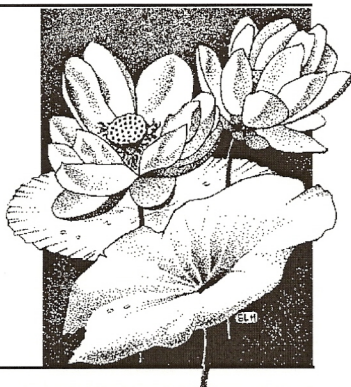


Lotus

NEWSLETTER

of the
NORFOLK FIELD NATURALISTS



DECEMBER 2017



Cicadas vs Katydid

By W.D. McIlveen (with permission)

By late summer, the songs of breeding birds have mostly died away leaving just the year-round resident species to make any significant calls. Amphibian calls too have mostly passed for the year. But nature is not quiet, yet as other creatures take their turn using sounds to attract mates. Mostly, the callers are insects. Of course, we can hear the buzz of bees and wasps which create sounds simply by flapping their wings as they move from place to place, typically during daylight hours. Mosquitoes do the same in both the dark and the light and are usually more annoying to us humans.

The present article deals mainly with two groups of insects that use sounds to communicate their biological urges to mate as so propagate their species. The two groups might get confused in the minds of the average person so hopefully the following will help to clarify the differences between cicadas and katydids. As well, there are three further groups that are related to the katydids that also make audible calls for mates. These are the grasshoppers, the tree crickets, and the true crickets. The latter two are more conspicuous during the hours of darkness when the general background sounds of all things and visual information available in the daylight does not overwhelm our senses.

The Cicadas

Cicadas are true bugs in the Order Hemiptera and insect family Cicadidae. All cicada species look very similar and species are difficult to distinguish. They typically have large bodies. The adults have black to dark brown bodies ornamented with green and yellow venation depending on the species. The

eyes can be red, orange or brown which makes them appear slightly ferocious. The dried wings are clear with dark veins (Fig. 1). The veins on freshly-emerged adults are a beautiful pale green (Fig. 2).



Figure 1 Adult Dog-day Cicada - Rattray Marsh - August 24, 2015



Figure 2 Freshly-emerged Dog-day Cicada - Acton - August 25, 2014

For many people that have any familiarity with cicadas, they are well aware of the Periodical Cicada that is often referred to as 'locusts'. None of these species occur in Canada save for a possible occasional stray from the adjacent United States. They are included here only to clarify their unusual life style in comparison to our local species.

The Periodical Cicada has an unusual life cycle. It is one of the longest-living insect species taking seventeen or thirteen years of living underground feeding on tree roots before they emerge to breed. It is proposed that the length of these particular life cycles represent prime numbers so that parasites have difficulty coordinating their own life cycles with those of the cicadas. In this way, the cicadas have a good means to avoid massive attacks by

predators and pathogens. The other feature of this strategy is that the cicadas all emerge at the same time. The massive numbers that emerge during the years of maturity is so large that existing predators cannot consume enough of their prey to decimate the cicada population. This allows large numbers to escape attack and so the new generation get established. Despite this apparent advantage of the cicadas over potential predators, the entomopathogenic fungus *Massospora cicadina*, which infects adult cicadas, manages to survive in the soil as dormant spores between host generations [Speare, 1921]

As noted, Periodical Cicadas have developed 17-year and 13-year forms. As well, these have similar cycle length in three types. The three types and cycle length have been assigned to seven separate though similar species

	'decim group	'cassini group	'decula group
17- year Cycle	<i>Magicicada septendecim</i>	<i>Magicicada cassini</i>	<i>Magicicada septendecula</i>
13- year Cycle	<i>Magicicada neotreddecim</i> <i>Magicicada tredecim</i>	<i>Magicicada tredecassini</i>	<i>Magicicada tredecula</i>

By contrast, our local species are described as 'annual'. In fact, the species live from two to five years. The 'annual' name is applied instead to describe the fact that the cicadas emerge in similar numbers every year. Like their Periodical cousins, they feed on tree roots in their nymph state. When they emerge, they climb convenient surfaces, frequently tree trunks. They undergo metamorphosis and transform into their adult form leaving a shed skin or exuviae attached to the surface when they emerge. The exuviae are usually the most tangible evidence of the cicadas for most people.

There are six species of cicada in Ontario in two genera. The Ontario species list includes *Okanagana canadensis* (Canadian Cicada), *Okanagana noveboracensis*, *Okanagana rimosa* (Say's Cicada), *Neotibicen linnei* (Linne's Cicada),

and *Neotibicen lyricen* (Lyric Cicada). The most common species is *Neotibicen canicularis* (or *Tibicen canicularis*) (Dog-day Cicada). This is the most common species that we hear making a buzzy call from trees in our area.

