
50 AWESOME
ENVIRONMENTAL FACTS
ABOUT WINDSOR-ESSEX
#ThePlaceForLife

THE PLACE FOR LIFE.

Rotary
Club of Windsor (1918)

In 2017, as part of its Centennial Legacy Program, the Rotary Club of Windsor (1918) donated $225,000 to help build the Rotary (1918) Centennial Hub, linking the Chrysler Canada Greenway with the Herb Gray Parkway trails, and trails in the Towns of LaSalle and Tecumseh. In so doing, the Rotary Club effectively helped fill in a gap in the greenway system, and with the creation of the trail, the Greenway system links every community in Windsor Essex. Not to be outdone, in 2018 the Rotary Club of Windsor (1918) committed an additional $20,000 over four years to create the Rotary Forest - a shared project of all Rotary Clubs and all Rotarians in Windsor Essex.

These projects not only contribute to the Rotary Club of Windsor (1918)'s legacy in Windsor Essex; they also contribute to an incredible legacy for the region - projects that connect communities, restore landscapes and habitats, and ultimately help create a place where people want to live in, play in, and invest in.

The Rotary Club of Windsor (1918), more than most, recognizes the important connections between healthy economies, healthy people, and healthy landscapes. As part of the Club's ongoing commitment to raising awareness and celebrating all the Windsor-Essex region has to offer, the Club, President Jules Hawkins introduced the **"50 Awesome Environmental Fact about Windsor Essex'** as a way of increasing awareness of our regional environment.

This is a compilation of those 50 Awesome Environmental Facts - an encouragement for Rotarians to get out and explore, enjoy, and celebrate what makes this region the **#Place for LIfe**.

Richard J.H. Wyma CSLA

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Executive Director, Essex Region Conservation Foundation
Member, Rotary Club of Windsor (1918)

Note: *Photos were borrowed from private collection, ERCA collection, and from wonderful photographers who have made their images available on the internet.*

50 AWESOME ENVIRONMENTAL FACTS

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1. CAROLINIAN LIFE ZONE

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ABOUT THE CAROLINIAN LIFE ZONE

If you drew an imaginary line from Grand Bend to Toronto, the area south of that line is the ONLY part of the Carolinian Life Zone in Canada. This area is only 0.25% of Canada, but contains 25% of Canada's population. It is also THE MOST diverse ecosystem in all of Canada with over with more endangered and rare species than any other life zone in Canada.

This zone boasts over 2,200 native plant species including 70 different tree species, over 400 bird species (which is more than half the total bird species found in Canada), over 150 protected species at risk, over 500 additional rare species and more than 60 rare ecosystem types.

BUT, in the 300 years since Antoine de la Mothe Cadillac declared this region "*so lush and fertile that it must truly be the earthly paradise of North America*", we've lost much of what made it so lush and fertile. Ducks Unlimited estimates that we have lost over 95% of our coastal wetlands. We have lost almost all of our tallgrass prairie. And, when ERCA was established in 1973, our region contained less than 3.5% natural area cover. And, what was left was disconnected, with very little interior habitat.

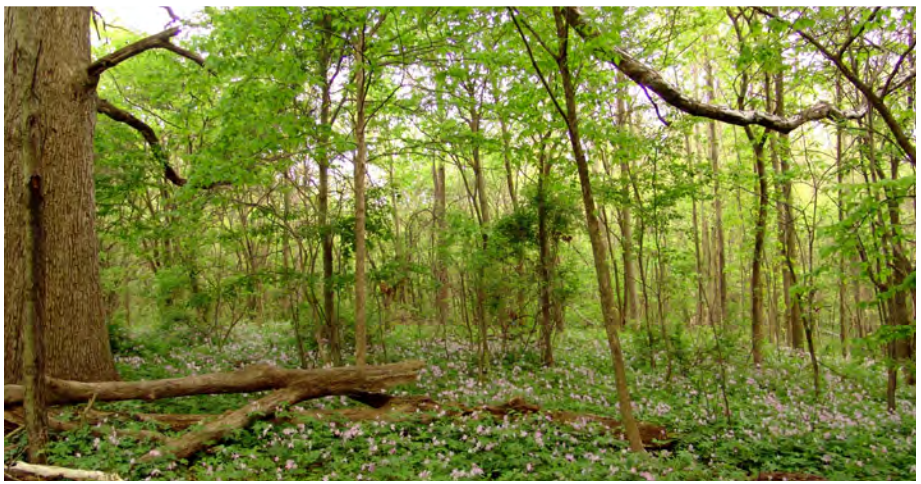
So, what's so **Awesome** about that?

Well. Together, we are making a difference.

Since ERCA's inception in 1973, 6.3 million trees have been planted to increase green space. Our natural area cover in Essex Region has increased from less than 3.5% to more than 8.5%. This amounts to 10,000 acres of forest, tall grass prairie and wetland restoration. Still more to do to get to our goal of at least 12%.

As guardians of the Carolinian Life Zone, we are keepers of an Awesome legacy. We're collectively working to restore it, and there is much more to do to be sure. But, with everyone's help, we will get there.

And that is pretty Awesome.



2. DEVONWOOD CONSERVATION AREA

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT DEVONWOOD CONSERVATION AREA

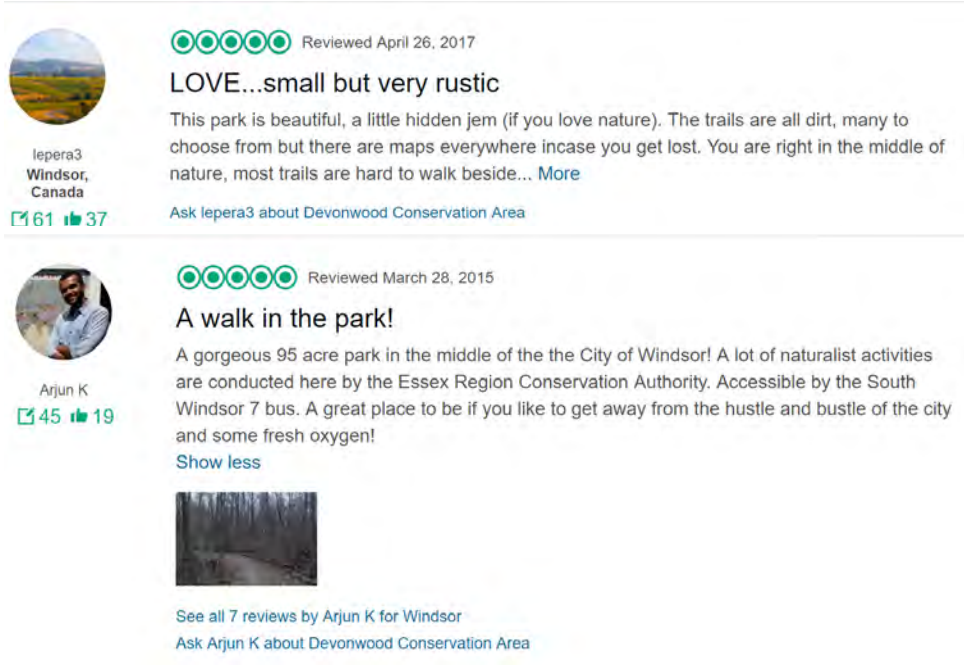
Across from Home Depot and beside the Ford dealership off Division lies one of the most awesome little places in all of Windsor Essex, right in the heart of big box urban Windsor.

Devonwood Conservation Area. If you haven't been, you need to.

The Conservation Area includes 4.5 km of trails, connected to the City of Windsor trail system, within 38 hectares of Carolinian Forest. The woodlot contains eight different species of oak - no other forest in Canada supports a higher diversity of oak trees! See if you can find all eight.

As you walk along the trails, you may see Eastern Screech Owls, Long Eared Owls, Little Brown Bats and much more.

TripAdvisor commenters called it a 'Quite Leisure walk in the city', a 'Wild part of the City', a 'very special, small, urban forest with an unusual array of animals', a 'hidden gem'.



3. DETROIT RIVER

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT THE DETROIT RIVER

The Detroit River is a 51km long connecting channel that links Lake St. Clair to the western basin of Lake Erie (so, technically it is a strait). **The Great Lakes, as we know, contain 21% of the world's freshwater; and it takes about 20 hours for water entering the Detroit River at Peche Island, to where it empties out into Lake Erie at its mouth.** More than that, it links Canadians and Americans through an inseparable border and serves as the foundation of our economies, our communities, our environment, and our place for life.

The Detroit River is the only river in North America to be designated as an American Heritage River and a Canadian Heritage River. It is unique and important ecologically, it is home to globally significant waterfowl, migration routes including raptors. There are more than 29 species of waterfowl, 65 different kinds of fish, and over 300 species of birds documented in the Detroit River area. Significant threats to this natural heritage exist - only 3% of the area is protected. It, along with Lake Erie, is exposed to the greatest stress due to urbanization, industrialization and agriculture and is exhibiting signs of degradation. For these reasons, it was designated as an Area of Concern in the 1987 Great Lakes Water Quality Agreement. Which has resulted in tremendous effort to clean up this amazing river and its watersheds.

It is also the only river in North America to have a shared Wildlife Refuge. In 2012, the Detroit River and the Western Lake Erie Watersheds were named a **Priority Natural Area**, a unique Canadian partnership between Environment and Climate Change Canada, the Department of Fisheries and Oceans Canada, the Ministry of Natural Resources and Forestry, Ducks Unlimited, Nature Conservancy of Canada and ERCA. This one-of-a-king partnership was Canada's contribution to the Detroit River International Wildlife Refuge Designation with US Fish and Wildlife and a uniquely Canadian way to celebrate and promote an Awesome region.

Highlights of this international partnership include: improvements to all three sewage treatment plants along the river, and tremendous efforts to reduce combined sewer overflows. More than 50 'soft' engineering projects implemented in the watershed creating improved fish and coastal habitat; five sturgeon spawning reefs constructed in the Detroit River, common tern habitat has been restored in four locations; and numerous forest, and wetland restoration projects and green infrastructure improvement projects. Many river clean-ups and tree planting projects, including those coordinated by Rotary Club of Windsor (1918), and thousands of volunteers each year.

