



The official publication of Alberta Conservation Association

CONSERVATION

Rocking Out, Pheasant Style

+
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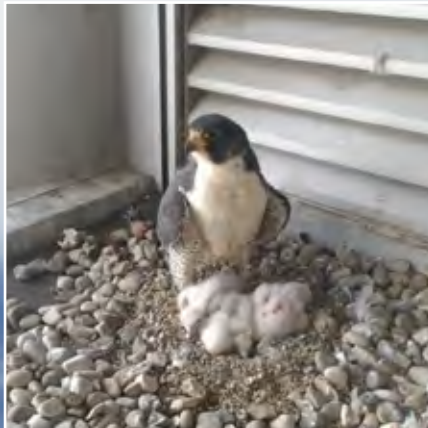
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Music to Our Ears



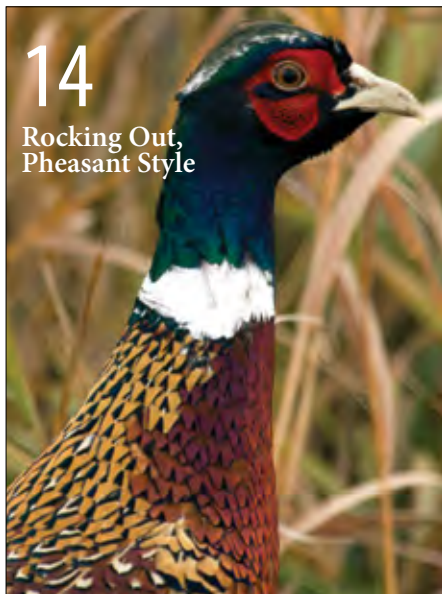
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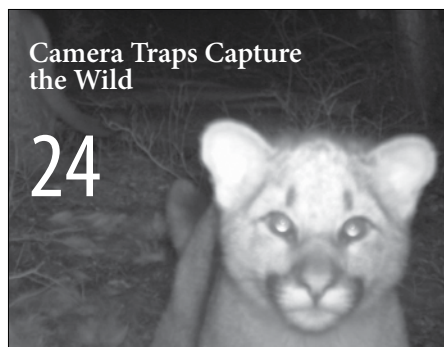
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Alberta Conservation
Association

Conserving Alberta's Wild Side

Our Mission

ACA conserves, protects and enhances fish and wildlife populations and their habitats for Albertans to enjoy, value and use.



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Conserving Alberta's Wild Side
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About Us. Conserving Alberta's wild species and spaces requires commitment and passion, something we have plenty of. For 15 years, we have scaled mountains, navigated wild waters, fought off flies, endured hours in helicopters, and walked three quarters of the way around the planet—studying, assessing, counting and conserving some of Alberta's most common and iconic species and their habitat. Superheroes we are not, but there are times we feel a bit like one when we know we've made a difference.

Our work is possible because of our surrounding community. Many people, organizations and partners support us, including Alberta's hunters and anglers. These individuals and groups have contributed millions of dollars towards thousands of conservation projects. So the next time you are thrilled by the sight of a brilliantly coloured pheasant, the exotic looks of a pronghorn, or the tenaciousness of a bull trout—think of Alberta Conservation Association and our partners. Together, we conserve the outdoors you know and love today for future generations to enjoy.

It's All in the Numbers 2012/13 Highlights:

- \$11,080,742 received from **levy revenue** on hunting and fishing licenses
- \$5.5 million received in non-levy revenue from **donations and corporate partners**
- 33% of our **total revenue** came from non-levy sources
- **116% of levy value** collected put directly into our fish and wildlife resources
- 4,000 acres of **land conserved** through purchase
- 245,000 trees and shrubs planted
- 480 acres of **native grassland restored**
- 16 waterbodies aerated to **increase fish survival**
- 61 waterbodies **stocked** with rainbow trout
- 15 riparian projects completed on **36 km of stream**
- 30 **habitat enhancement** projects completed with MUTISAR
- 17 **big games surveys** completed
- 88,000 unique visitors came to our website

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From the Editor

Pops of red, yellow and orange are highlighted against the muted, sweet smelling understory. Hiking, I notice I'm not the only one marveled by and preparing for the changing season. Birds are gobbling up the colourful berries, deer have stripped the chokecherries off stems and the squirrels were way ahead of me this year foraging for hazelnuts. Only the remains of brown husks lay on the ground in broken mosaics, mocking my unpreparedness.

The wildlife have been seduced; beckoned by a deep biological call for survival. They are building up their body's fat reserves and food caches deep within hidden cavities. The goal is to win the battle against the gripping winds and deep snow of our Canadian winter. It's the Stanley Cup of the wild, played out in our natural areas.

I suppose we are no different. Although we hunger for more heat and vitamin D building daylight hours, there's an internal mechanism that drives us to stock up, plump up and prepare our nests. For those of us with dependable shelter, we can take comfort in the crackle of the fire, the warmth of the furnace and comfort food prepared from the fall's finest. However our wild neighbours can have a really hard go of it, especially if there is limited cover to shield them from the elements.

This is where we come in. Alberta Conservation Association, landowners, other conservation organizations, businesses, individuals and communities working to enhance areas for species. In 2012, we conserved 4,000 acres of land, planted 245,000 trees and shrubs and restored 480 acres of native grassland. We have recognized that by adding a little green in areas where it has disappeared, pockets of sustainable housing complete with community gardens are cropping up and attracting the local wildlife. That is the connecting thread within many of our articles in this issue. Re-establish, alter the way we have always done things and make room for others.



—Lisa Monsees, Editor-in-Chief

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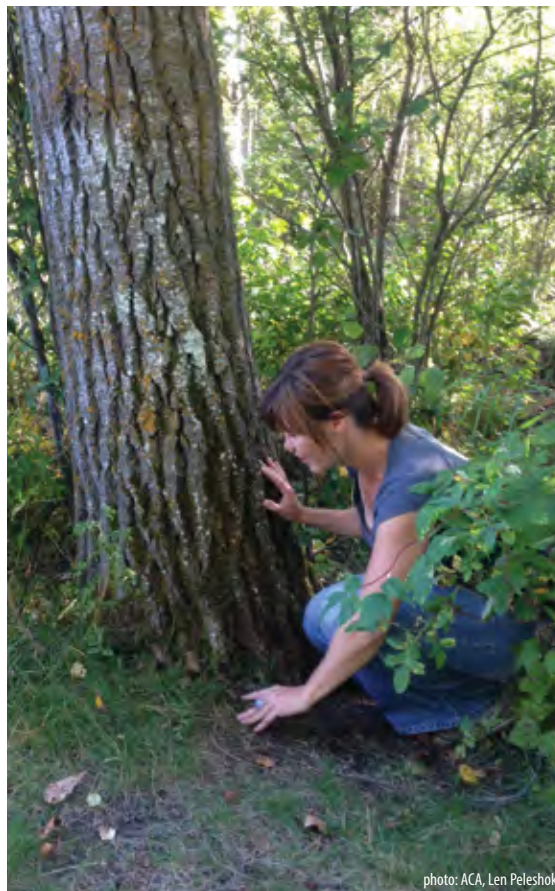


photo: ACA, Len Peleshok

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Music to Our Ears

photo: ACA, Miss Kendall

► by Sue Peters, ACA

How are our actions affecting our wetlands and the wildlife that depends on them?

What can we do about it?

These are big questions, and tough to answer. But Alberta biologists are not afraid to try, with a little help from our webbed and feathered friends.

