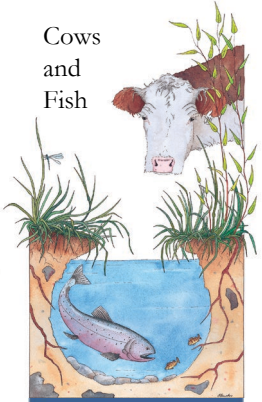


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Cows and Fish

The Cows and Fish Summer 2021 Newsletter

Volume 11



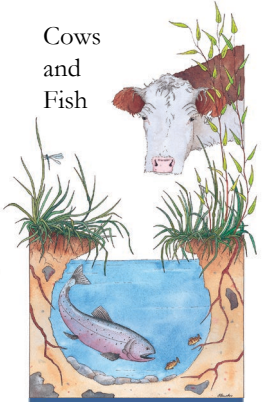
What a year it's been! We are looking forward to mask-less events and to see your faces again soon.

Thank you for reading our Summer 2021 newsletter. Some of our contributors referenced the magical Harry Potter in their articles. They must have been feeling the magic of riparian areas this summer.

Can you spot all the references?

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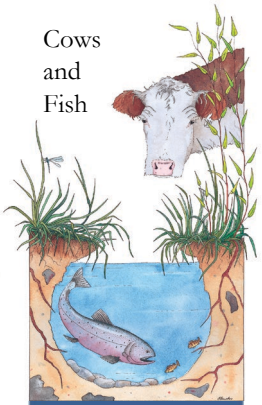


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Tending to your garden: seeing weeds in a different light and cultivating wholeheartedness

By Amy McLeod, Provincial Riparian Specialist & Eastern Slopes Coordinator

"There's an empty space inside my heart, where the weeds take root..."

-Thom Yorke, Radiohead

I used to see weeds as a continuous battle against the pervasive and invasive. Things with deep, stubborn roots, tapping into and stealing away nutrients that feed and nurture my garden. Weeds overtook my desirable outcomes, the things that I wanted to grow, that I wanted to present to the world. My ideal garden, blooming with potential, growing perfection. Weeds didn't belong in my garden. Weeds are the kind of thing you find in vacant uncared for lots, areas that slipped through the cracks, unattended too and trampled through. They loiter on sidewalks, making beds of asphalt and poor soil, sending out roots to look for subsistence. That was my relationship with weeds, until I realized, weeds aren't just an inconvenience, they are an indicator.



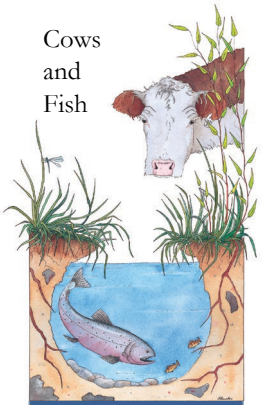
Photo Courtesy of Amy McLeod

Weeds are not inherently the problem, but a symptom. The presence of a weed can tell us about deficiencies in the soil, such as a lack of nutrients or compaction, or they can indicate that a disturbance has occurred, which has damaged the soil and created opportunity for weeds to take hold. Weeds tend to take over because they can do well in poor environments, they can thrive in bare soil, and not many creatures are interested in eating them. Weeds can also be a symptom of healing; they can provide cover for the soil so it is not exposed and their deep roots can begin to decompact the soil. Weeds are an indicator of the condition of the landscape.

When I thought about weeds from that perspective, I realized that I too have weeds, we all do. Habits and heartache, shame covered imperfection, and a longing to belong. Just like weeds, these tend to be the things we don't want to acknowledge in ourselves and our society. Unfortunately, just like weeds, the more they are ignored, the more they take hold—they fill a void and are fed by lack and inattention. But just like weeds, habits and heartache can indicate something is missing; an emptiness inside. They give insight into what lies beneath, unmet needs and deeply rooted self-limiting beliefs, that is, if we choose

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to see them. In that light, feelings and habits are an indicator of the human condition and weeds indicate unmet needs.

If you thought this article was about gardening, you're not wrong, but it is also about caring for our whole selves by restoring ourselves and the environment around us. Resilience refers to the ability of a system to recover or come back to balance following a disturbance. Resilience is not generated without pressure and change, without mistakes and imperfection, but in the face of it. So, what do we do when the weeds take root, take hold, and take over? The answer is similar for both our garden and ourselves. Maintenance—being aware and taking care.



Photo Courtesy of Amy McLeod

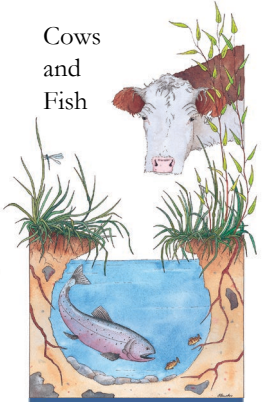
The proactive approach to weed management is to not let weeds get out of control to begin with, which means taking the time and checking in with your garden to look for symptoms of stress. If it's stressed, let it rest. Sometimes simply removing pressure from a system can give it an opportunity to recover. If weeds have begun to surface, find the root of the problem and pull it out gently to ensure you get it all, you may have to dig deep. Some weeds can have uncomfortable prickles or sharp intense thorns, so it can be painful if not properly prepared, again, be gentle. If your garden is completely overwhelmed with weeds, don't be afraid to ask a friend for a helping hand or reach out to a qualified professional.

