FISH & WILDLIFE COMPENSATION PROGRAM
COLUMBIA BASIN

Update

Spring/Summer 2010 Number 22

Giant of a Gerrard Run – Highest Since Records Began

The numbers are in, and they are nearly as big as the fish themselves. The 2010 Gerrard rainbow trout run hit a peak count of 725 adults at the Lardeau River spawning grounds at the outlet of Trout Lake. This is the highest daily peak count ever observed since records began in 1960. The next highest peak, 620, was observed last year and, prior to that, 618 in 1979.

The annual data is recorded by the B.C. Ministry of Environment (MOE) with support from the Habitat Conservation Trust Foundation, and the Fish & Wildlife Compensation Program. The total estimated Gerrard spawning run for this year is a little over 2,200.

"Not only did we see a very high peak count, we also saw an extended period of high counts: more than 300 fish counted each day over a three week period," explained MOE fisheries biologist John Bell, who oversees the annual survey. "These fish are typically on the spawning areas for only about six to ten days so that means we are seeing a lot of different fish during this time period."

What might explain the extraordinary returns?

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Kerry Reed reeled in – then released - a beautiful 14lb Gerrard rainbow trout from the waters of Kootenay Lake in May 2010. While this one likely stayed in the lake a record number of Gerrards made their way up the Lardeau River to spawn this year.

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Osprey Webcam is Back

While there is significant interest in the bald eagle webcams on B.C.'s coast, fewer people may be aware of the osprey nest webcam in the southern interior. It's been offline since 2007 but the nest cam is live-streaming again and will provide captivating images

It's easy to get a nest-side seat this summer. Just visit fwcp.ca and follow the link to the osprey nest webcam.

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Giant of a Gerrard Run – Highest Since Records Began

For a start, the Nutrient Restoration Program (see "Kokanee" on pg 3) in the North Arm, as well as nutrient additions in the South Arm funded by Kootenai Tribe of Idaho and Bonneville Power Administration, is providing a well-stocked food cupboard for these big fish. But there are likely other factors as well.

"Turbidity from intense Mobbs Creek floods in 2000, 2001 and 2002 reduced egg survival. We have seen a rebound in subsequent generations as conditions on the spawning grounds improved," says FWCP Fish Technical Committee chair, Jeff Burrows. "Also there may have been fewer fish harvested in Kootenay Lake for a couple of reasons: the downturn in the economy reducing angler effort and the outbreak of worms that was witnessed in 2006 to 2009."

Not only was the Gerrard run large but it was also very early, likely a result of the mild winter weather. Historically, the peak count is around Mother's Day (second Sunday in May). This year the peak count was recorded on April 27. So early that the peak was hit even before the very first fish was counted on the spawning grounds in 2009.

These Gerrard spawners will provide better future fishing opportunities in a variety of West Kootenay water bodies beyond just Kootenay Lake. Every two to three years the Freshwater Fisheries Society of BC needs to collect eggs and sperm from Gerrard spawners to replenish its wild stock Gerrard genes for its captive brood program at Kootenay Trout Hatchery, and 2010 was the year. Under this program Gerrards are raised and released for stocking purposes in various lakes and reservoirs around the province including Duncan Reservoir and Arrow Lakes Reservoir. (For details on how many Gerrard yearlings are released visit gofishbc.com/r4w.htm.) These stocked fish are sterilized (non-productive) so that they do not interfere with the genetic makeup of the existing fish.

To view an amazing clip of spawning Gerrards go to www.fwcp.ca and click on the video link. Also a reminder that the Gerrard Reward Tagging project, led by the Habitat Conservation Foundation Trust, is still in place in Kootenay Lake. There are nearly 100 fish fitted with special reward tags, with some tags marked at $100.

Not So Bad... if You're a Sheep

Lewis Creek Badlands, east of Wasa Lake in the East Kootenay, is aptly named. It is a rough and rocky region, with an old, dried-up river channel coursing its way through the valley. "Bad" perhaps, but barren it is not, and over the decades there has been significant forest encroachment and in-growth of trees. That's why the FWCP has been undertaking restoration work in the area to improve bighorn sheep habitat.

"Sheep need access to forage and ways to escape predators so they require more open terrain to improve sightlines," explains FWCP wildlife biologist Larry Ingham. "This work will undoubtedly give them both of these and should help strengthen the local bighorn populations."

The restoration work, undertaken in early 2010, involved slashing and piling smaller trees, with the piles being left to dry over the summer, to be burned in the fall. A total of 90 hectares has been treated, part of a bighorn sheep management plan to help three sheep herds that roam between Wildhorse River and Premier Lake.

The Fish & Wildlife Compensation Program led the work with additional funding support from the Habitat Conservation Trust Foundation through the B.C. Ministry of Environment.

"Although bighorn sheep are the primary target species, this restoration work will certainly benefit all ungulates, as well as a variety of birds and even badgers," added Larry.

