

# *The Quinte Naturalist*

The Quinte Field Naturalists Association is affiliated with Ontario Nature, a non-profit organization sponsoring nature education, conservation and research.

## *September*

*Nature News for Quinte Residents*



*Photo by Joe Bartok*

**Can you identify this insect? It's not what you think. See Page 4**

## SEPTEMBER MEETING

**MONDAY, SEPTEMBER 16TH AT 7 PM**

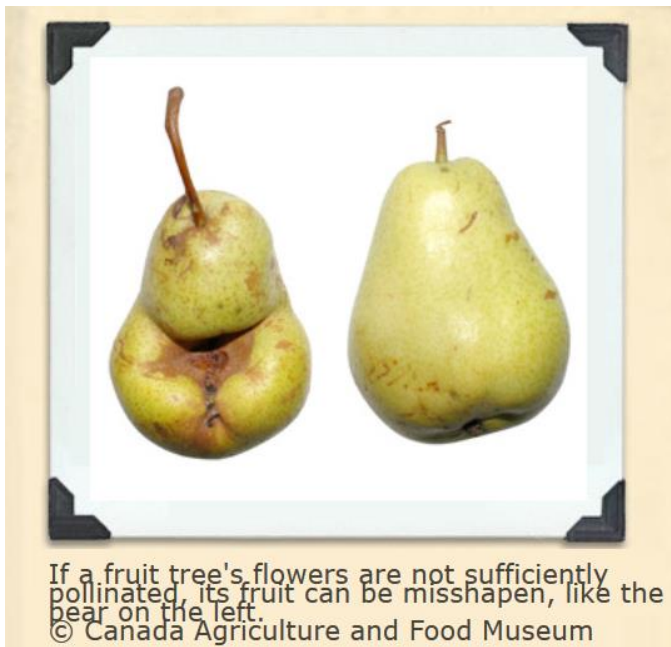
**LOCATION :** Maranatha Church, 100 College Street W, Belleville

Our first meeting of the 2024-25 season occurred in a new venue with a knowledgeable and interesting speaker. It couldn't be anything but a success and it was. The venue was the main auditorium in the Maranatha Church with comfortable seats and an excellent sound system. The speaker was Mike Rehder, president of the Quinte Beekeepers Association and with his wife, Jane Biggs, Proprietor of Ventress Vale Farm. His topic was "Honey Bees, Wasps and Pollinators."

Bees are descended from early predatory wasps creating the main difference between these two groups of insects. Wasps are carnivores. While wasps do contribute to pollination their more important role is preying on and limiting the success of pest species. Bees are very important pollinators and through his talk Mike described how many of our foods are a result of the bees' work including such favourites as apples, beans, garlic, lettuce, peaches and dozens more fruits and vegetables.



**This tomato hornworm has been parasitized by a species of braconid wasp. If you see a hornworm like this leave it alone. The white eggs will hatch and the larva will kill the hornworm. As adults they will infect other hornworms. Don't worry about being stung. Braconid wasps won't sting unless you are foolish enough to try to catch them in your hands. Photo from the government of Maine "Got Pests?" website.**



If a fruit tree's flowers are not sufficiently pollinated, its fruit can be misshapen, like the pear on the left.  
© Canada Agriculture and Food Museum

The pollination performed by bees is so important that there is a thriving business in trucking colonies of honey bees to orchards when fruit trees are blooming. You can also mail order bumble bees to pollinate tomato crops.

Technically honey bees are an invasive, nonnative species but their agricultural and economic importance precludes any attempt to limit their numbers. Unfortunately in the past few years colony collapse disorder in honey bees has caused great concern among beekeepers. Most of the worker bees disappear. Hives are left with only the queen, nurse bees for the larva and food but no workers to collect more pollen and pollinate plants. Many farmers are relying more on native insects to pollinate their crops.

Honey bees cannot pollinate all plants effectively. Some plants, such as tomatoes, require buzz pollination. Bumblebees produce the vibrations necessary to dislodge the



**Blue Orchard Bee**  
**Photo by Joe Bartok.**

pollen. Other flowers, such as red clover, are too deep for honey bee tongues. Mason bees are actually better pollinators than honey bees. One type of mason bee, the blue orchard bee, seen in the photo left, is a native species so prized that it is actively managed for apple, peach and other orchards. Other bee species also have a role to play. Leaf cutter bees are important pollinators of many of our foods and wildflowers. Mike stressed the importance of pollinator diversity.

