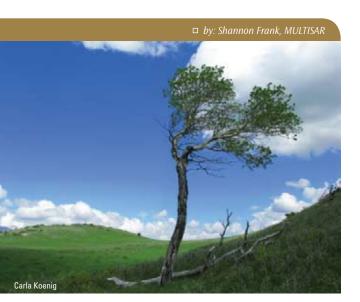
atching sage grouse dance and strut, smiling as baby burrowing owls peak out of burrows for the first time, or listening as northern leopard frogs' call for a mate in spring offer to us memorable glimpses into a wild world that is at risk of disappearing from Alberta.

Farmers and ranchers in Alberta know this better than most. Many families have been living on the land for generations and know the history that has been passed down from grandparents to parents, and parents to sons and daughters. Their families have documented the decline of many species that are now considered at risk of disappearing from our province. Urbanization, cultivation, invasive weeds and industrial development have concentrated species at risk on the remaining tracts of native grasslands.

Ranchers understand how vital it is to keep their native grasslands intact for water and soil protection, carbon storage and wildlife habitat.

Multiple Species at Risk

Careful management of native habitats and encouraging their preservation are the key features of MULTISAR, a unique partnership between landowners, Alberta Conservation Association and Alberta Sustainable Resource Development (both Fish and Wildlife and Public Lands Divisions). MULTISAR stands for multiple species at risk, and it has been partnering with ranchers since 2002 to maintain and enhance their rangelands for species at risk. Ranchers understand how vital it is to keep their native grasslands intact for water and soil protection, carbon storage and wildlife habitat. Sound management by ranchers and their love for the land is the reason Alberta still has expanses of grasslands left that support the majority of wildlife and species at risk. Partnerships among ranchers, conservation groups and government have also been instrumental in helping complete land stewardship efforts.



Conservation Partnerships

Tony and Lorraine Bruder see the benefits of collaboration for their operation; they're members of the Drywood-Yarrow Conservation Partnership, a watershed stewardship group made up of landowners that are actively protecting their streams. The Bruders have made conservation a part of their ranch, as important to them as the cottonwood trees, fescue grasslands and clean water are to their cattle. They know their location requires special care and attention to minimize impacts to the riparian area and to protect the stream from runoff. That's why they have been limiting cattle access to the creek and creating riparian pastures that can be managed separately. They use the same care and attention on their upland pastures, rotating cattle to maintain healthy grass that provides habitat for grassland birds, sharp-tailed grouse, raptors and amphibians.

In order to keep our native habitats, especially grasslands, Alberta will need the ranching industry to remain viable.

Supporting Stewardship

Ranchers and farmers are more than willing to make the small changes that will provide habitat for species at risk, but sometimes they need a helping hand to share in the cost. Funding programs like Greencover and the Government of Canada's Habitat Stewardship Program are vital for helping stewards with improvements for their operations.

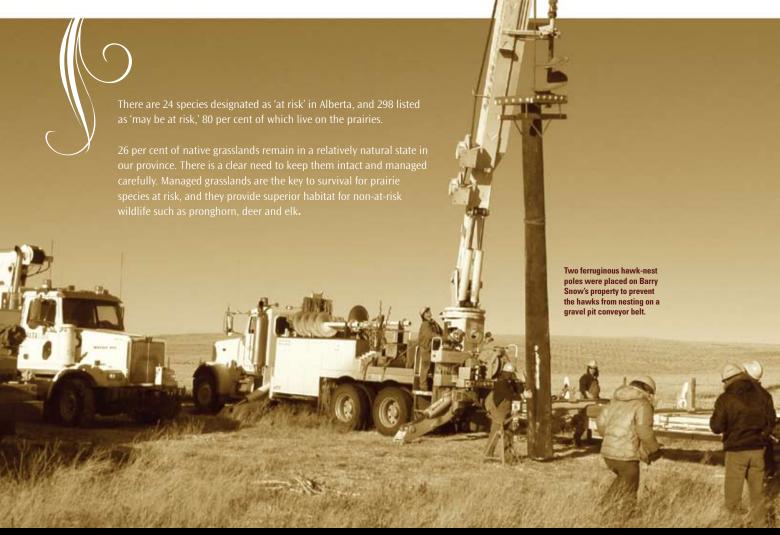
A one-year grant from the Greencover Canada Technical Assistance Program has helped stewards like the Bruders complete projects that will benefit their operation and species at risk. The Bruders had planned to fence off their stream, which fit in perfectly with MULTISAR's Species at Risk Conservation Plan for their property. The Greencover Beneficial Management Practice (BMP) Implementation Project allowed the Bruders to finish fencing off

the creek and create an alternate watering site where cattle will not impact the riparian area. It has also given three other landowners the opportunity to complete habitat enhancements, including fencing a shelterbelt that holds a ferruginous hawk nest, fencing a wetland in the driest part of the province to allow natural rehabilitation, and fencing a prairie river located in a high feedlot impact region.