There are no bighorn sheep relocations planned for this year. The last sheep relocation that the FWCP supported was in February 2009 when 13 sheep were moved from the Kicking Horse Canyon to the Wasa area.

Dave Lewis

Badlands improved, at least for bighorn sheep.

Partners in Conservation & Enhancement

The FWCP works on behalf of its Program Partners BC Hydro, the B.C. Ministry of Environment and Fisheries and Oceans Canada to conserve and enhance fish and wildlife populations affected by the construction of BC Hydro dams in the Columbia Basin.

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Osprey Webcam is Back

and an amazing nest-side view of daily activities all summer long.

The osprey nest cam is located in the Creston Valley, and is a joint project of the Creston Valley Wildlife Management Area (CVWMA), and the Fish & Wildlife Compensation Program (FWCP). Technical support is being provided by Kootenay Wireless. The live-streamed images can be found at www.fwcp.ca.

"We're pretty excited about this for sure," says FWCP wildlife biologist Irene Manley. "We are expecting two chicks to emerge in the second week of June, so it will be fascinating to watch their progress this year."

Biologists are hoping that the parents are a little more diligent with the eggs this year. In 2009 the images, although seen by our biologists, were never live-streamed as the nest failed. Shortly before the eggs were due to hatch both eggs were taken by predators, likely ravens. The first time the cameras – and the public - watched the chicks grow and successfully leave the nest was 2007.

The camera was installed in early April this year prior to the ospreys' return. Several changes have been made since the first year of live-streaming: a new camera to improve the image quality and a new design to allow the camera to be swung down on an arm to enable easier cleaning. "Being so close to the nest means the camera lens can come under direct fire, mostly from flying remnants of fish!" added Manley.

"This is a great opportunity to really get a glimpse of what family life is like inside an osprey nest – and 2007 showed us that it is a pretty raucous affair, especially when live fish are being delivered," said BC Hydro's Kevin Conlin, co-chair of the FWCP Steering Committee. "Typically the juveniles will remain in their nest all summer so there is lots of time to watch them develop."

BC Hydro is the primary financial supporter of the CVWMA as well as being a program partner of the Fish & Wildlife Compensation Program.

A series of short clips, recorded during the nesting season of 2007, is also available at www.fwcp.ca.

For those without Internet a trip to Creston Valley is required. Live images of the osprey are being fed to the Wildlife Centre at the CVWMA.

Other Osprey Facts

- Ospreys (Pandion haliaetus) return to the same nest, made of sticks, often located on man-made elevated structures such as power poles, buoys and bridges, as well as cliffs and snags.
- The female lays between two to four eggs one to five days apart. The eggs are incubated for 35 to 40 days.
- The diet of an osprey consists nearly entirely of live fish. The Nutrient Restoration Program in Kootenay Lake has helped boost kokanee numbers, therefore, playing an important role in supporting the osprey population.
- Ospreys can become completely submerged when diving for fish and still take off with their prey, unlike bald eagles which pluck the fish from the surface.
- There have been reports of ospreys drowning after locking their talons into a fish that is too big and strong to bring t to the surface.
- Ospreys were once threatened around the world primarily due to the use of DDT and other pesticides, but their numbers have rebounded in recent decades.
- They are the most widely-distributed bird of prey, found on all continents except Antarctica.
- Ospreys in the Columbia Basin usually migrate in winter to the southern United States or Mexico.
- Ospreys are unique in that they have an opposable toe that can face forward or backward. When sitting on a branch it usually has three toes on the front and one on the back. When holding a fish it usually has two toes on each side of the fish. When flying with its prey the osprey invariably flies with the fish head first to reduce wind resistance.

Update **Newsletter**

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Bigger Can Be Better: Low Impact Logging at Hofert

Big trucks and big tires are, typically, not associated with being environmentally friendly. But this is exactly what the Fish & Wildlife Compensation Program used during some recent restoration work of sensitive habitat on the Hofert conservation property near Fairmont Hot Springs.

"Decades of successful wildfire suppression have resulted in forest in-growth and encroachment," explained FWCP wildlife biologist, Larry Ingham. "The conservation properties we have helped purchase with The Nature Trust of BC and other groups, like Hofert, provide an excellent opportunity to reduce forest coverage and restore more open forests and grasslands that will benefit a range of species. The challenge is to do that work without disturbing the soil."

So the FWCP used two, eight-wheeled units with large tires to do the work, both specifically designed for low impact logging or thinning. The vehicles' design helps distribute the weight over a large area. One is the faller for cutting the trees, and the second is a forwarder, for transporting the trees and branches to a landing area.

"These have been used in national parks but this is the first time we have used them," says FWCP wildlife technician Dave Lewis who was on-site to direct the work. "Apart from the obvious benefits of minimizing the impacts on the soil, the equipment allows the whole treatment to be condensed into a shorter time frame."

Typically crews cut the trees and the slash is left on the ground to dry. It is then piled and, several months later, burned. This new approach means the treatment objective can be achieved in weeks if not days.

