

# Beaversprite

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Spring 2014



Photo by Sharon T. Brown

**“Is it spring yet?” A beaver breaks through thinning ice at an Adirondack foothills pond in New York. Foot-deep snow remains in the nearby woods in early April.**

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***“PLEASE RENEW  
YOUR MEMBERSHIP”***

*Working for Wildlife,  
Healthy Ecosystems  
and People*

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*Carrying on the Work of  
Dorothy Richards  
Since 1985*

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## President's Message

What is the relationship between “Beaver Woman” Dorothy Richards and “Beaver Man” Grey Owl? After Dorothy read *Pilgrims of the Wild* by Grey Owl she was inspired to learn about beavers. Anahareo, Grey Owl’s compassionate Mohawk wife, is a sometimes overlooked heroine in this story. She persuaded him to stop trapping and become a beaver champion. Two new books (see p. 10) explore the life of this strong-spirited and beautiful woman. And the great movie, *Grey Owl*, *Grey Owl* book, and classic, *Beaversprite*, are all for sale in our Spring catalog on p. 14 & 15.

**International Beaver Day**

What is the relationship between International Beaver Day and Dorothy Richards? April 7, 1894 is her birthday! This was our Board of Directors’ way to honor her. If it wasn’t for Dorothy, *Beavers: Wetlands & Wildlife* would not exist as the voice for those without a voice. And without our dedicated members, BWW would not exist.

*This is Spring, Renewal Time, and*



*Sue Pagano and puppy at her pond.*

to see if you need to renew, just look for “Please Renew” stamped by your address. For Beavers and All, I thank you for your essential support.

We have heard from those who are celebrating International Beaver Day nationwide and beyond. This year people in Colorado, Illinois, New York and North Dakota, among others, have contacted us. For example, a media specialist librarian in Cortez, CO is showing “Coexisting with Beavers.” BWW members Anne and Ray Smith from New Paltz, NY. are showing that DVD too, along with their own “beaver cam” videos, at Woodland Pond. Environmentalists in Spring Grove, Illinois are giving a beaver program in April (Earth Month is a perfect time to celebrate the animal engineers!), while others in North Dakota are presenting BWW’s “Meet the Beaver” DVD.

Each year, countless people hear about International Beaver Day from from us, and from *Chase’s Calendar of Events*. That nonprofit had first contacted us many years ago—quite an honor since 80% of those who apply to be listed each year are refused.

### **Outreach, Near and Far**

At two sites where we consulted last year beaver flow devices have been installed, and another is planned at a third site. Sue Pagano had invited us to see her gorgeous “high peaks” property, where beavers were flooding a long driveway. We found the problem spot and provided plans for a culvert fence that will be built this year.

Barry Prestigiacomio in the Dolgeville area also enjoys his resident paddletails and had us consult about



*Barry and his wife enjoy their beavers.*

managing their dam so that they—and a nearby town road—would not be threatened. He then installed a flow device for a win-win solution.

Last fall we toured the SEVA Foundation’s scenic land in South Kortright, NY, where a dam threatened their water supply. They later hired Skip Lisle to install a device, as we’d suggested, and they’ve invited us to give a program this summer.

### **A New Beaver Toolbox**

Meanwhile, Karl Malcolm, a biologist with the U.S. Forest Service has created a *Beaver Restoration Toolbox* that includes “Beaver Activity and Climate Change” by Suzanne Fouty, the lead article in a past issue of *Beaversprite*. We contacted Dr. Malcolm to thank him, and learned that more of BWW’s work will be in the next revision of his valuable Toolbox (<http://oaecwater.org/USFS-beaver-restoration-guide-2013>).

### **Our Best Allies**

Don’t miss the articles on pages 8 and 16 about how beavers can be our allies in both curbing future climate change and dealing with the current impacts of this major problem.

*Continued on p. 3*

## News & Alerts

### Save the Monarchs

The migrating population of monarch butterflies has dropped from 1 billion to a record low of only 33.5 million in Mexico this year—and the major culprit is the potent herbicide glyphosate that's also linked to cancer. Sales of weedkillers with glyphosate, have skyrocketed in the U.S. over the last twenty years because genetically modified crops are resistant to this herbicide. But it kills milkweeds—the only plant where Monarchs can lay their eggs.

Ask U.S. EPA to ban weed killers with glyphosate that poses a critical threat to monarchs. Contact EPA via the Organic Consumers Association webpage: [http://salsa3.salsalabs.com/o/50865/p/dia/action3/common/public/?action\\_KEY=8848](http://salsa3.salsalabs.com/o/50865/p/dia/action3/common/public/?action_KEY=8848) MoveOn.org also has a petition to ban the use of glyphosate-based herbicides at <http://petitions.moveon.org/sign/ban-use-of-glyphosate>

### Clean Energy and Wild Places

We need wind and solar energy to replace dirty fossil fuels. We also need healthy wild places for clean air, clean water and places to recreate and enjoy the great outdoors. The Public Lands Renewable Energy Act (H.R. 596/S. 279) aims to achieve both goals by putting solar and wind energy projects in places where they

### President's, *Continued from p. 2.*

Pete Seeger, the folksinger and environmentalist, died recently. He came to a Utica Marsh River Day in 1975. His life served as a moral compass for many of us.

For Beavers and All,



will have the smallest impact on lands and wildlife. To support this common-sense bill, contact your U.S. representative: <http://www.house.gov/representatives/find/>.

### Clean Air Win!

This March, the Obama administration finalized a strengthened set of standards to lower the sulfur content in gasoline and reduce tailpipe pollution from our vehicles. These standards, known as Tier 3, will help save thousands of lives each year by reducing smog and other pollution that contribute to life-threatening health problems like asthma.



### Mute Swans Targeted

The mute swan has been named by the United States government as the International Symbol of Peace, but the New York State Department of Environmental Conservation (DEC) plans to eliminate all mute swans statewide.