The BMP Implementation project also involves constructing artificial burrowing owl dens at a test site and installing ferruginous hawk nest poles. All the sites involved in the project will be used for demonstration and education purposes and will allow MULTISAR to monitor the impact of their recommended BMPs on landowners and species at risk (BMP Implementation Guides will be available in February 2009).

At Home on the Range: Living with Alberta's Prairie Species at Risk is a guidebook for landowners that explains how little changes such as delaying grazing and haying until July 15 has a huge impact by allowing many species, including ground nesting birds, grouse and amphibians, to complete their breeding and rearing periods. These changes are often cost free; however, they may require additional time planning around the adjustment. Where habitat enhancements do carry a financial cost, MULTISAR works with landowners to find a funding source that fits their needs.

> Usually landowners provide labour or equipment, and the funder pays for materials. This type of agreement has proven beneficial for many species at risk in the Milk River Basin. which is where MULTISAR began before expanding to the entire Grassland Natural Region in 2007.



Barry Snow has been working with MULTISAR since 2006 and has completed four major habitat enhancements since that time on his 3,840-acre ranch. A Habitat Conservation Strategy was completed for the ranch, which involves range assessments, breeding bird surveys and wildlife inventories before recommendations are made. Snow has been proactive in providing habitat for species at risk; he completed all recommended habitat improvements and has shared in the cost by donating considerable labour and machinery to get the job done. Partnerships on the Snow ranch have also been essential to sharing the cost of a portable watering unit, fencing, a pasture pipeline and two ferruginous hawk-nest poles. Poles for the hawk nests and one nest platform were donated and installed by AltaLink, the local transmission company, to attract hawks away from a conveyor belt on which they were nesting in a gravel pit on the property. Mr. Snow shut down the conveyor belt until the raptors were done nesting and used the artificial nests to attract them away from the belt the following spring.

Alberta ranchers and farmers are deeply dedicated to the protection and conservation of native grasslands. They have shown themselves to be conscientious and committed stewards, even when faced with hardship. Ironically, the tradition of working and living on the land itself seems to be at risk as it becomes more difficult to earn a living from the land. In order to keep our native habitats, especially grasslands, Alberta will need the ranching industry to remain viable.

Please contact Shannon at 403-388-3191, if you are interested in working with MULTISAR.

Help Needed Ferruginous Hawk Recovery The ferruginous hawk is an Endangered Species in Alberta. As a part of the recovery program for this species, Alberta Sustainable Resource Development - Fish and Wildlife Division, is undertaking a project to inventory all known hawk-nest poles in the province. You can help by calling or emailing any known pole locations to: Francois Blouin Phone: 403-381-5318 Email: francois.blouin@gov.ab.ca

Thank you for your help in the recovery efforts for the ferruginous hawk.







Two helicopters lift off one after another in near synchronicity as the sun crests the horizon; then I'm reminded why I like doing these surveys. Despite the freezing temperatures that persist in the helicopters all day, it's still a thrill to see the frosty landscape from the air; fields freshly painted with a new coat of snow, hoar frost hanging heavy on spruce and aspen below. It's -30 degrees in mid-January, but the mighty Peace River is still open in spots; the ice ledges along the banks threaten to break off and float away, yet at the same time they creep closer and closer towards each other.

First Light

We quickly find our survey line and head down near the treetops so we can pick out dark moose forms. "Moose on the left! No antlers, no calf." We swing around for a closer look at the rump to see if a white patch can identify it as a lone cow. As we turn, Dave spots the calf a hundred yards away and calls it out. We head back to our survey line without disturbing her any more than necessary in the deep snow.

We finish our survey block and head back in for fuel; we locate drums that were cached in a co-operating landowner's field a few days prior to minimize dead-heading back

give us a high degree of confidence in our population estimate. We focus on moose in the majority of the surveys that occur in the boreal regions; their desirability as a hunted species and response to landuse changes make them a priority species for Fish and Wildlife Biologists to manage through tag allocation. Their tendency to disperse across the landscape, rather than clump like deer and elk also make for easier population estimation with the random block sampling design.