And that work is being spearheaded by the Detroit River Canadian Cleanup (**DetroitRiver.ca**) on the Canadian side, who works with senior levels of government, community partners and agencies to clean up the Detroit River. Its a pretty awesome group doing some really great work and the River is benefitting greatly from their efforts.

4. FALL MIGRATION

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ABOUT THE FALL MIGRATION

Southwestern Ontario is a triangular peninsula with its narrowest apex stretching southwest between Lakes Ontario and Erie on its southern edge and Lakes St. Clair and Huron on its northwestern edge. These vast expanses of open waters present formidable barriers to many fall migrants, which soar on thermal air currents which give birds lift over land. Thermals form over land when the sun heats up the ground and this warm air rises within the surrounding cooler air forming the rising, spiraling column. The birds spiral upwards on one thermal and glide down to the next thermal allowing them to move long distances while expending as little energy as possible. When thousands of hawks are soaring on the same thermal it is called a "kettle" because it looks like a steaming tea kettle!

Birds gain altitude over the flat farmland to the north and east of our region, rising easily with the thermals that such areas provide in abundance. As the birds head south they meet Lake Erie and, reluctant to cross it, turn west. With appropriate wind and weather conditions, birds pile up along the lake shore and move west until they reach the narrow crossing at the Detroit River (or island hop within the river mouth). Holiday Beach Conservation Area (HBCA) is strategically located at the extreme southwest narrowest portion of the migrant funnel. Holiday Beach Conservation Area and Big Creek Marsh have been designated as a **Globally Significant Important Bird Area** for the large concentrations of raptors and migratory landbirds in the fall.

During the fall migration, the raptor concentration at Holiday Beach is globally significant. In 1996, for example, 149,534 raptors were counted, including a record 96,000 broadwing hawsk being counted in one day. Many other species, like Turkey Vulture, Red-shouldered Hawk, Northern Harrier, Peregrine Falcon, and Cooper's Hawk – all having status globally and nationally - have nationally significant fall migration numbers In total, 22 different species of raptors, and hundreds of other species of birds fly over the hawk tower at Holiday Beach each year.

And, we celebrate their migration at the world renowned Festival of Hawks each September (this year, September 15/16 and 22/23). Join experts from the Holiday Beach Migration Observatory, who have been banding birds at Holiday Beach since 1986, for this natural spectacle. Take in free programs hosted by local experts and see live hawks and owls up close. Get up close and personal to a variety of raptors as experts measure, tag, and then release these birds back into the wild. Visitors will also be in awe at the live raptor display of Kingsport Environmental, a local organization that rescues and rehabilitates raptors and promotes falconry through education programs. And, of course, watch the thousands of raptors soaring overhead the 40 foot hawk tower.

It is pretty awesome.

5. THE TALE OF THE HUMMING-FISH

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ABOUT THE LORAX

Dr. Seuss wrote the Lorax in 1971 to talk about the importance of the environment. It tells the story of how a greedy businessman, the Once-ler, wiped out an entire forest of truffula trees to make his Thneeds, which everyone needed. With the loss of truffula trees, Dr. Seuss showed, as only he can, the direct impact of deforestation on air and water pollution.

The Lorax was Dr. Seuss' favorite books. "*The Lorax*," he once explained, "*came out of me being angry. In The Lorax I was out to attack what I think are evil things and let the chips fall where they might*". It was written at a time where the great lakes were considered, for all intents and purposes, dead. Or, in Dr. Seuss' words: glummed, dreary, weary and smeary. And, in the early editions of the Lorax, Dr. Seuss pointed directly to Lake Erie. Lake Erie inspired songs like REM's Cuyahoga, about the Erie feeder river that caught fire in the late 1960s which Time Magazine said "*oozes rather than flows*", where a person "d*oes not drown but decays*." Johnny Carson referred to Lake Erie as "*the place fish go to die*". And, he was right: a lot of fish died, and some never came back: Lake Erie lost 10 species of fish. Still doesn't sound so awesome …

The Awesome part is that Lake Erie showed that burning rivers, dead fish and stinking water are good motivators for environmental action. The public demand to solve these issues were one of driving forces behind the first Great Lakes Water Quality Agreement between Canada and the U.S. in 1972, signed by Prime Minister Trudeau and President Nixon who, though they didn't agree on much, agreed on the importance of the Great Lakes.

This agreement contained many commitments, but in simplest terms, it said that water shouldn't stink, fish shouldn't die, and rivers shouldn't burn. And it worked. There were restrictions on phosphorus, upgrades to sewage plants and reductions in toxic chemicals dumped into the lake. A number of Areas of Concern, including the Detroit River were identified and governments committed to taking an ecosystem approach to lake management. There were significant improvements in drinking water quality, beaches were re-opened and both commercial and recreational fisheries thrived. Habitats and water quality at some of the toxic hotspots started to improve. Rivers didn't burn anymore, and fish stopped growing tumors. And, at the request of the Ohio Sea Grant, which demonstrated the improvements made to Lake Erie, Dr. Seuss removed the line in the Lorax about Lake Erie. Public advocacy pushing for change. **That's pretty Awesome**.

You're glumping the pond where the humming-fish hummed.
No more can they hum, for their gills are all gummed!
So I'm sending them off:
oh, their future is dreary!
They'll walk on their fins and get woefully weary,
In search of some water that isn't so smeary.
I hear things are just as bad up in Lake Erie.

The Lorax Dr. Seuss, 1971

Recently, Lake Erie has been experiencing flashbacks to the 1960s and 70s, with satellite images showing those same psychedelic green patterns caused by massive algal blooms. Unlike the 1970s, this old problem has a new cause: nutrients are now coming into the lake from 'non-point' sources: via streams, rivers and drains that flow through agricultural lands, and urban run-off from lawns, asphalt and concrete, influenced by more intense rainfall events due to climate change, combined with the shallow, warmer, slower water of the western basin of Lake Erie

But, like the 1970s, public advocacy is pushing for change. In early 2018, the governments of Canada and United States published their Domestic Action Plans with goals of reducing phosphorous loading by 40%, and targetted priority watersheds – which include the Thames River and the Leamington tributaries. The Canadian Lake Erie Action Plan [LEAP] showcases 125 Actions to be taken to clean up the Lakes - urban and rural BMPs, wetlands, etc., etc.

So, progress is begin made, but we need to increase the scope, scale and intensity of these efforts to address the challenges facing our region. So, stay tuned. Lake Erie will be awesome again!

6. *Acipenser fulvescens*

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ABOUT THE LAKE STURGEON

Those who were here for Claire Sander's talk on the Detroit River should recognize this fish.

The Lake Sturgeon (*Acipenser fulvescens*) is Canada's largest freshwater fish, weighing up to 180 kilograms (400 pounds) and reaching over 2 metres long. Its body is covered with large bony plates. Unlike other fish found in Ontario, the Lake Sturgeon has a skeleton made up of cartilage instead of bones.

The Lake Sturgeon lives almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel. They are usually found at depths of 5 to 20 metres. They spawn in relatively shallow, fast-flowing water with gravel and boulders at the bottom. They also are known to spawn on open shoals in large rivers with strong currents.

The oldest known specimen of Lake Sturgeon is 155 years old. The largest Lake Sturgeon recorded was from the Roseau River in Manitoba, weighing 185 KG and measuring 4.6m in length.

In 2010, the ERCA along with DRCC, USFW, senior levels of government and other partners created a number of spawning reefs at Fighting Island. Partners 'dumped' 25,000 tonnes of broken limestone rock on the bed of the river and created 4 acres of spawning reef.

It's estimated that in the 1800s we had over a million of these fish in the Detroit/St. Clair River system. In 2017, the Detroit River Canadian Cleanup and Essex Region Conservation joined U.S. Fish and Wildlife Service researchers on the Detroit River in April 2017, who now estimate there are over 6,000 Lake Sturgeon in the Detroit River, and over 30,000 in the corridor from Lake Huron to Lake Erie, making it one of the healthiest populations of sturgeon in the Great Lakes.

But, please don't rush out to catch one, it is a species at risk, and considered 'Threatened' in Ontario.

7. POINT PELEE NATIONAL PARK

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ABOUT POINT PELEE NATIONAL PARK

Point Pelee National Park (est 1918, 15 km2) is located at the tip of Point Pelee, a long peninsula jutting abruptly into Lake Erie near Leamington, Ont, the southernmost tip of Canada's mainland. It was the 2nd National Park established in Canada

The spit was named by French explorers, who called it Pointe Pelée, meaning "bald point," for its lack of vegetation. Lobbying by naturalists and by duck hunters led to formation of the park in 1918, though it was still dotted with cottages and, by 1939, 2 hotels.

It is renowned as one of Canada's finest bird watching spots. Located on the crossroads of 2 major migration flyways, some 360 species have been recorded in the park, and over 100 species stay to breed here. The park is also a staging area for monarch butterflies on their southwards migrations.

It's Carolinian woodlots, wetland/marshes, and sand ecosytems are home to more than 60 at-risk species including trees, reptiles, amphibians, birds, and insects, and it boasts the highest biodiversity of any national park in Canada.

8. URBAN TREE/FOREST

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ABOUT THE URBAN STREET TREE/URBAN FOREST

For the first time in history, more than 50 percent of the world's population now lives in towns and cities. By 2050, this number is expected to increase to 66 percent largely due to poverty and related socio-economic factors.

For the most part, the rapid expansion of cities takes place without any land use planning strategy and the resulting human pressure has highly damaging effects on forests, landscapes, as well as green areas in and around cities. The environmental impacts of urbanization are often intensified by climate change and include increased pollution, as well as increased poverty and frequency of extreme climatic events.