DEC justifies the plan to kill some 2,200 swans by claiming they can cause problems with water quality, destroy submerged aquatic vegetation and be aggressive towards people.

Mute swans have been in the state since the 1880s and are valued by many residents for beautifying waterways. Many waterfowl do consume aquatic vegetation, and people can be educated to avoid nesting swans. New Yorkers can ask Gov. Cuomo to oppose this plan. Send an email to: [gov.cuomo@chamber.state.ny.us](mailto:gov.cuomo@chamber.state.ny.us)

## Secrets of Wetlands Birds April 23 BWW Annual Meeting



Matt Perry will present “Secrets of Wetlands Birds,” a new talk and video at BWW’s annual meeting on Wednes., April 23 at 6:30 pm in the Meeting Room of the Basloe Library, 245 N. Main St., Herkimer, NY. Matt Perry, who is the Conservation Director and Resident Naturalist at Spring Farm CARES, is well known for his wonderful wildlife videos.

Perry will focus on seldom seen species, such as the Great Egret, Least Bittern, Marsh Wren and Bald Eagle. He will show migrants, including the Mute Swan too—see his page 5 article the birdlife at Utica Marsh.

Other footage comes from Verona Beach State Park, Delta Lake, Spring Farm CARES Nature Sanctuary and Wildsprite Sanctuary in the Adirondack foothills. At Wildsprite, he filmed a Great Blue Heron family—both the images and sounds of a large Heron feeding young are startling!

All are welcome, and brief BWW elections will be held.

### World Water Day

In honor of World Water Day, March 22, The Nature Conservancy asks, Do you know where your water comes from? Most Americans don't know the lake or river at the other end of their faucet. If you'd like to learn more about this important resource, go to TNC's website: <http://water.nature.org/?src=e.nature>. This works best for cities.

# Utica Takes Back a Wetland

By Sharon T. Brown



*A glance at the horizon quickly reveals the uniqueness of this marsh. To the east and south there is a city with a population of over 100,000. (Photo by Paul E. Meyers)*

*More and more cities are beginning to realize the value of wetlands for education, flood control and recreation. They are taking steps to reclaim these wetlands. Here's an example from the early 1980's when city wetlands were rare. (See the page 5 article about Marsh birdlife and Trouble at the Marsh on page 6 too).*

Blue-winged Teals and Mallards paddle peacefully among the bulrushes, barely disturbing the greenish, duckweed-laden water. Nearby, an immobile green heron shares a half-sunken log with three turtles. It is a scene typical of many freshwater wetlands, but a glance at the horizon quickly reveals the uniqueness of this one. To the east and south a city with a population of

over 100,000 surrounds the marsh.

This is the Utica Marsh, an urban wetland of 213 acres, over half of which lies within the city limits of Utica, New York. Despite its proximity to a metropolitan area, wildlife thrives, thousands of ducks find resting and nesting sites. During the warmer months, osprey dive for carp and snipe perform their courtship flights a few minutes away from downtown. Commuters driving into the city on a four-lane highway that crosses part of the sanctuary can often see a great blue heron or a common egret from their cars.

Utica Marsh is actually composed of several types of wetlands: emergent marsh characterized by cattails and

arrowheads and typically inundated by two inches to two feet of water, shrub swamp where button bush grows in water, and wet meadow where sensitive fern grows and it is possible to walk without getting your feet wet.

First-time visitors to the green oasis are often surprised to discover that boots are unnecessary for most hikes. Wild blue irises grow near the water. Horsetails, the silicon-laden plants that the pioneers used to scour their pans, are everywhere. The first plant to flower each spring, skunk cabbage, grows in shallow water near the bank.

## **The Cleanup**

The sky was a brilliant blue as a dozen youngsters from local scout troops

*Continued on page 5..*

**Utica, Continued from p. 4.**

took part in a Utica Marsh Cleanup Day. Their task was to clean out a 25-foot-deep ravine near the canal embankment. Dozens of tires, old furniture, a huge barn door, and even a bathroom sink awaited rescue from their watery graves. Several boys climbed down the steep incline with a sturdy rope that was soon tied to a decrepit car seat. At its other end the rope was attached to a truck; a construction firm had donated the use of the truck and its driver's time. Slowly the car seat was hauled out of the gully. Other volunteers filled large plastic bags with bottles, cans, and assorted refuse that littered the sanctuary's edge.

The truck departed around noon. It was time for lunch and a little informal nature study. One boy picked up a surprisingly docile garter snake that he found along the trail. Others discovered painted turtles basking in the sun on the railroad tracks. The event had been planned by the Mohawk Floodplain Association, a prime mover in the 10-year struggle to save the marsh.

**Citizen Action**

The spark was lighted in the late 1960s. An amateur ornithologist visited the wild spot on the fringe of the city. She saw how the marsh ecology was

*Continued on page 12*



*Boy scouts move an old car seat out of the Utica Marsh during a spring Cleanup Day. (Photo by Sharon T. Brown)*

**Birdlife Thrives at the Marsh—30 Years Later**



By Matt Perry

The premier wetland habitat in this area is the Utica Marsh. Located on the north side of Utica in the Mohawk River floodplain, this New York State Wildlife Management Area is home to many species of wildlife that are hard to find elsewhere in the region.

Like virtually all wetlands, it once had a sad history of destruction and abuse. For many years it was used as a dump for factory refuse. Automobile graveyards flanked one side of it and are responsible for a massive amount of tires that annually “migrate” into the marsh during high water. Undoubtedly, the junkyards are the source of other contaminants that are not as visible.

The Mohawk Valley Flood Plain Association, and later the Utica Marsh Council, were largely responsible for getting protection for the Marsh and transforming it into a Wildlife Management Area.