Although moose are targeted in this survey, we also record observations of mule and white-tailed deer, recording age and sex when we can. When the deer

Calf-to-Cow Ratios

Age (adults vs. juveniles) and sex (male vs. female) ratios help to define the moose population's demography and vital rates. Understanding the proportion of bulls in a population helps Fish and Wildlife Biologists determine impacts of hunting pressure and predation or weather mortality on bulls as they neglect their own health in search of receptive cows. By determining the proportion of calves per hundred cows, biologists also get a sense of predation levels and fecundity. Twentyfive calves per hundred cows denotes a minimally self-sustaining population. Fifty calves per 100 cows indicates population



to the hanger. We need to make the most of the paltry six or seven hours of daylight these short winter days offer.

Survey Blocks

Moose and deer populations are extrapolated from random block samples. Each crew tries to finish three survey blocks in a day. We try to complete between 15 and 18 randomly stratified blocks out of the 69 blocks that make up the entire area within Wildlife Management Unit (WMU) 359. We balance our sample effort between "low," "medium" and "high" densities of moose; these are estimated from rough counts from the air immediately prior to the intensive searches at hand. The goal is to keep surveying until the statistics are tight enough after three or four survey days to

yard up, we can usually get good totals on the numbers of bucks, does and fawns. It's the individuals that are situated in dense forest that are difficult to positively identify by age and sex without spending a lot of time and effort. Despite that, with the survey results we have a good count of total deer numbers in the WMU to compare with estimates from the last survey—usually about the last five years previous.

Total counts of elk in a WMU are obtained by tracking down individual herds and counting all bulls, cows and calves. For elk, our estimates are still a minimum because of the difficulty in finding lone animals or smaller dispersed herds, but it's still useful information to help keep tabs on herd sizes.

growth. Predation generally maintains ratios between 25 and 50 in the boreal forest. In areas with reduced predation, calf-to-cow ratios are typically much higher. Hunting becomes much more important as a regulatory tool in these areas to maintain socially acceptable numbers.

Spirit River Moose Population

Approximately five moose surveys are conducted in WMUs annually across the province. Although it would be advantageous to survey each WMU every year, limited money and time make it necessary to prioritize. As a result, WMUs are typically surveyed at a frequency of about once every five years; more frequent in high priority landscapes (increased

Understanding the proportion of bulls in a population helps Fish and Wildlife Biologists determine impacts of hunting pressure and predation or weather mortality on bulls as they neglect their own health in search of receptive cows.

hunting pressure, rapid landuse changes), and less frequent in lower priority landscapes (reduced hunting pressure, stable landuse).

Our survey of moose in Spirit River tells us that last year's harsh winter seems to have taken its toll. Calf and bull numbers are down, and deer numbers are nearly half of what they were in 2004. There is still a healthy population of around 1.700 moose in the WMU, broken down to about 18 bulls and 25 calves for every 100 cows. Within WMU 359, fifty-three bull tags and 151 calf tags were allocated to hunters for the 2008 hunting season. Although the antler drop had already begun prior to our survey in January, there were still indications of some largebodied bulls out there. Despite numbers being down from the record high populations in the past few years, there will be ample harvesting opportunities for hunters.

Day's End

Daylight runs out on us. We head back to the hanger and put the helicopters away for the night. We spend the rest of the evening entering our data and looking at the confidence estimates of our survey so far; getting close to satisfaction—another day of surveys should be sufficient to achieve the required level of precision. It's very late by the time we're organized and have planned assignments for the next day. Hopefully the weather holds out and we can wrap it up tomorrow.

Surveys are conducted jointly in a collaborative effort between Alberta Conservation Association and Sustainable Resources Development, Fish and Wildlife Division. Results from these surveys are posted on ACA's website at www.ab-conservation.com. Hunter draw information is available from Sustainable Resources Development at www.mywildalberta.com.



Why do we survey in the winter?

Winter is an ideal time to track moose; their dark shapes are easy to distinguish against a snowy background. Fresh snow defines recent activity and assists in tracking these large mammals.

Because their bodies are so well designed to withstand a cold Canadian climate, moose are most mobile in colder temperatures; they actually have to exert energy to stay cool, even when it's -20 C to -30 C. Moose on the run makes them easier to be seen from an aircraft.

