



GRAND Actions

The Grand River watershed newsletter



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What's Inside:

Features

Electrofishing1

Watershed Awards

Emil Frind 2

Joyce and Buck Ross3

Taking action

Stream of dreams 4

What's happening

305 birds 5

Osprey update 5

50 Things contest 5

Hugh Templin 6

Foundation

Conservation grants 7

Heritage

Brown's Point cairn 8

Calendar 8

Cover photo

Setting up a seine net in the Grand River by Snyder's Flats.

Photo by Kevin Tupman



GRCA staff net 949 fish on Grand

By Janet Baine
GRCA Communications specialist

For some people, a dream job is going fishing and getting paid for it.

As the need arises, GRCA staff do this. They call it a fisheries community survey. The goal is to visit aquatic habitats (rivers, ponds, reservoirs and creeks) to find out which species of fish live there. On a recent trip to Snyder's Flats near Bloomingdale, across the river from the City of Waterloo, they netted 949 fish.

Staff from the Ontario Ministry of Natural Resources and Forestry helped out.

Seine nets and minnow traps were used in the ponds. Anecdotal information collected from anglers also helped complete the survey.

Electrofishing was used in the floodplain channel. A trained staff member wearing a backpack unit sends a mild electrical current through the water. The current temporarily stuns

the fish and attracts them towards the sampling crew, who scoop the fish out of the water with a net. Fish are placed in buckets to recover. They are then identified by staff, who record details before releasing the fish back to the watercourse.

This is a way to capture fish and learn which species live in the channel. This practice doesn't hurt the fish and gives the GRCA information about the fish community composition.

Fish tell us how healthy the habitat is

Fish are excellent indicators of stream, river and pond health for many reasons. Some species can tolerate pollution and degraded water, while other species do not. In the Grand River system, many sites are monitored regularly, while others are monitored for special studies.

Snyder's Flats was surveyed as part of a biological inventory for the property. Two other surveys were done on this property during the



Photos by Kevin Tupman

These photos were taken during an assessment at Snyder's Flats near Bloomingdale, across the river from the City of Waterloo. Clockwise from left: 1. brown bullhead 2. rosyface shiner 3. electrofishing pack 4. processing the fish once they have been caught 5. electrofishing 6. a largemouth bass.

early summer — a frog survey and a bird survey. An inventory of plants has already taken place.

This information will help guide the GRCA as it completes an update of the master plan for the area. The master plan sets out the future plans for restoration and management of the property.

More than 90 species of fish have been documented in the Grand River watershed, and we now know that Snyder's Flats is home to at least 30 different species. These include small and largemouth bass, yellow perch, black crappie, pumpkinseed, common carp, shiners, darters and suckers.

"We were really excited to find young-of-the-year fish using the floodplain channel and ponds," said Crystal Allan, the GRCA's supervisor of natural heritage. Through the 1980s and 1990s, Snyder's Flats was created to demonstrate how to rehabilitate an aggregate pit.

The design sought to reconnect the river valley with its floodplain and offer important spawning and nursery habitat to fish from the Grand River.

Water expert Emil Frind

By Janet Baine
GRCA Communications Specialist

Emil Frind is a highly-cited groundwater expert who has been working on a surprising variety of projects ever since he retired from the University of Waterloo way back in — he's embarrassed to say — 1998.

One has the sense that he keeps working because he cares deeply about the direction the world is headed. For his work, Frind received a 2014 Grand River Watershed Award.

A long list of articles in academic journals and speaking engagements at international conferences, as well as awards received, show he is well-respected by his students and colleagues. He remains at the top of his field.



Emil Frind

WATERSHED AWARDS

Frind was a key player in the aftermath of the Walkerton disaster in 2000, when seven people died and many became ill after the water in that community became contaminated. He noted that there were cows beside a town well and realized that Ontario still lacked the source protection regulations that other countries have had in place for a long time.

He spearheaded a study and recommendations were submitted to the judicial enquiry that eventually led to Ontario's 2006 Clean Water Act.

Frind pioneered using computer technology to figure out how groundwater moves beneath our feet. He developed the first groundwater model in Canada, the Welland model, in 1969.