The Katyids

Sometimes cicadas are called katyids and katyids are referred to as cicadas. This would be incorrect in both instances. Unlike cicadas which are true bugs, katyids belong to an entirely different insect order. Katyids belong to the Order Orthoptera which is aligned with the grasshoppers [Vickery *et al.*, 1985]. In Ontario, there are 24 species that partly share the common name 'katyid'. These are fairly diverse species within three different families – namely the Conocephalidae, Phaneropteridae, and Tettigoniidae (Fig. 3).



Figure 3 Adult Katydid species – Ratray Marsh – October 20, 2009

Despite their very different taxonomic status, the egg-laying practice is shared, at least to some extent. Cicadas use their ovipositors to cut slits in the bark of tree twigs while some of the Katyids perform a similar procedure on plant stems. As adults, cicadas do not feed at all whereas adult katyids feed on plant foliage.

Although cicadas and katyids can cause some damage to vegetation, this is seldom great enough to be considered serious. The insects themselves are quite attractive and their 'song' adds greatly to the pleasant ambience of summer days and nights, even if we are not aware of their presence as individuals.

References

- Speare, A.T.** 1921. *Massospora cicadina* Peck: A Fungous Parasite of the Periodical Cicada. *Mycologia* **13**: 72–82.
- Vickery, V.R., D.K.McE. Kevan, and C.D. Dondale.** 1985. The Grasshoppers, Crickets, And Related Insects Of Canada And Adjacent Regions: Ulonata: Dermaptera, Cheleutoptera, Notoptera, Dictuoptera, Grylloptera, And Orthoptera (The Insects and Arachnids of Canada #14) Publication 1777. Research Branch, Agriculture Canada, Ottawa. 918 pp.

THANK YOU

All of us at the NFN
would like to extend our sincere gratitude
to all those who made donations to the NFN
in memory of
Pat Robinson
and
Jim Harlow

Welcome New NFN Member

Judy Zuber

We look forward to meeting you and
hope you will participate in and enjoy all
the NFN indoor presentations and field
outings.

VOLUNTEER WANTED!

The NFN is looking for one or two
DIRECTORS-AT-LARGE

Tasks: attending 4 Board Meetings and the
AGM

Contact Inga at:
519-875-5601 or daveinga@live.ca

Carolinian East Regional Meeting Report

From October 14th, 2017 Meeting

The following groups were represented:

Bert Miller Nature Club, Woodstock Field Naturalists, Niagara Falls Nature Club, Halton/North Peel Naturalists Club, Peninsula Field Naturalists' Club, Hamilton Naturalists' Club, South Peel Naturalists' Club, and Ontario Nature

Discussion highlights include:

Bert Miller Nature Club

- Chimney swift monitoring for Bird Studies Canada, mid-May to mid-September.
- Fourth Annual Butterfly Festival at the Stevensville Conservation Area.
- Continued stewardship at Shagbark Nature Park with trail cleanup
- Representation on the Environmental Advisory Committee of Fort Erie.
- Advocated to help save wetlands in Thundering Waters development in Niagara Falls.

Halton/North Peel Naturalists Club

- Development of a Bird Friendly Yard brochure to be distributed at community events.
- Participation in a birding day in support of Wildlife Preservation Canada and their Loggerhead Shrike Recovery Project.
- Upcoming: removal of woody vegetation at Forks of the Credit Provincial Park to maintain grassland/meadow ecosystem.

Hamilton Naturalists' Club

- Held a "Day on the Bridge" Cootes to Escarpment Ecosystem park fundraiser with an estimated 3,000 to 4,000 people in attendance
- Impressive progress is being made in restoring Bronte Creek and its tributary, Mountsberg Creek, at Courtcliffe Park in Carlisle. Key partners include Conservation Halton, the three levels of government and Trout Unlimited Canada.

Nature's Calling Environmental Education

- Hosted the 8th annual "Rooted in Nature" Outdoor Festival.
- Hosted "Shinin' Times Mountain Man Rendezvous" (a Pre-1840 re-enactment).
- Ran an Eco-Explorer summer camp with an average of 22 kids/day.
- Initiated a forest kindergarten with seven children registered during the first term.

Niagara Falls Nature Club

- Hosted nature walks every Wednesday evening from late April until early September
- Participated in a monarch teaching initiative with Niagara Parks.
- Several members were judges during the Envirothon contest for high school students.