Best conditions involve snow deeper than 18 inches; this amount of snow covers fallen trees and stumps that could be mistaken for moose. As well, it gives moose an advantage over predators such as wolves that wouldn't be able to keep up to moose in deep snow. The worst snow condition for moose is when the top of the snow cover begins to melt. When that surface freezes, it forms a hard crust that may support the weight of a running wolf, while preventing moose to flee. Because of their sharp hoofs and great body weight, it causes the moose to break through the snow.

Ideal conditions

Sub-zero cold temperatures are not regarded as a factor preventing aerial surveys from being conducted; ideal conditions consist of all of the following being available at the right time: temperatures cold enough to keep moose moving, the right amount of snow, and staff and aircraft availability. However, due to health and safety risks to staff, surveys could be postponed if temperatures dip below -35 C.

©iStockphoto.com/tulissidesign



hrough the co-ordinating efforts of the Hunting For Tomorrow Foundation, a number of provincial stakeholder groups have recently come together to more fully explore the range of economic, social and environmental benefits that can be attributed to hunting and fishing across Alberta. This impact is poorly understood by the general public as well as policy makers, and there is no current and comprehensive data available that could be used to increase awareness and help make the continued case for the importance of hunting and fishing in Alberta.

Purpose

The project partners collaborated to develop the scope for the study and agreed that it would accomplish the following objectives:

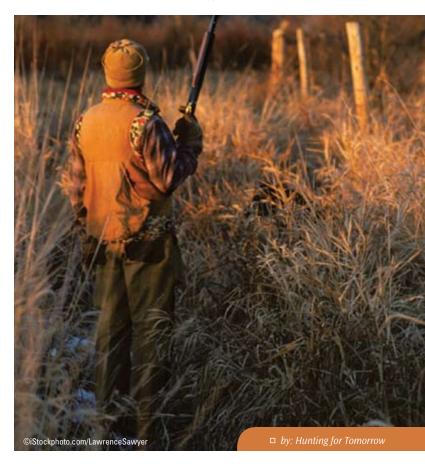
- Determine the economic impact of guided and unguided hunting and fishing in Alberta utilizing the most current capital, operational and tourism expenditure data;
- Identify the environmental and social benefits associated with hunting and fishing activity, and quantify these benefits where appropriate; and
- Identify current barriers and showcase the growth and market opportunities for the hunting and fishing sectors in Alberta, from both a guided and unguided perspective.

Benefits

The findings from this study will have significant benefits to Alberta's hunters and anglers assisting stakeholder groups in the activities they undertake to:

- increase awareness of the role that hunting and fishing play in the tourism sector and specifically, the economic impact on the rural/regional and provincial economies;
- advocate and facilitate wildlife management planning and decision making that supports hunting and fishing activity across Alberta in a sustainable manner;
- facilitate communication strategies between members of the various stakeholder groups and with the public at large regarding the benefits of hunting and fishing; and
- assist stakeholders in identifying growth opportunities for both the hunting and fishing sectors.

The Economic, **Environmental and Social Impact of Hunting and Fishing** in Alberta Study



Individual hunters will be randomly chosen for a telephone survey immediately following the fall 2008 hunting season to collect information regarding their expenditures, travel and time spent in the field. Your participation in this study is critical to its success and will ultimately benefit the future of hunting and fishing in Alberta.



Hunter Survey

A consulting firm is working on this project, and the final report is expected to be completed by January 2009. The fishing component has largely been collected and analyzed. In the coming weeks, hunting outfitters and guides will be surveyed regarding their activities, and data from various hunting related conservation organizations will be collected and compiled. Individual hunters will be randomly chosen for a telephone survey immediately following the fall 2008 hunting season to collect information regarding their expenditures, travel and time spent in the field. Your participation in this study is critical to its success and will ultimately benefit the future of hunting and fishing in Alberta. All personal information will remain confidential.

A web-based survey is also available for people to complete regarding their hunting activity and expenditures. For more information, visit www.huntingfortomorrow.com. The deadline to participate in this survey is December 15, 2008.

If you are interested in more information about this project or other hunting programs and what the various organizations are doing to promote hunting opportunities in Alberta, please contact:

Hunting For Tomorrow - Kelly Semple, Executive Director # 87, 4003 - 98th Street, Edmonton, Alberta T6E 6M8

Phone: 780-462-2444 Fax: 780-431-2871 E-mail: ksemple@huntingfortomorrow.com

www.huntingfortomorrow.com







We see solutions where others don't.