There is also the added environmental benefit that the waste material can be turned into electricity. Using this specialized equipment the slash is removed by the forwarder and will likely be taken to the power generation plant operated by Tembec at Skookumchuck. Last year BC Hydro expanded the amounted of electricity it would purchase from the power plant in a new ten-year agreement with Tembec.

Dave Lewis

One of two specially-designed vehicles help thin the trees at Hofert while ensuring minimum disturbance of the soil.

"A total of 60 hectares was successfully treated early this year," added Larry. "It was made possible with the help of people like Rob Neil from The Nature Trust of B.C., and Sue Crowley from the Ministry of Environment, as well as the funding partners Columbia Basin Trust and the Habitat Conservation Foundation Trust. Given its success we hope to do more work with this equipment in the future."

Kokanee Numbers Off The Chart. Literally

Kootenay Lake is firing on all cylinders. Two thousand and nine was an excellent year for kokanee, and productivity as a whole, in Kootenay Lake. The preliminary estimated kokanee population was calculated at approximately 48 million fish, not including spawners.

"This was so high that the research team had to extend the axis on their graphs; the next highest count was 35 million back in 1996 and 2002 ," says limnologist (lake specialist) Eva Schindler. "Not only did the kokanee do extremely well but there was excellent productivity at all trophic levels.

A trophic level is a species or group of species, such as kokanee, occupying the same level in the food web. The lowest trophic level includes phytoplankton and, going up from there, the zooplankton (they eat the phytoplankton), the kokanee and then the piscivorous (fish-eating) species like bull trout and Gerrard rainbow trout.

"The results indicate that we are seeing sufficient food at all levels in the ecosystem," added Eva. "With kokanee numbers high and measurements of the zooplankton biomass high it means that we can expect good survival rates for the kokanee, as well as sufficient food for the larger fish species."

Undoubtedly the Nutrient Restoration Program (NRP) in Kootenay Lake, jointly coordinated by the FWCP and the Ministry of Environment is having a positive impact. The liquid blend of nitrogen and phosphorous added to the water's surface during the four months of summer replaces nutrients being trapped upstream by Duncan Dam. The nutrients feed the lowest trophic level but clearly the positive impacts are experienced throughout the entire food web.

The establishment of a nutrient program in the South Arm (funded by Kootenai Tribe of Idaho which receives funding from the Bonneville Power Administration through the Northwest Power and Conservation Council's Columbia Basin Fish and Wildlife Program for impacts from Libby Dam) in 2004 also helps to support all trophic levels in the lake. Since the start of this program the amount of nutrients added to the lake has increased about 45%.

The 48 million kokanee consist of 11 million one-to-three year olds, and 33 million fry. It does not include kokanee in the West Arm.

Although not as high by comparison, productivity in Arrow Lakes Reservoir was also good in 2009. That system is also the beneficiary of nutrient additions, again coordinated by MOE and FWCP with support from Columbia Power Corporation (in partnership with Columbia Basin Trust). The latest kokanee population preliminary estimate for Arrow Lakes Reservoir is 10 million, up from 8 million in 2008.

Lynne Betts

An extremely high number of estimated kokanee in Kootenay Lake in 2009, and solid results for all trophic levels, likely mean that Meadow Creek Spawning Channel will be full once again come fall spawning time.

How Are Kokanee Populations Estimated?

- A team of researchers from MOE in Victoria undertake the kokanee surveys annually in a number of large lakes and reservoirs across the province
- The same methodology is used each year (and in each water body) so that accurate comparisons can be made
- The work is done at night and around the new moon in September in Kootenay Lake and October for Arrow Lakes Reservoir
- Weather permitting, the data gathering takes a minimum of five nights in each system
- The lake is split into 18 transects (sections) and a boat with a sonar traverses each one, from shoreline to shoreline.
- The sonar, with the assistance of computer modelling, provides the number of kokanee in each transect (the abundance of kokanee in each transect can vary substantially)
- The results for each transect are extrapolated to provide a total population estimate for the whole lake
- The echo strength in decibels can be used to determine fish size so that the relative abundance for each age class can be tracked.

Vaux's Watch

Spring and early summer is the prime season for migratory birds and just before nightfall small acrobatic birds may be plummeting into a hollow tree or brick chimney near you. If you witness such a sight the Fish & Wildlife Compensation Program (FWCP) wants to hear about it. FWCP's Vaux's (pronounced "voxes") Swift Watch Program is in full swing.

In spring the Vaux's swift makes its northward migration using communal roosting sites en route. However, biologists have little knowledge of these sites and without it there is less chance to protect critical habitat. What is known is that brick chimneys – residential and commercial - are favoured resting stops as the swifts refuel and head from the southern United States and Mexico.