Urban trees can help to mitigate some of the negative impacts and social consequences of urbanization, and thus make cities more resilient to these changes. For example:

1. Trees play an important role in increasing urban biodiversity, providing plants and animals with a favourable habitat, food and protection
2. A mature tree can absorb up to 150 kg of Carbon Dioxide per year. One acre of forest absorbs six tons of CO2 and puts out four tons of oxygen.
3. Strategic placement of trees in cities can help to cool the air between 2 and 8 degrees Celsius, thus reducing the urban "heat island" effect.
4. Trees also help to reduce carbon emissions by helping to conserve energy. For example, the correct placement of trees around buildings can reduce the need for air conditioning by 30 percent, and reduce winter heating bills by 20-50 percent. The net cooling effect of a young, healthy tree is equivalent to ten room-size air conditioners operating 20 hours a day. If you plant a tree today on the west side of your home, in 5 years your energy bills should be 3 percent less. In 15 years the savings will be nearly 12 percent.So, trees help urban communities adapt to the effects of climate change.
5. Speaking of Climate Change ... Mature trees regulate water flow and play a key role in preventing floods and reducing the risk of natural disasters. A mature evergreen tree, for instance, can intercept more than 15,000 liters of water per year.
6. Large trees are excellent filters for urban pollutants and fine particulates. They absorb pollutant gases (such as carbon monoxide, nitrogen oxides, ozone and sulfer oxides) and reduce fine particulates such as dust, dirt or smoke out of the air by 9 to 13 percent so not only more oxygen but cleaner air.
7. Research shows that living in close proximity of urban green spaces and having access to them, can improve physical and mental health, for example by decreasing high blood pressure and stress which, in turn, contributes to the well-being of urban communities. Surgery patients who could see a grove of deciduous trees recuperated faster and required less pain-killing medicine than matched patients who viewed only brick walls.
8. Planning urban landscapes with trees can increase property value, by up to 20 percent, and attract tourism and business. A number of studies have shown that real estate agents and home buyers assign between 10 and 23 percent of the value of a residence to the trees on the property.

So, a city with well-planned and well-managed green infrastructure becomes more resilient, sustainable and equitable in terms of nutrition and food security, poverty alleviation, livelihood improvement, climate change mitigation and adaptation, disaster risk reduction and ecosystems conservation. Throughout their lifetime, trees can thus provide a benefit package worth two to three times more than the investment made in planting and caring for them.

9. *Gymnocladus dioicus*

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ABOUT THE KENTUCKY COFFEETREE

Gymnocladus dioicus, the Kentucky Coffeetree is extremely rare in Canada. It is one of the first native trees to drop its leaves in autumn and one of the last to leaf out in spring, thus displaying its striking silhouette of stout branches for much of the year. The Latin name, Gymnocladus, actually means “naked branch” because the tree is bare much of the year.

But, when it does leaf out, it leafs out. Its leaves as big as 60 by 90 centimetres - the largest leaves of any Canadian tree. They are twice compound, or bi-pinnate, divided into many, small bluish-green leaflets. The flowers are greenish-white in colour.

The fruit is what makes this tree unique. It is a hard, dark, leathery and bean-like pod, about 15 to 25 centimetres long and contains four to seven seeds and remains on the tree throughout the winter. Early settlers used the seeds of the large, leathery pods to make coffee, but the seeds are poisonous to humans when eaten raw.

The Kentucky coffeetree is an example of evolutionary anachronism (attributes of living species that are best explained as a result of having been favorably selected in the past due to coevolution with other biological species that have since become extinct). Its tough, leathery seed pods are too difficult for many animals to chew through (in addition to being poisonous) and they are too heavy for either wind or water dispersal. It has been hypothesized that the now-extinct Mastadon and mammoth may have evolved its unique seeds, specifically for Mastodon-assisted dispersal; the mammoth would eat the pods and nick the seeds with their large teeth, aiding in germination. This behavior is seen among African elephants eating similar pods on trees in Africa.

Because of this, its prehistoric range may have been much larger than it has been in historical times. Today, in the wild, it only grows well in wetlands, and it is thought that only in such wet conditions can the seed pods rot away to allow germination in the absence of large herbivores.

As you’d expect, its greatest threat is the lack of suitable or good quality habitat and poor seed production.

However, here in Windsor Essex, we are lucky to have the 100 hectare Canard Valley Conservation Area, which has three small stands of Kentucky Coffeetree along the floodplain forest along the Canard River in Amherstburg. What makes this site unique, though, is that these stands are the ONLY naturally occurring stand of coffee trees in Canada. Unlike other natural populations of Kentucky Coffeetrees in Canada, both male and female trees are present here at Canard Valley. Thus, these stands reproduce from seeds. In other sites, Kentucky Coffetree spreads vegetatively from shoots, creating genetically identical clones.

As part of the Carolinian Forest, which we talked about earlier this year, this site has a great diversity of vegetation – much of it rare or threatened in Canada, including the only known location of a unique, naturally occurring hybrid of Yellow and White Trout Lily; a large presence of Black Maple Trees, which are rare to this region, and a diverse number of mature trees that range from 100 to 150 years old which are also very hard to find here in Windsor Essex.

10. GREY FOX

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ABOUT THE GREY FOX

Located in west Lake Erie near the U.S. border line, Pelee Island is not only the southernmost populated point in Canada, it's also the last confirmed refuge in Ontario for the threatened grey fox species.

The Grey Fox is about the size of a small dog and looks very similar to the familiar Red Fox. But unlike the Red Fox, the Grey Fox has grizzled grey fur with lighter cinnamon coloured patches on its body. It also has a black tail tip, while the Red Fox has a white tail tip. The Grey Fox has shorter legs and a smaller snout than the Red Fox, and it can have a very long bushy tail. Their tracks look very similar to a domestic house cat. But, unlike a cat, fox prints always have claw marks. The Grey Fox is not a picky eater. Small rodents and rabbits are the preferred food during the winter, but this omnivore will also eat apples, corn, and wild grapes in the summer and fall.

The Grey Fox is also the only canine in the western hemisphere that can climb trees, thanks to their sharp, hooked claws which helps them scramble up tree trunks and can even jump from branch to branch. They can actually climb up to 18 metres, jumping from branch to branch

Their dens are usually found in dense shrubs close to a water source, and used to be fairly common sight across southern Ontario and parts of Manitoba. But a loss of forest habitat, along with harsh winters, increased road fatalities, and predators like coyotes, has led to a steep decline in their numbers. Now, though it has been recorded in Alberta, Manitoba, Ontario, Quebec and New Brunswick, the 42 square-kilometre Pelee Island is home to the only confirmed breeding population of grey foxes in the country. In fact, the population in Canada is relatively unknown due to no quantitative population study of the species. However, based on a few records, the estimate for mature Gray Fox individuals is less than 110.

Gray Fox habitat on Pelee Island occurs in Fish Point Provincial Nature Reserve, managed by Ontario Parks under the Provincial Parks and Conservation Reserves Act and Stone Road Alvar managed by the Essex Region Conservation Authority under the Conservation Authority Act. Gray Fox habitat is also protected on over 400ha of privately owned land managed for conservation purposes by Ontario Nature and the Nature Conservancy of Canada.

So, next time you're on Pelee Island between dusk and dawn, keep an eye out for the grey fox, and don't forget to look up!

11. N42°12.709 W082°47.576

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ABOUT MAIDSTONE CONSERVATION AREA – SIGNAL TREE

A walk along the Darlene and Phil Horn Nature trail at Maidstone Conservation Area guides you through an outstanding Carolinian forest. But centuries ago, you would have been guided by this Shagbark Hickory, purposely bent to be a Marker Tree, or Signal Tree.

Signal trees were formed by bending saplings down near the ground, and tying the leader (the main stem) to a rock or another tree with rawhide, grapevine or secured with heavy rocks. The lateral branch pointing directly upwards was retained while the rest were removed. Over time the tree settled into the bend, the rawhide was removed or withered away, and a 'nose' was often left to point the way. As the tree grew, the diameter of the main trunk remained larger than the lateral branch forming the crown.

First Nations peoples used Signal Trees to point to all kinds of things: villages and camps, water sources and river fords, or to mark boundaries between different communities.

There is another signal tree, an oak tree, behind the eighth tee on the Kingsville Golf and County Club, but I can assure you that it did not do a great job directing me to the green as well as it guided First Nations peoples travelling through the area.

Though common in pre-settlement times, most are now lost to habitat destruction and the practice of removing ill-formed trees in woodlots. The remaining ones are among the most important heritage trees around!

You may recall a few weeks ago, we did an Awesome Fact on the 'Signal Tree' in Maidstone Conservation Area – a tree with tremendous heritage value and one of only 2 left in Windsor/Essex, and of a very few left in all of Ontario. Indigenous peoples would form signal trees to point to all kinds of things: villages and camps, water sources and river fords, or to mark boundaries between different communities. Over the decades, thousands of people have visited Maidstone Conservation Area and photographed this tree.

It greatly saddens me to report that over the Victoria Day weekend, that signal tree in Maidstone was destroyed by individuals lighting off firecrackers within its hollow. We are working with Lakeshore Fire Department, and OPP on the case, and do hope to find the perpetrator(s). But, as this was one of the more interesting (I thought) and lesser known environmental features that makes this region so awesome, I thought I'd pass on this very disappointing news as well.