Once you have confronted your weeds, you can get to work on replenishing the soil to bring back a healthy, nurturing system. There are many resources available that can help identify soil condition, based off which weeds are coming up, such as the Alberta Weed Spot App, [Alberta government's weed management resources page](#), or your local county office. For personal weeds, my twin sister Michele Theoret, registered provisional psychologist and founder of Empowered U has a mindfulness exercise called Mental Composting to help take all the dead rotten stuff in your life and turn it into nutrition. If you are looking for practices to enhance your personal soil, check it out here:

<https://empoweredu.ca/empowered-blog/spring-wellness-part-3-composting/>

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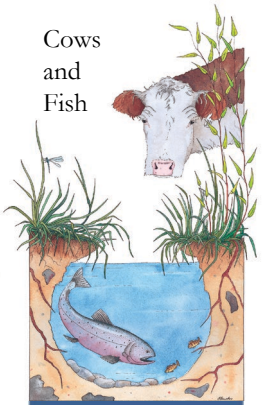
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By digging around in the dirt, finding the roots of the problems, and shedding some compassionate light on what is missing, we may find healthy ways to give ourselves and our garden, what it needs. In her book *Gifts of Imperfection*, author Brene Brown talks about wholehearted living, which involves leaning into and accepting our imperfections to allow for vulnerability, which cultivates compassion and connection. In her research she found that people “who live wholeheartedly do indeed Dig Deep... When they are exhausted and overwhelmed, they get deliberate in their thoughts and behaviours through prayer, meditation, or simply setting intentions; inspired to make new and different choices... They take action.”

Through management and care, we can grow a resilient garden, field, or restoration plot, not without weeds, but despite them.

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Buzzing about Native Pollinators

By [Agroforestry & Woodlot Extension Society \(AWES\)](#)

Did you know we have tigers in Alberta? And that they fly?! But fear not, for you can put away your magic wand there Harry, these are no Gryffindors soaring through our prairie skies. Alberta's flying tiger is the magnificent Canadian Tiger Swallowtail, a wondrous native butterfly that brandishes a stunning set of yellow wings with black striping (hence its feline name). As caterpillars, these little troopers will pupate during our harsh Alberta winters only to emerge in the spring reborn as a beautiful butterfly. We Albertans perform a similar behaviour, retreating into our homes during the winter deep freeze, cocooning ourselves in blankets, only to emerge come May ready for beach season. Try planting some smooth aster or silvery lupine to attract these photogenic pollinators. Look for the Canadian Tiger

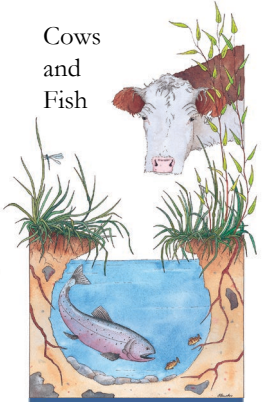


A Canadian Tiger Swallowtail enjoying the flowers of the silverberry (wolf willow)

Swallowtail in deciduous woods and urban parkland throughout Alberta. Badfinger's hit song "Baby blue" is the perfect ode to Alberta's favourite blue butterfly, the Silvery Blue butterfly. This abundant pollinator is a common sight throughout the Alberta landscape. The top side of their wings is a striking azure while the underside is an illustrious silver that together combine to form... you guessed it... a silvery blue! These little fellas have an interesting relationship with ants. Silvery Blue caterpillars are protected from parasites and predators by courageous little ants who in return for their bravery are rewarded with a delicious sugary substance the Silvery Blue caterpillar secretes called honeydew. It's like the silvery blue has its own secret service! Try growing some wild vetch with its tubular purple flowers to attract some Silvery Blue!

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The beautiful flowers of the wild vetch

When it comes to our buzzing pollinators, Alberta has many fascinating native bees. Most of our native bees are introverts, being solitary nesters, while the extroverted bumblebee is a social bee that lives in a small colony. Of our solitary native bees, there are a few common groups or genera. The Mining bees are so aptly named because the females dig their solitary nesting tunnels in the ground. The sweat bees earned their name due to their affinity for sipping the salty perspiration off your arm! The sharks of the prairies, the leafcutter bees, have large heads to support their large leaf-cutting mandibles that they use to line

their nests with leaf cuttings. Mason bees are often smaller than honeybees and will utilize your backyard bee hotel to shelter the next generation.

There are over 20 species of bumblebees in Alberta and the easiest way to tell them apart is by the colours of the bandings on their body. Bumblebees are by far the most popular and easily recognizable bee in Alberta, which is probably due to their fuzzy little bodies reminding us of small furry mammals. Bumblebees are the true heroes of the pollinating world. They're some of the first bees to emerge in the spring, putting in long hours even in cold and wet conditions! Bumblebees and other native bees also outperform other pollinators and even honeybees when it comes to pollinating! Try planting some wild bergamot (bee balm) or some native shrubs such as wild raspberry or prickly rose to attract lots of native bees. There's nothing more entertaining than watching a group of bumblebees hard at work.

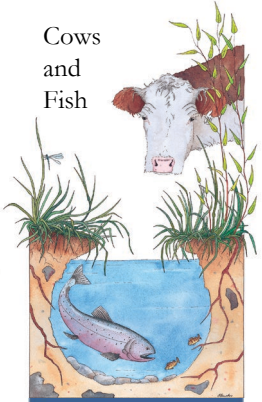
When it comes to riparian health, pollinators are no exception. Establishing new riparian buffers and protecting existing ones provides habitat for pollinators. Riparian areas are important travel corridors for pollinators making their way to new habitat areas. Riparian buffers full of native species such as western chokecherry, various willows, and red osier dogwood attract native pollinators who in turn will extend their pollinating services to bordering cropland. Ultimately, native pollinators and riparian areas go hand in hand with pollinators enjoying a rich habitat full of food and shelter while also moving pollen around to ensure the continual reproduction of plant species in the area. Check out a local riparian area to see what all the buzz is about!