"We have very few reports of chimneys being used by Vaux's swifts in the Basin even though swifts are seen in this region," says FWCP senior wildlife biologist John Krebs. "In fact we are aware of only two active roosting sites. One is at the St. Eugene Mission near Cranbrook and the other is at Nelson's Evangelical Covenant Church. There must be other locations out there and it is really important that we find them. We recently received a report from the Valemount area about a large hollow cottonwood being used by about 30 swifts so it is great to collect this information. "

The Vaux's swift is North America's smallest swift and is relatively easy to identify. At dusk they gather in the darkening skies, wheeling around for 20 or 30 minutes before swooping dramatically into a brick chimney or hollow tree trunk.

"They are quite a sight because communal roosting sites can accommodate from several tens of birds, to many thousands," says FWCP public representative Gerry Thompson. In 2008 Thompson made nearly 30 massive Vaux's swift nest boxes that have been distributed in various parts of the Basin.

The Columbia Basin provides important habitat for Vaux's swifts as many breed in the forests of the Interior Cedar Hemlock zone. More than half of their global breeding sites occur in B.C. In addition to roosting in larger chimneys, Vaux's swifts also nest in smaller chimneys from June to August. Very few nest sites have been documented for this species but they are likely to occur in brick chimneys. Towns with older houses and historic buildings are most likely to support nesting birds.

Historically the breeding and roosting sites consisted of hollow trees often found in old growth forests. With the creation of regional reservoirs and changes in forestry practices such habitat has become more limited. In fact most recorded breeding and roosting sites are now in man made brick chimneys. As more brick chimneys are converted to steel or aluminum, even this man made habitat is in decline.

To report a roost site, or to get more information about the FWCP Vaux's Swift Watch Program, visit www.fwcp.ca, email irene.manley@bchydro.com or call 250-352-6874.

Marcia from near Valemount sent the FWCP this photo of a cottonwood after reading about our request for Vaux's swift nesting and roosting sites. This old cottonwood, with its large cavity, accommodates about 30 Vaux's swifts.

Cottonwoods – Good for Wildlife & Land Owners

As trees go, the cottonwood is probably one that is underappreciated. Perhaps because it has relatively poor firewood value, or because it can be toppled or shed its limbs in a windstorm. Whatever the reason, the Fish & Wildlife Compensation Program (FWCP) would like to change this thinking and is asking you to save cottonwoods wherever it is safe to do so. Cottonwoods are extremely valuable to wildlife and can help protect vulnerable land.

The cottonwood is a poplar tree and part of the willow (Salicaceae) family. It is the largest of all poplar trees in North America climbing to a height of 50 metres. It gets its name from the heavy "snow" showers of white, cotton-like seed heads discharged into the air in early summer. The seeds are flood-dependent – they need several weeks of very moist conditions to germinate – and, once established, the young trees are extremely flood resistant.

Human development can be at odds with the welfare of the cottonwood. As is most urban and agricultural development, the trees are concentrated on or around floodplains at lower elevation. So, all too often they end up at the front end of the bulldozer or the sharp end of a chainsaw.

Added to this, more effective flood control over the last forty years has resulted in fewer cottonwood stands.

"Poor re-generation of cottonwoods combined with higher chances of remaining stands falling victim to human development means that a wide variety of species that rely on them are suffering," says FWCP senior wildlife biologist John Krebs.

Cottonwoods are valuable to wildlife because they are fast growing and die relatively young. They are very susceptible to heart rot and decay in their latter years, thus providing safe cavities for a variety of wildlife. In a relatively short time frame a cottonwood can grow from seed into a fully mature and valuable wildlife tree.

The list of birds using cottonwoods is extensive and includes great horned owls, pileated woodpeckers, saw-whet owls, Vaux's swifts, wood ducks, osprey, red-tailed hawks and great blue herons.

It is not just our feathered friends that take advantage of the cottonwood. The tree can be home to wild honeybees, bats that roost in the cavernous hollows or under the peeling bark, flying squirrels, and also the odd black bear has squeezed into a cottonwood cavity to hole up for a night or two, even overwinter. The cottonwood is perhaps the most valuable tree in B.C. when it comes to hosting insects. Its leaves provide shade for dogwoods and other shrubs, and cool water to help fish habitat.

Despite some popular poplar thinking (they have in the past been described as very tall weeds) the cottonwood can be extremely valuable to landowners as well as wildlife. Cottonwoods grow where many other plant communities cannot – in gravel bars and water-soaked environments next to streams and rivers. As a result they are often the first line of defence when flooding occurs. The root system of the cottonwood can be a saviour when it comes to bank stability and preventing valuable farmland from being washed downstream. And, last but not least, being a tree that draws up large amounts of water the cottonwood can be very useful in reducing the risk of wildfires to communities.

Angus Glass

Mature cottonwoods can provide habitat for a range of species, from birds to bats, bees to bears and many others.

East Kootenay Conservation Program

Looking for Conservation Options for the West Kootenay

The East Kootenay Conservation Program (EKCP) is a partnership of 52 conservation, agriculture, industry and forestry organizations, plus government and First Nations. These partners - including the Fish & Wildlife Compensation Program - are dedicated to conserving natural areas for Kootenay communities.