Because so much depends on sustainable and practical solutions, your needs for effective environmental services are growing. With over 45 years of experience, Golder Associates Ltd. can provide innovative thinking and cost effective solutions, including:

- Water Resource Planning
- Permitting Support
- Land and Water Reclamation
- ייי
- Aquatic and Terrestrial Baseline Studies
- Environmental Impact Assessments
- Implementation of Mitigation/Compensation Plans

A World of Capabilities Delivered Locally.



Edmonton 780 483 3499 Calgary 403 299 5600 Fort McMurray 780 743 4040 solutions@golder.com



www.golder.com

en 1Ver PROJECT

□ by: Jim O'Neil, Golder Associates

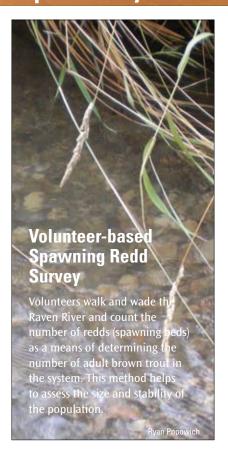
Understanding and protecting a valued sport fishery

he Raven River originates in the foothills just east of the Forestry Trunk Road, and south of Rocky Mountain House. It then flows easterly for over 100 km, approaching communities such as Caroline, before entering the Red Deer River just upstream of Gleniffer Lake, the reservoir formed behind the Dickson Dam that became operational in 1983.

The Raven River watershed supports a wide diversity of land uses including agriculture (livestock grazing and crop production), oil and gas development, timber harvesting and recreation (fishing, hunting, etc.). Due to its central location and proximity to a large number of Alberta anglers, the Raven River is a highly valued recreational resource. The sport fishery largely focuses on brown trout, which occupy the lower and middle sections of the river and brook trout, which reside in the upper section. The Raven River receives inflow from the North Raven River (also known as Stauffer Creek), a cherished brown trout stream. This tributary, which in many ways is a smaller version of the Raven River, has been the focus of considerable habitat restoration and protection efforts over the years. Fish resources in the Raven River were studied in detail by the Alberta Fish and Wildlife in 1977, prior to the construction of the Dickson Dam. In recent years, the provincial government has surveyed a typical section of the Raven River to track changes in the fish populations. The same section

of the river is periodically electrofished to track or monitor any changes in the brown trout population. Also, Alberta Conservation Association in co-operation with local landowners has carried out riparian fencing on several sections of the Raven River to restore and protect stream habitat.

Volunteer organizations such as Trout Unlimited Canada (Edmonton Chapter) and the Edmonton Trout Club have had a longstanding interest in maintaining the quality of the sport fishery in the Raven River. Concerns were expressed that the fish resources in the Raven River were not well-understood, and may have been altered by the Dickson Dam. In 1997 these organizations, following the lead of individuals such as Lloyd Shea (see inset on page 26) and noted fish biologist Dr. Martin Paetz, conducted a volunteer-based spawning redd survey on the Raven River. It was hoped that this information, if collected repeatedly every 2-3 years, would serve as a basis for monitoring the state of the river over the long term.



Due to its central location and its proximity to a large number of Alberta anglers, the Raven River is a highly valued recreational resource.



The objective of our surveys was to enumerate brown trout redds for comparison to the 1997 data and to allow future population tracking.



While this survey program did not continue as hoped, an opportunity arose in 2008 to carry out a comprehensive fisheries study using matching funds from Trout Unlimited Canada, collected under the Lloyd Shea Fisheries Enhancement Fund and through Alberta Conservation Association's Grant Eligible Conservation Fund. With these funds in place and corporate support from Golder Associates Ltd., field studies were carried out during the summer and fall of 2008.

Fish populations were surveyed in eight river sections situated between the headwaters and the mouth. A total of 11 fish species were captured, including brown trout, brook trout, mountain whitefish and two types of suckers (white and longnose). Minnow-type species (lake chub, longnose dace, troutperch, brook stickleback, fathead minnow, pearl dace) were also captured, particularly in the lower sections.

Riparian habitat along the Raven River was assessed to determine current conditions and to identify opportunities for restoration or improvement. To accomplish this, a Riparian Health Inventory (RHI) was carried out along 10, one-kilometre sections by Cows and Fish (Alberta Riparian Habitat Management Society). Aerial videography of the entire river from an ultra-light aircraft, was also undertaken to provide an overview of riparian and river channel conditions and provide a basis for future monitoring.