A bumblebee doing what a bumblebee does best

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Native Grassland Stewardship

Written by Norine Ambrose, Executive Director

As someone who works for a stewardship organization, I like to think of myself as someone who enables and supports others to care for the land, since I don't own any land outside of town (although I wish I did). I rely upon others taking information I offer, moulding the management ideas, and applying them to their own farm or ranch. Because I've seen it, I know that a well managed pasture will support more wildlife, have more stable, abundant forage to graze and also benefit water quality, being more resilient in drought or flood periods. Having worked for Cows and Fish for over 20 years, I have seen [countless examples of this amazing stewardship](#)—so many keen, committed landowners ensuring the health of their land, while also making their agricultural operation successful. Often, these are ranches or farms that have kept their upland rangelands and riparian areas (those moist areas next to streams, rivers, lakes and wetlands) healthy with thoughtful management, spanning generations. At other times, these are agricultural producers, acreage owners and others, that may have seen some loss of health to their land and have worked hard to return it to a healthier state. Sometimes change is prompted by a new view, or by an old memory – maybe they noticed something from their childhood has gone missing – perhaps that wonderful meadow lark song in spring, the fish they used to catch in a favourite spot, or the willows and cottonwoods for shade, that they would like to see return.

Portability = Flexibility

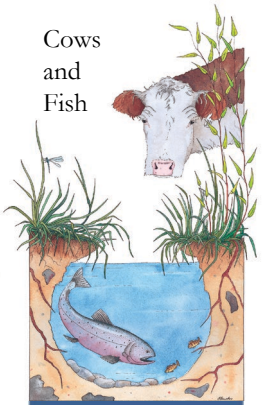
Portable electric fencing, windbreak shelters and livestock watering systems mean the same resources can be used in many places, adjustments can easily be made once you have tried something out.



Easy to use portable electric fence equipment can create temporary cattle exclusion in sensitive habitat.

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These voluntary, proactive measures to benefit rangeland and riparian areas means healthier, more productive pastures, while also benefiting wildlife in need of support – like greater sage grouse. In addition to looking at grazing management (timing, distribution, etc), other simple techniques can have multiple benefits and portability is valuable: portable off-site watering systems create flexibility and increase cattle weight gain, visibility reflectors on fence lines reduce wildlife collisions and fence repair costs, portable wind breaks can direct livestock away from sensitive habitats while offering much needed protection to cattle, and portable electric fencing helps landowners protect sensitive areas and aid in cattle distribution where permanent fencing may not be feasible.



Solar-powered portable off-stream waterers can easily be moved around. Excluding cattle is not required to improve cattle distribution and riparian health. Fencing, if used, can be temporary or permanent, or used to create riparian pasture units.



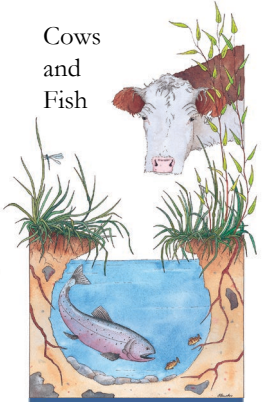
Solar-powered portable off-stream waterers can easily be moved around. Even when the nearby waterbody is not fenced out from cattle, research shows that 80% of cattle drinking will occur from the trough, instead of the nearby waterbody.

Lyndon Haugan, who ranches near Manyberries, says his portable fencers have “allowed me to protect wildlife habitat and other sensitive areas on my ranch, and improve my cattle operation.”

We focus on riparian areas at Cows and Fish, so we rely on partnerships to offer the best support to landowners on other aspects of management. In southern Alberta, MULTISAR (a partnership between [Alberta Environment and Parks](#), [Alberta Conservation Association](#), and [Prairie Conservation Forum](#)) focusses on conserving species at risk in Alberta’s native grasslands. Their expertise in range health, wildlife, and grazing management that benefits species at risk complements our focus on riparian areas. Together, we are working with agricultural producers to support stewardship in critical habitat for greater sage grouse in southeastern Alberta.

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Cows and Fish and MULTISAR are looking to support more projects that have mutual benefits in southeastern Alberta using SARPAL (Species at Risk Partnership on Agricultural Landscapes) funding secured by the [Canadian Cattlemen's Association](#).

Contact us to learn more about opportunities:

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Riparian Functions in Action

Written by Angie Quist,

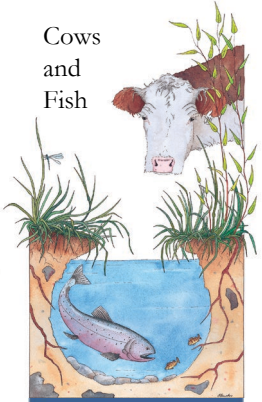
Eastern Slopes Riparian Specialist

"It's going to be a hot one today with a high of 38 degrees," the voice on the radio blares as the sun scorches through the windows of your vehicle while you look for a shady spot to park. Today seems like the perfect day to head to the river to find some reprieve from the heat; it has been above 30°C all week, after all. You are not surprised to see that the river is packed, everyone is either wading in the water or lounging in the shade, trying to keep cool in this heat wave.

These same trees that provide shade from the sun also help keep the water cool. Cool water temperatures are vital for the survival of many aquatic species in the freshwater systems of Alberta, especially cold temperature fish such as our native trout. Healthy riparian areas with large woody trees and shrubs protect the water from the sun's rays and is just one more invaluable function these important areas serve.

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Why the Fuss Over Native Trout? A Trout is a Trout is a Trout!

By Lorne Fitch, P. Biol.