Richard

12. ROTARY (1918) CENTENNIAL HUB

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

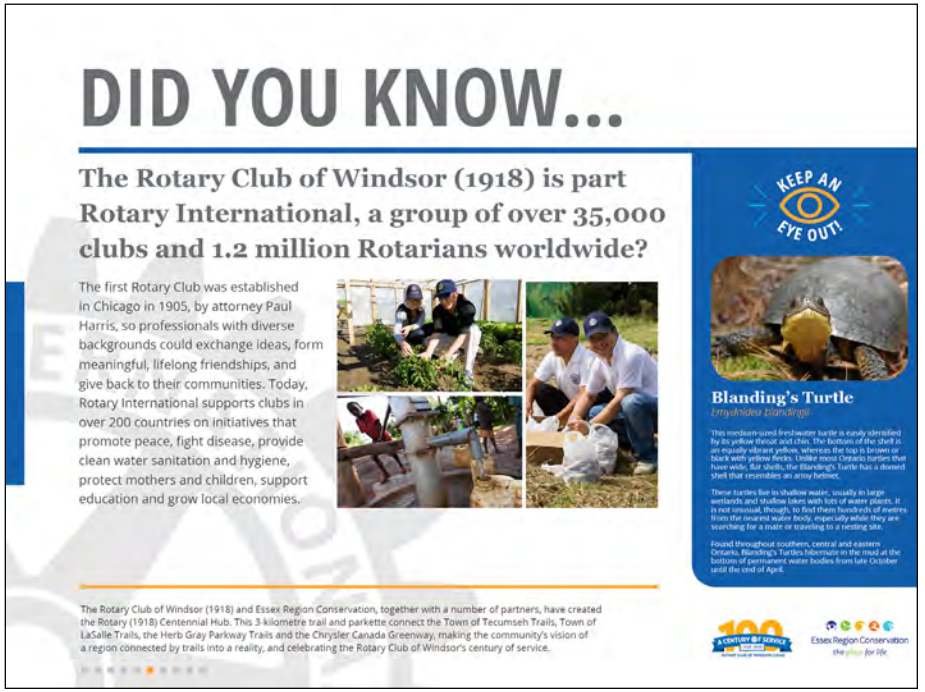
ABOUT ROTARY (1918) CENTENNIAL HUB

We all know how important the 3km Rotary Club of Windsor (1918) Centennial Hub is for connecting people and supporting active living and healthy lifestyles. In fact, the Hub connects the City of Windsor, the Towns of LaSalle and Tecumseh, and all the way to Harrow, Kingsville and Leamington and Pelee Island via the Chrysler Canada Greenway which itself connects to the Towns of Essex and Amherstburg.

That is pretty awesome.

BUT, Rotarians know, more than many, how important these connections can be for nature as well. In fact, in spring 2018, Rotarians planted 300 trees along this Hub to make sure wildlife and birdlife can be connected as well. If you walk or bike on this Hub today, you'll pass by 13 different species of trees and shrubs that you planted – everything from Serviceberry, Red Osier Dogwood, Elderberry, Highbush Cranberry to Sycamores, Red and White Cedar, and Red and White Oak! And a few more in between!

So, not only is the Hub itself an amazing legacy for people, it is also an amazing legacy for natural heritage.



13. *Protonotaria citrea*

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

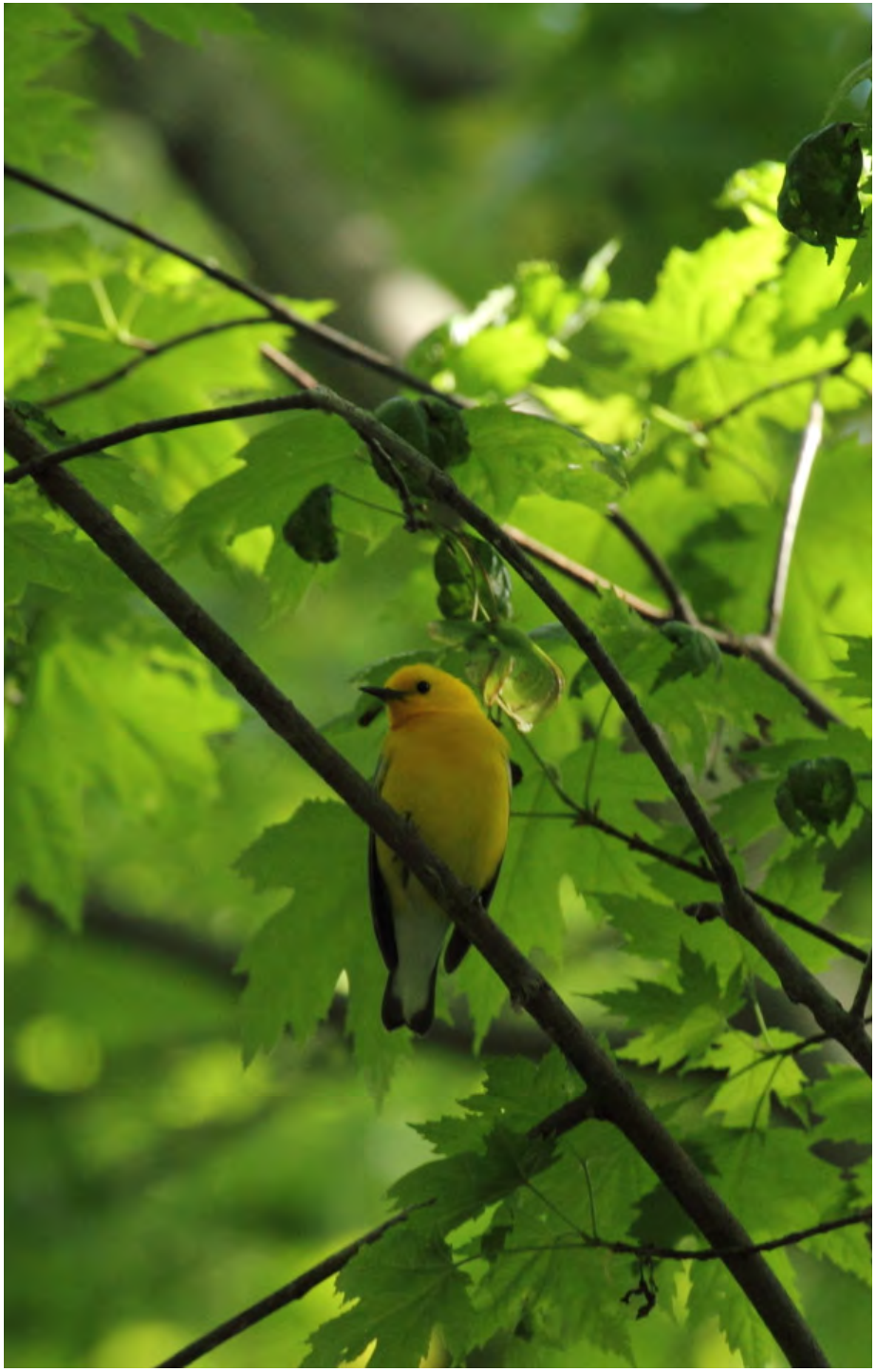
ABOUT THE PROTHONOTARY WARBLER

The prothonotary warbler (Protonotaria citrea) is one of Canada's rarest birds. It is a very attractive small songbird with a bright golden-yellow head and under parts, dark blue-gray wings and rump, and large white tail spots.

The prothonotary warbler is the only cavity-nesting warbler in North America, and requires a unique combination of habitat characteristics to successfully nest — a source of moss for nest building, a mature tree canopy with fully shaded understorey and standing water below. These specific habitat requirements are hard to find – typically found in a flooded woodland or deciduous swamp forest — habitat that is being lost throughout Ontario. This loss of habitat is impacting the species' distribution, making the prothonotary warbler a critically endangered species in Canada.

Because of its location on the Big Creek Marsh, Holiday Beach Conservation Area is one of only three prothonotary warbler populations in Canada. To enhance this special population, ERCA and its partners restored nesting habitat for the warbler by removing roads and excavating nesting habitat. In total about 4 acres of habitat was restored, trees were planted, nest boxes were erected with poles and predator guards.

Because of these efforts, the population continues to grow and today the population at Holiday Beach accounts for nearly one quarter of the entire Canadian Population of this bird!



14. JACK MINER'S

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT JACK MINER'S MIGRATORY BIRD SANCTUARY

1865 John (Jack) Miner was born April 10, 1865 in Dover Center, now Westlake, Ohio, USA. He moved with family to then Gosfield South Township, near Kingsville, Ontario, Canada at age 13. In 1900, he formed one of the first Game Protective associations and in 1904, he founded the Jack Miner Migratory Bird Sanctuary for the conservation of migrating Canada geese and wild ducks, the first of its kind in North America, not far from Point Pelee National Park, which Miner in fact helped to designate as a national park in 1918.

Jack Miner was one of the first conservationists to determine the migratory paths of birds. In August 1909, he constructed a successful duck trap, and banded the first duck with his own hand-stamped aluminum band which included address information and a verse from scripture: "Keep yourselves in the love of God—Jude 1-21" and "With God all things are possible—Mark 10-27". Late that year, his original band was recovered in Anderson, South Carolina. This marked the first complete record for banding migratory birds.

In the spring of 1915, he successfully adapted his trap to capture Canada geese and fitted a goose with a tag that was found in October of that same year from the Hudson's Bay Company in Moose Factory. This was the first confirmation of the migration path and summer roost of the Canadian Goose which had simply before been known to fly 'northward'. By the fall a year later, tags were coming in from all along the eastern shore of James Bay, Hudson Bay, and as far abroad as Baffin Island. A second route south into the United States followed the Mississippi Flyaway, into states such as North and South Carolina, Georgia, Alabama and the gulf coasts of Florida. Using information garnered from these returned bands, the migratory habits of Canada geese were mapped. In 1916, data from tagging recoveries were instrumental in the Migratory Bird Treaty between the U.S.A. and Canada. This Act placed the first restrictions on hunting, giving consideration to waterfowl populations for the future.

Jack Miner died in 1944. He had been presented with the Order of the British Empire (OBE) by King George VI in 1943 "for the greatest achievement in conservation in the British Empire." In 1947 In commemoration of the achievements and contributions of Jack Miner, the Act to create Canada's National Wildlife Week passed unanimously to be observed the week of Jack Miner's birth. Named "one of the fifteen great personages of the world" by the Book of Knowledge. At the time of his death, he was rated by several U.S. newspapers as one of the best-known men on the continent, among a few other people you may have heard about: Henry Ford, Thomas Edison, and Charles Lindbergh. Ty Cobb would visit the ball diamond at the Sanctuary, and if you look out over the field today, you can still imagine him running around the bases.

In his lifetime, he had banded over 50,000 wild ducks and 40,000 Canada geese. From an environmental perspective, Jack Miner is one of the father's of conservation in North America and indeed the world. In fact, my early visits as a child to the Sanctuary, watching his son Jasper ride around on his ATV scaring up the geese was one of the reasons I became interested in environment. It is pretty awesome that this incredible man, and the legacy he left us in the Jack Miners Migratory Bird Sanctuary is right here in our own back yard.