Temperature recorders were placed in the river at three locations to obtain data on water temperature variation during the open water season. An important part of the study was the spawning survey carried out in October by volunteers from Trout Unlimited Canada, Alberta Conservation Association and Golder Associates. In the fall, female trout excavate nests in gravel substrate, deposit eggs that are externally fertilized by one or more males and then quickly cover these eggs with gravel. The objective of our surveys was to enumerate brown trout redds for comparison to the 1997 data and to allow future population tracking.

The various phases of the project provided considerable insight into the status of fish populations in the Raven River. The final report will be completed by Golder Associates in January 2009 and presented at upcoming fisheries meetings in Alberta. The report will assess the current status of the fish and riparian habitat resources in the Raven River and will identify river sections that could benefit from restoration or improvement. It is also hoped that the findings of the report will assist government and volunteerbased groups in optimizing management and protection of the highly-valued sport fishery in the Raven River.

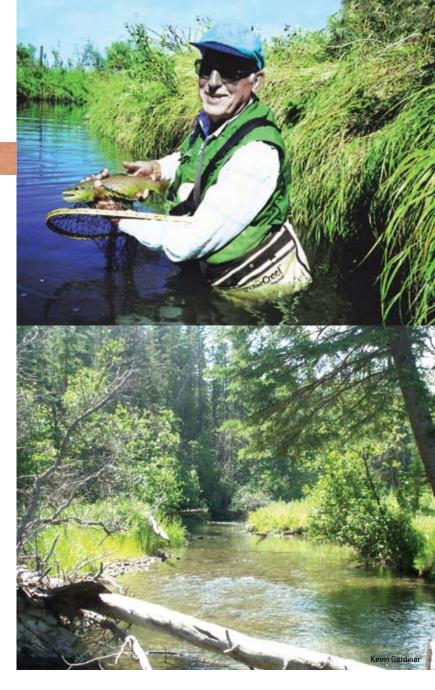
Lloyd Shea

The Raven River Project

When Lloyd Shea passed away in 2002, the people of Alberta lost a strong voice for conservation. For almost 80 years, Lloyd Shea was an ardent fly fisherman, hunter and advocate for conservation. He worked tirelessly for organizations like the Alberta Fish and Game Association, Alberta Fly Fishers, Edmonton Trout Fishing Club and Trout Unlimited Canada (TUC) to improve fisheries in Alberta.

Lloyd Shea's vision lead to the formation of the Buck For Wildlife program in which Alberta hunters and anglers gave an extra "buck" with their license fees to improve fishing and hunting habitat. (The program was the predecessor of the Alberta Conservation Association's Conservation Site Program). As Chairman of the Fisheries Committee of the Alberta Fish and Game Association, Lloyd started the stream bank restoration projects on the North Raven River (Stauffer Creek). He also taught fly-fishing to many youthful anglers through the Edmonton Trout Fishing Club. As a founding member of the Edmonton Chapter of TUC, Lloyd could be counted on to represent the organization on committees and task forces. Because of these efforts, Lloyd was presented with Alberta's highest honour for conservation, the Order of the Bighorn, in 1985.

After Lloyd passed away, Dave Johnston of The Fishin' Hole proposed that the Edmonton Chapter of TUC hold a raffle at The Fishin' Hole's annual outdoor show to raise money for conservation projects. Space was provided at the show and exhibitors donated prizes to support the raffle. Thus, the Lloyd Shea Fisheries Enhancement Fund was created. The mandate of the fund is to carry out projects on brown trout streams in the central Alberta foothills where Lloyd loved to fish. Foremost in this regard was a fisheries study on the Raven River and support for fencing and stream bank restoration projects in the area. The fund has paid for fencing around the headsprings of the North Raven River (Stauffer Creek), supported stream bank restoration projects on Stauffer and Clear creeks, paid for water quality studies on Stauffer Creek and now, realized Lloyd's wish for a fisheries investigation on the Raven River.



Grant Eligible Conservation Fund

The next opportunity to apply for funding is December 2008.

A total of \$1.2 million dollars was allocated in the 2008-2009 fiscal year for conservation work in Alberta. The GECF has received 791 applications since 2002, of which 423 have been funded. For every dollar granted an estimated \$6.3 is leveraged in partner dollars. Including this seventh funding cycle, a total of \$7.5 million has been granted through the GECF leveraging more than an estimated \$45 million in conservation projects across the province.