Mark Twain once said, "Don't tell fish stories where people know you, but particularly don't tell them where they know the fish." Keeping that advice in mind, I'd like to tell you a fish story, about native trout.

An avid angler friend of mine loves to fish for trout and to him, a trout is a trout is a trout. Well, isn't it? Whether a trout is wild, spotted, striped or stocked makes little difference to him. But is a trout a trout a trout, especially Alberta's native species, besieged as they are by habitat issues, a changing climate and hybridization with non-native trout? I'd like to provide some thoughts on why our native trout species deserve a second look, a measure of respect, some admiration and most of all, a helping hand.

Now, for those of you who didn't pay attention in high school biology, it would be useful to point out that trout, all trout, native or not, are part of a big family in the animal kingdom called *Salmonidae*. To make this a little less daunting, think of Harry Potter and Hogwarts. At Hogwarts School, all students are sorted into various houses based on similar criteria. If trout attended Hogwarts, some like brown trout would be sorted into the *Salmo* house, rainbow trout and cutthroat trout would be put in a house called *Oncorhynchus*, mountain whitefish are in the *Prosopium* house, Arctic grayling are in the *Thymallus* house and bull trout and brook trout would be placed in the *Salvelinus* house.



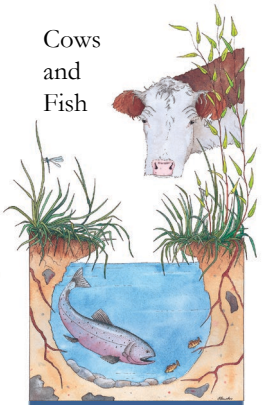
An example of a bull trout

The natives in streams and rivers of the Eastern Slopes include bull trout, Athabasca rainbow trout (the only native rainbow trout), Westslope cutthroat trout (found on the east side of the continental divide), Arctic grayling and mountain whitefish. All the others are foreigners.

Have you ever touched a native trout? If you have, you're lucky, as there are very few of these native species left in Alberta.

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They are cool to the touch, wet and slippery. What you touch isn't just a fish; it's a living, wriggling history book, the embodiment of a landscape and a study in adaptability and resilience.

If one were to scroll back through the tenure of native trout and their ancestors, on a whiplash-inducing rush through deep time, one might begin to appreciate what native trout endured, evolved with and adapted to would have included: encroaching seas, retreating seas, volcanic events, continental drift, crustal deformations, drainage captures, drainage separations, orogenies, folding, faulting, igneous bulges, uplifts, down cuts, multiple glacial events, millions of years of weathering and erosion, plus extremes of fire, flood, ice and drought. The odds of a fish surviving that smorgasbord of natural events seems improbable. But trout did survive, in an exuberance in awe of which we should stand.

Native trout saw the last of the continental glaciers, those-kilometer-thick blocks of ice that shaped most of Alberta, and still live beneath the rapidly receding alpine ice flows. These fish, early visitors to what would become Alberta, saw a raw land transformed and adapted to those changes. Many generations ago they came from other geographies, but settled in those streams along the eastern side of the continental divide and onto the western fringes of the grasslands, parkland and boreal forest.

Within the trout and salmon "family" specializations are apparent. Further adaptations have fine-tuned life histories to favor survival amid local climates, variability in stream flows, water temperature fluctuations, recurring fire, flood and drought events, predators and coexisting fish species. For our native trout this meant the streams and rivers of the Eastern Slopes.

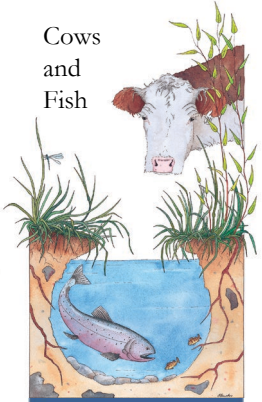
Today's native trout are descendants of trout that never turned wrong in the maze of life, never got lost or dead-ended. Not in millennia.

Native trout evolved to fit a particular environmental context, a place in the watersheds of the Eastern Slopes. Their beauty is derived from that fitness. Seeing the flash of a cutthroat, a grayling or a bull trout in a crystal-clear stream, a splash of liquid sunshine, is to experience a natural piece of art. That scene, with all of the intricacy and mystery of an interconnected system, is as valuable as a piece of art by Renoir or Picasso and as irreplaceable.

Call native trout early pioneers, a group of species superbly adapted to their adopted world. What they have done is rolled the storms, the floods, the droughts, the changes in water temperature, the good and the bad—the natural variability of their world—into their genetic material as a mechanism for survival. What they have not adapted to, cannot

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adapt to, is the speed and magnitude of changes we brought to their world in a period of time as short as a human life. Only a handful of mostly isolated populations survive today.

From visitors and tourists, they became residents with a long earned tenure. These species are ancient but their future is precarious. Whether or not they perceived the loss of bison, there might have been a sense they were seeing a glimpse of their own future. As many of us settled the banks of rivers and lakes teeming with these hordes of fish, we probably thought they would last forever.

Yet, in the last century and often less, a mere blip in geologic time, the effects of the wheel, clear-cuts, mines, dams, climate change and, to a degree, the hook, have made the previous thousands of years of trout existence in Alberta seem benign.

They are creatures limited to a certain condition of life—that is—the watersheds in which they evolved for the past 12,000 years. There is no place to go back to—that place doesn't exist anymore. They make their last stand here, in an ecology dramatically altered by us. Some populations, in watersheds both large and small, have been extirpated, a loss of unique genetic inheritance; all remaining populations hang on by a fin. Once these trout would have been counted in the thousands, then it was hundreds, then dozens, then a dozen and for some, finally, none. They are not headed to the final roundup; they are in it. It speaks volumes when three of the species have been designated "Threatened" and another is of "Special Concern."