15. STONE ROAD ALVAR

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT STONE ROAD ALVAR

A ferry ride away from the mainland, Stone Road Alvar Conservation Area is located a boat ride away on Pelee Island on its south west shore.

An Alvar is an area of thin layer of topsoil over limestone bedrock, a very unique ecosystem and one of the region's most biologically diverse. Alvars have their own unique flora adapted to the extreme heat, variations in moisture and rocky calcareous soil. The Conservation Area, and neighbouring conservation lands, were designated as a provincially significant Area of Natural and Scientific Interest because this type of unique limestone plain is not represented elsewhere in Ontario, and is separated from other limestone plains in the Great Lakes basin by several hundred kilometres.

Stone Road Alvar supports 55 native alvar plants including 44 species which are provincially rare, and several including the downy wood mint which, though locally abundant, can only be found on Pelee Island. It is also prime habitat for the endangered Blue Racer snake, a snake also only found on Pelee Island, whose numbers appears to have declined from about 200 in 1995, and the endangered Lake Erie Water Snake. It is home to five rare butterflies which occur quite commonly including the spectacular Giant Swallowtail. Carolinian bird species such as the Yellow-breasted Chat and the Blue-gray Gnatcatcher like the property's dense thickets. In the open savannahs, you can find the provincially rare Hop Tree as well as Blue Ash. Chinquapin (chink-o-pin) oaks are scattered throughout the unique alvar habitat and despite their stunted appearance can often be over 100 years old. This Chinquapin Oak savanna-alvar ecosystem occurs nowhere else in the world, making it globally significant.

ERCA works with its neighbours, Ontario Nature and Nature Conservancy of Canada to manage the alvar properties. Management efforts include periodic prescribed burns to prevent the natural succession of shrubs from closing in on the savannah communities.

There is no formal trail but the area is yours to explore and there is much to see. From late July to early September, all the open areas are masterfully coloured with the yellow of gray-headed coneflower, the purple of nodding wild onion and clusters of the white of whorled milkweed.

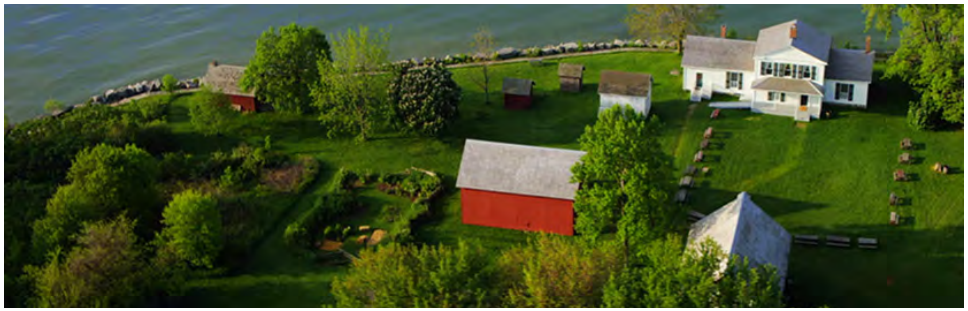
16. JOHN R. PARK HOMESTEAD

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT THE JOHN R. PARK HOMESTEAD

A visit to the John R. Park Homestead Conservation Area will take you back in time to the 1850s. Named Ontario's Best Living Museum in 2012, the house and farm buildings of John and Amelia Park were built in 1842 on lands John R. Park purchased in 1833, and have been restored by the Conservation Authority to bring the nineteenth century to life. Park, along with his two brothers, originally from Massachusetts, built a successful mercantile and Great Lakes shipping business. That success allowed John and Amelia Park to raise their six children in this idyllic farm setting that continues to depict 18th century pioneer life for over 20,000 visitors a year, including thousands of school children attend field trips here each year for hands-on learning opportunities about pioneer life and the importance of preserving our cultural and natural heritage.

Today, you can explore the Parks' magnificent Classical Revival home, taste baking from the kitchen fireplace or play with a wooden toy in the children's bedrooms. See the workings of an 1885 steam engine-powered sawmill and stop by the blacksmith shop to witness the making of small hardware and repairing of farm tools at the coal-fired forge. Don't miss the working smoke house, ice house and barn. For a breath of fresh air, take a scenic walk on the lakeshore boardwalk, or a walk along Fox Creek – a Provincially Significant Wetland that is part of the 19 acre Conservation Area. You can also take in the theatre where an audio-visual presentation will transport you back in time to John Park's day. And there's more! Each spring the gardens are planted with heirloom crops, flowers and vegetables. In the summer, livestock are a popular addition.



17. KOPEGARON WOODS

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT KOPEGARON WOODS

Welcome to Earth Month!

This month, you'll hear about a few of our lesser known, but still spectacular places in Windsor Essex, and what makes them so amazing; and we'll set the stage for Earthy Day culminating with our first Rotary Legacy Forest Tree Plant on May 4 at Cedar Creek Conservation Area.

And, though the recent snowfall doesn't really make it feel like spring, underneath is a blanket of wildflowers waiting to burst through. And, the best place to see wildflowers is Kopegaron Woods Conservation Area – a 19 hectare (about 50 acre) Carolinian Woodland which contains one of the most beautiful forest boardwalk trails in the region that takes you through two very different landscapes - the wildflowers of the wet lowland and the huge beech trees that fill the upland forest.

While exploring, you'll see Tulip-tree, Sassafras, Black Gum, American Beech, Sycamore and Flowering Dogwood trees, as well as wildflowers such as Trillium, Jack-in-the-pulpit, May Apple, Spring Beauty and Columbine, to mention just a few. While you are walking along the boardwalk, you'll hear and see hundreds of beautiful and colorful spring warblers, resting before continuing their flight north in spring.

Kopegaron is located on Highway 3, between Leamington and Wheatley.

18. LEEDR

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT LEEDR

In a densely wooded area about three miles from the southern shore of Lake Erie, the stirrings of a new town were felt nearly 180 years ago. In 1824, a townsite was drawn in that area for James Woods Senior. Christened “Hopetown,” each farm lot in the site was subdivided into eight town lots of 25 acres. By the 1840s, the community had become known as Mungers’ Corners after a local pioneering family. Around 1860, its name changed once again to Harrow, for Harrow-On-The-Hill in England. In “Essex County Sketches” published in 1947, Neil F. Morrisson wrote, “Inland, isolated and often mired in mud of the pre-railway, pre-highway era, the development of Harrow was for years, inevitably slow.”

In August 1888, that all changed. Hiram Walker put through his Lake Erie, Essex and Detroit Railroad (LEEDR) railway south from Walkerville to Harrow. Built by migrant workers who put down nearly a mile a day. On September 21st, the local paper announced: “The rails will reach Harrow tomorrow — the engine whistle was heard in Harrow from Walker’s marsh (now known as Marshfield Woods).” Then, on October 12th: “Bridges on the railway between Harrow and Kingsville are completed except the one across Cedar Creek, which is well under way.” By 1893, Walker extended the railroad east to St. Thomas, and the movement of goods from Essex County to Detroit and Ontario was in full force. The quantity of grain, livestock and produce shipped from Harrow and environs steadily increased; the railway boom enjoyed by Harrow became a source of amazement for locals.

By the middle 1890s, it had become an important shipping centre for corn and other grains, dressed and live hogs. Harrow boasted two saw mills, a hub and spoke factory, carriage and wagon industry, two flour and gristmills, and a cheese factory, all long gone. In addition, a boot and shoe making industry once flourished while blacksmithing and harness repairing continued into the middle of the 20th century. Sawmills sprang up to support development. The Harrow-Kingsville-Leamington farms with their early season and quickly warming light soils meant early crops such as tomatoes, potatoes, cucumbers, cabbages, and so on brought another source of revenue into the area. Favourable tariff legislation and higher prices greatly stimulated tobacco growing in South Essex and brought the Harrow tobacco station into being in 1909. In 1923, it became the Dominion Experimental Station and then the Harrow Research Station in 1959.In 1904, the LEDR was sold to Pere Marquette. The personal attention Hiram Walker had given to his railroad was sorely missed — people were soon complaining of old engines and delayed services. In 1991, the last train came through Harrow and the old rail line built by Hiram Walker was abandoned.

So today, when you walk, or bike from the Rotary (1918) Centennial Hub and down the Chrysler Canada Greenway through Harrow, Kingsville and into Leamington, think back to what that railway meant to Harrow, to Kingsville, to Walkerville, and to Hiram Walker. The Greenway not only connects natural areas, it connects you to the landscapes around you, and to the history of our region.

19. EARTH DAY

50 AWESOME
ENVIRONMENTAL FACTS
ABOUT WINDSOR-ESSEX

ABOUT EARTH DAY

On January 28, 1969, a well drilled by Union Oil Platform A off the coast of Santa Barbara, California, blew out. More than three million gallons of oil spewed, killing over 10,000 seabirds, dolphins, seals, and sea lions. As a reaction to this natural disaster, activists were mobilized to create environmental regulation, environmental education, and Environmental Rights Day, which today we know as Earth Day.

The first Earth Day "brought 20 million Americans out into the spring sunshine for peaceful demonstrations in favor of environmental reform." It now is observed in 192 countries, and celebrated by more than one billion people every year, making it known as "the largest secular holiday in the world". Okay, so maybe it isn't a Holiday … but it should be! Today, Earth Day remains, as it has been from the beginning, a day of action to change human behavior and provoke policy changes.

And, like that first Earth Day which was recognized by President Richard Nixon and First Lady Pat Nixon who planted a tree on the White House Lawn, we plant trees. This year is the 20th anniversary of tree planting on Earth Day in Windsor. More than 1,200 people will come together again in the Little River corridor to add almost 2,500 trees to push the total to more than 30,000 trees planted over the last 20 years during Earth Day celebrations in Windsor in Malden Park and along the trails of Little River.

So, though Rotarians will come together in early May to begin planting the Rotary Legacy Forest, on April 28, the conservation authority and Detroit River Canadian Cleanup are inviting people to plant trees from 10 a.m. to noon in the green space off Wyandotte Street East between Florence Avenue and Martinique Avenue. Get there early before the trees run out!