As children, many of us experienced the simple excitement of hearing frogs or toads singing in a nearby pond. If we were lucky (and didn't hear our moms calling us inside), we even caught a few. For biologists, who know that amphibians can tell us a lot about how well we are taking care of our landscape,

it's not quite that simple. There are some hurdles to successfully studying amphibians, especially rare species or those that call at night. That's where ACA's Grant Eligible Conservation Fund enters the picture, providing the opportunity to purchase 10 digital recorders. Also known as song meters, these allow biologists to record the calls of amphibians and songbirds.

Through the *Using Wetland-dependent Wildlife to Monitor Landscape Change* project, biologists placed song meters next to 21 wetlands in a variety of landscapes. These ranged from protected, natural wetlands in forests to urban stormwater ponds near roads. The recordings will aid biologists in answering long-standing questions about the breeding activity of amphibians

and songbirds: How do ambient sounds (human and natural) affect breeding? How does the vegetation around a wetland affect breeding? And in the bigger picture, they want to know if changes to the landscape (like building a road or removing forest habitat next to a wetland) affect amphibian and songbird calling and breeding patterns. Long-term monitoring may also tell us how the changing climate affects when frogs emerge from their winter slumber and if it's delaying their breeding period.

The song meters proved a valuable tool for biologists, who compared the results with traditional field surveys. The meters captured the calls of more amphibian and songbird species than field surveys. For example, calls from elusive

Canadian toads (*Anaxyrus hemiophrys*) and boreal toads (*A. boreas*) were captured by song meters but were sometimes missed during field surveys.

The Beaver Hills area of Alberta is the hub of this monitoring, as part of a larger network of research sites known as the Terrestrial Wetland Global Change Research Network. By establishing a node in this research network, Alberta biologists are contributing key information to a continental partnership. Through large-scale and long-term partnerships, we can answer big questions about changes to our landscape, and ultimately climate change. ■

Project delivered by: Department of Biological Sciences, University of Alberta (C. Paszkowski and A. Whiting)

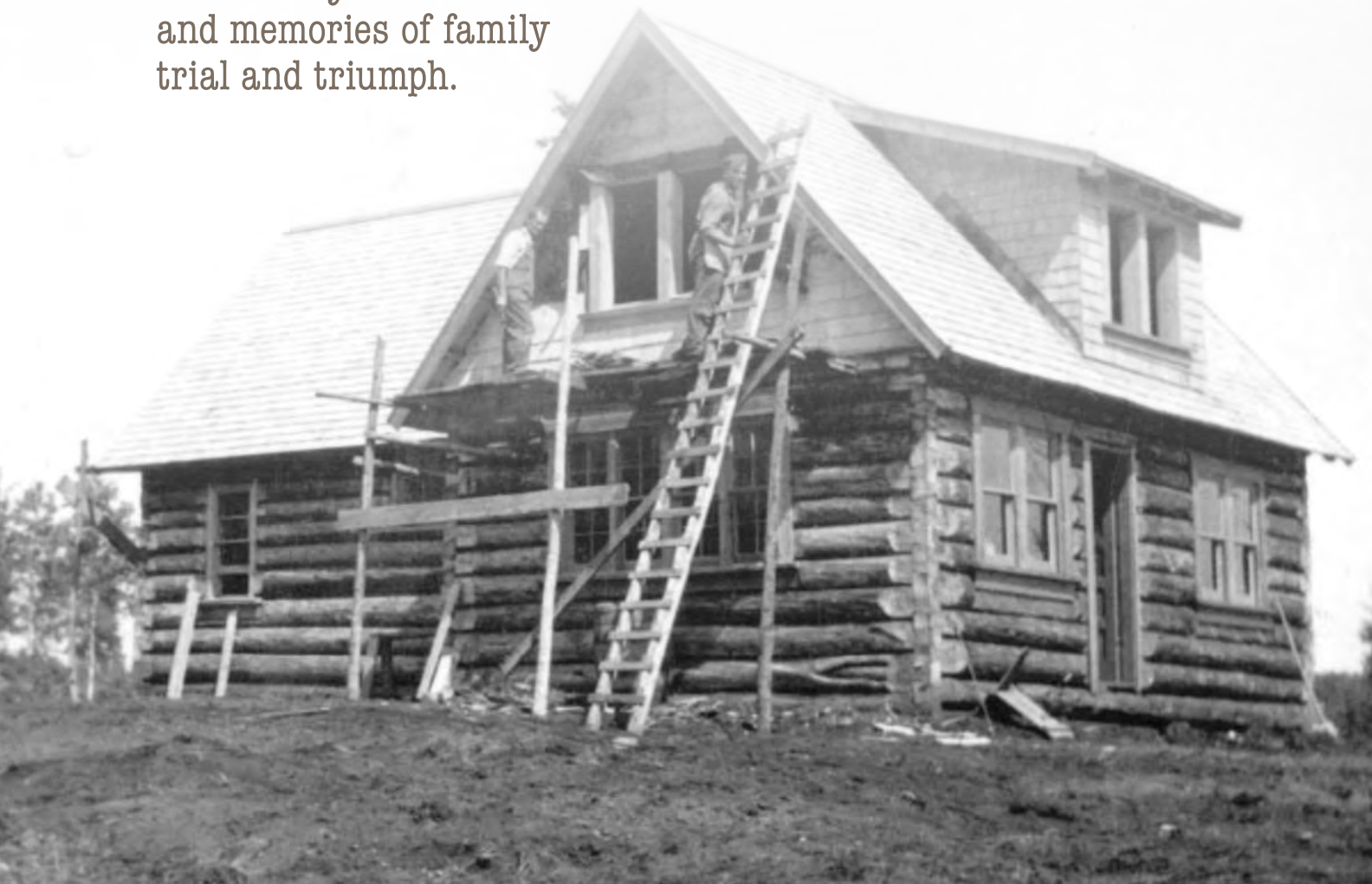
WILD ON THE WEB
For more information on this and other projects
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The Reiners

Meet the Landowner

The caved-in foundation of a family homestead holds many treasures and memories of family trial and triumph.

► *by Karen Crowdis*



The Reiners

The earth cleaved to the white enamel pan of a bygone era, reluctant to give up its treasure. Stubborn caragana roots held tight to the artifact as the woman and her father pulled at the pan. Finally, the caragana relinquished its hold and the pan was freed. The familiar smells of roasted chicken dinners served in the pan by his mother wafted through Albert Reiner's mind as he admired the hard-won treasure.

Adventure Calls

It was the spring of 1930 when Albert Reiner, a young missionary student, was sent to the Peace River region for a summer vicarage placement. Agricultural development in the area was rapidly growing. Albert enthusiastically reported of the fertile growing conditions and anticipated good crops. It seemed the solution to years of drought and farming frustration in southern Alberta for Gottlieb H. Reiner, Albert's father.

A son's dedication to his aging father and Albert's growing affinity with the Peace area, combined with his boyish hankering for adventure, led to father and son wintering in the area on newly acquired homestead land. Roof fires and other challenges were overcome and the men wintered over successfully.

Years of slow progress manually clearing land followed. The effort finally yielded hearty wheat crops, yet the payoff remained elusive in the deepest part of the depression. Young Albert left to complete his theology studies which led to work in distant parts of various provinces.



The Pull of Progress

The dirt of the land gets in the blood through the fingernail beds of those who work it and can never quite be left behind. Albert willingly spent summers and breaks there working the land. He and his father worked their raw homesteads into producing farms. Over the years, the land has been leased to other farmers. Remnants of trailers and dog pens served as frustrating tribute to the generosity of the man who allowed campers there.

The land has deep meaning for the family. Three generations of Reiner family have held title to this piece of prairie history. All have made numerous trips to hack through overgrown caraganas to get to the sites of the family homesteads. Albert's children, Theodore, Walter and Faith, remember their father's passion for the land. They recount his pure emotional bond to this homestead. Albert had said that this soil contained his very heart, blood and sweat.