The simple model he developed for the Waterloo Moraine as a young man and new faculty member in the 1970s has evolved over the past 40 years. It is now a powerful 3D model for studying the impact of human activities on groundwater. To this day, he often gives advice to citizen groups on groundwater issues.

A recent project was the summer 2014 Special Issue of the Canadian Water Resources Journal called "The Waterloo Moraine: Water, Science and Policy" that he edited. This project was sponsored by Natural Resources Canada. It has articles by many experts that he selected to write about the science needed by the Region of Waterloo to develop its successful groundwater management strategy.

Rely on groundwater, not pipeline

Together with water-saving measures, this science-based strategy is allowing Waterloo Region to continue relying on the groundwater of the Waterloo Moraine as its main water source, assuring water sustainability while saving the Region's taxpayers the billion-dollar cost of a Lake Erie pipeline.

Frind feels his proudest achievement was when government cutbacks to conservation

authority funding in the 1990s meant the GRCA was set to sell two parcels of land at Laurel Creek for housing development to raise needed funds. Frind took action.

"I thought, I'm not going to accept it," and he, son Michael, and neighbour Fran Hatch "mobilized the public to save Laurel Creek Nature Centre from being carved up." They raised \$5,000 from many small donations and cookie-baking. The city, under then Mayor Lynne Woolstencroft, contributed

"The earth is finite and you can't get around that," Frind says. "Eventually you run up against some limit."
-Emil Frind

the water services hookup for the nature centre building valued at \$80,000. It was not quite the \$2 million that the land would have been sold for, but it was enough. In 2004, the GRCA took the land off the market. Instead of houses going up on the Laurel Creek lands, trees were planted.

More recently, when the City of Waterloo was looking for a way to clean up Clair Lake, Frind stepped in along with other neighbours and stood against the initial preferred option that would have seen a creek run beside a much smaller off-line pond. Frind did the calculations and found that there was not enough water running through to keep both the stream and the pond healthy. So the community got its lake back. Frind's core message is conservation.

Landowners receive award

Buck Ross and Joyce Spies received a 2014 Grand River Watershed Award for the many projects they have undertaken on their agricultural properties in the northern part of the watershed.

Ross first started planting trees with the GRCA in 1984. Ever since then, the family has been undertaking environmental projects on their land near Arthur. They raise turkeys and chickens and grow wheat, corn and soybeans.

"We feel sustainability is very important and Mother Nature is the boss," Ross said.

He has planted thousands of trees in shelter belts and wildlife corridors. The wildlife corridors provide a way for animals to move from one habitat to another. This helps alleviate the fragmentation of habitat caused by human activities, such as roads, farms and development.

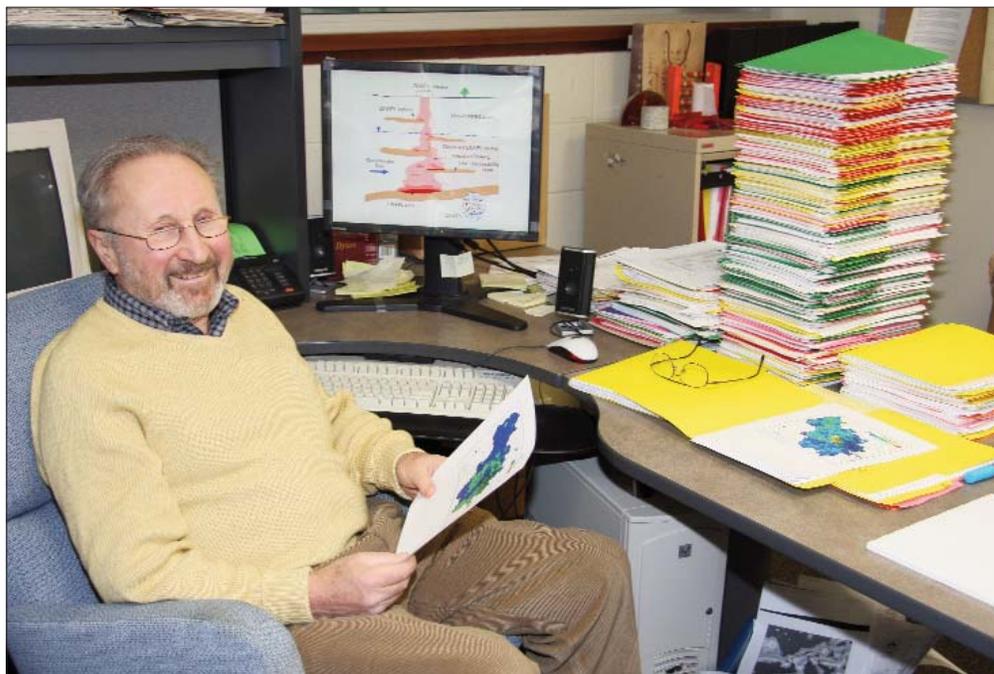
Windbreaks are linear plantings of trees and shrubs that enhance crop production, protect people and livestock, and benefit soil and water conservation. Windbreaks around buildings help cut down on energy costs of farm buildings and homes, keeping them warmer during the winter and cooler in summer.