A question after the presentation led to a discussion about the relationship between humans and honey bees. The question was, “What was the origin of the custom of Telling the Bees?” The practice of collecting honey or keeping bees has gone on for thousands of years. In Celtic mythology bees were seen as messengers between this world and the next. Bees had to be told of important events in the keeper’s life. When a death occurred a family member or servant would knock on each hive, possibly drape it in black, tell the bees of the event and reassure them that they would continue to be looked after well. If they were not told the bees might stop producing honey or leave the hive or even die. The bees at Buckingham Palace and Clarence House received the news after the death of Queen Elizabeth II. It seems silly to modern minds but it is an acknowledgement that we are a part of nature and must look after its needs.

The number of questions after the presentation told a tale. A knowledgeable and enthralling speaker had helped us better understand how we are part of a complicated ecological web. Thank you, Mike.

## Syrphid Flies

Despite its appearance the insect on page 1 is not a bumble bee. It is an orange-legged drone fly (*Eristalis flavipes*), a species of syrphid fly. Syrphid flies are also known as hover flies because of their behaviour and flower flies because of their activities as pollinators. At QFN's September meeting Ken Rehder mentioned flies as major pollinators but had little time to pursue the topic.

In the field it can be difficult for an amateur to tell the difference between a bee and a fly. The most obvious physical clue is that flies have one set of wings (2 wings) and bees have two sets (4 wings). If you can consistently see that fieldmark you're better than I am. The best way to tell the difference is to watch the insect in the air. Syrphid flies hover. They can remain almost stationary in the air and move much like a helicopter. Of course you can also ask for help. Failing a nearby entomologist the next best source is a post showing the insect on iNaturalist. The AI will suggest an identification and an expert will either confirm or refute that identification. I admit that getting a picture of the insect can be challenging. My own efforts are very much a work in lack of progress.

According to *The Field Guide to the Flower Flies of Northeastern North America* there are 416 species of syrphid flies in an area bounded by Tennessee to the south and the Dakotas and Manitoba to the west. Why do so many of them look like bees or hornets? They are making use of a strategy known as Batesian mimicry. Flies in the genus *spilomyia*, like those pictured on this page, tend to look like hornets. Those in the genus *eristalis*, like the orange-legged drone fly, received their common name because they look similar to bumblebee drones. By appearing like stinging, dangerous insects they are hoping to fool predators into leaving them alone.

Flies are very important pollinators although not quite as important as bees. Like bees they transport pollen from flower to flower in their travels. Unlike bees they don't gather nectar or pollen for their larva so they don't produce honey. They consume nectar for carbohydrates and pollen for protein. Still, they do double duty in your garden. The adults pollinate the blooms and their larva eat aphids and other pests. You can watch flower flies and their larva going about their business in this video :<https://www.youtube.com/watch?v=E3nLuK7D7LY>.



*EASTERN HORNET FLY (SPILOMYIA LONGICORNIS). ON THIS INSECT YOU CAN CLEARLY SEE THAT IT HAS ONLY ONE PAIR OF WINGS. LIKE ALL FLIES IT CANNOT STING.*



*FOUR-LINED HORNET FLY (SPILOMYIA SAYI)*



SYRPHID FLIES ARE ATTRACTED TO FLOWERS BY THEIR ODOURS. THAT PERFUME MAY NOT BE APPRECIATED BY HUMANS. WE ALL LOVE TO FIND RED TRILLIUMS. HAVE YOU EVER SMELLED ONE? THE BEST ADVICE I CAN GIVE IS, "DON'T." THE ODOUR HAS BEEN COMPARED TO THAT OF DECAYING MEAT.

The Quinte area supports an abundance of syrphid fly species. Joe Bartok has posted 1566 sightings of 85 species mainly on a two kilometre stretch of the Trans-Canada Trail through Tweed. That's a significant percent of the 202 Ontario species identified on iNaturalist. In September and October look for Syrphid flies on asters and goldenrods, that's where I'll be trying to hone my skill at photographing them.