For many years the Utica Marsh Council along with the NY Dept. of Environmental Conservation

hosted a spring Marsh Cleanup—mostly for removing the year's accumulation of tires. In late 2010, the Barnes Ave. bridge leading to the Marsh's parking area was permanently closed, and Clean-up Days were put on hold due to the lack of vehicle access. Since then the Utica Marsh Council has been scrambling to find a new and practical way for people to gain easy access.

It's an interesting time that we live in when bridges are condemned without thought of replacing them. As it turned out, some good news came with the loss of our Barnes Ave. bridge. The auto junkyards adjacent to the Marsh were all closed due to lack of road access, and illicit dumping of trash along Barnes Ave. was also effectively curtailed.

Spring is an exciting time at the Marsh. Virtually as soon as its shallow pools lose their ice, a procession of migratory waterfowl begin visiting. Northern Pintail, Gadwall, American Wigeon, and Northern Shoveler are a few of the larger dabbling ducks that can be found during migration. By May, the duck migration is mostly over, and the songbird migration comes into full swing. Migrant warblers can be seen easily here as they travel through the low tree border between the main trail and the marsh.

Both the Sora and the Virginia

*Continued on page 6.*

# Trouble at the Marsh

“The term Black Friday will have extra meaning this year...” began a November 25, 2010 *Observer Dispatch* story titled “Barnes Avenue bridge in Utica set to close Friday.” Although that story focused on the impact of the bridge’s closing upon auto salvage businesses, it also noted, “There will no longer be easy access to the Utica Marsh... It will now require a walk [of over a mile] from the bike trail along the Erie Canal.”

A NY Dept. of Transportation inspection of the 73-year-old bridge that allowed drive-in access to the Utica Marsh had revealed it was not safe. Replacing it would cost \$3 million or more. Ernest Williams, a Hamilton College professor on the Utica Marsh Council, predicted the bridge closing “means there will be a several-year hiatus in using the Marsh for much public or educational use.”

Dr. Williams was right. Without vehicle access to the Marsh, except a restricted roadway along railroad tracks, most all public events stopped at the area’s best nature attraction.

## The Purple Project

Earlier, students from several local schools had participated in “the Purple Project” by releasing beetles that eat invasive Purple Loosestrife, an invasive plant. After some success in decreasing the colorful non-native plant, that effort is now on hold.

Purple Loosestrife does push out native plants, yet this showy wildflower is not all bad. According to *The Field Trip Guide for Utica Marsh*, “Honeybees and other insects do collect pollen and nectar; the caterpillar of the pearly woodnymph moth does eat it; and research has shown that it can absorb and thus detoxify PCB’s (polychlorinated biphenols).”

A one-day 2009 BioBlitz survey of all living organisms at the Marsh revealed 523 species living there, including muskrats and beavers. Wildlife benefited from the bridge

c l o s i n g because the junk car businesses bordering the Marsh were required to remove their



*Purple Loosestrife*

old autos. And no more can be brought in. Now only smaller remnants of Detroit remain, and Nature holds sway.

Today, hikers and bicyclists use a bike trail alongside the Erie Canal to enter the Utica Marsh. Paddlers arrive there via the Erie Canal. Although Dr. Williams says, “the only organized events come from the local Tramp & Trail Club,” those who make the effort are well rewarded. They can enjoy the peaceful 213-acre bird haven with two observation towers, one viewing platform with a ramp and, and several trails complete with boardwalks over wet areas.

## Railroad Road Access?

Stephen Litwhiler, NY DEC Region 6 Citizen Participation Specialist, stated recently, “We are working on a formal agreement with the Railroad to use their access road along the rail line...”

Whatever happens with the efforts to restore more public use, the Utica Marsh will always be a life-saver that soaks up dangerous floodwaters, and a life-giver as a green oasis for hundreds of wild species.

*For more information:*

Welcome to the Utica Marsh: <http://www.uticamarsh.org> “

*The Field Trip Guide for Utica Marsh* (<http://academics.hamilton.edu/biology/ewilliam/umarshfieldtrips.html>) could be a model for other guides.

Utica Marsh Map: [http://andyarthur.org/data/d/maps/08/8/map\\_08802\\_d.pdf](http://andyarthur.org/data/d/maps/08/8/map_08802_d.pdf)

## Birdlife, Continued from p. 5.

Rail breed at the Utica Marsh. The latter species is particularly vocal at this time of year, and can be heard calling from many places in the cattail beds. The Common Moorhen (also known as Gallinule) is mostly black and about the size and shape of a chicken. Like the rails, they have extremely long toes that act to distribute their weight and enable them to walk over thin rafts of emergent vegetation.

## Least Bittern & Purple Loosestrife

Another Marsh specialty is the Least Bittern, a colorful robin-sized heron [see the p. 5 photo] that breeds in cattail marsh habitat. The Utica Marsh is one of few places where this bittern can be reliably found in Oneida County. Currently, the biggest threat to the bittern and its marsh-nesting allies is the invasive plant, Purple Loosestrife, that has been steadily expanding throughout the Marsh, and now threatens to overwhelm the last areas where these birds still breed. Although the three species of beetle that are used to control Loosestrife have been released at the Marsh, so far they don’t appear to be putting much of a check on the plant.

During my last visit to the Marsh, I saw a pair of Pied-billed Grebes begin a nest. Their nest is made on a floating mat of vegetation that is anchored in place. The advantage to this design is that the nest can handle water levels rising without being flooded out. In 2011 a dramatic flooding event swelled water levels at the Marsh enough to destroy all of the Canada Goose nests as well as most other bird nests in the marsh. Yet the Grebe nests may have survived because of their unique floating design.