"Located in the headwaters of the Grand River watershed, the environmental practices on this farm benefit everything downstream. Not only do they improve wildlife habitat and water quality, they also serve as a demonstration for the farming community," his neighbour Melisa Luymes wrote when nominating the Ross family for the award.

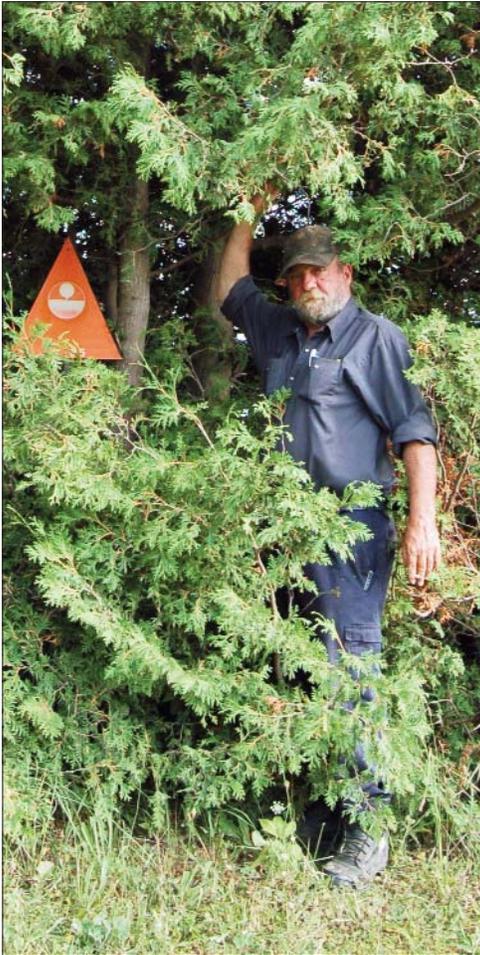
Ross and Spies have also had community groups plant trees on their land. They allow youth groups, such as cadets, to use the property for meetings, helping them to also connect with the land and nature.

Spies is an active volunteer in her community.

The Ross family has hosted tours and events on their property, such as workshops for the GRCA and local universities. They practise conservation tillage, leaving the crop residue on the soil surface, to help stop erosion. This slows water movement, which reduces erosion and runoff.



Emil Frind at work in his office at the University of Waterloo. He was a pioneer in water modelling and has also worked on many community initiatives.



Buck Ross stands with the first trees planted on his land through the conservation authority 30 years ago. He has undertaken numerous environmental projects.

They also plant clover as a cover crop, which is a sustainable farming practice. Their property is also a demonstration site for grassed waterways and ditch bank buffer zones as well as French drains, all techniques that improve water quality. These drains are trenches filled with gravel or rock that contains a pipe to redirect water.

For information

The GRCA's Rural Water Quality Program works with landowners across the watershed to undertake environmental projects on their property, such as those on Buck and Joyce's land.

If you are interested in doing environmental work on your property, please email ruralwater@grandriver.ca or call 519-621-2763 and ask for a Rural Water Quality Program representative.

Streams of fish across the Grand

Streams of colourful fish are flowing across schoolyard fences in the Grand River watershed.

They are created by children, but provide a message for all of us.

A team at the Grand River Conservation Authority has been licensed by the Stream of Dreams Murals Society to deliver this unique program. It brings environmental education and art together. It is a new addition to the many programs that are offered by the nature centre staff.