Many thanks to Tweed area naturalist, Joe Bartok, who allowed me to use his pictures for this article and inspired me to learn more about these important but often ignored or misidentified members of our local wildlife.



## Mimicry



There are many types of mimicry in nature. Three are illustrated above.

The longhorn locust borer (photo by Joe Bartok) is an example of Batesian mimicry. The larva of this hornet look-alike is a pest of black locust trees. Look for the adult on goldenrod.

The viceroy (photo by Joe Bartok) in the middle was once thought to be another example of Batesian mimicry. Now it is considered to demonstrate Mullerian mimicry with monarchs. In this case both species are distasteful to predators. Both species benefit. When a predator learns to avoid one species it will avoid both because they look so similar.

The eastern screech-owl (photo by Robert Ormston) is an example of cryptic mimicry. It hides by looking similar to the bark of the tree where it roosts.

## Fall Planting Event!

Please mark your calendar! **October 25 and 26** will be the dates of our next volunteer planting.

As you already know the Spring Plant Sale was a great success and raised enough money to support the purchase of 8 trees for Tweed's park ravished by the tornado in 2022 and to plant trees and shrubs in Clifford 'Sonny' Belch Park in Belleville. We also were awarded 2 grants again this year through the Home Hardware/Tree Canada program. So many thanks to Bayview Home Hardware and Belleville Home Building Centre for helping us apply for these funds to plant trees. Please thank them for their support of wildlife when you visit their stores.

And there is more great news! This year we also have 2 new partners planting with us. Our plan this time includes the planting of about 45 large calliper trees. Neil Bouma of Picture Perfect Landscaping has very generously volunteered to plant the trees for us! This is a huge gift of around 90 hours labour and equipment. We would certainly not be able to do this without him. We also will be welcoming Rotary Loves Trees who will be funding and helping to plant 140 more trees and shrubs in the park. Rotary hopes to plant a tree for every citizen in Belleville. That's a worthwhile and lofty goal and I would hope that we might continue this partnership in future plantings. Clifford 'Sonny' Belch Park (formerly Hillcrest Park) is in the process of being redeveloped to meet the needs of the growing city. Pickleball and basketball courts have been added as well as washrooms, a skate dot and a playground, with more to come next year. But in the process over 130 trees were removed - some for the development and some due to disease.



MERLINS ARE SMALL FALCONS. THEY SCOLD LOUDLY IF HUMANS VENTURE NEAR THEIR NESTING TREE. PHOTO BY TOM WHEATLEY.

So our part is to help replace the lost trees and re-wild some of the undeveloped areas.

We'll plant to soften the recreational areas but the majority of the planting will be in a naturalized area that will expand and connect the larger existing mature pines on site. These pines already support a family of Merlins that return every year and are a joy in the neighbourhood. Monarch butterflies were also seen staging in them as they gathered for fall

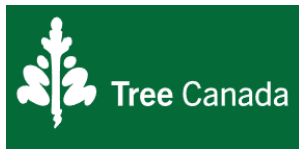
migration one year. As Quinte Field Naturalists, we like to think we are planting for nature and wildlife - providing habitat and food sources for birds and mammals, as well as working to mitigate climate change. Of course we are also happy that this creates beauty and habitat for humans as well!

I hope you will join us in October on planting day. If you don't want to plant, perhaps you'll help with our QFN displays and encourage new members to join, spread mulch, or hand out snacks to hungry volunteers!

To volunteer <mailto:gregPparsons@gmail.com>



### Our Partners in this Project



### Note to QFN Members

**How to Support QFN** – Our projects, like tree planting, require more hands than the executive can provide. QFN members have turned out to help with tree planting and plant sales. We still need more help. You could be a QFN ambassador, assisting board members staffing our displays to talk to visitors about QFN. Marketing has been broken down into smaller units so please consider offering your knowledge and skills

**How to Support Nature and the Community** – Membership dues provide the money we use to pay for the hall rental, insurance, speaker fees, etc. When we receive enough money to cover these expenses profits earned in the plant sale, the annual dinner and donations can be devoted to causes such as tree planting, pollinator gardens, Sandy Pines and the Ontario Turtle Conservation Centre. Most dues were paid in January. If you think you might be in arrears please contact our membership Nancy Stevenson, our membership secretary. 613-922-9566 or [nlsriver@gmail.com](mailto:nlsriver@gmail.com).