As the pace of life quickens, voyages to the family homestead decrease for the Reiner descendants. The challenges of managing the land from a distance collide with fulfilling a father's yearning. The family struggled to answer the echo of their father's voice that hoped "that piece of land would always remain the Reiner Homestead." Cairns erected at the home site five years ago pay homage to the pioneer fathers and their descendents. But keeping the homestead was becoming challenging.



Perhaps the true legacy from Albert Reiner is the gift of dirt under the fingernails that created an unbreakable bond with the land for his family. **This is their place. They welcome you to share it.**

Honouring Dad

Desire to preserve the history and respect a father's wish, while having the freedom to visit the land, led the Reiner children to donate this heirloom to ACA. At once relieved and conflicted, Faith had "qualms about letting the land go back to its natural state when Dad worked so hard to open every acre." Calling it the natural circle of life, the Reiner clan agreed that the rebirth will be enjoyed by many.

A continuing tribute to their father is the land that will sustain wildlife and preserve habitat for many years. The treasures culled from the grips of the earth stay as physical reminders of bygone days. That white enamel pan holds a place of prominence alongside an old washtub as yard art at Faith's home.

Perhaps the true legacy from Albert Reiner is the gift of dirt under the fingernails that created an unbreakable bond with the land for his family. This is their place. They welcome you to share it. ■

If your adventurous heart pulls you to the Peace country to see this piece of history, please remember to be respectful, travel on foot and pack out garbage whether it is yours or left behind by someone else.

To visit the Reiner Homestead, go to the *ACA Annual Outdoor Adventure Guide* (albertadiscoverguide.com) for directions and any visitation restrictions.



Photos:

- A Emilie & Gottlieb Reiner, Hines Creek homesteaders in their late 60's.
- B Albert Reiner "camping" back on the homestead in 1980 at the age of 75!
- C 1932: second house under construction
- D All aboard berry picking at the Montequé
- E Hilda Reiner with children Faith, Walter and Theodore
- F Gottlieb Reiner
- G Gottlieb Reiner and son, Albert's, first house
- H Albert, Hilda and parents
- I Albert's three children erected a cairn near the original farm site in 2001. Each column represents a generation with initials of the family members.
L to R: Theodore, Faith, and Walter

Wild Hazelnuts

The wild table  from field to fork

Best I can tell the vast majority of Albertans have zero idea that wild hazelnuts exist in this province. I'd go even further and claim that the vast majority of the food community in Alberta remains clueless. What's odd is that they're not elusive like a truffle, but grow in plain sight in our forests. Admittedly the large-leaved shrubs are rather nondescript—generally I only notice them when they're bearing nuts. Or perhaps the biggest reason we don't know of them is because squirrels sensibly abscond with them before we get to them. I suspect though, if humans were motivated to out-think a squirrel, it could be done. The only logical conclusion is that the wild hazelnut simply needs some warm and fuzzy attention and love in the kitchen.

And they are fuzzy—prickly, rather—so when heading out to find the slightly-odd-yet-lovely-shaped orbs, bring a glove. You can get by with grabbing them near the ends with bare hands, but a glove speeds up the task. If you have any visions of making nut butter or the like, speed will be required to harvest any substantial quantity of the small nut. I'd say they're about a third to half the size of what we're used to from a commercially-produced hazelnut. A primary challenge in the kitchen is to make a little go a long way.

BASIC PREP

My technique for drying hazelnuts is laying them out in a single layer on a sheet pan and forgetting them somewhere for many weeks. Usually that part's not so hard. Once they've browned and dried, it's just a matter of shelling them and figuring out how you want to celebrate the little bundle of goodness you robbed from Mr. Squirrel. My default is to keep it simple by lightly toasting them, crushing them into chunks, and sprinkling them on custards, cakes, and any other desserts that appear in the kitchen.

Here are some other ideas to hit the kitchen with once you have your stash.

Wild Hazelnut Pesto

Pesto can be good, but it's seldom great without the inclusion of the traditional pine nuts. The richness and nuttiness of actual nuts bring a pesto up a notch, no debate there. For years I did without the nut part, simply because they weren't yet part of my pantry assets, and subsequently suffered from pesto apathy.

Enter the wild hazelnut.

Broadly speaking, pesto can be made out of basically any tasty green thing: some cheese, flavoursome oil, nuts, and salt. Bash it up into a mush. Voila: pesto. Recipes abound online for pesto, which I find odd, as balancing the fragrant with the nutty with the salty with the savoury is highly dependent on the ingredients that you're using, and personal preference. So rather than ratios, I'll recommend ideas.

- Instead of the default basil, think outside the box with greens such as wild mint in the summer (think: mint-hazelnut pesto on ice cream) or add a couple of spruce tips (think: rosemary substitute) in the spring and top a big game dish with it.
- Closer to the garden, arugula in its many forms and its mustardy cousins are all great options.
- Avoid box stores for the cheese and opt for a local producer like The Cheesiry's old pecorino, or Sylvan Star's many-award-winning Grizzly Gouda.
- Pick up cold-pressed canola oil from Mighty Trio Organics, which offers a distinct raw-pea/asparagus flavour.
- Grab the fanciest salt you have.

This is the world of un-boring pesto, and super-tasty and exciting food.

Wild Hazelnut Compound Butter

If you can mash potatoes, you can make a compound butter.

Making something go a long way is easier if another ingredient can carry the flavour. Enter butter. Compound butters sound fancy, but they're just butter mashed with something else, often herbs, garlic, nuts, citrus zest, and other tasty add-ins.

- Crush a handful of hazelnuts up a bit.
- Toss them into a half-cup or so of the highest quality butter you can get your hands on.
- Mash with a fork until the nuts are well distributed.
- Storage is easy, just roll it into a log, wrap in plastic, and toss it in the fridge or freezer.
- When it's time to impress your friends at brunch, butter their toast or scone with hazelnut butter. Or tuck it under the skin of the Thanksgiving roast bird. Or finish the pan with it after pan-frying your favourite game meat. Use it in your favourite batch of cookies.

Dream it up, share it with your friends and family, and maybe one day wild hazelnuts will deservedly embed itself into our collective culinary consciousness. ■



Kevin Kossowan is a local food writer deeply involved in Alberta's urban agriculture and foraging communities. He believes wild foods are critical to our regional food culture. Join us every issue as he celebrates Alberta's regional foods with tips, recipes and fresh ideas.



Harvesting Hazelnuts in Alberta



Beaked hazelnuts are commonly found in moist aspen forests. Harvesting typically begins the middle to end of August, when the outer papery beaked husk starts to turn brown. Get started by visiting these Conservation Sites: Cameron Development, Silverberry and Wood Lake. Directions and maps to these and other foraging sites are located at albertadiscoverguide.com.



WILD ON THE WEB

Check out the local food producers Kevin mentions. Simply search The Cheesiry, Sylvan Star Cheese, and Mighty Trio Organics online for more information.

"That was like trying to get tickets to a Led Zeppelin concert."

-@jackcornback

Fast. Furious. And don't you dare fumble.

At least that seemed to be the consensus immediately after all available spots for the annual Taber Pheasant Festival went up for grabs. While we didn't make waves around the world like one of the greatest rock bands of all time, headlines in our neck of the woods went something like this: Pheasants score a comeback and make history in Taber, Alberta; all 350 hunting spots filled in 3 minutes and 42 seconds.

So how does this feathered headliner get people saddled up to their computers on a bleary-eyed Monday morning, anxiously firing their mouse in hopes of a coveted hunting spot?

It goes back a few years—even before Led Zeppelin's epic sellouts of 1975.