Unlike other nature centre programs, this one is taught in schools rather than at a GRCA nature centre.

This program was developed in Burnaby, British Columbia, after an unfortunate incident — someone dumped toxic material into a storm drain, killing everything in the creek, including 5,000 fish. Many organizations, including some conservation authorities, are now licensed to deliver the program in other provinces.

The program teaches students about connections to local watersheds. They are challenged to think about where their water comes from, where it goes and what they can do to protect it. The bottom line is that “all drains lead to fish habitat” and it is essential to be careful what is put down storm sewers.

TAKING ACTION

After learning this lesson at a grade-appropriate level, students create their own dreamfish. These are fish shapes cut from plywood that are painted. The combination of all the fish results in murals.

Already there is a Stream of Dreams mural flowing across a fence at W. Ross Macdonald School in Brantford and another at the pool enclosure at Brant Park in Brantford. A third was installed along the Nith River at Lions Park, Paris. Breslau Public School is the first in Waterloo Region to have a fish mural. This is thanks to the Region of Waterloo Community Environment Fund that provided money to launch the program in the region.

Community art legacy

Once installed, the art murals are a community art legacy and a reminder of environmental responsibility that everyone has for fish.

For more information on this program, please contact Louise Heyming, supervisor of conservation outreach for the GRCA at lheyming@grandriver.ca or 519-621-2763 ext. x2279.



A stream of dreams was installed at Brant Park pool in June as part of the celebration of the 10th anniversary of the Brantford/Brant Children's Water Festival. This photo was taken from behind. The fish are all painted on the other side.



Photos by Rex Bartlett

A breeding pair of prothonotary warblers were nesting in Brant County this spring. This is the first confirmed breeding record of this species for the Grand River watershed.

Grand has 305 bird species

By Janet Baine

GRCA Communications Specialist

There's a newly updated version of the Grand River Watershed checklist of birds available on

www.grandriver.ca/birding.

The checklist includes all bird species that have been recorded historically, as far as the Grand River Conservation Authority is aware. The list includes 59 species that are rare within the province and 27 that are at risk in Ontario and Canada.

Birding has evolved from a mere recreational activity into an important aspect of bird conservation, notes Tony Zammit, aquatic and terrestrial ecologist with the GRCA. The checklist of birds was intended to be a guide for recreational birders, GRCA staff, consultants and others with an interest in birds and bird conservation.

Programs developed by organizations including Bird Studies Canada make information about birds easier to find and share than it was 10 years ago.

"We have better record-keeping and it is easier now to find out about rare species," explains Zammit. "There is definitely also an increase in the level of interest in birding."

Internet websites such as www.ebird.org encourage people to record and share their

WHAT'S HAPPENING

sightings with each other and also see what birds have been recorded in their area. Through time, a historical record is being built up by citizen scientists, and more people are turning to online record keeping for personal lists of sightings, which can also be viewed by anyone.

Information about birds and bird calls is much easier to track down than in the past with the advent of sites such as www.allaboutbirds.com. There are many active birding hotspots within the watershed.

In 2010 a scissor-tailed flycatcher was seen at Luther Marsh, and this was exciting news for birders, who read about the sighting online and "flew" up to the area to catch a glimpse of it. This species is extremely rare and had not been seen in the watershed for many years. A dickcissel was seen at Luther in 2013. Both of these are vagrant species, meaning they had strayed outside their expected range. This year, a breeding pair of prothonotary warblers pleased and surprised birders in Brant County. All three of these species are on the GRCA's checklist of birds.

Zammit hopes that the Belwood osprey web camera will encourage more people to

keep their eyes to the sky and learn about the birds that most of us take for granted.

"It is hopefully going to inspire more people to get out and visit natural areas. That is always a good thing," he said.

If you have documented a bird that is not on this list, please contact Tony Zammit at tzammit@grandriver.ca or 519-621-2763, ext. 2246.

Osprey web cam update

By Janet Baine

GRCA Communications Specialist

The young osprey at Belwood Lake each have two leg bands — a silver one and a blue one.

Master bird bander David Lamble has banded about 200,000 birds over the years including about 200 osprey. Each year he bands the osprey from Belwood Lake and Luther Marsh and thousands of birds of other species. He is a retired chemistry teacher and a volunteer bander who received a Watershed Award from the GRCA in 1999.