Norfolk Field Naturalists

- Collaborating with Long Point Phragmites Action Alliance (LPPAA).
- Providing manpower for preparing a controlled burn at St. Williams Forest Reserve.
- Providing manpower for annual road side Cleanup at NCC's Backus Block properties
- Fundraising for Bird Studies Canada by participating in the Great Canadian Birdathon.

Peninsula Field Naturalists' Club

- Port Weller West Migration Study is in its fifth year of charting migratory birds.
- Conservation of Niagara's Lake Erie Coast.

South Peel Naturalists' Club

- Intervened to preserve nesting chimney swift habitat from damage and destruction.
- Sponsored youth to attend Ontario Nature's Youth Summit for Biodiversity and Environmental Leadership.
- Signed on to EBR submission made by Oak Ridges Moraine Coalition regarding proposed natural heritage system for the Greater Golden Horseshoe.

Cont'd page 6

**To All NFN Members and Friends:
MERRY CHRISTMAS
and
HAPPY NEW YEAR**



The Ontario Ministry of Natural Resources and Forestry and partners have undertaken one of the first aquatic uses of herbicide to control phragmites in Canada at Rondeau Provincial Park and the results so far appear successful.

The ministry was approved for emergency use of the herbicide at Rondeau and Long Point Provincial Park in 2016 and again earlier this year by Health Canada's Pest Management Regulatory Agency.

According to a September report from the ministry, this type of treatment was not used in Canada prior to 2016, but it has been used regularly in the U.S. The herbicide can only be used in Canada when permission is granted by the PMRA.

"We've consulted some U.S.-based experts in some adjacent states who have a long history of control of aquatic infestations of phragmites," said Michael Irvine, the provincial vegetation management specialist at the ministry.

"They do many thousands of hectares per year and we really benefited from their experience."

The 2016 phase of the project mostly applied the glyphosate-based herbicide through aerial means over 500 hectares at Rondeau, which borders Lake Erie.

The goal is to control phragmites in wet areas, which the ministry says is needed to prevent the spread of this invasive species on both dry and wet lands.

Phragmites is an invasive grass species which was transported from Europe to North America and has caused "severe degradation to coastal wetlands and beaches," according to the ministry.

Irvine said assessments made of the 2016 project earlier this year show it was very effective, but monitoring will continue because phragmites can often have dormant roots which lead to its return.

"We're pretty excited about the results we've gotten," he said. "Based on flyovers, it looks really good. The areas treated last year are returning to their natural state, pre-infestation."

The 2017 phase of the project, which took place from August to October, involved mostly ground application of the herbicide at Rondeau. According to the report from the ministry, the additional use of the herbicide was needed to ensure phragmites does not recolonize the areas treated in 2016.

The areas at Rondeau and Long Point are considered under emergency because "the health of these coastal marshes is at a critical tipping point," according to the ministry.

Irvine said controlling the phragmites at Rondeau would mean restoring the natural plant life in aquatic areas, which creates habitat to attract birds and various species of turtles, toads and snakes at risk.

"Rondeau is such an important area for birds," he said. "It's internationally recognized. When everything is phragmites, birds are not able to use that habitat."

The people who worked on the project ensured the glyphosate did not extend parts of Rondeau where there is no phragmites, said Irvine.

"There was continuous monitoring of the water on site and adjacent areas," he said. "The level of glyphosate never exceeded drinking water standards in Ontario."

The monitoring of the project is being conducted by the University of Waterloo. They will perform surveys to see how effective the treatment has been, determine what happens to the glyphosate at water treatment sites and look at the risks the herbicide poses to the ecosystem.

Irvine said additional results from the two projects should be released next summer.

Thank You!

**From Norfolk Field Naturalists to
Will Partridge / Guardian Computing
For hosting our website**

Carolinian East Regional Meeting Report cont'd.

Woodstock Field Naturalists

- Continued involvement in restoration of the Woodstock to Hickson Trail; two bridges to be installed soon.
- Many members volunteer with a local trail association that is working on a decommissioned rail line (from Woodstock to Ipsom) to create a recreational trail.
- Walker Industries' proposed Oxford Quarry landfill is an ongoing issue.

Ontario Nature

A report "Reaching 17%: The Protected Places Campaign" was presented. The goal of this Campaign is to permanently protect at least 17% of Ontario's land and inland waters by 2020. Currently, approximately 10.6% of Ontario lands and inland waters are protected in legislated protected areas, which is the same as in 2011. To reach 17%, another 70,000 square kilometres needs to be protected. From a biodiversity conservation perspective, we need to think about ecological representation, connectivity and the effective management approaches that will conserve biodiversity over time.