► *by Ariana Tourneur, ACA and Elize Uniat, ACA*





Over the Hills and Far Away

The ring-necked pheasant is not native to North America. Its life on this continent began in 1881, when 200 Asian ring-necked pheasants were released in Oregon. Twenty-five years later in 1906, Calgary sportsmen released 80 birds across the Alberta prairie, near Midnapore, Bragg Creek, Rosebud Creek and Strathmore. A couple more releases, followed by a distribution program of young pheasants and eggs to farmers near Brooks, Lethbridge, Camrose and Edmonton, saw pheasants fly into their glory days.

The pheasant does best along canals, in grain crops and in cattails. Their favoured landscape seems to encapsulate the beauty of the Alberta prairies that represent country life—an unobscured view of row crops, small grains, pasturelands, grasslands and abandoned farmland. Pheasants have created their own special niche in Alberta—to the delight of landowners, hunters, and naturalists. Landowners welcome the exotic flash of a pheasant; bird hunters and often their dogs treasure the chase through brush and slough and can't wait to do it again.

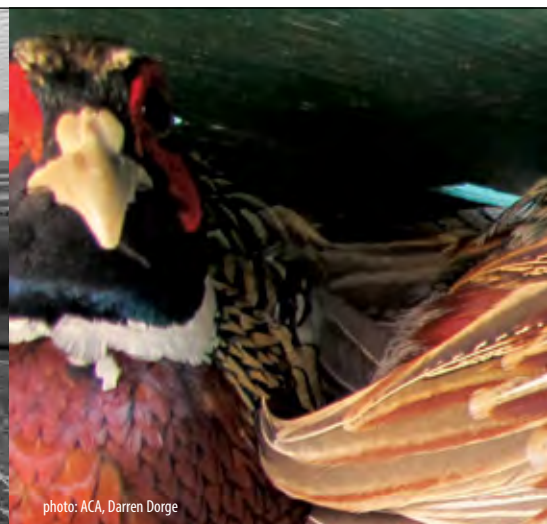
Alberta held its first open hunting season for pheasants in 1932. In 1945, a provincial government hatchery was set up in Brooks to raise and distribute birds in cereal crop regions of the province. Populations continued to explode, and pheasants were enjoying all the perks of the prairie landscape. Hunting them was becoming an exciting time. But like other wildlife populations, living the high life only lasts so long. The ring-necked pheasant's history in Alberta reveals a familiar pattern of boom and bust, driven by changes in policy and of course, habitat.

photo: ACA, Randy Lee

Good Times Bad Times

And that just might be the sticking point when it comes to the rise and fall of pheasants: habitat. During the pheasant's heyday, agricultural practices were obviously different. Quarter sections were cross fenced, shelterbelts planted, and farmers were threshing as opposed to combining. Each workable field was smaller, and each quarter had two or three straw piles, with all the waste grain concentrated in one area. Think of it this way: food and cover were rolled together into a one stop pheasant shop. Less energy expenditure and more quality food got them through the harshest of Alberta winters.

Pheasant life got tough in the '60s. Farming technology amped up: combines were routinely used, the straw piles disappeared and waste grain was scattered sparingly across entire crops. The fields opened up becoming larger and the cross fences disappeared taking a lot of cover out. The introduction of pesticides also really took their toll on the pheasant and bird populations in general. Along with ditch mowing and canal changes, it all created a domino effect that impacted habitat health and abundance.



In 1974, the ring-necked pheasant's significant decline was making news. The *Edmonton Journal* reported that the previous year's hunting season was cut by two weeks and might have to be reduced again: "With the pheasant count in Alberta...down to about 50,000—the lowest in 25 years—biologists said the only way hunters will ever witness an abundance again is if the province raised and released the birds on a massive scale."



photo: ACA, Randy Lee

Heartbreaker

No doubt, the ring-necked pheasant is a captivating creature. Ring-necked roosters are unmistakable: a long, tapered tail, spectacular multi-coloured plumage and white collar (as the name suggests), topped with an emerald green head and red circling the eye. More frequently heard than seen, they are truly a sight to behold—especially when they pop up on a dreary winter landscape. Hens are less showy, with duller, mottled brown plumage all over and no markings on the head. Both sexes are swift runners and strong flyers for short distances.



What Is And What Should Never Be

And that did happen. In 1978, the government hatchery at Brooks moved to a bigger location outside town because it needed more space for the increased number of pheasants it was raising each year. Things went swimmingly all through the 1980s. Then, in the 1990s, the hatchery was privatized. According to an April 5, 2013 article in *The Western Producer*, "The Brooks facility had several owners after it was privatized, most recently Ed Houck and a group of investors....The pheasant operation has struggled in the past when the provincial government considered ending its role in the pheasant release program."

When the government called off the release program in 2012, a volunteer organization, Upland Birds Alberta (UBA), sprung up and handled the releases, with pheasants from Brooks. Again from *The Western Producer*, "Ken Bailey, a volunteer with UBA, said the group agreed to handle the pheasant release

and obtained 13,000 birds from the company. His group has agreed to handle the program again in 2013." Earlier this year, The Canadian Pheasant Company (as it was renamed in 1999), announced that it is closing. This news certainly shook the pheasant community. Even so, UBA is determined to find birds elsewhere and continue the release program.

Bring It On Home

Pheasants in Alberta have certainly taken their fair share of hits. Some people are wary of the pheasant's future here, believing their time is up. Obviously farming practices will never reverse, but perhaps a single step in the right direction is *forward*. Looking at new ways to enhance the landscape, instead of dwelling on "how it used to be," is our best shot at reviving the wonder of pheasants and the joy their hunting tradition brings. That is where the Taber Pheasant Festival, now in its third year and massively popular, comes in.

While the festival is summed up as "put and take," it's much more than that: it's truly an opportunity to communicate with hunters

and landowners alike. Organizer and Alberta Conservation Association (ACA) president and CEO, Todd Zimmerling said, "We're the first to admit: releases and hunts create significant interest and enthusiasm. However, in the big picture—at the core of ACA's work—self-sustaining populations are the goal. Better habitats are the focus."

Zimmerling, recounts a wonderful conversation he had last year with a 13-year old girl and her dad. She really enjoyed pheasant hunting at the festival, and thought it would be great to do it on her grandpa's land. Her dad said that her grandfather's two sections were not great pheasant habitat, and she replied, "I guess I'll have to talk to grandpa about what he can do to improve the habitat, so that we can go hunting together on his land." When youngsters understand the importance of habitat conservation, the future suddenly looks a lot brighter.



photo: ACA, Brad Taylor

Hey Hey What Can I Do

And the hope remains that if enough landowners adopt farming practices to lend pheasants and other wildlife a hand, Alberta will eventually have its self-sustaining population back. It is impossible to imagine a time in history when the need to conserve our wildlife and the places where they live has been more visible: our direct impact on their survival is hard to ignore these days.

So, what's a landowner to do? Biologists agree that leaving some buffer zones around prairie potholes, rivers and springs is important. This practice has the ability to impact more than just one species. Pheasants benefit, but so do our ducks, songbirds, deer and more. Leaving pockets of habitat doesn't cost the farmer a lot, because those pockets usually end up being on marginal land that is harder to farm and is less productive anyway.

In the Municipal District of Taber, the pheasant festival has also spawned discussions about pheasant habitat.

Agricultural fieldman, Jon Hood, started asking ACA biologists to look at the county's mowing schedules for ditches and the herbicides it's using to see what can be done to help out pheasants. In an article published on July 18, 2013 in *The Taber Times*, Jon asks: "[H]ow am I affecting the habitat and what can I do to do better? Do I need to mow less, do I need to change my timing? What's the best direction I can take?" It turns out the M.D. is already doing most things right. Mowing after July 15 is the single most important thing, as that allows pheasant hens to hatch their chicks and get them out of the way of deadly mower blades. Those questions are ones every landowner should be asking, and many are.