This collaborative approach brings together a range of partners and interests and has been instrumental in coordinating the acquisition of thousands of hectares of land for conservation in the East Kootenay. Is it time for a similar approach in the West Kootenay?

"EKCP's success in the East Kootenay has attracted attention in the west and many people have suggested that having a similar model in the West Kootenay could benefit conservation," says EKCP Manager, Wayne Stetski.

"Networking can help find win-win approaches to ecosystem conservation and stewardship on private and adjacent Crown lands," says Wayne, adding, "In this way the EKCP has maintained and, in some cases, restored the rich biological, economic, and social heritage of the East Kootenay."

On October 14th 2010, the EKCP, in partnership with the FWCP, plans to host a workshop in the Nelson / Castlegar area to test the waters in the West Kootenay.

"We want to hear from local groups and stakeholders and explore conservation options that could work in the West Kootenay," says Stetski.

For more information, or to let the ECKP know you are interested in attending, please contact the EKCP ekcp@cyberlink.ca or 250-581-1122.

Species Not Reported in Canada Since 1942

It pays to have a keen eye, steady hand and a thirst for more information. These actions by a West Kootenay resident resulted in the report of a species not recorded in this country for more than half a century. The Platypedia putnami (pictured) is one of two cicada species found in southern B.C., and the last report of it in Canada was in 1942.

Alistair Fraser

The rarely glimpsed Platypedia putnami cicada, taken by Alistair Fraser in May 2010 near Kootenay Lake. ***For more of Alistair's photos visit kootenay-lake.ca***

There are likely a couple of reasons that it is only rarely sighted – we are at the very northern end of its range, so there are very few about; and it is a species with an extraordinary life cycle, spending just a fraction of it above ground.

Primarily to avoid predators the cicada larva (nymph) burrows into the ground for up to five years to feed off nutrients from roots. It then emerges – as an adult - above ground for about one week only, to reproduce and start the life cycle again. One species of cicada found in the United States even spends 17 years underground.

Assistance with the identification of this particular cicada was provided by Agriculture and Agri-Food Canada. The legs of the more common P. areolata (sometimes called the Orchard cicada) are reddish brown, while those of the rarer P. putnami are black. More information about cicadas can be found at: http://www4.agr.gc.ca/AAFCAAC/displayafficher.do?id=1229363968841&lang=eng.

If you have fish and wildlife images you would like to share with the FWCP please send them to info@fwcp.ca

Harlequins Harder to Find

In 2009, the FWCP funded a survey of harlequin ducks in the Salmo River watershed, and the findings point to a duck population that is losing ground. The striking harlequin duck is very sensitive to human development and disturbance, typically preferring nest sites on densely vegetated river or stream banks.

The adult survey work conducted during the last three weeks of May last year generated a population count of 42 adults. This is 12 fewer birds than the previous count of 54 in 1999 and 2000, conducted in collaboration with the Salmo Watershed Streamkeepers Society.

Due to the drake's bold colouration, the harlequin duck is named after traditional Italian comedic characters with their brightly painted masks. The Columbia Basin population over winters on the coast in the Strait of Georgia before migrating inland to the fast flowing rivers of the Kootenay for the breeding season. In addition to the Pacific population in North America, there is also one on the Atlantic coast considered to be of "special concern" by the Committee on the Status of Endangered Wildlife in Canada.

"There have been reductions throughout the watershed but declines are most pronounced in the upper watershed (Apex to Hidden Creek) and in the Sheep Creek tributary," says project leader and wildlife biologist Marlene Machmer.

"What we do know is that the harlequin breeding season coincides with an increase in human recreational activity in the watershed and, given the sensitive nature of these birds, they can be easily disrupted and abandon heavily used areas. This is one reason why we need to promote a greater awareness of harlequins among recreational users."

Brood surveys, conducted in July and August of 2009, found that nearly 58 per cent of females successfully hatched a brood with nearly three quarters of the young reaching the class 3 stage (fully feathered but incapable of flight). This results in an average productivity of 1.68 ducklings per female.

Paul Tessier

The male harlequin has a distinctive look, yet this duck species seems to be on the decline in the Salmo River watershed.

The harlequin work, which also continues in 2010, goes far beyond generating population estimates and breeding success. It includes establishing a public awareness campaign that asks for harlequin duck sightings; providing qualitative information on recreational use that might impact the duck population; preparing recommendations for harlequin conservation and stewardship; and, ultimately, sharing the results with local residents and land managers and jointly implementing stewardship actions.

"We were really pleased with the public's response last year for harlequin sightings," says FWCP wildlife biologist Irene Manley. "And we want to keep that momentum going through this summer as well - not just of sightings in the Salmo River watershed but throughout the Columbia Basin.

Harlequin duck sightings can be reported online at www.fwcp.ca

FWCP Projects for 2010-2011

The Fish & Wildlife Compensation Program has already started working on projects for this fiscal year. For more information visit www.fwcp.ca.