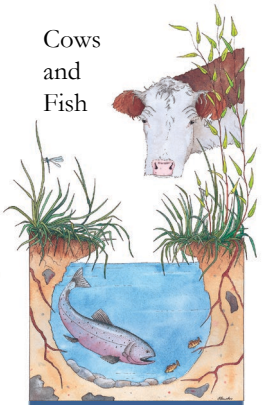
The combination of climate change, lack of connectivity, competition from non-native trout and habitat loss is particularly devastating for native trout since it attacks them from different but cumulative angles. It's hard to find a good survival strategy that works simultaneously against multiple threats. Nothing in their past experience provides any sort of adaptive solutions to changes that happened in an apparent split-second of their lengthy existence. We also seem unwilling to acknowledge the new normal in their disrupted world and the chances are slim of native trout adjusting to that altered state in any meaningful time.



Of many alterations, one was the imposition of non-native trout species on top of existing native ones. The non-native foreigners include rainbow trout, brook trout and brown trout. Non-native trout hitched a free ride to the new universe; it took native trout thousands upon thousands of years to sort things out in their new geography. Non-native species

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compete with native trout for space and resources and can hybridize, diluting the genetic makeup and adaptations of native species to Eastern Slopes streams. In some watersheds, we might start culling some of the weeds that are non-native trout, which have replaced and continue to compete with the rightful owners of the Eastern Slope watersheds. It is an unfolding drama of human meddling, with severe consequences.

As we further change the world of native trout, we forget to mourn a reduced, and diminishing stock. So far, none of the native species in the hierarchy of official protection—not caribou, not white-bark pine, not bull trout, not cutthroat trout, not Athabasca rainbow trout, not Arctic grayling, not grizzly bears—have inspired managers to bring order to a large and increasing land use footprint. Land use plans may help, if they reduce our footprint and restore vital habitats. If we think we have improved the situation with a plan, but no will to implement it, in the end we will discover we have fooled ourselves completely.

We are not protecting native trout from extinction: they are protecting us from an extinction of experience as we engage and begin to understand a world beyond ourselves.

Native trout have been successfully tested by time, but will they stand the test of our time? Native trout can fade from our collective memory, just as their vivid colors dissipate once a trout is removed from the water. It will take some herculean efforts to repaint watersheds with native trout. If we don't try, we leave behind an incomplete piece of art.

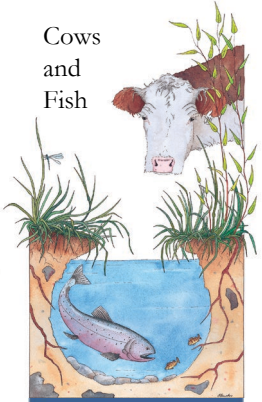
Nostalgia is not the driving force behind the sentiment to preserve populations of native trout. It is rather an expression and an acknowledgement of a group of species with a best fit for life in some of Alberta's waters, tested as they have been in the crucible of their habitats for at least 10,000 years. These fish have been entrusted to our care, not for our exclusive use and disposal but to ensure viable populations are passed on, unimpaired, for subsequent generations. It would be a blot on our record as stewards of shared resources to allow these species to disappear through apathy, ignorance, inaction or greed.

Legally we are obligated to ensure native trout remain, although the law seems a bit ineffective in the face of economic pressures. There are also elements of practicality, sensibility, compassion and foresight in protecting native trout, to ensure they don't slip through our fingers and out of our consciousness. We would no more discard our history books, unravel the threads on a prized tapestry, or weaken a bridge than we would allow a reminder, an indicator of iconic landscapes, connections with nature or essential ecosystem services to disappear.

If we can protect some places for native trout and allow recovery of populations to more robust levels, the intended effects will benefit other species. It may well be that our own

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species will need these healthy watersheds with natural expressions of biodiversity. It truly needs them now!

Let's have a serious talk about the non-native trout in Alberta streams. The stocking of non-native species was based on a perception angling pressure had significantly reduced trout populations and streams needed "seeding" to supplement wild stocks. Fisheries science and popular opinion had not progressed far enough to understand the innate capability of wild fish to self-replenish if angling pressure was moderated. This "Johnny Appleseed" response to trout stocking was also the desire of anglers to fish for trout more familiar to them, based on their origins in Europe and eastern Canada.

Most stocked trout did not survive, as is the fate of a hatchery trout first raised in a placid hatchery pond, then placed in a stream environment sometimes as turbulent as a cement mixer. Wild populations of cutthroat were initially tapped to supplement streams but the belief was native fish weren't up to the task and were less "sporting" compared with the more abundant stocks of rainbow trout flowing out of early fish hatcheries.

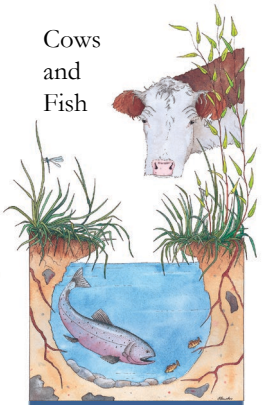
Streams along the foothills were subjected to intensive stocking programs from the 1920s through the 1960s, with the construction of the Forestry Trunk Road being a conduit for stocking further westward. That means non-native trout have a history of about 25 generations in Alberta. By comparison, native trout have invested over 4000 generations in adaptation to our Eastern Slopes watersheds (not counting their time in glacial refuges), surviving extreme warming periods, drought, floods, wildfire and glaciation. It is them that have successfully rolled the storms, the variability and the uncertainty into their genetic material, not their distant cousins, recent interlopers.