With a boost from a lift truck, Lamble was lifted up to the web cam nest so he could remove the young osprey on June 26. The adults, Bella and Woody, left the nest during this time, but they remained nearby.

"There is an 80 per cent chance that the adults will survive the year and an 80 per cent chance that their young will not," Lamble said, explaining that the adults will leave during banding and then return and it will be as if nothing has happened.

He put a silver band with nine digits on on the right leg of each young bird. This is a standard U.S. Fish and Wildlife Service band, but the numbers are small and don't tend to be reported until the bird is found dead.

A second blue band that Lamble has devised is on the left leg. These numbers are bigger and it is easier to see and report the numbers from these bands.

The older of the two offspring, Fergus, bears a blue band with B42 on it, while the younger one, Welley, has B43. Fergus and Welley were placed back in their nest about a half-hour after they were removed and Lamble was not able to tell if the birds were male or female at that time.

Banding is a scientific way of learning more about birds. It allows observers to



On June 26 two young osprey were removed from their nest at Belwood Lake to be banded by master bird bander David Lamble. From left, Lamble puts a band on the leg of one of the young osprey; close up of the banded feet; and a parent watching over the young once they had been returned to the nest. Banding takes place before the young begin to fly. For more photos, the GRCA osprey intervention policy and to watch the live osprey cam that will be active until they leave the nest, check www.grandriver.ca/osprey.

collect information about habitat use, life processes and movement. Banding protocols follow international standards, and information is stored and accessed through a central system.

Hopefully these two birds will successfully fledge and their blue bands will be spotted many times in coming years, including occasions in exotic places, Lamble said.

Osprey are closely watched

The Belwood osprey have been closely watched since late April. Life is touch-and-go during the early days, and there have been moments when it is hard to watch the

webcam. There are also amazing moments to witness, such as the hatching of eggs, the care given by the parents and the first flights that began July 23.

By the end of July, the osprey cam had become so riveting that people collectively had spent more than three million minutes watching the young family, which has garnered nearly 150,000 views. At times, 200 people have tuned in at once.

As one observer commented, when osprey behaviour is interpreted in human terms, it can be problematic and upsetting to watch. For example, osprey parents invest in the strongest offspring and feed the older siblings first. Fortunately, the Grand River provides lots of food, so there has been enough for everyone at this nest.

Observation of nature is entertaining and thought provoking. It gives us a better understanding of birds in the wild. As the young learn to fly (at the time of writing the second, Welley, has not yet taken a first flight), they will be on the nest less frequently. They are expected to migrate around the end of August.

One viewer wrote on Facebook: "Over these past few months we have enjoyed watching this family raise their young. I have learned a lot about these birds and hopefully will have a chance to watch another osprey family next year. I am going to miss checking in on the little ones when they finally leave the nest. Watching these birds is more

50 Things contest on until Sept. 8

The GRCA is holding a 50 Awesome Things to Do contest until Sept. 8.

Participants in nature programs at seven of the Grand River Parks will have the chance to win a weekend for two "glamping" (glamour camping) at Elora Gorge Park, an eco-birthday party or an annual Grand River Parks pass.

The contest encourages participation in family interpretive programs at Grand River Parks. These programs are led by GRCA nature guides.

Park visitors can experience nature-themed activities at parks within the central part of the Grand River watershed, including:

- Laurel Creek (Waterloo)
- Rockwood
- Guelph Lake
- Shade's Mills (Cambridge)
- Pinehurst Lake (near Paris)
- Brant Park (Brantford)
- Elora Gorge.

At each nature program event, people will receive a contest ballot for a chance to win a prize. The more park programs attended, the greater the chance of winning.

See www.grandriver.ca/parks for details and to download the two 50 Awesome Things to Do This Summer lists.

If you spot a blue-banded osprey

Citizen scientists play an important role, because they can read the blue leg band and report osprey sightings.

If you see an osprey with a blue band and can identify the three digit code, please email dlamble@hotmail.com with this information. This will let us know where the osprey banded in the Grand River watershed end up. David Lamble has had few reports of osprey he has banded. But they have been reported as far west as Minnesota, as far north as Algonquin Park, as far east as Hamilton, and as far south as Haiti.