Landowners who want to take things a step further can enhance or plant shelterbelts—shrub hedges have been used for years to improve wildlife survival rates. Along with shrubs and low trees, cattails and brushy cover, they provide shelter in harsh winter conditions and places to escape and hide from would-be predators. In a discussion

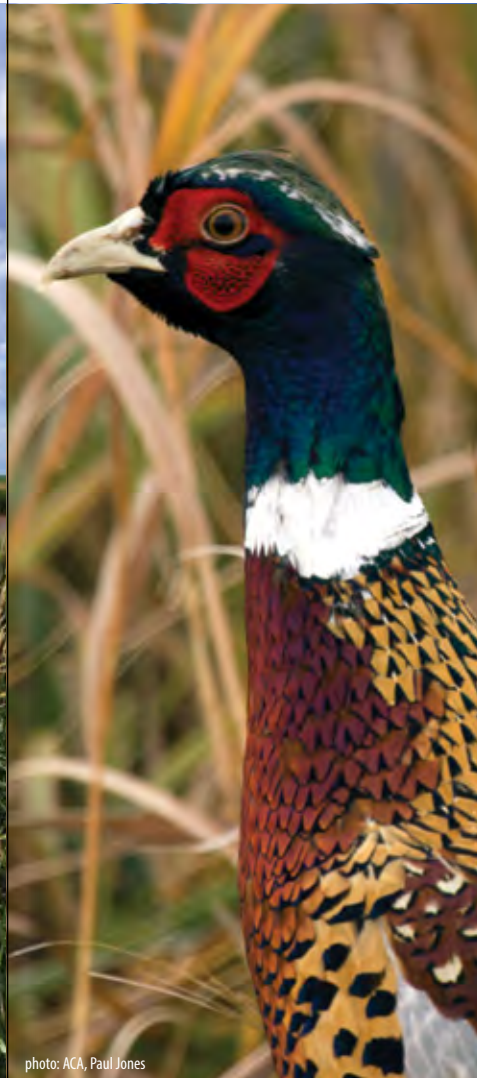


photo: ACA, Paul Jones



Habitat enhancement on Hays Drain C3 Conservation Site.

photo: ACA, Randy Lee

from 2011 on the Alberta Outdoorsmen Forum, wwbirds points out “Pheasant habitat loss is just a sign that all wildlife habitat has deteriorated over the past 30 – 40 years. We can say too bad they weren't native anyways, or ignore habitat loss to all species or start doing something about it collectively from all farm and conservation areas before it is too late...what will we accept as normal decline in another 10 or 20 years when we say this hunting heritage should be protected and encouraged for those that come after[?] We can leave them excuses or leave them a hunting heritage and a place to do it.” Clearly, pheasants inspire passionate opinions, and while not everyone may agree with working to make pheasant habitat better, we can all agree that making *wildlife* habitat better is important. Better habitat equals more wildlife. That's something we all can live with.

Your Time Is Gonna Come

The ring-necked pheasant is a bright spot—for the farmer, for the hunter, for youth...for whoever witnesses its beauty up close. The same can be said for Alberta's economy—the positive economic impact the ring-necked pheasant makes every year in rural Alberta is undeniable. Consider that a 2011 report on pheasant hunting in the County of Newell pegged total expenditures by pheasant hunters at \$1.75 million in 2010. In an article published in *The Brooks and County Chronicle* in October 2012, “Houck cites the UBA study that underlines a \$10 million deposit the sport annually injects into the economy.” According to *The Western Producer*, “The 2010 Alberta government revenues from pheasant hunting activities totalled \$754,803, including \$215,186 in hunting licence purchases attributable to pheasant hunting.” There is an economic case to be made for pheasant hunting.

Pheasants are also a great way to introduce someone new to hunting, and at the Taber Pheasant Festival, the first weekend is always dedicated to novice hunters. As joshcat points out on the Alberta Outdoorsmen Forum, “So I can take a youth interested in hunting[,] release some birds, take him/her out with pointers in a controlled environment where I know there is game and let said youth have some fun and [hunt] some birds....Introduce some new people to the sport.

[S]trength in numbers.” The strength in numbers idea is intriguing, because Alberta has been bucking the general downward trend when it comes to hunting. The number

of hunters has increased over the last few years, and if the three minute 42 second sellout time of this year's Taber Pheasant Festival is any indication, there are numbers all right, and they're passionate. If these numbers tell us anything, hopefully it's that we're seeing the creation of a new generation of hunters with a finely honed appreciation for wildlife and the importance of conserving the places they call home.

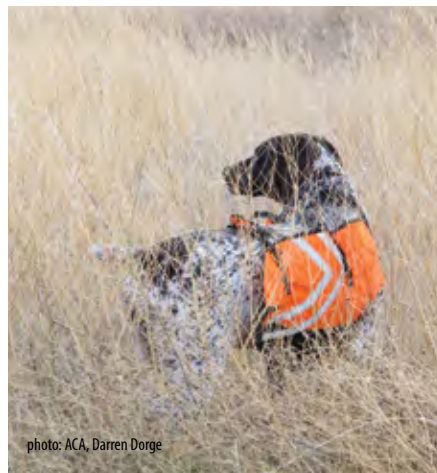


photo: ACA, Darren Dorge

Stairway To Heaven

When is the last time you listened to one of the greatest rock songs of all time? Those mysterious lyrics mean many things to many people...perhaps it can even mean something for pheasant enthusiasts. While that is probably a stretch, it is a fact that pheasants once thrived in Alberta—we have firsthand knowledge of that time. They can thrive again, but it will take political and popular will to make the changes necessary. It's not rocket science, but it does take commitment and mutual respect between landowner and land, landowner and hunter, and hunter and pheasant.

Pheasants are, and always have been, beautiful headliners. Together we can keep them centre stage.

Rock on pheasants, rock on. ■

WILD ON THE WEB

Want more about pheasants?
Explore Alberta's *Ring-necked Pheasant Through the Seasons*.
ab-conservation.com/pheasantbooklet



photo: ACA, Darren Dorge

Making it as a MOOSE

► photos & text by Wayne Lynch

It was Christmas Eve day, -25 C and snowing. I was in Jasper National Park searching for a photogenic subject when, on the roadside to Maligne Lake, I spotted a mother moose and her seven-month-old calf browsing. Despite my presence, the pair languidly pruned the tips of willow and soapberry bushes while I snapped away. As minutes stretched into a solid hour, I wondered how moose survive on such a dry woody diet. Weren't they bothered by the deep powdery snow and frigid temperatures that left me floundering with a frost-bitten nose?

FOOD

Gettin' twiggy with it

Most of the year, particularly in winter, moose are browsers, feeding on the woody tips of willows, poplars, and birches. Their common name is derived from the Algonkian Native American name that means "twig stripper." In fact, an average moose, weighing 350 – 400 kg, will chew through roughly 15 kg (33 lbs) of twigs *every day* of the winter. That's about five yard bags full, per day!

The twig diet is 30 – 50 percent less nutritious than the leafy diet of spring and summer. In autumn, willows, aspens, and birches transfer nutrients back to their root system in preparation for the winter season. By autumn's end, the terminal twigs and buds of these plants contain less than a third of the protein they contain in spring.