*This is a 2012 entry from the “Tales from the Wilds” blog by Matt Perry, Conservation Director at Spring Farm CARES. He also took the bird and nest photos on page 5, and his records were used for the Marsh Bird Checklist at the Welcome to the Utica Marsh website.*

# Native Fish and Beaver Dams

New research is shedding light on a long-lasting controversy about whether beaver dams harm native trout and salmon. Just as beavers had been nearly extirpated from North America by the time when most roads were being built, so no one planned for them, beavers were also scarce during the early decades of stream science. That may be why, in the past, biologists tended to ignore this keystone animal of our waterways—and even treat the beaver as an intruder.

Unless one has witnessed the powerful jumps of salmon, or trout, as they travel upstream, it's easy to think of a few-foot-high beaver dam as an impenetrable barrier. This concept has gained traction among powerful fishermen's groups, and agencies that receive significant funding via sources such as "fish stamps." For example, about 1,500 miles of Wisconsin trout streams, mostly in the north, have been kept beaver-free, although current fishery science indicates this may be counterproductive.

## Speculative negative impacts

When researchers from the University of Southampton (Kemp 2012) did a thorough review of both the scientific literature and fish experts' opinions about the impact of beaver dams upon salmonids (trout and salmon), they found that benefits were cited more often than costs. In addition, "The majority of 49 North American and European experts considered beaver to have an overall positive impact on fish populations, through their influence on abundance and productivity."

Streams with beavers produce more native trout or salmon. **The most common "perceived negative" impact of beavers was that their dams are "barriers to fish movement," but this was supported by data only 21.6% of the time. Over half (51.5%) of the positive impacts**



Photo by Paul Ramsay

*Beaver dams often have breaches, such as the one to the left, that salmon and trout use during migration. They also use side channels to bypass dams.*

**cited were based on data, whereas for negative impacts (71.4%) were speculative.**

## "Cold water resources"

The Brook Trout was the most studied fish in the Kemp review with 22 records. A need to aid this native fish has been cited to justify beaver eradication efforts in Wisconsin and elsewhere. Despite little evidence, the fear that dams promote undesirable warming of water has been a major factor in killing thousands of beaver annually in northern Wisconsin to "protect cold water resources."

Until recently, it was not understood that beaver dams and excavations create pools of deeper, cooler water upstream of dams. Some of this deep water flows underground around the ends of dams to cool the water downstream in what is called a "hyporheic effect" (Shaw 2008).

Due to concerns about the low beaver population in Wisconsin, that state has been preparing a new ten-

year beaver management plan. Non-native fish, may not cope as well with beaver dams as native fish (Lokteff 2013). Non-native Brown Trout have been introduced in Wisconsin and other states. Let's hope that the interests of a small minority do not trump the interests of the majority—of wild species and people.

Kemp, P. S., Worthington, T. A., Langford, T. E. L., Tree, A. R. J. and Gaywood, M. J. (2012), Qualitative and quantitative effects of reintroduced beavers on stream fish. *Fish and Fisheries*, 13: 158–181.

Lokteff, R.L., Roper, B.B., and Wheaton, J.M. (2013), "Do beaver dams impede the movement of trout?" *Transactions of the American Fisheries Society*, pp. 1114–1125.

Shaw, E. et al. 2008. Lateral Hyporheic exchange along a beaver-dammed stream... *American Geophysical Union*.

# Natural Flood Protection

## Look to the beaver, scientists say

*We now must adapt to a warming planet, states the United Nation's new report "Climate Change 2014: Impacts, Adaptation, and Vulnerability." Instead of only trying to curb greenhouse gases, we need to manage the impact of climate change with strategies that maximize benefits and minimize risks.*

*"A first step towards adaptation to future climate change is reducing vulnerability and exposure to present climate variability." As we face more floods, droughts and other extreme weather, beavers can be our allies. This March 28, 2014 Calgary Herald story explains how the animal engineers are helping.*



*Photo by Cherie Westbrook*

*A series of beaver dams (see the one at the top too) can reduce flooding downstream.*

By Colette Derworiz

When the rain hit Kananaskis Country last June, unleashing a torrent of water and flooding dozens of communities, it washed out a large beaver dam being monitored down in the valley. But several others remained intact and even stored water.

"For the majority of the event, we actually had a lot of storage in the system," said Cherie Westbrook, an associate professor in wetland ecohydrology at the University of Saskatchewan who's been studying beavers in the Sibbald area of Kananaskis since 2006. "There was actually quite a lot of ability to retain the flood waters and slow them down as they were moving down the valley bottom."

Her team, including some university students, ended up getting

trapped in the field when the deluge hit. But they learned a lot about how beavers could help in a flood. "Beaver ponds were pretty empty prior to the event happening," Westbrook said. "The larger one, the one most downstream, became overwhelmed with water and it ended up blowing a 10-metre section of it out so we had some flooding, but not massive flooding."

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### **Dr. Westbrook believes beavers could play a role in flood mitigation...**

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Flooding was much worse in other southern Alberta areas, making the 2013 event the worst natural disaster in Canadian history. As the Alberta government looks at ways to mitigate against future floods, focusing on

infrastructure such as diversion canals and dry dams, scientists suggest the province should also consider nature's top engineer: the beaver.

Beavers are often considered pests, but the busy dam, pond and wetland builders have long shaped the landscape in North America. "They are ecosystem engineers and keystone species, meaning that they create habitat for a wide variety of other organisms," Westbrook said. "They also have a massive effect on what ecosystem structures look like and how they function."

That includes both a hydrological function in floods, but also a geomorphic (or surface) function to retain sediment, she says. They also maintain wetlands, which support a range of biodiversity and improve hydrological function. Westbrook

believes beavers could play a role in

*Continued on p. 9.*

# Good News from Unexpected



UNEXPECTED WILDLIFE REFUGE, INC.  
*Home of the Beaver Defenders*  
P.O. Box 765, Newfield, New Jersey 08344

By Sarah Summerville

Mother nature is showing us she means business this winter. Temperatures in January and so far in February were mostly freezing or below - one morning the bank thermometer read -2 degrees! We haven't had a good cold winter in New Jersey for quite some time. I tend to measure the severity of winter by how much firewood I burn. So far this year, I have burned as much or more than all of last winter. The stove has

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**I saw a small dark figure hopping along the vegetated bank.**

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been going 24-7 except for the periodic pause to unload the ashes and make room for more wood. As difficult as it can be to battle the cold, I think it is healthy for this geographic region to experience prolonged freezing during winter.