20. CEDAR CREEK

50 AWESOME
ENVIRONMENTAL FACTS
ABOUT WINDSOR-ESSEX

ABOUT CEDAR CREEK

We've talked before about how lush and green this area once was – a landscape dominated by Carolinian woodlands, wetlands and Tallgrass prairies. Since this time of settlement in the 1830's, much of the original natural resources of the Essex region have either cleared or drained for timber, agriculture, and urban development, resulting in the degraded landscapes we see today. This loss and alteration has had profound consequences on the region's sustainability and ecosystem health, necessitating the need to not only significantly increase the extent of remaining natural habitats, but also the quality.

At the top of that list of important natural habitats is Cedar Creek, one of the most biologically diverse areas in Ontario and in fact, according to the 1983 Environmentally Significant Areas study, 'undoubtedly, one of the finest natural areas in Ontario'. Although the Cedar Creek complex is quite fragmented and is entirely surrounded by agricultural land, it is nevertheless, one of the least modified and most significant natural areas within the area.

A continuous band of forest lines both sides of the creek over much of the area, and the northern portion of the area includes some large ravines. The forest type is variable but includes high quality mature forest with strong Carolinian representation. The complex includes a total of 29 different vegetation communities including include lowland woods, creek valley, oak savannah, Carolinian forest and shrub thickets.

This richness also makes it a significant habitat for many bird and wildlife species – the Ontario Natural Heritage Information Centre (NHIC) currently tracks approximately 55 provincially rare species that are found here, including American Chestnut, Black Gum, Carolina Vetch Duke's Skipper, Eastern Foxsnake, False-daisy, Goldenseal, Many-fruit Seedbox, Reflexed Sedge and Snapping Turtle.

ROTARY LEGACY FOREST

Since ERCA was established in 1973, we have secured, protected and restored over 750 acres of lands within the Cedar Creek complex including our most recent acquisition – a 70 acre agricultural parcel now known as the Rotary Legacy Forest. Our goal is to restore the site to pre-settlement condition: forest, wetlands and some prairie habitat, and create a riparian buffer along drainage corridors leading into the significant wetland. This restoration project will have multiple environmental benefits including providing a habitat linkage for wildlife, improving water quality, providing monitoring opportunities and creating additional ecological diversity. The creation of the Rotary Legacy Forest will also help to reduce phosphorus runoff entering Lake Erie, which is a primary contributor to harmful algae blooms.

On Saturday May 4, Rotarians from across Areas 9 and 10 planted over 300 trees. A great start to the site, which will see 50,000 trees planted on this site when it is done (not all by Rotarians) in addition to a newly created 1 acre wetand.

21. HILLMAN MARSH CONSERVATION AREA

50 AWESOME
ENVIRONMENTAL FACTS
ABOUT WINDSOR-ESSEX

ABOUT HILLMAN MARSH

Essex County is at the confluence the Atlantic Flyway and the Mississippi flyways. In the spring, thousands of birds who have spent the winter in the south rush to reach their northern breeding grounds, flying straight over Lake Erie to the closest point of land, exhausted after their crossing, in need of a meal before making their next hop north.

Hillman Marsh was once part of a massive 10,000 acre wetland which stretched from Hillman Creek up to, and including, present day Point Pelee National Park. Once viewed as wasteland, this natural area was drained around the turn of the century. Only Hillman Marsh remained, and it had become not so much a marsh as 800 acres of sloppy ground.

Hillman's key location on migration routes made it a prime candidate for restoration. Between 1977 and 1989, ERCA acquired 21 properties, securing 900 acres of Hillman Marsh and a kilometre long beach ridge that separates the marsh from Lake Erie.

Once properties were assembled for the Hillman Marsh Conservation Area, the project team created two 'cells', or individually managed water containment areas, representing about 40 per cent of the entire marsh, and a bypass channel to redirect stream flows, sediment and run-off from surrounding lands, ensuring the project would not increase potential flooding of lands upstream. In total, almost 7 km of dikes were built around the cells. On one dike, a 4.5 km trail leads visitors through the heart of the marsh.

In 1999, ERCA acquired a neighbouring 87 acre (35 ha) farm field, and by 2003, had constructed a 42 acre "Shorebird Cell" - the first of its kind in North America. Like the wetland cells, the shorebird cell is encircled by a berm to contain water. The site is planted with barley in the summer and flooded in the fall to speed up the decaying process and promote growth of larvae, worms and other prey for shorebirds. In late April, a gradual drawdown of the water starts, which exposes mudflats rich in invertebrate prey for the shorebirds.

Since the creation of Hillman Marsh Conservation Area, the diversity and numbers of birds has increased dramatically. Birders have recorded more than 300 species at Hillman including at least 75 breeding species, and 399 between Hillman and Point Pele (there are only 685 bird species in Canada!).

22. EASTERN MASSASAUGA RATTLESNAKE

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT THE EASTERN MASSASAUGA RATTLESNAKE

The Eastern Massasauga Rattlesnake, *Sistrurus catenatus*, is the only venomous snake still found in Ontario. Although the venom is potent, this snake's small size and retiring habits make it a minor risk to humans.

The Massasauga is a stout-bodied rattlesnake, usually about 50 to 70 centimetres long. It is Ontario's only venomous snake, and though the venom is potent, the snake's small size and retiring habits make it a minor risk to humans - it will only bite in self-defence if it is threatened or harassed.

It has a triangular head and a tail that ends in a small rattle that creates a buzzing sound when the tail shakes. The body is grey to dark brown with darker brown "butterfly" or "saddle-shaped" blotches down the back, with alternating blotches along the sides. The Massasauga is the only Ontario snake with a vertical (cat-like) pupil.

Massasaugas once had a wider range and were far more common. Today, the only Canadian population of the Massasauga is in southern Ontario at Ojibway Prairie here in Windsor, the Wainfleet Bog near Port Colburne, and the Bruce Peninsula and the eastern shoreline of Georgian Bay where they are more common. Their disappearance coincides with the disappearance of tallgrass prairie – their primary habitat.

Due to the rapidly disappearing habitat and declining population, the eastern massasauga rattlesnake has been officially designated as threatened and is protected from harassment or killing under Ontario's Wildlife Conservation Act and the Ontario Endangered Species Act.

You're likely not going to see one if you are out in Ojibway, but watch where you are walking and never reach into areas you cannot see. If you do, see one, please don't try to capture it, handle it or kill it. And, please watch out for any snakes while driving between May and October when snakes are most active.

If you live outside of the Ojibway area, and think you have found a Massasauga Rattlesnake, you may have actually found the Eastern Fox Snake – the largest snake in our area, attaining lengths of almost two metres. When captured or disturbed, this snake may imitate a rattlesnake by vibrating the tip of its tail. They are non-venomous, unlike their twins, but like their relatives, due to habitat destruction, are also protected in Ontario.

From a conservation perspective, we do work to protect snake habitats … but it would be so much easier to fundraise if our endangered species were warmer, and fuzzier …

23. OJIBWAY PRAIRIE

50 AWESOME ENVIRONMENTAL FACTS ABOUT WINDSOR-ESSEX

ABOUT THE OJIBWAY PRAIRIE

We talked before about Antoine de la Mothe Cadillac's letters he wrote after exploring the Detroit River region in 1703. He certainly painted a picture of the 'earthly paradise' this region once was. In that same letter, he also spoke about the "boundless prairies, which stretched away for about 100 leagues to the southwest from the entrance to Lake Erie."

Some years later, in 1949, another very highly regarded conservationist, Aldo Leopold wrote that "No living man will see again the long-grass prairie, where a sea of prairie flowers lapped at the stirrups of the pioneer…"

The poignant sense of loss underscores the value of one of Ontario's rarest communities, our prairies. In fact, many accounts of early Ontario stress the heavily- forested nature of the land, and created the image of vast, unbroken forest. In reality, the early French explorers and first settlers of southwestern Ontario also discovered extensive, open landscapes. They encountered the outlying remnants of oak savanna and tallgrass prairie which once dominated a large portion of midwestern North America along the eastern edge of the Great Plains. Leopold's 'sea of prairie flowers' extended from the Great Plains through Illinois and Indiana to Michigan, Ohio and Ontario.

Prairie persisted where a combination of soil type, microclimate and fire continued to favour grasslands over forest. In southwestern Ontario, prairies are found where soils have limited capacity to store moisture. During spring the soil can be completely saturated yet by mid-summer soils become extremely dry. Periodic drought in the region enhances this effect.

Gradually, as climates became cooler and wetter, the forests fought back, but prairie landscapes still dominated, until we started to develop our region for agriculture, for lumber, for communities. Today, there remains less than two tenths of one percent of North America's original million square kilometers of tallgrass with less than 500 hectares in southern Ontario.

We are lucky to have some of the best remaining prairie landscapes in our region – the collection of four parks within the area we know as the Ojibway Prairie Complex, and a bit further afield, you can still see considerable stands of oak savanna and prairies on Walpole Island near Wallaceberg.

At Ojibway, because of controlled burns, prairie is now reclaiming some of the forest that grew in since settlement times. More than 100 of the rare plant species of Ontario and a rich variety of wildlife including many butterflies, birds, Butler's Garter Snake and Eastern Massasauga Rattlesnake we heard about last week contribute to the rich diversity of Ontario's prairies.

It is one of only a few spots like it left today. So, next time you pass through the farmland in and around 'Prairie Siding', in Chatham Kent, think about the prairie it now memorializes.

QUICK FACTS

24. WILLOWLEAF ASTER

This native perennial plant can grow up to 1.5 metres tall and has a smooth, somewhat waxy stem. The small daisy-like flowers have petals that are lavender, light blue or white in colour and surround a yellow centre, which becomes more red over time. The blooming period occurs early to mid-fall and lasts about a month.

In Ontario, the Willowleaf Aster is found in openings of oak savannahs—a very rare type of vegetation community containing many oak trees and tall grasses - and is also found along railways, roadsides and in abandoned fields.