In early winter, moose compensate for this less-than-stellar nutrition by digging craters in shallow snow with their sharp-edged front hooves,

uncovering more wholesome foods. They dig in boggy areas around marshes and river banks for still-succulent sedges and search for fresh fallen aspen leaves that are higher in protein and more digestible than twigs. The addition of leaves to their diet is probably underestimated by researchers, because leaf remains are not easily identified in droppings—the most common way to dissect moose diets. On rare occasions, moose will strip bark from aspens and other trees as elk commonly do, but this is a last resort when starvation threatens.

Moose depend on fire

Periodic boreal forest wildfires create habitat they need to thrive. Food abundance for moose reaches a peak 10 to 15 years after a forest fire, and gradually declines over the next 20 years, as the forest grows back. Wildlife managers speculate fire suppression and the clearing of large tracts of aspen are the number one threat to moose populations in Alberta.

When your stomach is bigger than your eyes...

Moose can survive on such a fibrous diet because like cattle, sheep and goats, they are ruminants—they have a four-chambered stomach. The major chamber, called the rumen, is a large fluid-filled vat where microbes ferment and digest the animal's food, allowing as much nutrition as possible to be extracted. These microbes are not present at birth, but acquired when a calf licks its mother's saliva in the first few months of life.

Despite their four-chambered powerhouse, most moose cannot eat enough twigs to meet their energy needs. They lose up to a quarter of their body weight, but sometimes as little as 25 – 30 kg. The most nutritionally challenged moose are

often mature bulls that normally stop feeding during the September/October rut, entering winter with reduced fat reserves.

Winter weight loss can also impact pregnant cows. When fat reserves are abundant and winter conditions mild, up to 90 percent of adult females will birth twins and, on rare occasions, triplets. But when a pregnant moose has a poor diet, scanty fat reserves or endures a long winter with deep snow, she may birth only one calf or have no calf at all.

TRANSPORTATION

Put it in 4X4

The leggy moose is the original all-terrain vehicle, with an average chest height of 105 cm (a third higher than caribou). They lift their legs from the snow vertically, rather than dragging them out at an angle, reducing the energy they burn when moving around. In a combined Elk Island/Jasper National Park study,

researchers found moose had the greatest chest height of any hoofed mammal in Alberta, travelling freely through snow 40 – 50 cm deep and being seriously impeded only when depths got greater than 90 – 100 cm.

Slack season

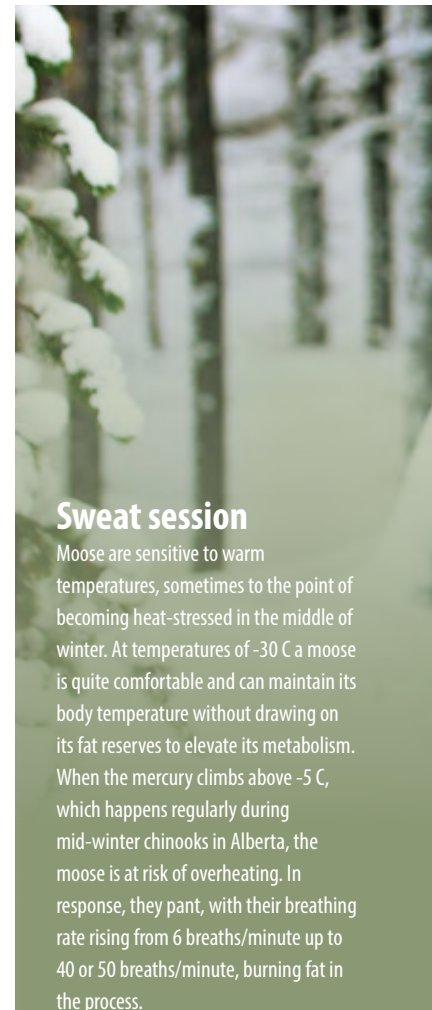
To cut energy drain when the snow cover is deep and soft, a moose might move around less. When researchers measured the winter ranges of moose under different snow conditions, they found that during mild winters when the snow was shallow, moose used an area of about 225 ha (555 acres). In moderate winters, they used just under half this area, and during severe winters with deep snow, the haggard animals eked out an existence in a mere five hectares (12 acres). Moose have reacted to deep snow by migrating to more

favourable locations, sometimes moving as far as 200 km. Typically, they travel less than 10 km.

It seems the moose is tailor-made for Alberta's deep snow and bitter cold. Of all Alberta's hoofed mammals (elk, deer, bighorn sheep, mountain goat, bison, pronghorn, moose and caribou), only the woodland caribou comes out ahead of the moose. It's certainly not me: while my teeth were chattering and I was fantasizing about eggnog that cold winter's day, the mother and calf were doing what they do best—enjoying a satisfying meal in perfect al fresco temperatures! ■

Dr. Lynch is a popular guest lecturer and an award-winning science writer.

His books and photography cover a wide range of subjects, including the biology of owls, penguins and northern bears; arctic, boreal and grassland ecology; and the lives of prairie birds and mountain wildlife.



Sweat session

Moose are sensitive to warm temperatures, sometimes to the point of becoming heat-stressed in the middle of winter. At temperatures of -30 C a moose is quite comfortable and can maintain its body temperature without drawing on its fat reserves to elevate its metabolism. When the mercury climbs above -5 C, which happens regularly during mid-winter chinooks in Alberta, the moose is at risk of overheating. In response, they pant, with their breathing rate rising from 6 breaths/minute up to 40 or 50 breaths/minute, burning fat in the process.



We need farmers and we need ducks, so the question becomes: how do the two coexist?



► by Velma Hudson, ACA

Who doesn't love a duckling? They're fluffy, feisty, soft, cute, and just generally adorable. They're also vulnerable, especially in areas where native wetland vegetation has been removed or changed. In areas of Alberta where agriculture is the main land use, many ducklings never make it past the egg stage. We need farmers and we need ducks, so the question becomes: how do the two coexist?

Digs for ducklings



Pothole paradise

Every spring millions of waterfowl leave their southern wintering grounds to breed and raise their young in the north. Many species settle in the Prairie Pothole Region (PPR), a large geographic area of central North America stretching from Iowa to central Alberta. The PPR formed over 10,000 years ago as the last ice age came to an end. Retreating glaciers left behind thousands of shallow depressions where blocks of ice melted, creating "kettle lakes" or what we call potholes or sloughs.

Pothole wetlands gain water primarily through spring snow melt and surface runoff. As a result, these wetlands hold water longer in the summer season, many of them permanently, and are rich in plant and aquatic life. These characteristics make them ideal for waterfowl nesting and brood rearing. It is estimated that up to half the continental waterfowl population is produced in the PPR, earning it the nickname "North America's Duck Factory." The same glaciers that created the potholes also deposited rich soil which, along with an agreeable climate, has made the PPR an important agricultural area. Many wetlands have been drained and much of the natural areas next to wetlands have been removed or damaged by agriculture to the point where secure nesting habitat for several duck species is in short supply.

Hide and seek

Mallards are ground-nesting ducks, building their nests in the dry uplands bordering wetlands. In large expanses of native grass and shrublands, this is a good survival strategy—predators like skunks, coyotes, foxes, crows, ravens and magpies have a hard time finding the nest. However, when nests are built in the narrow ring of vegetation commonly left around wetlands in cultivated fields, predators easily discover and destroy the eggs and nesting hen. Research on nest survival (eggs hatching) in these areas show a success rate as low as 1-2 percent, well below the 15 percent necessary to sustain a population. Complicating nesting efforts, spring runoff sometimes flood those remnant grassy areas, forcing the hens to nest in stubble where they and their nests are more visible. As spring planting starts, those nests that have evaded predators may be destroyed by farm machinery.



photo: ACA, Jim Fisher

A perfect duck dwelling

Alberta Conservation Association (ACA), Delta Waterfowl and many dedicated individuals and conservation groups address nesting habitat loss by installing “hen houses” for ground-nesting ducks. A hen house consists of a metal base post, an adjustable cradle and a straw-stuffed wire cylinder where the duck nests. These structures are placed in open water in small wetlands, providing protection for the hen and eggs from both terrestrial and avian predators.