On the surface, or perhaps below the waters' surface, rainbow trout seem to have carved out a substantial niche in Alberta waters. The famous fisheries of the Bow and Crowsnest rivers are formed on the fins of the species. These waters were, in living history, the realm of the cutthroat and the bull trout but habitat changes coupled with an aggressive campaign of stocking hatchery rainbows has changed these and many other smaller streams within historical native trout waters.

The rainbow trout fisheries of the Bow and Crowsnest might give the impression native trout stocks are replaceable, that protecting the genetic diversity they represent is anachronistic and a trout is a trout is a trout. No matter how resigned we might be to the prospect of populations of rainbows or their hybrids, this will not recreate a living world that is the equal of the one being replaced by habitat loss and hybridization. Native trout have committed to the long haul, the extended view and so should we as ultimate arbiters of their existence.

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A rainbow trout isn't a cutthroat trout and vice versa. That's not to suggest the rainbow hasn't evolved to fit the watersheds of its origins, but those origins were not the streams of the southern Eastern Slopes. Accepting the proposition that non-native trout and their hybrids are acceptable substitutes for the real thing leads us down a dangerous path. Warmer water, laden with more sediment currently favors rainbow trout, hybrids and other non-natives. What happens as habitats continue to deteriorate and the outsiders can no longer find suitable conditions?

You can fish for rainbows in the shadows of Calgary office towers, through the artefacts of coal mining in the Crowsnest Pass and in many lakes and potholes in settled landscapes. Brown trout and brook trout form popular fisheries in many Eastern Slopes streams. It's not as if these non-natives are going to disappear from Alberta's watersheds. However, wild, native trout and their habitats are as far as you can get from a Disneyland-like context of things artificial, contrived, concrete, pacified and plastic. Native trout are genuine, with no artificial color or flavor added.

When you fish for native trout, the wild variety, it's the real deal. It's about place and connections and heritage. In an age where such things get scarcer, the value and appreciation of these trout in a natural landscape grows.

Native trout are a part, a feature of a watershed and an indicator of landscape health. The clarity of the medium these fish swim in should jog our sensibilities and remind us of the source of our drinking water. Having native trout occupy these watersheds is the gold seal of water quality and landscape integrity. The ripples that extend outward from a pebble dropped in a stream containing native trout inevitably find us.

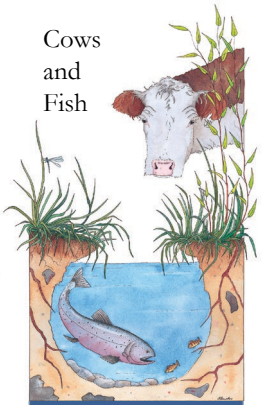
Wild, native trout have the capacity to inspire our imaginations, to cause us to remember and cherish the genius of life arrayed against an uncertain future. To allow that living flame to wink out is to passively accept we cannot be inspired and motivated to act. We won't restore native trout populations because we need to, but only if we want to. The innate capacity of native trout to sustain abundance and variety is still with us, albeit in an abbreviated way, waiting for us to deal with the issues of habitat and hybridization.

Still think a trout is a trout is a trout? It's not so, based on genetics, adaptation and survival. Our native trout are old campaigners with a proven ability to adapt and persist under extreme environmental conditions over millennia. These trout deserve our respect, admiration and a helping hand.

Lorne Fitch is a professional biologist, a retired provincial fish and wildlife biologist and the co-founder of Cows and Fish. He is a vocal advocate for native trout, writes about their biology and ecology and has concerns about the cumulative effects of land uses on their survival and continued persistence.

Caring for the Green Zone

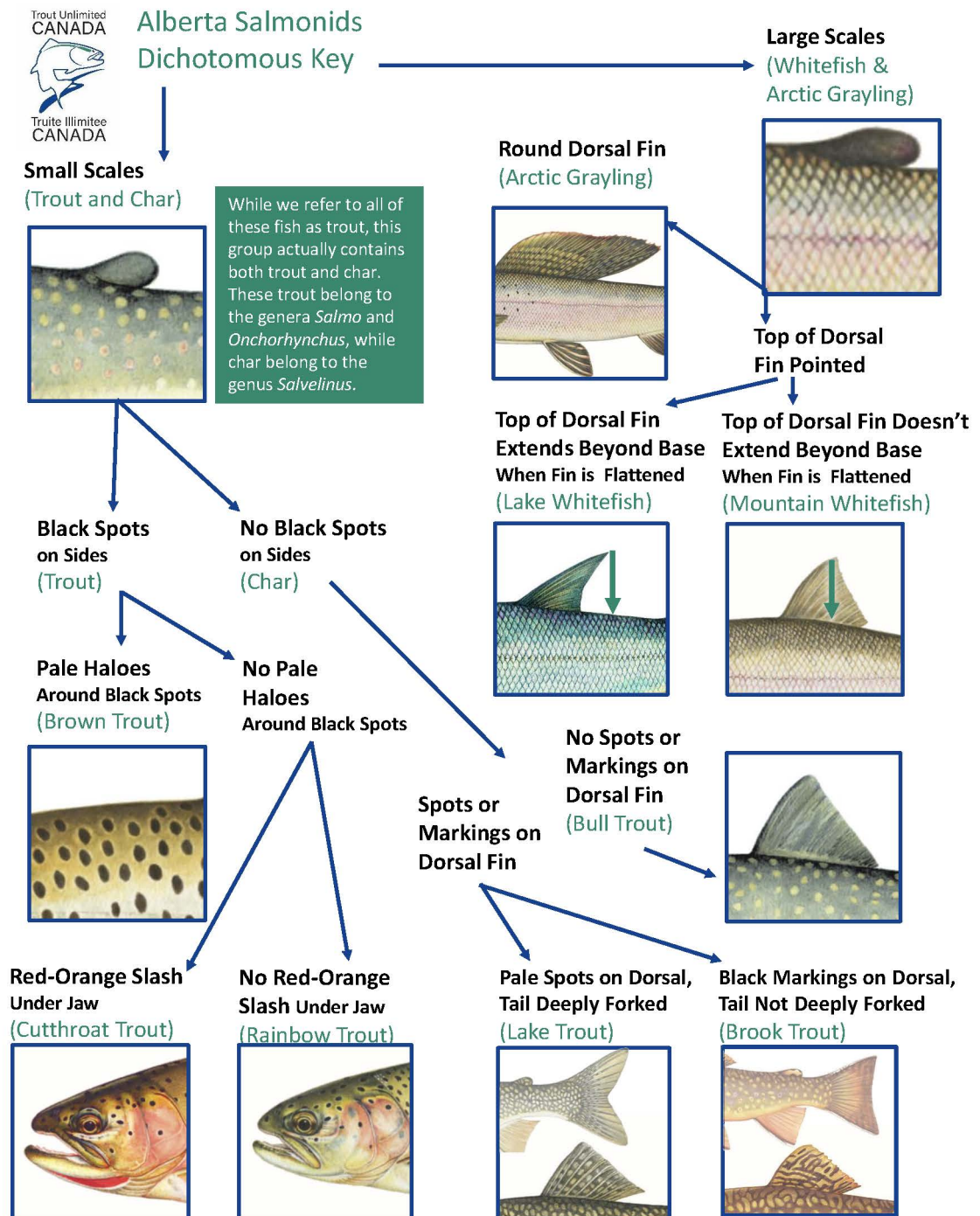
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Can you Identify Alberta's Trout Species?