## A New Quinte NCC Property



Many of you will remember Cliff Maclean (in the black jacket). Cliff and Heather lived on a 57 hectare property with over a kilometre of Moira riverfront just a little south of Chisholm's Mills. Remarkably this primarily natural property is within Belleville's boundary in the rural northeastern part of Thurlow Ward.

You can find a wealth of ecological values on the Maclean property. Threatened species such as the wood thrush prosper in the old growth and mixed forests. In the fields and meadows endangered eastern meadowlarks and bobolinks are regular nesters. The wetlands provide habitat for aquatic species and, in combination with the forests and grasslands, conserve and filter the water which flows into the Bay of Quinte.



The two pictures above show one of the Maclean property's unique features, karst topography. Karst develops when rainwater combines with carbon dioxide in the atmosphere to form a weak carbonic acid. In the soft limestone bedrock this acid gets into cracks and eats away the limestone forming new channels above and below ground. Eventually the underground channels cause the limestone to collapse in a jumble of large rocks. Walking is difficult as there is a constant threat of injuring yourself if you step into a hole or unto unstable rocks

Cliff and Heather have both passed away but they knew the ecological value of the property and wanted it preserved. The family has fulfilled this wish by enabling the Nature Conservancy of Canada to acquire it and establish the Moira River Karst nature reserve. *(Photos courtesy Terry Sprague)*



## Other Club News

**Community Outreach** – John Lowry and Lowry Borthwick represented QFN at a Quinte Conservation Information Session regarding invasive species in the Bay of Quinte. Our display board generated some interest.

On September 28 John Lowry will attend the West Lake Annual Environmental Symposium at Isiah Tubbs. The theme is “*Prince Edward County is an Island...Climate Impact on Shorelines, Natural Habitats and Wetlands.*” It is an all day event. For more information visit the website. <https://www.invasivespeciescentre.ca/event/annual-environmental-symposium-prince-edward-county-is-an-island-climate-impact-on-shorelines-natural-habitats-and-wetlands/>.

**Advocacy** - Elizabeth Churcher, our corresponding secretary, has sent letters to the Ontario government regarding several issues: the need to restore the integrity of the Endangered Species Act, the environmental and agricultural consequences of the building of highway 413 and the cancellation of plans to require beverage companies to pay a recycling fee for their containers.

**Next Meeting** – The next meeting will be on Monday, Oct. 21, 7:00 pm at the Marantha Church on College St. West. Speaker is Dan Guenther, Proprietor of Wild Birds Unlimited. As the winter bird feeding season approaches it’s the perfect time to hear about the best ways to attract over-wintering birds and about how to deal with possible problems.



Dark-eyed Junco by  
Andrea Kingsley

Red-breasted  
Nuthatch by  
Rick Beaudon



Common Redpoll by Kyle  
Blaney



## Autumn Glow

By George Thomson and Elizabeth Churcher

Reprinted with permission from the Tweed News, Oct. 14, 2015

The 'Season of Thanksgiving' is with us. As we load up the wheelbarrow with Butternut Squash and fill bushel after bushel with potatoes, we are reminded that we live in a land of plenty. A brief departure from the fruit and vegetable gardens to gaze across our rolling landscape, too, fills us with gratitude for living in beautiful Tweed surroundings. Right now, as autumn is making its way onto the stage, a spectacular show is beginning to unfold --- a show that is unique to northeastern North America. Our woodlands are transforming from their lush green summer cloak to their magnificent autumn glow. Only at this time of the year, in the northeastern portion of our continent, do whole forests change colour almost simultaneously. The colour change is confined primarily to the hardwood trees. Here, though, we may mention one cone-bearing tree, the Tamarack or Larch. Who has not been thrilled by the wonderful golden-yellow colour of the Tamarack needle-leaves in autumn, especially when they stand out against the dark greens of spruces and pines? The Tamarack is our only deciduous conifer, and, along with poplars, lends colour to regions of Western Canada.