## Destructive bugs

Our native species have evolved to withstand freezing winters

with antifreeze-like elements. The destructive progress of invasive bugs that have moved in from the south, like the emerald ash borer and the southern pine beetle, as well as foreign insects like the gypsy moth, may be checked by this prolonged cold snap. The Refuge, as well as surrounding township forests, has taken a terrible blow from a southern pine beetle infestation, with huge swathes of dead pitch pine trees.

The dead trees pose a dangerous threat in high winds, ready to snap off and fall with a powerful gust, and they wreak havoc on the trails when they land. Hopefully, the beetles' momentum will be slowed by this cold weather.

## Ducks and beavers

The pond is frozen solid now with no evidence of beaver activity whatsoever. They kept their ice holes open as long as they could, but they are now sealed up so thick with ice that we can walk over them. We have been casting corn out upon the frozen water for the ducks. They come and push through the snow with their breasts to find the hidden kernels.

*Beavers are as much a part of our waterways as the water itself.*

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## Natural, Continued on from p. 8

flood mitigation, and another expert agrees.

“What happens is the water comes down, hits these buffering features — the beaver ponds — so the water slows down, has a bit of resistance with the dams and then gets to the next one,” says Glynnis Hood, an associate professor in environmental science at the University of Alberta. “You end up having these stop gaps along the way.”

She acknowledges there is a Catch-22 situation, because the water releases all at once if the dams blow. “I wouldn't say there is a superhero quality here,” said Dr. Hood, who wrote a book called *The Beaver Manifesto*. “There are benefits to some degree, depending on the volume of water coming down and just how quickly it releases.”

## Help during droughts too

She believes beaver ponds and dams would help in a regular spring

During patrol week, I followed the tracks of two large otters from Main Pond to the irrigation reservoir at Station 19. Then, last week at dawn, as the cold winter sun began filtering through the trees and shining on



the white snow covered ice, I saw a small dark figure hopping along the vegetated bank. The size of a cat, it jumped and bucked along the edge of the ice, diving in and out of the snowy brush. It was a juvenile otter! It was very unusual (and very dangerous) for this little guy to be out and about without parental supervision.

He worked his way around the pond edge to the sitting area in front of the cabin. He came up and inspected the patio and chairs and then went back out onto the ice and disappeared. Hopefully, he got to wherever he was going.

melt or a quick thaw event that's normal. “I think last year was a bit of an anomaly,” she said, noting the ponds and dams work similar to running water through a bunch of bowls on a countertop rather than having it flow down a flat top.

Hood says beavers can also help in droughts. “When drought hits, these ponds tend to channel water from whatever is there into the ponds — just like farmers digging drainage

*Continued on page 11.*

# Anahareo's Lasting Legacy

Grey Owl, the world's first beaver champion, evolved from life as a backwoods trapper to become an internationally known environmentalist thanks to the love of his life—the high-spirited, compassionate Mohawk called Anahareo. This spring, Anahareo's enthralling autobiography, *Devil in Deerskins* is being re-published by the University of Manitoba Press. Plus, *Anahareo, Wilderness Spirit*, a biography of this compelling



*Anahareo, Grey Owl's wife, with a beaver kit.*

woman that appeared in 2012, fills in many of the blanks left by her autobiography that focuses on her life until Grey Owl's death.

In *Devil in Deerskins*, Anahareo (1906-1985) tells about her life with Grey Owl and the beavers during the 1920s and 1930s. Clearly this self-educated woman was decades ahead of her time. Her book was a bestseller

in 1972, and the author's adventurous spirit and insightful observations make it a page turner today. They adopted two beaver kits, whose antics, along with her own strong opinions, helped convince Grey Owl to abandon his traps. Instead, he began to write and become an strong advocate for this endangered species—and the vanishing wilderness.

## A Girl Called Pony

She was born Gertrude "Pony" Bernard to a Mohawk family that lived on the outskirts of Mattawa, Ontario. Her nickname was Pony because she was always running as a child. One of several ironies in this love story is that Pony was partly attracted to Grey Owl because she hoped he'd teach her about Native American ways in the wilderness. She'd already learned traditional crafts from her grandmother, who was descended from Algonquin chiefs, but longed to learn bushcraft. Grey Owl, aka Archie Belaney, was an adept wilderness guide and trapper who had adopted

the persona of an Indian—and claimed to be half Apache—although he was, in fact, an 100% white, Englishman.