In the last 20 years, development has caused this rare plant to disappear from several sites where it was once found. The largest populations can be found in the Ojibway Prairie in Windsor and on Walpole Island.

25. BUTLER'S GARTERSNAKE

This small, non-venomous snake can grow between 25 to 57 centimetres long. It has a small head and yellow-orange stripes running down its dark brown to black body.

Commonly mistaken for the Common Gartersnake, the Butler's Gartersnake can be identified by two rows of dark spots between the side and back stripes. To help identify the species, the Butler's Gartersnake characteristically thrashes in place when it feels threatened, as opposed to fleeing for safety.

Found only in the lower Great Lakes region, this species is endangered in Ontario due to loss of tallgrass prairie habitat. The Butler's Gartersnake prefers open, moist habitats with small wetlands where it can feed on leeches and earthworms.

26. BLANDING'S TURTLE

This medium-sized freshwater turtle is easily identified by its yellow throat and chin. The bottom of the shell is an equally vibrant yellow, whereas the top is brown or black with yellow flecks. Unlike most Ontario turtles that have wide, flat shells, the Blanding's Turtle has a domed shell that resembles an army helmet.

These turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site.

Found throughout southern, central and eastern Ontario, Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April.

27. EASTERN BLUEBIRD

This medium-sized member of the Thrush family is a cherished sight for birdwatchers. It held a special place in the folklore of our early settlers who welcomed it as a true harbinger of spring. Its colourful appearance and distinctive calls make it easily recognizable.

The Eastern Bluebird breeds throughout the province except in the Hudson Bay lowlands. It is found in a variety of habitats from apple orchards to boreal forest, and will nest in almost any area with short vegetation as long as suitable nest cavities are available.

Their numbers have increased in the past few decades, after this bird was in serious decline due to habitat destruction, pesticide use and the loss of their eggs and young to introduced bird species such as Starlings and House Sparrows.

28. EASTERN PRAIRIE FRINGED-ORCHID

This perennial orchid is native to Ontario and generally found in moist prairie habitats and old fields. Reaching heights of up to 1 metre, it has a spike of white flowers, each with a fringed petal and long spur. The 'nectar spurs' are very deep and contain a lot of nectar that only certain insects, such as Hawkmoths, have the ability of reaching into and drinking.

Typically, this species takes 3 to 7 years to reach maturity. Flowers generally bloom during the month of July. However, the same orchid may not flower every year and can lie dormant for several years in between flowering.

These orchids are most concentrated in Essex County. The species was probably much more common in the Walpole Island prairies and St. Clair River before the habitat was farmed.

29. MONARCHS AND MILKWEED

For a few special days each fall between late August and October, Essex is a temporary home to thousands of migrating Monarch butterflies. As they make their way 3000km south to Central Mexico, an encounter with daunting Lake Erie can make them linger for a few days along the shoreline, 'dripping' off trees at Holiday Beach and Pointe Pelee as they wait for favourable conditions to head across the lake.

Over the last decade, we've seen dramatic drops in Monarch populations due to habitat loss and extreme weather. Planting native species that flower into the fall, such as asters, butterfly weed, and purple coneflower can help butterflies and other pollinators and milkweed for monarch caterpillars.

QUICK FACTS

30. EASTERN PRICKLY PEAR CACTUS

The Eastern Prickly Pear Cactus is a perennial succulent cactus that grows in dry sandy areas that are relatively open and sunny. In Canada, the Eastern Prickly Pear Cactus is found only in southern Ontario on sand spits along the shore of Lake Erie. The main threat to Eastern Prickly Pear Cactus is habitat loss due to shoreline erosion and shading by trees and shrubs. It is also vulnerable to human interference from trampling, destruction of habitat and illegal collection for planting in gardens. The Eastern Prickly Pear Cactus is considered endangered in Ontario.

31. MAYFLIES

You know you're from the Essex region if you've ever slid over a road slick with dead mayflies in your car. They are known by several names - Junebug, Canadian Soldier, Fishfly but their scientific name is *Hexagenia*. Sometime around the middle of May and lasting through June and into July, this plague of insects strikes the cities, towns, and villages along Lake Erie's shoreline.

Mayflies spend 1-2 years on the bottom of the lake as a nymph burrowed in the mud. Once they emerge, they usually live for 24-72 hours. And within that three days, they manage to get into about everything you can imagine and go anywhere where there's light at night.

As gross as you might find them, mayflies are a sign of a healthy ecosystem. They are an important part of the food web and provide

As gross as you might find them, mayflies are a sign of a healthy ecosystem. They are an important part of the food web and provide and abundance of food for many species fish and birds. Due to pollution problems and low oxygen concentrations in the water in the 1950s, they virtually disappeared from Lake Erie for several decades. With the clean up of the lake in the 70s and 80s, mayflies made a surprise comeback in the western basin in the early 1990s.

It's also pretty awesome that they don't have mouths and can't bite. Thank goodness.

32. SALT MINES

There are some awesome things UNDER Essex!

Detroit and Windsor sit on massive salt deposits. These underground deposits of solid rock salt are of marine origin. Large inland seas existed for a time in the geological past (Salina Formation of the Silurian age), which were only connected to the ocean by narrow channels. With the arid climate and powerful sunlight, the salt-bearing inland seas evaporated leaving behind crystallised salt. The process recurred over millions of years and resulting in layers of rock salt.

The main salt bed at the Ojibway mine is exceptionally pure and extends under the Detroit River. It is 8.2 m thick and is at a depth of 289 m to 297 m below the surface. The salt bed was discovered by Canadian Rock Salt Company as a result of diamond drilling carried out in 1952. For the province's pioneers, salt was vital. It was needed for livestock, and was used to season and preserve food. Today, we also use salt in enormous quantities to de-ice roads, in the production of industrial chemicals, and in industry.

33. GREAT LAKES RESEARCH

Our Great Lakes are full of wonder, mystery and endless research questions. Located on the shores of the Detroit River, the Great Lakes Institute for Environmental Research (GLIER) at the University of Windsor addresses complex environmental problems that cross conventional disciplinary boundaries, such as the effects of multiple environmental stressors on large lakes and their watersheds. From helping solve our pollution problems of the past to discovering innovative techniques to monitor and model current issues, the research undertaken at GLIER provides information and supports management and restoration efforts for our water resources.

QUICK FACTS

34. CRYSTAL BAY

Just north of Bois Blanc Island (Boblo) in the Detroit River, Crystal Bay is only accessible by boat. It's odd shape was constructed from the 9.5 million of cubic yards of sediment that were dredged out of the Detroit River over 100 years ago to create the Livingstone Channel for freighters heading to Lake Erie. The dredge spoils were used to create a series of channels, providing shelter to smaller boats and aiding navigation for river traffic.

The strong river current forks around its northern end, leaving a quiet and sheltered lagoon in the center. The water in the Hidden Lake lagoon is particularly clear and is home to mallards, kingfishers, blue herons and hawks, and make excellent fishing areas. Look out for Muskie, Walleye, White Bass or Yellow Perch.

35. BOBLO (WHITE SANDS)

Bois Blanc means "White Woods," a name derived from the many birch and beech trees in the area. The island has a rich history as a place of First Nations settlement. It's also featured during the War of 1812, the Upper Canada Rebellion and served as a stepping stone for individuals on the Underground Railroad.

The Bois Blanc Island Lighthouse, constructed in 1836 by the government of Upper Canada played an important role in navigation along the Detroit River. The lighthouse remained in service until the 1950s, and since its retirement has been transferred to Parks Canada and designated a National Historic Site. Located at the south end of Bois Blanc Island on the Detroit River, White Sands Conservation Area is the perfect spot for a day-away escape at the beach.

36. LAKE ERIE FISHERIES

Few things on this list are more awesome than having a basket of fresh Lake Erie perch and a cold drink on a patio in Essex County.

As early as the 1800s, there are reports of large numbers of fish being taken from the Great Lakes for food and fertilizer. As a result of the introduction of the alewife and sea lamprey, over-harvesting, and pollution, populations of virtually all marketable species were decimated by the 1960s.

Faced with an ecological disaster, various governmental agencies in Canada and the US worked towards restoring the Great Lakes fishery. Today, the fishery is one of the most intensively managed in the world with annual quotas determine by binational committees.

37. HERITAGE APPLES

Thousands of apple varieties have been named and grown in North America, but today 80 percent of the apples produced in Canada are made up of just 10 varieties, The multitude of lesser-known apples are called 'heritage' varieties, because most of them are quite old. Either brought from other parts of the world, discovered by chance, or bred in Canada, they form a complex and delicious mosaic of Canada's horticultural past.

The John R. Park Homestead Conservation Area's heritage orchard was planted in 1985. It consists of M-26 (MacIntosh) semi-dwarf rootstock. Five rows of five trees each were originally planted. Ten additional heritage varieties were added to the south end of the Homestead's orchard in 2015.

Varieties grafted onto the rootstock included: MacIntosh, Northern Spy, Ben Davis, Baldwin, Red Astrachan, Duchess of Oldenburg, King Tompkins, Spitzenburg, Baxter, Fameuse, Colvert, Newton, Wolf River, Canada Red and Roxbury. These varieties were selected as they were popular at the time that the Homestead was established (circa 1840).

In addition to the Homestead's own use of the orchard for Interpretation and Education purposes at the living history, the orchard is also used by OMAFRA and other agencies because the Homestead's orchard is not exposed to pesticides, herbicides, or fertilizers. As such, it provides a great baseline for scientists monitoring orchards for crop pests, fungus, disease, etc.

38. JESUIT PEAR

According to tradition, the Jesuit Pear was introduced into the region by the Jesuits at the beginning of the 18th century. Once typical of the giant pear trees, whose origins go back to the New France period, have become rare.

Since 2001, they have become the living symbol of the region's French-speaking community, The specimen located at the John R. Park Homestead is estimated to be over 200 years old, is 12 metres (40 ft) high with a trunk measuring 5.7 metres (18.7 ft) in circumference. Despite their great age and their sometimes very advanced state of decay, most of these trees still produce, year in and year out, a large number of tiny, sweet, slightly spicy pears which ripen in mid-August.