Please help track the blue-banded osprey that hatch each year within the Grand River watershed.

Templin painting returned to GRCA

A painting that was given by the Grand River Conservation Authority to Hugh Templin (1896-1970) to thank him for his outstanding service to the Grand River watershed was recently given back to the GRCA by his family.

Templin was one of several far-sighted men and women who pushed for solutions to the serious problems that were being experienced by the Grand River watershed residents in the early 1900s. At that time, the state of Grand River was perilous because of damaging floods, droughts and abysmal water quality. These problems threatened the health and well-being of the cities, towns and farms of the watershed.

Templin was born and raised in Fergus and was writer, editor and publisher of the *Fergus News-Record*, 1918-63. He was also a tireless advocate for the Grand River. Templin drew national attention to flood and drought on the Grand in a 1937 Maclean's Magazine article. In 1938 he was a founding director of the Grand River Conservation Commission, and the following year construction got underway on the Shand Dam on the site suggested by Templin.

He was a 'tenacious proponent' of Elora Gorge Park, which was the first conservation area in the province, opening in 1954. Ontario Premier Leslie Frost called him "the father of conservation in Ontario."

In 1963, Templin received a Distinguished Service Medal from the Ontario Water Resources Commission. Then in 1966 he was honoured by the GRCA on the occasion of the merger of the Grand Valley Conservation Authority and the Grand River Conservation Commission. They joined together to form the modern day GRCA.



Hugh Templin

Templin accomplished a great deal outside of the watershed as well. He was a president and life member of the Canadian Weekly Newspaper Association, founder of the journalism program at the University of Western Ontario and

received an honorary doctor of laws degree from University of Western Ontario.

The painting of Shand Dam is by Matthew Kousal, who emigrated to Canada from Czechoslovakia in 1927 and eventually settled in Waterloo. He was a prolific painter of landscapes and also a mentor and teacher of another well-known local artist, Peter Etril Snyder.

The painting was returned by the family due to its large size and it will now hang at the GRCA Administration Centre.

GRAND RIVER CONSERVATION FOUNDATION

Grants awarded

Four community groups and 10 schools will receive Community Conservation Grants from the Grand River Conservation Foundation and the Grand River Conservation Authority.

Grants are awarded to qualified groups and to elementary schools that are undertaking conservation projects in Grand River watershed communities. Grants support environmental projects that are tangible and available for the use or benefit of the entire community. These grants fund part of the project, not usually the entire project.

The grants for \$500 are going to these community groups:

- **Arthur Trails Group**, for two information kiosks at each end of the Arthur River Trail in Wellington North
- **Pollination Guelph**, for a pollinator habitat on the grounds of Hospice Wellington in Guelph
- **Rare Charitable Research Reserve**, to establish honey bee hives to improve pollination and education at this property in Cambridge
- **Trout Unlimited Middle Grand Chapter**, to restore a reach of Hiller Creek in Plattsville

These schools will each receive \$300 for school yard naturalization projects:

- **Branlyn Eco-Club**, Brantford
- **Edna Staebler Public School**, Waterloo
- **Emily C. General Elementary School**, Ohsweken
- **Eramosa Public School**, Rockwood
- **Gateway Drive Public School**, Guelph
- **Holy Family School**, Paris
- **Jean Little School**, Guelph
- **Oneida Central School ECO Club**, Caledonia
- **River Heights School**, Caledonia
- **St. John Catholic School Parent Council**, Arthur.

The grants are given out by the foundation each year, although the number and amount varies.



Learn to relax with nature and make friends with your phobias. Check www.grandriver.ca/events for information about the GRCA's visitor services programs.

New historic cairn

A new historic cairn installed at Brown's Point in Haldimand County commemorates this point of land that juts out into the Grand River at the mouth of the Feeder Canal close to Lake Erie.

Four plaques are on the cairn, and each one highlights a different aspect of the history of the area. The cairn will be dedicated on Aug. 29 at 2 p.m.