## Her Robin Hood

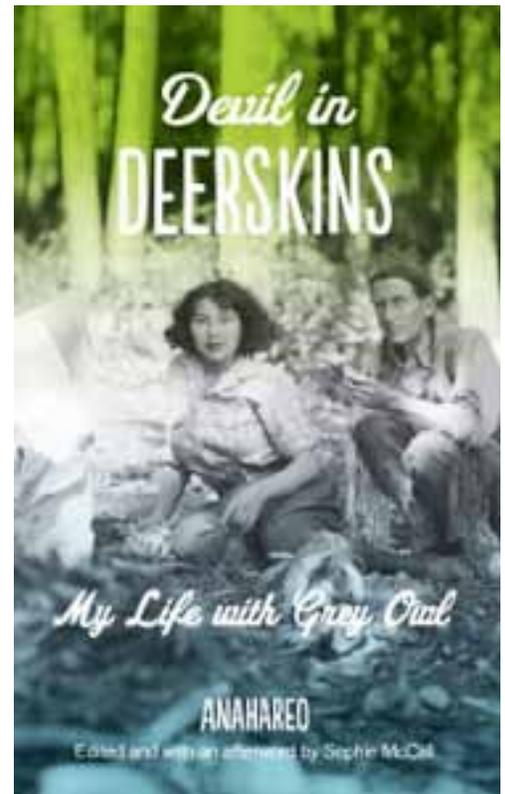
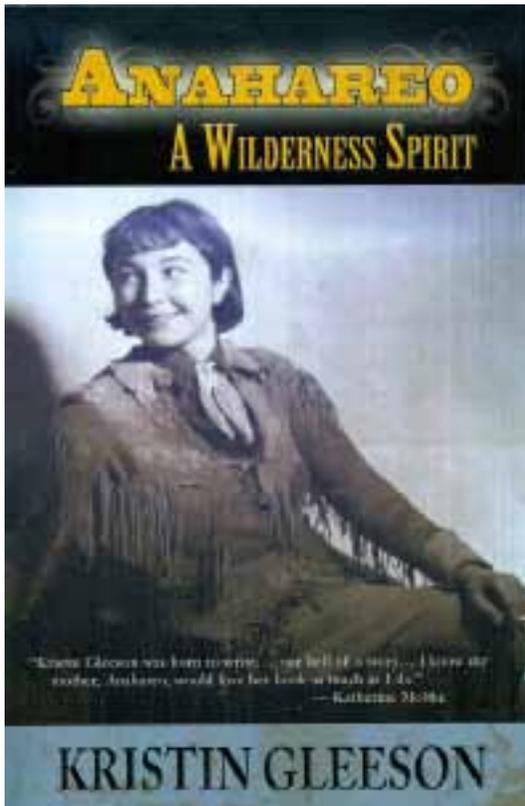
Teenage Anahareo viewed the tall mysterious man, who was almost twice her age, as a Jessie James or Robin Hood. And both were adventurous rebels. It is ironic that Grey Owl had planned to use the title, "*Devil in Deerskins*," for another of his bestsellers, where he'd at last reveal his true ancestry. But he never got that chance because he died in 1938

after an especially grueling book tour of the U.K. and U.S.

## Anahareo, A Wilderness Spirit

*Anahareo, A Wilderness Spirit*, a recent, well researched biography by Kristin Gleeson, answers many questions about Anahareo's life after Grey Owl. They had separated before he died, although Anahareo came back

*Continued on p.11*



### Anahareo, Continued from page 10.

to their cabin, Beaver Lodge, in the fall of 1936 and spent weeks preparing his beaded mooseskin costume of native regalia for his last book tour. Because they had wed in an Anishnabe ceremony in 1926, and Archie had a new bride when he died in 1938, Anahareo was not his heir. His will left an allowance for their daughter Dawn. Fiercely independent and proud, Anahareo never told him about the second daughter born in 1937.

What-is-more, after Grey Owl's

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### **“To me, he was an Indian and one of the best men I ever met.”**

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passing, he was denounced by the press as a fraud. Although the news that he lacked any Indian ancestry shocked Anahareo too, that revelation tainted her credibility. They were a team for more than a decade, and he had even created the name “Anahareo” from her Mohawk name of Paharomen Nahareo, meaning “Flaming Leaf.”

Prince Albert National Park, where she and Grey Owl had worked and lived for years, would not allow her to visit to check on the beaver called Jelly Roll. When she first wanted to write her autobiography in 1940, the publisher insisted that she portray Grey Owl as a Native American!

Would Grey Owl's story have had a happier ending if he had been able to admit his true identity to Anahareo and the world? That probably would have made his life as a celebrity much less stressful, and improved their relationship. But it may not have alleviate what Anahareo called the “morgue-like atmosphere” in the cabin of this intensely committed writer.

### **Hardships and Triumphs**

On her own as a single mother of two during the Depression, Anahaero found that her feisty spirit and wilderness skills, such as being a canoe guide and driving dog sleds,

were not enough. She experienced the worst hardships of her life and briefly considered suicide.

Eventually she met and married a Swedish Count. Their tumultuous relationship lasted many years and yielded another daughter. During her last decades, Anahareo continued working to restore Grey Owl's reputation and she also became famous as a wildlife advocate and early animal rights advocate.

She spoke up for wolves, and defended a beaver family against the



*Annie Galipeau played Anahareo in the 1999 movie Grey Owl. She visited Mattawa, Anahareo's hometown, in 2006 to celebrate the 100th anniversary of her birth.*

Kamloops, B.C. City Council in 1979 —and won. In 1979 she was given The Order of Nature from the Paris-based International League for Animal Rights. She was awarded the Order of Canada in 1983 for being a major force in conservation.

When Anahareo was 74 years old, she said of Grey Owl, “To me, he was an Indian and one of the best men I ever met.”

*Both Anahareo, A Wilderness Spirit and the 2014 edition of Devil in Deerskins are available at Amazon.com.*

*Anahareo's two surviving daughters wrote forewords for the new edition of Devil in Deerskins, plus there's an afterword by Sophie McCall, who is an English professor at Simon Fraser University.*

### Natural, Continued from p. 9.

ditches in the spring to get water to crops,” she said. “Beavers do the same thing.”

Beaver ponds also tend to come back more quickly from a drought because they have more complex bottoms and the same concept works in floods. “All of these little crevices and channels — these really dynamic bottoms, really complex — often slows the water,” she said. “The pond has to fill up first before the water can continue across the landscapes. “So the dynamic nature of the pond bottoms in a flood situation can also help to mitigate that flow somewhat.”

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### **...retaining water in beaver ponds replenishes the groundwater...**

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Westbrook's teams are studying both areas — particularly how retaining water in beaver ponds replenishes the groundwater systems and how flood waters are slowed down by the dams created by beavers. “Unless you have a really, really large event, the beaver is certainly going to play a role in storing the water,” said Westbrook, noting it has also helped in large events to slow down the flow of water.