Fish

- Arrow Lakes Reservoir Nutrient Restoration
- Upper Columbia White Sturgeon
- Hill Creek Spawning Channel
- Meadow Creek Spawning Channel
- Kootenay Lake Nutrient Restoration
- Kootenay Lake Creel Survey
- Fisheries Small Projects

Wildlife

- West Kootenay Enhancement
- East Kootenay Enhancement
- Non-Game Enhancement
- FWCP Land Management Operations
- Large Mammal Monitoring
- Small Wildlife Projects
- Land Acquisition
- Caribou Recovery
- Bighorn Sheep Augmentation
- Northern Leopard Frog Recovery
- Columbia Basin Amphibian Inventory
- BC Bird Atlas: Columbia Basin Region
- South Selkirk Grizzly Bear Assessment
- East Kootenay Rangeland Assessment
- West Kootenay Screech Owl Telemetry
- Western Toad Crossing Assessment
- Hofert Small Wetland Water Supplement

The "Art" of Conservation

Most leaders in environmental conservation exhibit a series of common personality traits: an appreciation of nature (obviously), being able to work with – and motivate – people, perseverance, and committing for the long haul regardless of the challenges along the way. Art Tremblay, chairman of the Yaqan Nuki Wetland Friendship Society, has all of these in spades - no pun intended since his day job involves digging holes. He designs and installs septic systems.

The 1,280 hectare wetland area (three times the size of Vancouver's Stanley Park) adjacent to the Kootenay River comprises several compartments dissected with dykes and canals, and three pumps. The infrastructure was originally installed in the late 1960s but within twenty years the wetland-by-design was drying up as fast as the funding.

"The canal system leaked badly and the pumps were inoperable," says Art. "It wasn't a desert but it certainly wasn't a functioning wetland either."

The Yaqan Nuki (pronounced "yaka nookie") Wetland Friendship Society formed in 1993 gets it name from one of seven tribes of the Lower Kootenay Band that owns the land. The two groups support one another for the greater benefit of wildlife, and approximately 30 per cent of the Society's board are Band members.

The goal of the Society is to turn this dried-up, cattail-choked, relatively lifeless section of the Creston Valley to a viable and vibrant community. This is made possible with the support of the Lower Kootenay Band, Ducks Unlimited, Fortis BC, Columbia Basin Trust, the Fish & Wildlife Compensation Program, and other partners along the way.

Art is the first one to say that the project's success is little to do with him, but happened because of people like Sharon Laughlin and the rest of the Society members. The work requires a team approach: digging and reinforcing canals, laying piping, electrical work, mowing invasive weeds, and pump repairs. The team's accomplishments have had the desired results! A myriad of birds and mammals now use the wetland at different times of the year, much to the satisfaction of all involved. "It's not about us, it's about wildlife," adds Art. And the wildlife has come back in droves.

While successful, the project cannot be left unattended. Half a dozen Society members take turns to monitor the pumps and water levels on a daily basis. The pumps that have been brought back to life will not last forever. The Society, however, has a plan for that too, having just "purchased" a massive pump that will soon be installed. The acquisition is another example of how this group gets things done on a shoestring budget with the right connections.

The connection was Marc-Andre Beaucher at the CVWMA who had heard about an available pump in Vancouver. No ordinary pump, this one can shift up to 13,000 gallons a minute or, in Art's words, "It represents a portable flood."

"Possibly made for the Canadian military, it was never picked up and has been sitting in the vendor's yard for the last 10 to 15 years. All they wanted in exchange was for someone to pay haulage fees, plus a receipt for a charitable donation."

With a wry smile Art, who was made Creston Citizen of the Year in 2010, along with his wife Pauline, explains that to build a comparable pump from scratch might set you back forty to fifty thousand dollars. Not content with getting the pump for nothing, Art sought out a favourable transport company that reduced shipping costs from $3,000 to $800.

The FWCP is paying for the installation of the pump and the new addition will help keep the wetland functional for years to come.

A committed and active society with a leader who can get things done (and is willing to spend his own money to do so); strong support from – and mutual cooperation with – First Nations, and a variety of partners that can lend their support – this is the "Art" of conservation.

Angus Glass

Art Tremblay and the Yaqan Nuki Wetland Friendship Society have been successful in restoring the wetlands near Creston. While invasive burdock (foreground) still occurs, years of mowing have ensured that it only has a toehold, not a chokehold.

Lower Columbia Rainbows Higher

Mainstem and Tributaries Important for Fry Production

For the last decade there has been an upward trend in the number of rainbow trout spawning in the lower Columbia River. This is the section of river from Hugh Keenleyside Dam to the U.S. border including the lower end of Kootenay River from Brilliant Dam to the confluence with the Columbia.

Survey work funded by BC Hydro has found that there has been nearly a ten-fold increase in the number of rainbow spawners in the mainstem of the river, from about 1,000 in 1998 to nearly 10,000 in 2008. Peak redd (nest) counts and peak spawner counts have also exhibited a similar pattern, confirming an upward trend in the rainbow population.