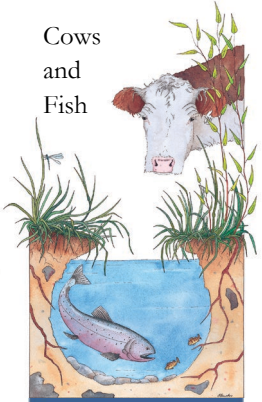
Take a look at [Trout Unlimited Canada's](#) key below



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Fish Illustrations by Karl Geist

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Cows and Fish

Meet The New Staff

We were lucky to bring on three new Cows n' Fishers to support the work we do including throughout the busy summer season. Each one brings with them their own passion for the environment and unique skillset that makes them important members of our growing organization and we are very excited to have them on our team. In addition to sharing a little about their background, we asked each of them what their favourite native plant is.

Lecia Stevenson, Riparian Resource Analyst



Photo Courtesy of Lecia Stevenson

My background is an Honours B.Sc. in Environmental Science with a concentration in Geography and a B.A. in English. I am a passionate environmentalist who has always loved nature, so the opportunity to work in a position where I could explore the beauty of Alberta while contributing to positive change is perfect for me. Working for a charity aligns with my core values while also doing work that I love!

"I love riparian work because it is the perfect combination of terrestrial and aquatic ecology"

Basically, I get to study plants while being around water!

How can I choose my favourite native plant? While that's a difficult decision, one of my favourites would absolutely be [yarrow](#)! It is so simple yet so beautiful, and has many purposes; it has incredible medicinal uses and the insects love it! As a bonus, it also grows well in gardens.

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Gabe Wilson, Riparian Resource Analyst

My name is Gabe Wilson. I grew up loving the outdoors and learning about the intricacies of nature and how these natural systems work. I studied Biology at the University of British Columbia and worked a summer term in Waterton Lakes National Park on the weed crew. I love all the landscape variety Alberta has to offer. My favourite native plant is the [Alpine Forget Me Not](#) because they're so small and you can find them way up in the mountains!



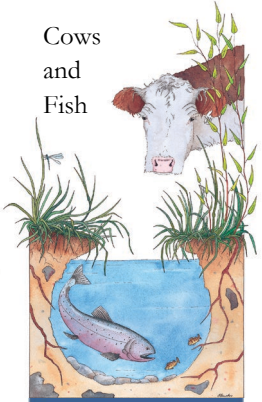
Photo Courtesy of Gabe Wilson

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Emily Purvis, Riparian Range Specialist

I have been fortunate to wear many hats in my career so far—from monitoring hyper abundant deer in the Gulf Islands National Park Reserve, to assessing water quality in the Great Lakes with the Ontario Ministry of the Environment, Conservation and Parks, to sampling bumble bees across the agricultural landscapes of southern Ontario—though many of my previous positions have involved monitoring sensitive habitats or species at risk. Through these experiences, I developed a fascination with research, field studies, and statistics that propelled the subsequent opportunities I sought out. I came to Alberta for a M.Sc. degree where I assessed how restored rangeland in the Prairie Pothole Region influenced wild bee recovery over a 25-year period, and made suggestions for which flowering plants would best support wild bees in future restorations, with an emphasis on bee species at risk.



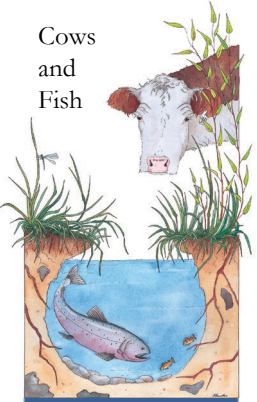
Photo Courtesy of Emily Purvis

“During my M.Sc., I was able to explore my interests in applied research and the intersection between agricultural productivity and biodiversity conservation”

—all of which culminated in my journey to Cows and Fish. My favourite wildflower is the [white trillium](#), the official flower of my home province and one of the first species to emerge on the forest floor in spring.