The hen houses are usually installed in winter through the ice. Once in place, the structures last many years. Annual maintenance is necessary and usually carried out during the late winter before the ice melts and the ducks return.

Nest tunnel maintenance is quite straightforward. Spending time outdoors on a mild late winter’s day checking and maintaining hen houses always brings a smile and is a great conservation activity for groups and families. Here is what you would do:

- ▶ Examine the interior nesting material for evidence of nesting success from the previous year.
- ▶ Replace the exterior material the ducks used for nesting to keep the nest hidden from overhead predators.
- ▶ Replace or augment interior nesting material to ensure there is sufficient grass for the hen to make a nest bowl, because ducks don’t carry nesting material in their bills.
- ▶ Raise or lower the tunnel to accommodate different water levels.
- ▶ Done! It’s all ready for the new breeding season.

A different duck dynasty —happy happy happy

Mallard hens often return to the same tunnel. Research is finding that some of their offspring also return to the same ponds to nest. So, once ducks find and use a tunnel, future waterfowl use of other structures in the pond often goes up.

The ideal way to conserve PPR’s ground nesters is by restoring large tracts of native vegetation that is interspersed with potholes. However, hen houses are an affordable and immediate alternative to improve a duckling’s odds.

ACA, Delta Waterfowl and Syncrude Canada provide funding for volunteers to install and annually monitor and maintain hen houses.

If you are interested in learning more about hen houses and how you can help, email us at info@ab-conservation.com, or call 1-877-969-9091. ■



photo: ACA, Andy Murphy



photo: ACA, Randy Lee

A well-positioned and maintained hen house provides a secure nesting site for mallards in areas lacking good cover.

375 ducklings and counting

To date we have installed approximately 250 hen houses. Monitoring reports indicate that ducks used just over half of them, and 93% of those appeared to have hatched ducklings. Using some fairly conservative estimates for duckling survival to fledging (flight), we estimate our tunnels produced approximately 375 ducklings last year! Compare that to 250 ground nests, which would have produced approximately 160 ducklings due to predation.



photo: ACA, Mike Jokinen

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Camera traps capture the wild

► by Michael Jokinen, ACA

► ACA contributing writers: Darren Dorge, Lisa Monsees, Bill Patterson

Warning: trail cameras are extremely addictive!

They're also an exceptional wildlife monitoring tool. Rarely seen wildlife are being photographed around the world with them. Not only have researchers been able to detect species of interest, but species inhabiting areas where they were thought to be extinct. In China, the Amur leopard was captured on a trail camera, the first observation of the leopard in China in 62 years. Closer to home, in California, a trail camera intended for other species caught the first wolverine sighting in 86 years.

The basic trail camera (also known as a camera trap) records images in still or video format using passive infrared technology. Essentially, it captures an image each time something passes in front of the heat-sensing motion detector. Digital technology has revolutionized the trail camera. These advancements are incredibly useful to biologists, expanding our understanding of species like never before. Cameras are relatively inexpensive, easy to operate and, thanks to improved battery life and image capacity, very reliable even when unmonitored for long periods. Most trail cameras use infrared flash, so they are far less likely to alarm or disturb wildlife. The images captured by the trail camera serve as a reminder that wild places still exist.

Researchers agree

The magnitude of information the cameras are capable of providing is invaluable and could never be replicated, not even by an army of researchers. But, as with all research, there is a component of trial and error. Trail cameras demand a certain level of expertise. You have to be certain that your image captures the subject of interest each time it enters the frame.

Getting up close

I have been using trail cameras for five years quite regularly, both for work and personal interest, and I admit the novelty has only worn off slightly. It's always exciting and often hard to wait to view images and interpret them. It's the challenge of the chase and the occasional "once in a lifetime" shot that holds my fascination. I have recently shifted to using the HD video option on the trail camera for my personal ventures—video

photos: ACA



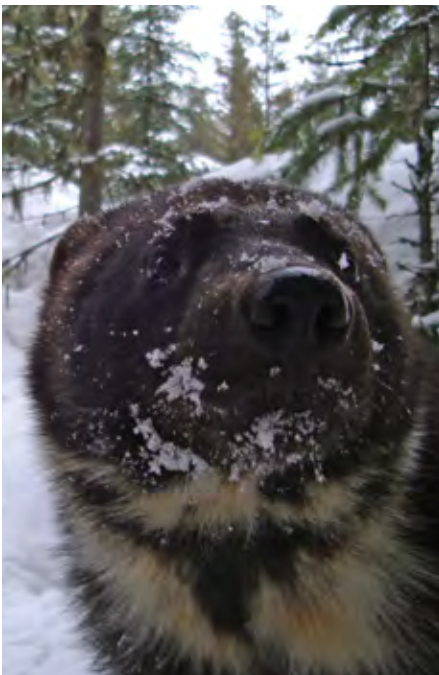
"The cameras take on the brunt of the work, all day, seven days a week, all season long."

Bill Patterson

"The information collected from trail cameras guides how we develop our management plans and gives us ideas of what we can do to enhance habitats for these species."

Darren Dorge

photos: ACA



footage unveils the character of an animal to the next level.

Where technology advances, trail cameras follow. Some models now come with remote image backup devices, while others can wirelessly upload images to your computer. While not technically a trail camera, Alberta Conservation Association's (ACA) live-streaming peregrine cams are a great example of how a simple application of the remote camera can keep people connected to the natural world. I personally like the idea of the old-fashioned trail camera design where you have to make the trek into the wilderness each time, exercising your senses and maintaining a relationship with your surroundings. The images captured by the trail camera serve as a reminder that wild places still exist.

Candid moments

Alberta Conservation Association has been working with trail cameras on a variety of projects, revealing interesting behaviours and movements of Alberta's species. For example, when monitoring wildlife activity at mineral licks, we captured a showdown between a male mountain goat and a cougar, something you may never see even after hundreds of hours in the field. Not to mention, trail cameras capture wildlife visiting licks at night, which would have been missed by field observation. Trail cameras also identify areas occupied by the

ever elusive wolverine and determine the effectiveness of fence enhancements for pronghorn migration. Last year, we set up 42 cameras on Canadian Forces Base Suffield and monitored the existing fence line for a month. We then randomly raised 21 sections of fence and monitored pronghorn reactions to the change. The cameras recorded 967 fence encounters for four ungulate species. It appeared that pronghorn use existing "traditional" sites to cross fences and avoided or ignored sites with goat bars.

Making a splash

Our fisheries team use cameras as part of their angler surveys. ACA has investigated the cameras' performance on small lakes stocked with rainbow trout and learned they measure upwards of 85% of angling effort. On larger lakes (<1000 ha), multiple cameras captured approximately 60% of angling effort. Since 2008, we've used cameras for 25 angler surveys. During the summer of 2012, we estimated 2,777 anglers fished for 8,666 hours at Beaver Lake, 498 anglers for 1,791 hours at Fiesta Lake, and 331 anglers for 1,059 hours at Ironside Lake. Biologist, Bill Patterson, says, "Digital trail cameras significantly increase survey effort, improve the confidence of our estimates, and reduce the cost of surveys. The cameras take on the brunt of the work, all day, seven days a week, all season long." The good part about this, Bill explains, is the lower costs can increase the



number of surveys we conduct. Of course, cameras can't capture everything, so staff will interview a minimal number of anglers to collect information on catch and trip length, and conduct camera maintenance. Also, using these cameras to count boat trailers at a boat launch or quads on a trail into remote fisheries are examples of innovative methods of measuring angling effort. Patterson concludes, "Trail cams make a large-scale monitoring program of Alberta's sport fisheries fiscally and logistically feasible."