The federal government, provinces, territories, Indigenous leaders and conservation organizations across the country are now talking about and planning how to achieve the 17% target by the year 2020. The Ontario government has committed to achieving the national target, but hasn't yet committed to doing that provincially.

There are eight opportunities:

- 1: Regulate Forest Stewardship Council (FSC) Candidate Protected Areas for a potential gain of 3,250 km².
- 2: End logging in Algonquin Provincial Park for a potential gain of 4,988 km².
- 3: Convert Enhanced Management Areas to protected areas for a potential gain of 18,742 km² on the Canadian Shield.
- 4: Regulate recommended protected areas for a potential gain of 3,108 km².
- 5: Protect Crown land for a potential gain of 14,981 km².
- 6: Secure private land
- 7: Make existing conservation lands count.
- 8: Far North which makes up 42% of Ontario or 451,920 km².

Welcome new Director!

Cindy Presant

We are thrilled to have you on board and agreeing to be Secretary

Here's a photo of the mystery creature seen this Summer and Fall by member, Don Emerson, in his backyard. At the November meeting, attendees thought it could be a weasel by the description, but obviously is not. Could it be a leucistic Eastern Chipmunk?



Weather and Northern Lights

Below are some good websites from David Chapman, our speaker in October:

www.raydar.ca It is a good radar for not just seeing storms in southern Ontario, but it also shows where the chasers are too.

www.spaceweather.com It is a great starter website for finding out when the northern lights could be possibly visible.

www.solarham.net is another great website for northern lights, with a little more in depth information.

<https://www.canada.ca/en/environment-climate-change/services/lightning/safety/overview.html> A great website for lightning safety from Environment Canada



Bernie Solymár received the Canada 150 Medal for his leadership in creating outdoor opportunities for the young people in his community. Congratulations!

Pollinators Welcome

Our Special Spaces, an annual series of activities designed to engage local volunteers in nature conservation, reached a milestone this year, including more events and engaging more participants than ever before. The Ontario Nature Youth Council, a network of young environmental leaders, organized 10 events around southern Ontario in May and June with the support of local partners.

The 2017 program continued to focus on pollinator protection, as in previous years. During Our Special Spaces events, the council encourages the creation of habitat for wild pollinators, which in turn promotes healthy ecosystems.

“The program helps to create a connection surrounding a critical issue,” says Melissa Cusack Striepe, a Youth Council member and student at McMaster University. “It brings together people from a community, educates them about the issues [affecting] pollinators, lets them do something to help and connects them to a group concerned about the same issue.”

This connection with like-minded young people is what led Daynan Lepore to help organize several pollinator-friendly garden plantings. “I’ve always had a curiosity about nature,” says Lepore, a Youth Council member who lives in Hamilton. “To me, nothing is more important than a sustainable environment.”

More than 2,700 pollinator-friendly native plants were planted during this year’s events. Special thanks go to TD Friends of the Environment Foundation, The Chawkers Foundation, Mountain Equipment Co-op and Ontario Trillium Foundation for their generous support of the Our Special Spaces program.

—Ron Corkum

Read ON Nature magazine online by going to:
<https://view.publitas.com/on-nature/on-nature-fall-2017/page/1>

For further info on this and other topics, visit:
ontarionature.org

The NFN Board of Directors met on October 24, 2017. The following are highlights of this meeting:

Treasurer’s Report: Barb reported deposits totalling \$2391.53 in September and October. The assets total \$60,858.04. The maturing GICs held by NFN will be rolled over every 3 months, as usual.

Directors’ reports: *Membership* - Diane reports 60 renewals to date. Inga has calculated 215 individual members, including two for each family membership.

Publicity - Notices have gone out to local media and Ontario Nature.

Natural Areas/Sanctuary - Peter will be clearing trails in the next months (when tick activity tails off)

Speaker Program and Field Outings - Len will be starting on the 2018/19 program in the new year. We have requested newsletters from other naturalist clubs for useful leads on guest speakers and field activities.

Environment: Stu MacKenzie, Peter and Bernie met to discuss strategy, re. municipal roadside mowing

Lotus Editor: Jan is working on the December issue.

Committee reports: *NCEE* - Bernie has hired a new educator, Lauren Dehens. Forest Kindergarten launched in September with Colleen Dale as educator. NCEE got notice from Delta Waterfowl that HHCC facility will not be available after December. Programs will continue at the Forestry Interpretive Centre in the short term. Bernie is in talks with Ryerson Camp Board of Directors. Fundraiser to support NCEE will be held at NFN Christmas Social.