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American Vetch



Tufted Vetch

Did You Know...

Our staff identify upwards of one hundred plants on any given field day? How do we remember so many plants, you ask? Aside from using plant identify keys, some of our staff have a few tricks up their sleeves.

Riparian Specialist Kristina Boehler tells tufted vetch and American vetch apart by looking at the differences between their stipules. Stipules are small outgrowths on the base of a leaf that serve to protect new leaves or buds. The stipules on tufted vetch look like Spock ears while the stipules on American vetch look like butterflies.

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UPCOMING EVENTS

Southern Alberta Grazing School for Women & Alberta Range Stewardship Course

July 20, 22, 27, 29 | Online

[RSVP](#)

...

Online workshop designed to bring livestock producers and professionals together to share information and expertise on livestock grazing



Grazing & Water Management Field Tour

July 28 | Timber Ridge Ranch

[RSVP](#)

...

Join FFGA for a Grazing & Water Management Field Tour at Timber Ridge Ranch. This tour will focus on grazing management and balancing water stewardship with production



Wetland & Stream Riparian Health Assessment & Plant ID Training

[August 4 | Red Deer Area \(Wetland\)](#)

[August 19 | Edmonton Area \(Stream\)](#)

...

Calling all conservation and extension staff or professionals: Register to spend a day with Cows and Fish staff to improve your understanding of riparian ecology and management

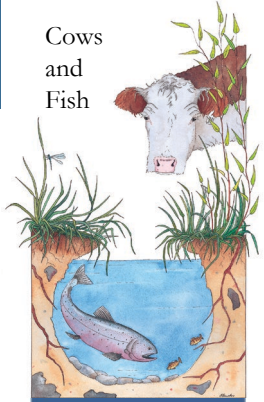


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Eastern Slopes Sustainable Recreation Fair

August, 2021

...

Cows and Fish is co-hosting a Sustainable Recreation Fair this August at two separate locations in Alberta. The fair will feature hiking tours, streambank restoration demos, off-highway vehicle tours, and more. Stay tuned for more details

Open House & Speaker Series

Presented by Healthy Waters Lac La Biche and Alberta Ecotrust Foundation

RSVP

...

August 4 – Owl River Recreation Centre
September 1 – Hylo-Venice Agriplex
October 6 – Craighend Hall

OPEN HOUSE & SPEAKER SERIES
Presented by Healthy Waters Lac La Biche and Alberta Ecotrust Foundation

2021

Join us for an exciting evening learning about and discussing the health of our lakes and watersheds! Each evening will feature a number of displays and resources on lake, shoreline, and watershed science and stewardship, and amazing guest speakers!

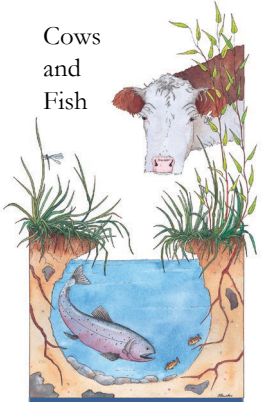
6:00 PM

JUNE 2 – BOLD CENTER
JULY 7 – PLAMONDON FESTIVAL CENTRE
AUG 4 – OWL RIVER REC CENTRE
SEPT 1 – HYLO/VENICE AGRIPLEX
OCT 6 – CRAIGHEND HALL

Healthy Waters
Lac La Biche

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Digital Stories

Did you know that we have a [digital stories](#) library?

Cows and Fish has partnered with the [Centre for Digital Storytelling](#) to continue to enhance our storytelling skills and engage audiences with meaningful messages. Digital storytelling is the art of using digital media to craft, record, share, and value the stories of individuals and communities, in ways that improve all our lives.



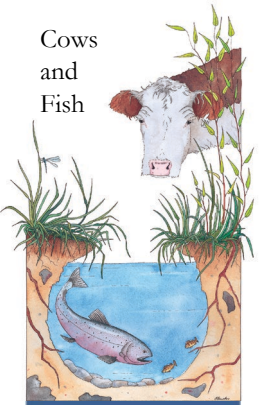
Original development of our newsletter was graciously supported by **Alberta Ecotrust Foundation**, along with our many core [funders and supporters](#). As you may know, we rely upon grants to do much of the work we do, so if you want to suggest an opportunity, collaboration, or make a donation, please do!

DONATE

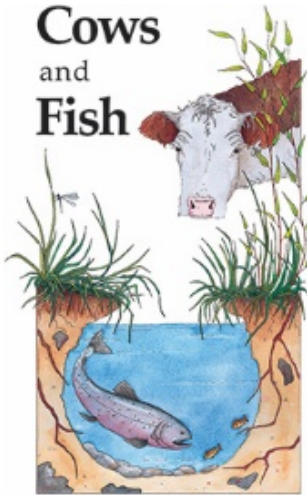
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Have you worked with Cows & Fish in the past?

- Have you wondered how your riparian area scores now?
- Wanted to have an extension event in your local community?
- Have a riparian management story to share?

To increase the broader community's riparian awareness and expertise, we will deliver extension events with local partners, bringing together neighbours and sharing successes. If you are a landowner we worked with in the past, and want to reconnect with us, give us a call or email. [Find out how here....](#)

We love hearing from you!

Please contact Norine Ambrose nambrose@cowsandfish.org or any Riparian Specialist, to follow up on any items in this newsletter. For full contact information, visit our website at: <https://cowsandfish.org/contact-us/>

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A special thank you to our partners