"The FWCP and partners have been successful in improving fish passage on Blueberry Creek," says FWCP fisheries biologist, Steve Arndt. "And there are certainly some opportunities to continue to improve access to other stream habitat, especially upstream of culverts in tributaries such as China Creek."

In the late 1990s FWCP fisheries biologists had highlighted the importance of tributaries to the lower Columbia for rainbow fry production.

"One of the key take-home messages was that fry production in both the mainstem and in the tributaries was contributing to the healthy rainbow trout population," added Steve. "Forgive the pun, but we should not put all our eggs in one basket and instead work toward conserving and enhancing spawning habitat in both."

There are certainly strong arguments for conserving spawning habitat in both the mainstem and in tributaries.

"For starters, it is really important for the diversity of the population," says Steve. "There's a lot of life history and genetic diversity in both habitats that we need to protect. And then there's the issue of stability; if there's a massive failure in one habitat type the population has the other to fall back on."

One popular misconception is that better fishing in the lower Columbia River is
directly tied to the efforts of rainbow restocking on the U.S. side of the border. While the restocking efforts in the U.S. will certainly not hinder fishing opportunities upstream, the rumoured benefits are likely to be negligible. A genetic study completed in 2002 showed that only about one per cent of the rainbows sampled on the Canadian side of the border originated from U.S. stocking activities.

The world-class rainbow trout fishing opportunities in this section of river are based on natural reproduction in high quality spawning habitats in both the mainstem and its tributaries.

Janice Arndt

Janice Arndt

FWCP fisheries biologist Steve Arndt catches – and releases – a nice rainbow trout from the lower Columbia River.

Turtle Mortalities

The Deadly Reach of Invasive Plants

During the spring and summer months the FWCP undertakes extensive invasive weed control in the region. This work would undoubtedly gain the support of the World Conservation Union which has stated that exotic species are the second greatest threat to biodiversity on the planet. The effects of noxious weeds, just like the roots of a plant, reach out in a myriad of directions and negatively impact native plant and animal species in many ways.

This was illustrated when, in May 2010, FWCP staff found nine dead western painted turtle hatchlings buried in the sand so entangled within the roots of spotted knapweed that they had no chance of survival. They were found at two nesting sites near Argenta and Cranbrook during routine cleaning which involves removal of invasive weeds and loosening of the sandy soil prior to the females' arrival in early June.

"It is not the first time we have found dead hatchlings as a result of root growth," says FWCP wildlife technician Thomas Hill. "So if we are finding instances of this occurrence we know that it is likely happening on a wider scale in other nesting sites."

The phenomena of invasive weed roots entangling painted turtle hatchlings was first discovered by Francis Maltby while undertaking nest site enhancement and monitoring work for the FWCP in 2000 near Revelstoke.

What happens is the fibrous roots of invasive species such as knapweed and hawkweed can either encase the turtle eggs so that the hatchling cannot emerge or, even if the turtle escapes the confines of the egg, it can get entangled as the hatchling remains in the nest.

"In the Columbia region painted turtle eggs are laid from late-May to early-July and hatch in late-August but remain in the sand until they emerge the following spring," says FWCP wildlife biologist Ross Clarke who oversees the turtle work. "In the southern part of their range they hatch and then emerge from the ground straight away, but here at the northern extent of their range there is a much longer duration when the hatchlings remain in the ground. As a result they are more vulnerable to invasive weed growth. In most cases the roots actually feed on the eggs and hatchlings which are nutrient-rich. We have even found dead hatchlings literally skewered by couch grass roots."

On a more positive note FWCP staff have extricated several entangled hatchlings, still alive, and taken them down to the water's edge.

These bad-news findings highlight the impact of invasive plants at turtle nesting sites. "The reality is that we are not going to get rid of many of these invasive weeds," says FWCP public representative Grant Tower, "but it is imperative that we control the spread of them and continue to prevent them from infesting new areas."

Angus Glass

A handful of dead western painted turtle hatchlings found in a nest site near Cranbrook, entangled within the roots of the invasive spotted knapweed.

What can you do to reduce the spread of invasive weeds?

- Knowledge is key: learn to recognize invasive weeds
- Do not plant invasive weeds or their seeds – ask first before you buy!
- Pull isolated patches of invasive weeds and carefully dispose of them
- With larger patches of invasive weeds, remove seed heads to prevent further spread
- Remove weeds from vehicle undercarriage
- Check yourself and your pets for seeds, especially before leaving a weed-infested area
- Get more information from the Central Kootenay Invasive Plant Committee (www.kootenayweeds.com) or the East Kootenay Invasive Plant Council (www.ekipc.com)

Wildlife Reporters Wanted!

We're looking for wildlife reporters again! For the third year in a row, we need your help to spot several local species – from badgers to bugs and owls to otters. If you see one of the following species please post your sightings at www.fwcp.ca .

Our online forms for wildlife reporters are user-friendly and your information will help our conservation planning. When reporting a sighting, be sure to sign up for our newsletter and you could be eligible to win FWCP merchandise!