International research is considering a wide range of solutions in flood mitigation and protection. “Those aren't just engineered solutions, they include natural solutions to help save money,” said Westbrook. “They have many social and economic benefits. “It's part of the solution.”

But Nikki Booth, a spokeswoman for Alberta Environment, says the province isn't considering any natural solutions. “We've been focused on flood mitigation through infrastructure,” she said. “The nature piece and beavers specifically have not come up.”

## Utica, Continued from p. 5.

being compromised by dumping and became determined to protect it. But, after appeals to national conservation organizations, it soon became obvious that a community effort was necessary. Fortunately, others were also concerned about the urban wetland. There was the businessman who happened to be an outdoors enthusiast. For years he had driven by the marshland and dreamed of its potential. He arranged the initial meeting of the dozen individuals who would form the nucleus of the Mohawk Floodplain Association. Another of the founders had swam in one of the marsh's "clay holes" as a boy during the 1920s.

As the members of the fledgling group began to publicize the Utica Marsh and push for its purchase by the state, other events moved in their favor. In the early 1970s the aftermath of several tropical storms, including **Hurricane Agnes, caused the flooding of some northeastern rivers, badly damaging certain cities along the banks of these streams. But in the Utica area there were no serious problems thanks to the spongy floodplain that accommodated the overflowing waters.**

**The wetlands accounted for a considerable amount of water storage and reduced the speed of water pouring through the floodplain.** Later, the water was slowly released to replenish the underground water table, streams and ponds.

**Floodplain wetlands act as sedimentation basins. As materials are deposited from floods they form a nutrient bank in the marsh. The nutrients create a rich environment to foster food chains. Wetlands also play a role in water purification by filtering out many pollutants.**

## Good News

A breakthrough came when it was learned that approximately one-quarter of the marsh was city-owned, acquired through back taxes. If donated by the city to the state, this land could act

as equity for federal funds from the Pittman-Robertson Program (moneys derived from the sales of sporting arms and ammunition) to be used for acquisition of the remaining marshland from the 12 private owners.

The news sparked an even more intensive campaign. Politicians were taken on canoe and walking tours of the wetland habitat; letters were written to state and city officials; dozens of meetings were held. Finally, the transfer of 58.3 acres of city-owned land was approved in 1977. In 1978, the moratorium on state acquisition of land was lifted, so both state and



*Photo by Lynn Rogers.  
The call (okaree) of the red-winged blackbird signals spring's arrival.*

federal funds became available to buy the urban marshland.

Victories of this sort call for a celebration, and celebrate they did at the first Mohawk River Day in the fall of 1977. Local conservation groups sponsored hikes and canoe trips; there were a half dozen workshops focusing on various aspects of the floodplain. The event was such a success that it was repeated later with even more activities.

Volunteers have been conducting tours of the wildlife refuge from spring to fall for the last few years. All kinds of people, including the disabled, are enjoying the floodplain wetland thanks to this program.

## Outdoor Classroom

By the summer of 1980 the metropolitan marsh had been the focus of yet another innovation. An environmental education course for city high school students was based upon many hours spent at the "outdoor wetland laboratory." It is an ideal setting for studying concepts such as nutrient recycling and ecosystem

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### **Steadily increasing public use of a basically wild place can create problems.**

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diversity. On a less intensive scale, science classes from elementary school to college level have been visiting the sanctuary for years.

Steadily increasing public use of a basically wild place can create problems. Field trips can be highly educational, but too much intrusion could harm the marsh. A local advisory council was formed to help decide which activities are most compatible with the sensitive ecology of the marshland. Science teachers from local high schools and colleges, representatives of civic and conservation groups, and individuals from state and local governments are on the Utica Marsh Advisory Council.

Clearly, the Utica Marsh has escaped the sad fate of the many wetlands that have been turned into urban developments. Thanks to a few people who cared enough to involve many others, the local floodplain remains a green oasis, flourishing with hundreds of different forms of life. Now, careful planning is needed to balance human activities with the sensitive ecology of the marshy refuge. At the Utica Marsh the challenge is just beginning.

*This article appeared in the 1981 Journal of Freshwater from the Freshwater Biological Research Foundation, Navarre, MN. The author was on the Utica Marsh Council in the 1980s and led field trips there.*

# Bring Back Beavers to the U.K!

By Jeremy Plester

Beavers could be one answer to many of Britain's flooding problems. It sounds a crazy idea – after all, beavers make dams that create their own floods. But beavers build their dams on small shallow streams and rivers, and these mini-reservoirs slow down the flow of water feeding into larger rivers, which helps to cut major flooding during heavy downpours of rain.

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**European beavers are not properly appreciated for their engineering and water management skills.**

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The problem this winter with much of the flooding was land drainage, dredging and straightening of rivers that all speeded up the flow of water into rivers and made them more likely to flood.

Unfortunately beavers simply aren't widely appreciated for their engineering and water management skills. There is also a popular misconception that beavers are foreign wildlife that only come from North America. In fact, our native European beaver lived here for thousands of



*Coping with flooding in the U.K.*

# Oregon Neighbors Learn to Coexist

By Ellen Spitaleri

At first, John Young thought the debris on Kellogg Creek, which runs through his Milwaukie backyard, was just a logjam, so he broke it up. The next day the logjam was back, so he broke it up again.

On his third try, Young realized he was fighting a losing battle; the logjam was really a beaver dam. "My son Tom, who is a marine biologist, said, 'Dad, how long do you want to battle with a rodent? You aren't going to win.'"