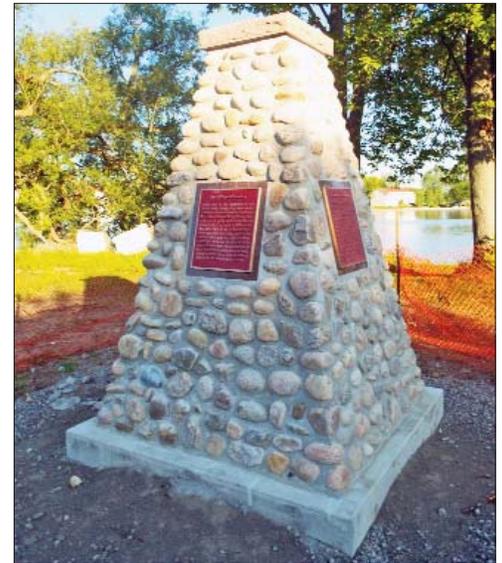
This project was undertaken by the County of Haldimand, the Port Maitland "On the Grand" Historical Association, and many supporters. The historical association raised funds to cover the cost of this project, and more than 60 paving stones will bear the names of the donors.

The cairn has four plaques, each telling a different story about the history of the area.

In 1815, a small detachment of the Royal Navy established the first naval base on Lake Erie at the mouth of the Grand River. Until 1834, members of the Royal Navy and their family were stationed at the Grand River Naval Depot. There may be a cemetery, but an archaeological assessment, completed in 2012, was unable to confirm the location of the cemetery.

In 1845, the Feeder Canal was extended from Stromness (once called "Broad Creek") to the nearby Port Maitland Lock, allowing ships to navigate from both the Welland Canal and Lake Erie to the upper Grand River.

Commercial fishing also took place in the area from the mid 1800s until the late 1950s.



New cairn at Brown's Point, Haldimand.

THE GRAND CALENDAR

Note: This calendar provides a selection of upcoming events. All events at the GRCA's conservation areas and nature centres are posted on www.grandriver.ca/events.

Stargazers 101 Aug. 28

For the past several years, the Kitchener-Waterloo Astronomy Club has put on a star party at Conestogo Lake Park, 7 p.m. to midnight. The club will set up telescopes at the beach parking lot and park visitors are invited to join the club for a night of stargazing.

Shade's Mills Bat Night Aug. 22

Join bat experts at Shade's Mills as they search for bats, which are in decline. Derek Morningstar will have mist nets out, so if the bats cooperate we will get the chance to see some up close and Derek will answer all your questions, 8 p.m. to 11 p.m.

Cairn dedication Aug. 29

The new cairn at Brown's Point in Haldimand County commemorates the history of this point of land, which juts out into the Grand River at the mouth of the Feeder Canal close to Lake Erie. 2 p.m.

Pinehurst Discovery Day -Sept. 13

Discover Pinehurst Lake Park at a free open house. There will be lots of fun activities for everyone — get up close and

personal with our critters, plant wildflowers, learn to geocache, bring home some nature crafts and more. Adventurous visitors won't want to miss the trail treasure hunt, free canoe rentals, checking out the fire truck and police cruiser, or catching a fish. Park admission and events are free. Food trucks of all kinds on site 10 a.m. to 4 p.m.

Youth Outdoors Day Sept. 13

Luther Marsh Wildlife Management Area, E. Luther Sideroad 21/22, Grand Valley

A fun-filled day of outdoor activities that is free to all youth ages 9 to 16. It is limited to the first 200 who register in advance. Register at www.youthoutdoorsday.com.

Grand River Spey Clave Oct. 3 & 4

Takes place at Brant Park this year and explores this style of fishing. Details available on www.grandriverspey.ca Takes place both days 8 a.m. to 5 p.m.

Price: Park admission and \$10 per day or \$15 for a weekend pass

Run for the Toad Oct. 3

Pinehurst Lake Conservation Area, 468 Pinehurst Rd., Ayr

The 25 and 50 km trail race is in its 13th year at Pinehurst. Runners and walkers representing many provinces and states participate in this event, which is Canada's biggest trail event. More Information: www.runforthetoad.com.

About Grand Actions:

This newsletter is produced bi-monthly by the Grand River Conservation Authority.

More information:

Current and back issues, as well as complete subscription information, is available online at www.grandriver.ca/GrandActions.

Submission deadlines:

The 15th of February, April, June, August, October and December. Submissions may be edited for length or style. Photos and event information is also welcome. We do our best to publish items, but we are not able to guarantee publication.

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