The Board approved a request for \$25,000 from LPBLT toward the purchase of a new 50-acre tract of land. This amount is subject to General Membership approval at the November meeting.

The Board reviewed nominations for three Honourary positions; and selected George Pond for Honourary President and Anne and Dolf Wynia for the two Honourary Director positions. Inga delivered the news to the recipients in person.

The next BoD Meeting will be held on Tuesday, January 23, 2018.

At the November 14 meeting, the general membership approved the donation of \$25,000 to LPBLT.

Upcoming NFN 2018 Winter Events

Sunday, December 17, 2017

Christmas Bird Count

Woodhouse Count (Norfolk County)

Contact: David Okines
davidokines@gmail.com
519-586-9464

Sunday, December 28, 2017

Christmas Bird Count

Fisherville Count (Haldimand County)

Contact: Linda Thrower
linda1@295.ca
905-774-1230

**Sunday, January 21, 2018,
2:00 to 6:00 p.m.**

Winter Birding in Haldimand County

The fields and pasture of Haldimand attract many wintering raptors, including Short-Eared Owls. The open water along the Lake Erie shoreline can be a good spot for waterfowl and the occasional Bald Eagle. Bring binoculars and wear warm clothing. Meet in Port Dover at the base of the dock on the west side of the harbor. *Contact Len at 519-428-6796.*

**Saturday, March 3, 2018,
7:30 to 9:00 p.m.**

What a Hoot — Owl Prowl

Take a moon lit hike as we play the recorded calls of local owls to entice them to answer us. Listen to the deep hoot of the Great Horned Owl and the horse-like whinny of the Eastern Screech Owl. Dress warmly and bring a flashlight. This is a joint event with Nature's Calling Environmental Education. Location TBA. *Contact Bernie at 519-428-0706.*

NFN Meetings

Norfolk Field Naturalist meetings are held the second Tuesday of the month from September to May.

Meetings take place at the **Simcoe Seniors Centre, 89 Pond Street.**

The meetings are free and visitors are always welcome. Doors open at 7:15 pm, programs begin at 7:30 pm.

NFN Mailing Address

**Norfolk Field Naturalists
PO Box 995, Simcoe, ON
N3Y 5B3**

Next Lotus Issue:

February 2018

Input dead line:

Friday, January 26, 2018

About the NFN

Norfolk Field Naturalists members participate in meetings and field outings, many of which are family-friendly. **Membership fees are \$20 Individual and \$30 Family.**

Donations are eligible for income tax credits. Charitable registration # 11905869RR00001

Guest speakers present programs on interesting and relevant natural history and conservation topics. Club members receive the Lotus newsletter with articles on local natural history and club activities. Copies of the Lotus are available at meetings, by mail or by email and posted on the NFN web site. Articles published in the Lotus reflect the views and opinions of the authors, but not necessarily those of the NFN.

www.norfolkfieldnaturalists.org

2017 - 2018 NFN Executive with Contact and Project Information

All 519-			
President	Inga Hinnerichsen	875-5601	daveinga@live.ca
Vice-President	Len Grincevicius	428-6796	portie_1989@eastlink.ca
Sanctuary	Peter Carson	586-3985	gartcar@kwic.com
Past President	Bernie Solymár	427-9969	solymar@nomet.on.ca
Treasurer	Barb Hourigan	583-1198	bbhourigan@yahoo.ca
Secretary (Acting)	Cindy Presant	586-9258	cindy.presant@gmail.com
Director/Membership	Diane Salter	586-7775	bigcreek@kwic.com
Director Speaker Program and Field Events			
	Len Grincevicius	428-6796	portie_1989@eastlink.ca
Director Publicity	Sue Olmstead	583-1436	ksolmstead@kwic.com
Director Environment	Bernie Solymár	427-9969	solymar@nomet.on.ca
Director-at-large	Ken Olmstead	583-1436	ksolmstead@kwic.com
Director-at-large	vacant		
Director-at-large	vacant		
Director-at-large	vacant		
Lotus Editor (appointed) Jan Grincevicius 519-428-6796 pwdtwo_2@eastlink.ca			
Butterfly Counts: (appointed) Adam Timpf 586-9964			
Christmas Bird Counts: (appointed) David Okines - Woodhouse Count 519-586-9464			
Linda Thrower - Fisherville Count 905-774-1230			
Honorary President:	George Pond		
Honorary Directors:	Anne and Dolf Wynia		