Now Young and his neighbors, it seems, are learning to live alongside their new nocturnal neighbor that feeds on trees. Young initially contacted folks at the Streamside Stewards Program run by the North Clackamas Urban Watershed Council. They confirmed in November that it indeed was a beaver dam. Then they organized a neighborhood meeting in January, so creekside property owners could discuss the implications of a beaver dam in their midst with Susan Barnes, a conservation biologist with the Oregon

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[years before it was hunted to extinction for its fur and oil a few centuries ago.](#) Recently, however, three new beaver colonies have become established in the wild, one in Devon and two in Scotland, and a review of one of the Scottish colonies is expected next year before a decision is made on whether to make further reintroductions.

## Free Bioengineers

Not only are beavers good at protecting against floods, but they also provide cleaner water, boost fish numbers and enhance all sorts of other wildlife and also plants. And beavers have another enormously attractive advantage – at a time of severely stretched public finances their hard-work flood control work comes virtually for free.

*From the 3/29/2014 Guardian,*

Department of Fish and Wildlife.

Neighbors were mostly concerned about losing their trees and a change in water levels. "We determined that there will not be a lot of detrimental impacts because the houses around the beaver pond are set back," says Tricia Sears, watershed council coordinator. Chris Runyard, a restoration contractor for the watershed council, explained that the eroding stream banks should reverse and actually fill in a bit over time.

## Questions — and Answers

At the meeting, neighbors learned the beavers' appetite for trees might not be limited to those along the creek bank, and that adjoining property owners may need to erect fencing to protect their trees from the nighttime chewers.

Barnes pointed out that many of the shrub and tree species the beaver is chewing on or felling won't actually be killed. "Herbivory action stimulates plant growth so trees and shrubs may look dead," Barnes says, "but many will actually send up new shoots/stems at the site of chewing."

Neighbors also learned about the many benefits of a beaver dam. Steven and Marsha Morasc noticed that ducks seem to like the expanded water area, making the creek more scenic.

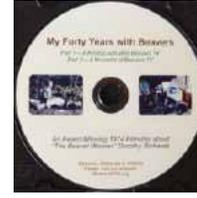
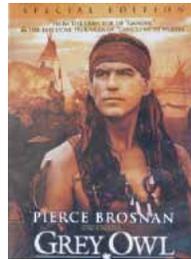
Alice Szanto came into the meeting worried about trees falling and damage to the hillsides. She emerged with a more optimistic view of her new neighbor. "We have a living National Geographic series in our backyards. I consider myself lucky," Szanto says. "The beaver might chew a substantial amount of trees, but the county can keep planting them, and there are ways to protect the trees we want to keep."

The beaver dam is certainly a positive for the watershed, says neighbor Mike Pinker. "They help cool the water temperature and create habitat for other animals," he says. "Beavers are our partners, and they are able to do a much better job than we can."....

*From the 3/13 14 Portland Tribune.*

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Logo T-shirt Back



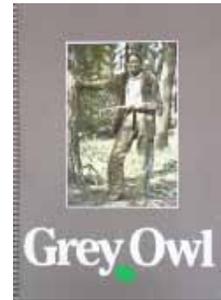
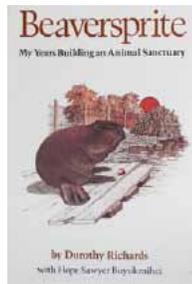
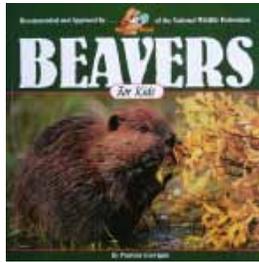
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## ***Restore Beavers and Slow Climate Change***

It's long been known that freshwater wetlands are among the earth's best ecosystems for storing carbon—and that draining wetlands releases carbon as carbon dioxide, the most common greenhouse gas. Now new research has quantified just how important beaver ponds can be in storing carbon.

Ellen Wohl, who is a fluvial geomorphologist at Colorado State University, was recently mapping logjams in the Rocky Mountain National Park. She said, "I kept coming across abandoned beaver dams, and began to wonder about the effects of these dams on carbon cycling and watershed-scale biogeochemistry."

That led to a study of the total carbon content of dried-up beaver ponds (called beaver meadows) in 27 drainage basins within Rocky Mountain National Park. She found **the dry beaver meadows accounted for only about 8% of carbon in the**

**landscape. But when these areas were flooded by beavers, the amount of carbon sequestered there, relative to the rest of the landscape, was as high as 23%.**

Active beaver wetlands are havens of life, but drainage causes the plants and fish to die. Then the organic carbon in these organisms is oxidized to form carbon dioxide. More such storage, called carbon sequestration, could help to slow climate change.

Dr. Wohl's work opens the intriguing possibility of improving natural carbon storage—and slowing carbon dioxide driven climate change—by restoring beavers. There were once between 60 and 400 million beavers in North America. There are now thought to be 6 to 12 million, and the park service is working towards reintroduction.

Beavers are an important biocarbon ally. Bring them back!

Beavers: Wetlands & Wildlife is an all-volunteer, non-profit organization created to carry on the educational work of the "Beaver Woman" Dorothy Richards who was both an environmentalist and a wildlife advocate. Officers are Owen J. Brown PhD, President; Brian Graff, Vice-President; Sharon T. Brown, MS, Treasurer; and Caryl Hopson; Secretary. Other members of the Board of Directors are: Susan Hendler, Kenneth Koman, Andrew Mason, Matthew Perry and Debhora Quayle.

Our Advisory Board consists of Gen. John Burney, Anthony DeLuca, Lowell Halverson, Esq., Darrel Norris, PhD, Hope Ryden and Elissa Wolfson. *Beaversprite* staff includes Sharon Brown, Editor and Contributing Editors: Sarah Summerville (NJ), and Owen Brown. Malcolm Kenton is Social Media Coordinator. Opinions expressed in *Beaversprite* may not be identical with Beavers: Wetlands & Wildlife policy.

*Wohl, E. 2013. Landscape-scale carbon storage associated with beaver dams. Geophysical Research Letters (40) 3631-3636.*