Remember not to harass or intrude on an animal in their natural habitat. A big thank-you goes out to our past wildlife reporters! The valuable information can help at-risk animals and ecosystems.

Marlene Machmer

Harlequin Ducks

These vibrant sea ducks are dwindling in numbers. If you see this colourful bird, reporting it can help us figure out the actual population and serve to protect this endangered species.

Dusty Veideman

Vaux's Swifts

This small bird is losing habitat. Hollow trees are their perfect home, but they just might be nesting in chimneys.

Alistair Fraser

Otters

Keep your eye open along the water's edge for these river otters. Not just a coastal creature, these mischievous animals can also be found in interior waterways.

Angus Glass

Western Screech Owls

This amazing bird of prey lives primarily where cottonwoods grow. Nocturnal by nature, you'll have to have a keen eye and ear to spot these owls.

Dean Nicholson

Badgers

These burrowing carnivores are red-listed, meaning they are endangered. Relocation has helped their numbers, but they are still at-risk.

R. Parsons

Grizzly Bears

These reclusive omnivores are blue-listed in B.C. This means they are a vulnerable species and their numbers are dwindling due to habitat loss.

Barb Houston

Fireflies

This unique soft-bodied beetle emits a soft glow to attract a mate. Although very rare in B.C., the firefly can be found in damp spots in meadows, forest edges and lawns.

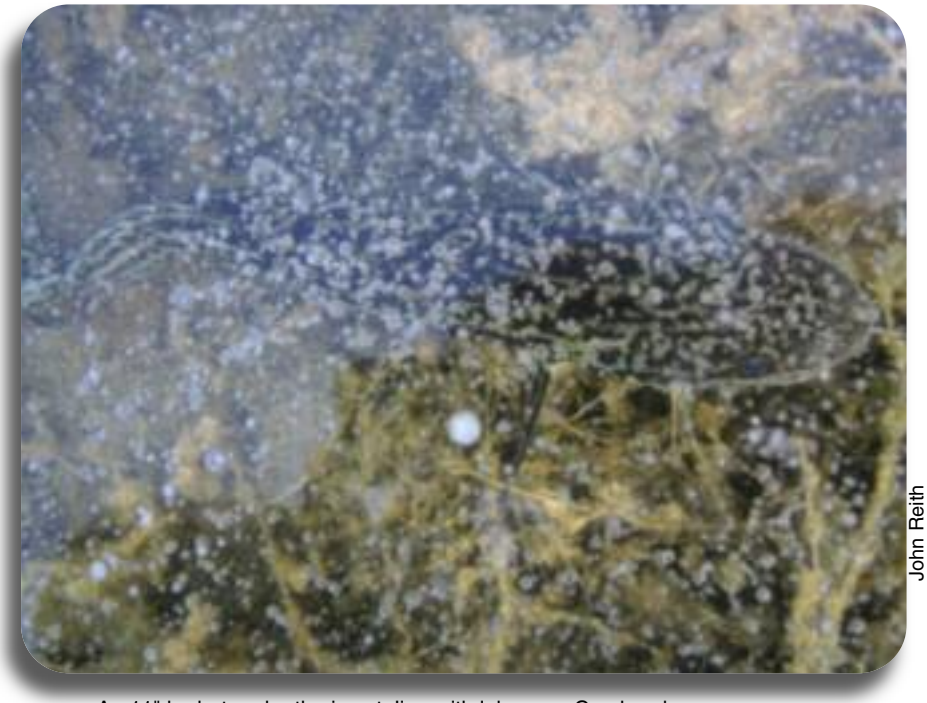
Send Us Your Photos

If you have a great photo of fish or wildlife in the Columbia Basin, send it to us. If we publish it we'll send you an FWCP shirt or hat.

Do not harass or disturb wildlife.

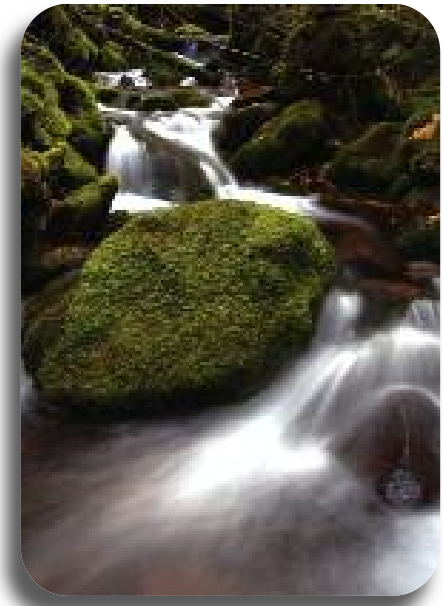
Send your images to **info@fwcp.ca**.

Keep in mind that printable photos require a "high quality" setting on your digital camera.



John Reith

An 11" burbot under the ice at Jimsmith lake near Cranbrook.



Jarod Bowe

Fast-flowing Basin Creek at Bull River.