Revealing the mysteries

The Land Management program at ACA has also benefitted from trail camera technology on Conservation Sites (land conserved for wildlife and sustainable recreation). At one particular site, a camera set up on a game trail on a high ridge snapped photographs of wildlife moving in the area. Another camera on a water development captured cougars, bears and deer stopping for a drink. Land manager, Darren Dorge, said, "They're a great tool that reveals what species come and go from our Conservation Sites and at what time of year. The information collected from the cameras guides how we develop our management plans and gives us ideas of what we can do to enhance habitat for species. The cameras are in operation 24 hours/day—so the data is certainly valuable and impossible to compare to what a person could collect by doing ground surveys." ■



GETTING STARTED

Forget the scientific utility of trail cameras—the best part is the enjoyment of seeing what you captured on camera!

Mike's best tips for trail cam success:

- **Purchase quality batteries.** Lithium batteries are expensive initially but pay off in the long run—they outlast alkaline batteries and continue operating at extreme temperatures.
- **Install your camera facing north.** This provides clearer images and limits the amount of whitewash or glare from the sun.
- **Always take your time when positioning the camera.** Take test images to ensure it is capturing your point of interest and including other characteristics that might be important.

WILD ON THE WEB

Get more tips at ab-conservation.com/mag. Check out Michael Jokinen's trail cam videos and photos too. His rub tree video is particularly amusing, plus you'll find photos from our wolverine and pronghorn studies.



Wild Outdoor Getaways

► by Juanna Thompson, ACA

Discover maps, driving directions and more to 743 Conservation Sites with the free *Alberta Outdoor Adventure Guide* app for iPhone. If you don't have an iPhone you can access the Guide online at albertadiscoverguide.com. The web-based version of the Guide offers the same information as the mobile app. Request a free hard copy at 1-877-969-9091.



photo: ACA, Juanna Thompson

WILD ON THE WEB

Read and watch our weed control experiment on Silverberry, using 410 goats to rid the area of toadflax at ab-conservation.com/goats



photo: ACA, Lisa Monsees

Getaways...a seemingly easy word to define...somewhere or someplace away from home, right? The fascinating thing with ACA's Conservation Sites is that I feel at home there. Living close to Edmonton, many Conservation Sites are easy for me to come home to—all located within a leisurely one- or two-hour drive. I have always loved the fringe of the parkland and the boreal. Over the years, I find myself spellbound by the intricacy of these two great ecoregions, colliding and battling over the last expanse of shrub, forest and grassland.

Silverberry



A site where we once used goats to control invasive weeds, Silverberry is a true gem. It is jam-packed with diverse habitats and wildlife. Rolling meadows? *Check*. Beautiful pine forests? *Check*. Marsh teeming with waterfowl? *Check*. Its vast size offers extensive hiking, hunting and photography opportunities. However, it just may be the tranquility and peacefulness that really hits home.



2,100 acres

Site Partners: Alberta Conservation Association, Alberta Environment and Sustainable Resource Development, Alberta Sport, Recreation, Parks & Wildlife Foundation, Ducks Unlimited Canada



Directions: Located approximately 12 km northeast of Myrnam. From Myrnam, travel east on Highway 45 for 12.8 km to RR 80, turn north and travel 3.2 km. RR 80 runs through the west-central portion of the site.



Check it out because: The old growth forests, steep coulees and open grasslands create a wonderful balance for an ideal getaway.



photo: ACA

Musidora 3

Be one of the first to visit! This site is so new that it hasn't even been added to *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide* yet.

A small but mighty Conservation Site, Musidora 3 offers rich forests and wetlands geared to the forest-lover at heart. Get ready to be spooked by flushing sharp-tailed grouse or serenaded by a diversity of neo-tropical migrant songbirds. A lack of trails means bushwhacking throughout this site will require a little perseverance, but it's well worth the effort. The Conservation Site is located within a pocket of forested land southeast of Two Hills where agriculture could not dare venture given the rolling terrain and sandy soils. There are several other ACA and partner sites within a 5 km radius, meaning you can further expand your adventures!



160 acres

Site Partners: Alberta Conservation Association



Directions: From Morecambe, travel 4 km south on Highway 870, turn west on Twp Road and travel 3.2 km, and then south on RR 112 and travel 3.2 km to the site located on the east side of the road.



Check it out because: Intact, unaltered forested parcels like this one are slowly disappearing.

photo: ACA, Lisa Monsees

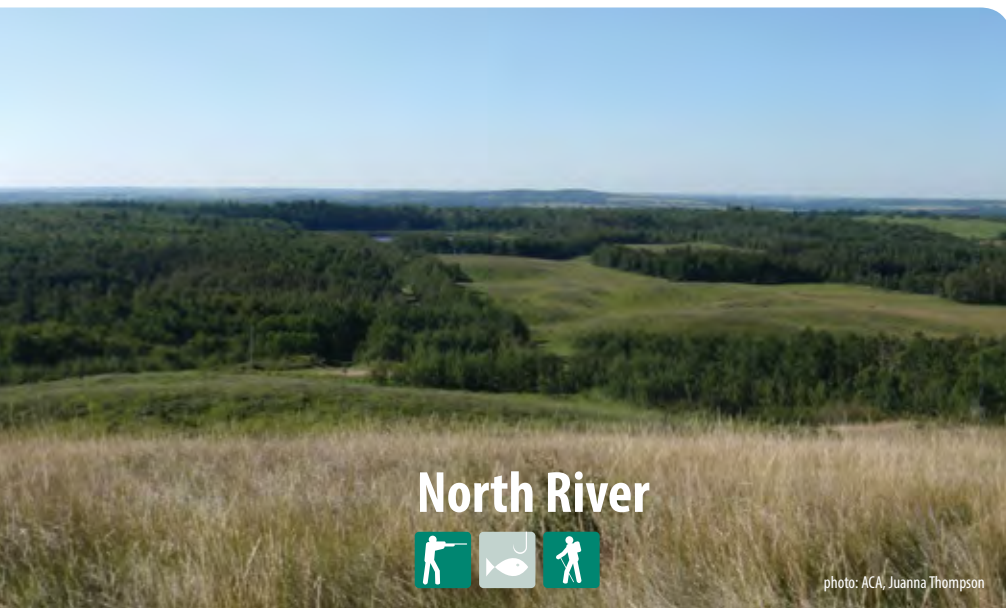


photo: ACA, Juanna Thompson

North River



photo: ACA

Providing important linkage along the river valley corridor to the mighty North Saskatchewan River is the unassuming and quaint North River Conservation Site. The drive alone makes you want to whistle and hum, as the surrounding landscape is an immediate mood booster with its winding roads and picturesque hills. When visiting the site, feel at ease amongst rolling hills, lake vistas and fringed wetlands that could inspire even the least outdoorsy person. The land is a mosaic of mature aspen forest mixed with healthy grasslands that attract abundant wildlife.



155 acres

Site Partners: Alberta Conservation Association



Directions: From Myrnam, travel north on Highway 881 for 14.5 km, turn east on Twp Road 555A and travel 9 km to the site located on the north side of the road



Check it out because: It is a hiker's treat, a birdwatcher's delight and, for you dreamers out there, like being smack dab in the middle of *The Sound of Music* (minus the mountains of course).



photo: ACA, Jim Potter



Always refer to the Alberta hunting and sportfishing regulations.



Fostering cooperation and respect between land users and landowners

Do the right thing. Ask landowners for permission **BEFORE** going on their property.



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