QUICK FACTS

39. OUR CHANGING CLIMATE

The Windsor-Essex region is located at the same latitude as northern California and enjoys seven months of short-sleeve weather annually and long growing seasons. Our summers usually have a generous number of warm or hot sunny days and the average temperature reaches above 10°C (50°F) 223 days of the year. The Great Lakes allow the region to experience comparatively mild winters with limited snowfall. Snow depths of greater than 1 cm are seen on about 53 days each year in the region, compared with about 65 days further north in Toronto.

Not only is our climate responsible for a dazzling array of plant communities found nowhere else in Canada or in any of the adjacent U.S. states, it is also responsible for a thriving agricultural industry. From grapes, to cash crops like corn and soy-beans, to greenhouse-grown crops, they all love the Sun Parlour weather.

Over the coming century, the region is expected to continue to experience the severe effects of a changing climate, including flooding from intense rain events in the spring and fall and hotter, drier summers.

40. PAWPAW

Believe it or not, Essex is home to a tropical fruit. The pawpaw, a native North American species that once flourished in the warmest areas of this province, still grows ihere today. While calling it “tropical” might be a bit of a stretch. it does, amazingly, taste like banana, mango all mixed together in a sort of custard and was popular with indigenous people and early settlers.

Papaws grow under canopy because they don’t like lots of sun. Their long, skinny, smooth trunks twisting upwards, topped by drooping leaves that hide the fruit, growing singly or in clumps of two or three. It takes at least five years before the trees start producing this fruit. And mature pawpaws (which are shaped like big peanuts) must be harvested within two or three days, or they go bad.

41. LAKE ERIE ARCHIPELAGO

The Lake Erie Islands are a chain of archipelagic limestone islands in Lake Erie, including Kelleys Island, Pelee Island, the Bass Islands, and several others. While the majority of these islands are American, there are six in Canada with Pelee Island being the only major inhabited island in Ontario, and the smaller Middle Island is the southern most point of land in Canada.

The geology of the Lake Erie Islands is unique. All of the islands have a base of limestone bedrock and rocky shores. When the most recent glaciers retreated over 14,000 years ago, it left behind rich clay and silt deposits, making for excellent agricultural land. Glacial grooves were gouged into soft limestone bedrock, which you can still see today on Pelee Island and Kelleys Island.

Over 40 nationally rare plant species have been recorded on Middle Island, now owned by Parks Canada, and several of the plant communities have been identified as nationally significant (i.e. mature hackberry forest, hop tree dominated scrub with blue ash).

In addition, the entire population of the nationally endangered Lake Erie Water Snake is restricted to the archipelago.

Birds also use these unique landforms to 'island hop' during their long spring and fall migrations. The Pelee Island Archipelago supports one of the richest assemblages of nesting colonial birds in Lake Erie.

42. IMPORTANT BIRD AREAS

Important Bird Areas (IBAs) are discrete sites that support specific groups of birds: threatened birds, large groups of birds, and birds restricted by range or by habitat. IBAs range in size from very tiny patches of habitat to large tracts of land or water.

There are almost 600 IBAs in Canada and 6 of those are here in the Essex Region: Lower Detroit River, Point Pelee, Pelee Island Archipelago, Pelee Island Natural Areas, and Holiday Beach Conservation Area, Eastern Lake St. Clair. These IBAs were designated because of the globally significant concentrations of migratory landbirds and waterfowl and because of the nationally significant 'at risk' species.

QUICK FACTS

43. ESSEX COUNTY DEMO FARM

The 40 acre Essex County Demonstration Farm, established in 1996, is adjacent to Holiday Beach Conservation Area on County Road 50 in Amherstburg. It is operated by ERCA in partnership with more than 25 private and public organizations and individuals. The farm is next to Big Creek Marsh to illustrate an important message: agriculture and the environment can work together in harmony to produce a diverse and sustainable landscape.

The Demo Farm exists to demonstrate conservation practices and innovative products, techniques and technologies, educate the community about conservation farming and its relationship to the protection of our natural resources and promote the use of sustainable agricultural practices.

Since the initiation of the farm, various improvements and accomplishments have occurred. Best management practices (BMPs) have been implemented, such as vegetative management through tree planting to prevent top soil loss and reduce wind stress on plants, establishing wetland buffers adjacent to Big Creek Marsh and implementing tile drainage and no-till cropping techniques.

44. SASSAFRAS

Sassafras is a rare tree in Ontario, occurring in scattered pockets in the Carolinian forest.

Its leaves easily identify sassafras, once you've seen the "mittens". There may be four variations on one branch: a simple oval leaf, a left and right-handed mitten with a thumb-like lobe, and the last with 3 lobes. If you rub the leaves together, you'll smell hints of fruit loops!

The flowers are small and yellow, and the fruit is dark blue on a red stalk, but much-loved by birds. Fall colour can be a mix of yellow, orange or red.

But, it is the root of the tree that is most interesting – the flavouring, Sassafras is made from the roots and was originally used to make Root Beer!

45. AESTHETICS OF PEDESTRIAN BRIDGES

If you've biked or walked along the Rt. Hon. Herb Gray Parkway trails, you have crossed one of seven pedestrian bridges along the corridor.

The design of these bridges were inspired by the significant colours, teachings, and clans of the local Anishinaabe First Nations (Ojibwe, Odawa and Potawatomi people) as interpreted by community members from Walpole Island. The concept for the bridges was based on the 'Seven Grandfather Teachings (Truth, Respect, Wisdom, Honesty, Love, Humility and Bravery). Each bridge's colour reflects one of the four colours of the Medicine Wheel or one of the three colours that represent life on earth. And, each bridge's animal symbol is an artistic representation by Teresa Altiman of the original seven clans of the Anishinaabe people.

46. LIGHTNING STRIKES

The Windsor Essex area is known as the "thunderstorm capital of Canada" with breathtaking lightning displays. Harrow now has the highest number of days of lightning strikes in the country, based on a 10-year average. Lightning strikes there 35.9 days a year.

Windsor, though, still holds the record for most days of lightning in one year at 47. It also has Canada's highest lightning density of 2.8 flashes per kilometre.

47. WRECKED ON LAKE ERIE

Lake Erie is the shallowest of the Great Lakes, the shallowest section being the western basin where depths average only 25 feet. As a result, as Cadillac noted, "*the slightest breeze can kick up lively waves*". These winds can cause wave setup, where the water from eastern end of Lake Erie is pushed towards the west end, producing large, though short-term differences in water levels between both ends of the lake.

These winds have left the lake littered with shipwrecks of schooners, freighters and steamships over the years. How many wreckage sites are below the surface is not known — estimates vary from several hundred to several thousand.

QUICK FACTS

48. THE SIXTH GREAT LAKE

Lake St. Clair has a relatively small area and depth in comparison to the nearby Great Lakes. For example, it would take over 2,900 Lake St. Clairs to fill Lake Superior (the largest of the Great Lakes).

Due to its shallow nature, water passes through the lake relatively quickly, taking roughly 5 to 7 days to flow through from its primary source, the St. Clair River. With a moderate temperature range of 0 to 24 degrees Celsius throughout the year, the lake is home to a variety of freshwater plants and animals and is characterized by multiple shoreline ecosystems, including wetlands, forests and beaches, as well as urban and residential areas.

More than 110 species of warm and cool water fish inhabit Lake St. Clair, many of which use the region for feeding and spawning. Popular angling fish include yellow perch, walleye, smallmouth bass and muskellunge. Wetland areas support abundant macrophytes (aquatic vegetation) and both resident and migrating waterfowl. Species of dabbling ducks, swans and plovers are common in the delta region and shoreline marshes.

49. BEACHES OF LAKE ST. CLAIR

Tremblay Beach Conservation Area is situated on the shore of Lake St. Clair with a sandy beach. Trails can be enjoyed along the shoreline as well as alongside the Creek. The lake here is shallow and the bottom is sandy, ideal for paddling, but not suitable for swimming due to aquatic vegetation. A viewing tower will give you a bird's eye perspective of the abundant and interesting wildlife in the marsh.

Tremblay Beach Conservation Area is one of only two marshes remaining on Essex County's Lake St. Clair Shoreline (along with Ruscom Shores Conservation Area). The sandy beach, 1/2 km shoreline and extensive marsh make it ideal for spring birding, or just a quiet walk by the water.

50. MAKE YOUR OWN AWESOME ENVIRONMENTAL FACT

Looking back on what's happened here iover the last 300 years, it's hard not to think of this region as a kind of paradise lost.

But even today, after centuries of development and environmental degradation, traces of the original landscape remain. And we still find ourselves drawn to these sites, where we can escape the pressures of daily life and commune with the natural world that once proliferated here without having to go far.

The richness of our region means we are protectors of an incredibly important environmental legacy. One of the first Environment Facts delivered was related to Dr. Seuess and the Lorax – one of the most important lines in that book (other than the wake up call it provided for everyone) is:

"*Unless someone cares a whole awful lot, Nothing is going to get better. It's not.*"

Rotarians can proudly count themselves in the group that cares a whole awful lot.

So, I encourage you to get outside. Visit these places. Go for a ride on the Rotary Hub. Visit a Conservation Area. Go to the spring migration festival or get a taste of maple Plant a tree, or more! Volunteer at an event. Find your own nature, whether your own back yard, or that special spot only you know about. Make your own Awesome Environmental Fact!

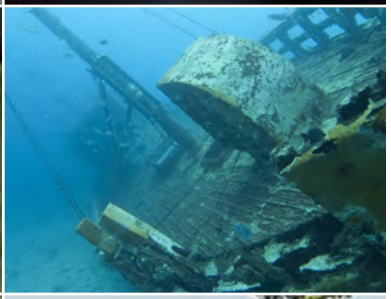
Deer taking the path from my constructed wetland, past the 3,000 recently planted trees to visit me at my back yard. Spring 2019.




NANCY A. SIDDALL








the place for life
Essex Region Conservation
HOLIDAY BEACH
DEMONSTRATION WETLAND