Application forms are online at www.ab-conservation.com. The deadline for applications is January 2009.

For more information please call toll free: 1-877-722-GECF (4323).

Association Conserving Alberta's Wild Side

Alberta Conservation



ou may recognize him from the program Let's Go Outdoors (LGO), Alberta's only radio program dedicated to the outdoors. Michael Short has dedicated his life's work—and passion—by turning a one-minute feature into an exclusive program that now airs on 21 radio stations so other outdoor enthusiasts can tell their stories.

It's almost fitting that outdoor reporter Michael Short was born in Banff; for many, the name "Banff" evokes vivid images of rugged, snow-capped mountains, wild water and wilderness—all the elements needed to kindle the love of the outdoors in a person. Later on, Michael lived in the backcountry of Trail and Nelson, BC; these places would further shape and mold him into the outdoorsman he is today.

Michael regards his parents as early mentors, having nurtured many opportunities to fish and hunt. Hunting trips were taken during the Thanksgiving weekend, and for Michael, the anticipation leading up to this time was almost as exciting as being on the actual hunt.

The concept for the radio program, Let's Go Outdoors (LGO) came about when Michael's father (John Short) was hosting a nightly sports talk show; he asked Michael if he would be interested in doing a one-minute feature about the outdoors. Needless to say, creating LGO was a natural progression. shaped in part on his love for outdoor adventure and from having developed skills in media relations and journalism.

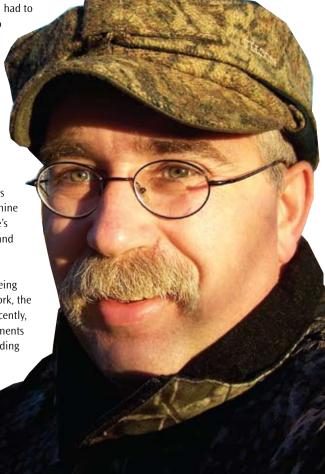
The program also became a vehicle for him to learn new technical skills such as climbing, as well as allowing him the opportunity to educate the public about great outdoor experiences and contributing, even if in a small way, to the stewardship of our planet.

He feels very privileged to have met some really unique and fascinating people. Michael recounts the time he interviewed Jason Maas with the Edmonton Eskimos about Provincial Hunting Day. "All I had to do was hook the microphone up to him, and away he went. He was just that passionate about what he loved to do-hunting. Then there's 12-year-old Tessa who took her first deer the season I interviewed her; her eyes kept on getting bigger and bigger as she told her story. When you get an opportunity to talk to young people like that you just can't help but sit back and go, "Wow! That was great!" Michael adds that over the nine years he's been doing this show, he's lost count of the number of great and inspiring interviews.

Michael considers himself lucky; being motivated every morning by his work, the people and their stories. In fact, recently, Michael has started producing segments for TV under the LGO banner, including a series for ACA. Michael saw this as another way to connect with audiences and communicate various

messages about the outdoors, while at the same time reaching a lot more people.

While pondering what he might do next, Michael remains optimistic. "I think there are still lots of stories left to be told. I hope to continue to grow the show, and increase the different mediums to bring the stories to more people."





American Mink (Neovison vison)

Mink are long and slender with long bushy tails. They are covered in dark-brown fur with a distinctive white patch under their chin. Mink are found throughout Alberta in woody, vegetated areas near the edges of marshes, lakes and rivers. Their thick, oily fur and partially webbed feet make them well adapted for life on land or in water. As effective hunters and good swimmers, they are able to dive to a depth of five metres and feed primarily on fish, small mammals, amphibians and muskrats. Mink are most active at night (nocturnal) when their primary prey items are easiest to catch.

Mink have long been prized for their soft, luxurious fur and although they are still trapped in Alberta, most mink fur now comes from mink farms.

American mink are listed as Secure, both in Alberta and throughout Canada. They are one of 10 weasel species found in Alberta; a second mink species that was found in Canada (*Neovison macrodon*) has been extinct since 1894. - *Lance Engley, ACA*

PUBLICATIONS MAIL AGREEMENT NO.41260556 RETURN UNDELIVERABLE CANADIAN ADDRESSES TO

101-9 Chippewa Road Sherwood Park, Alberta T8A 6J7