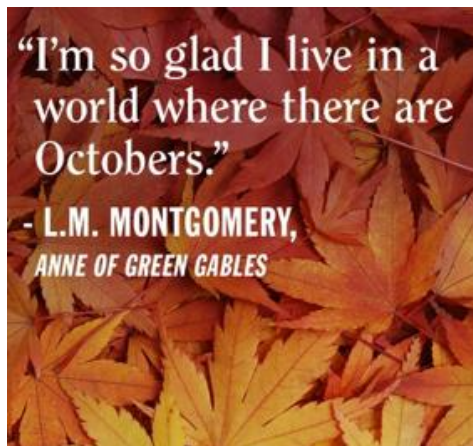
Each season of the year welcomes a different set of conditions for trees and they respond in ways that support their ongoing life. After their green phase and their production of sugars by photosynthesis all through spring and summer and into autumn, leaves on trees change to other vibrant colours. We have only to think of the bright crimson of Sumacs & Red Maples, the golden yellows, roses & oranges of Sugar Maples, the yellows of poplars, hickories, birches & oaks, and the wines of the ashes. What causes all of these colours? Sit back, relax and let us explore these changes together. The green pigment, chlorophyll, the pigment in leaves that is essential for photosynthesis, is contained in leaf cell structures called chloroplasts. Countless numbers of green chloroplasts give the green colour to leaves. But what about the yellows and oranges? It turns out that they are in the leaves all along, hidden by the predominant green colour. Just like the chlorophyll, the yellow and orange pigments, called xanthophylls and carotenes respectively, are located in the chloroplasts. In the chill of autumn, the production of chlorophyll slows and the chlorophyll molecules eventually break down into colourless compounds. This hierarchical shift in pigmentation allows the carotenes and xanthophylls to show their colours. --- Viola, the bright yellows of aspens, birches & hickories and the oranges of Sugar Maples! Just in

case you are wondering, this orange colour is produced by the same carotene pigment that fills our carrots with vitamin A.

The 'reds', from flaming scarlet to deepest purple, have a somewhat different story. These rich colours are caused by pigments called anthocyanins which are also responsible for the red colour in fruits and vegetables such as red cabbage, radish, beets, cherries, apples and grapes. --- And after we enjoy the brilliant scarlet red of the Red Maple, we can look forward to anthocyanins providing beauty for us as we decorate our homes with Christmas Poinsettias. Anthocyanins are found in a structure within the leaf cell called a vacuole. As the weather gets colder, they become more abundant. All of the vibrant colours of autumn appear as we feel a chill in the air. A sudden temperature drop just after the sun has set is especially likely to produce brilliant autumn leaves. --- And so are crisp, sunny fall days. If, however, a hard frost visits early, the pigments in the leaves are destroyed and the leaves on the trees become more brownish than coloured.

As winter approaches, our landscape changes gradually one more time. With the help of winds, leaves fall to the ground and the magnificent glow dims. Eventually, chemical changes in the colour pigments cause the leaves to turn brown and we are left with a sombre blanket over our gardens and forest floors. But do not despair: all is not dark. These leaves will decompose and, after winter's sleepy days, will provide nutrients to soil that will support new life in spring.

As autumn marches on, we encourage you to give thanks and feast on all that this wonderful season shares with us. Enjoy the fall colours while they last. Go out into the woods, wander down a trail or stroll across a meadow and revel in Nature's spectacular production, 'Autumn Glow'.



## Algonquin Autumn



On September 15 hills surrounding Tea Lake in Algonquin Park were just starting to turn. As the days shorten and temperatures drop the emerging colours will become more vibrant. The best show is on the west side of the park. For a report of fall colours as they progress through the season check this website. <https://www.ontarioparks.ca/fallcolour>

### QFN BOARD

- George Thomson – Past President - 613-478-3205
- Dan Guenther – Treasurer – 416-559-6257
- Elizabeth Churcher – Corresponding Secretary - 613-478-3205
- Nancy Stevenson – Membership, Social - 613-779-9407
- Sharron Blaney – Recording Secretary – 613-962-0935
- John Blaney – Newsletter – 613-962-0935
- Lori Borthwick – Member at Large – 613-391-9335
- John Lowry – Member at Large – 613-962-5232
- Robert Ormston – Member at Large