



The Prairie Arborist

The Official Publication of the ISA Prairie Chapter Issue 4 2019



Photo by Keith Anderson



Bonnie Fermanuik

As we welcome in 2020, I would like to thank the membership for their trust in me to serve another term as president of the ISA Prairie Chapter.

My first item of business is to extend a huge THANK YOU to Mimi Cole, our outgoing president.

Mimi served a number of terms as Alberta Director and worked many volunteer hours for the Board's events and the Chapter TCC.

I'm excited for the future of the Chapter with Toni Marie Newsham being elected into the vice president role. The chapter is seeing some new young professionals stepping up to provide new ideas and energy.

The year ahead looks busy with TRAQ and TPAQ workshops being planned. And some mini events in the various provinces. None of this is feasible without our dedicated Executive Director, Keith Anderson who works part time but puts out the work of a fulltime staff.

Our Chapter is only as strong as its membership and its volunteers. If you are interested in an event we would love to hear from you.

It not what the Chapter can do for me but what can I do for the Chapter you all have so much to offer.

Work safe and have an awesome 2020.

Bonnie Fermanuik



Mimi Cole President

A message from outgoing President Mimi Cole

Another successful conference.... Yes, it has been a busy few months for the Chapter - the TCC, closely followed by the pests workshop in Calgary (Thank you, City of Calgary for your sponsorship of this event..and to all presenters).

The annual Prairie Chapter conference has just concluded, with record numbers for recent years. As anyone attending can attest, it was worthwhile! An engaging line-up of speakers and our usual complement of professionals giving us a great trade show..and of course, Mr. Keith Anderson selling us the books we all need. Thanks, Don, for emceeing...Thank you, High River, for having us and a special thanks to 2 ladies who worked hard to make it all happen - Tawni Bartisch and Darlene Donovan, couldn't have done it without you!! And I have a new favorite tea mug!

For the first time in the Prairie Chapter (2nd in Canada so far) TPAQ was offered as an alternative stream to the conference. Thank you to Anita Schill for bringing that to us. Hope those who took part felt it was worth their time and effort.

Would like to take this time to thank you all for your participation in our various endeavors - you are a great group and I feel privileged to know you, one and all. Be safe as you work and a happy holidays to you and your families.

Cheers!

M.J. "Mimi" Cole,



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October 19 and 20 in Saskatchewan
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The Olds College Horticulture Program will be hosting its third employers presentation day on January 24, 2020. The format structure provides each employer 10 minutes to promote their organization and 5 minutes for student questions. Students attending the presentations will be from the Horticulture Technologist Diploma, Bachelor of Applied Science Horticulture and Arboriculture Certificate Programs. During the presentation day, accommodations will be made for employers to have one-on-one sessions with students seeking further information and opportunities to provide resumes.

Due to the success of the venue in 2019 the Olds College Horticulture Program has expanded the presentation format to have concurrent presentations in 4 locations. This provides the opportunity to have 52 employers representing a broad range of sectors from the horticulture industry to participate as presenters. The Olds College Horticulture Program is seeking to have employers representing a broad range of sectors from the horticulture industry to participate as presenters. The selection of potential presenter organizations will lend priority to sector diversification followed by the date of application to attend the event.

For those organizations interested in participating in the event, please respond by January 17, 2020.

The following registration link is provided;

[2020 Horticulture Industry Speed Presentations Registration.](#)

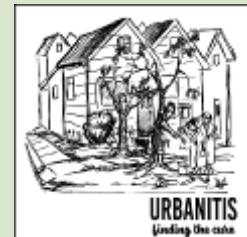
Or contact;

Gord Koch

Email - gkoch@oldscollege.ca

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From Entomology Today
Entomological Society of America
By Ed Ricciuti

Canadian scientists have figured out how to hit the tree-killing emerald ash borer (*Agrilus planipennis*) where it really hurts by employing a fatal fungus that turns mating into a way of decreasing, not increasing, its numbers. Male emerald ash borers infected with the fungus on contact inside a small chamber readily transmit it females during mating, with both dying thereafter, according to research published in the *Journal of Economic Entomology*.

The fungus involved is the ubiquitous *Beauveria bassiana*. Its snowy

spores cause white muscardine disease, lethal to many insects, and it has figured prominently in the history of science. In the early 1800s, Italian

Italy and France, was caused by a fungus, leading him to describe how some diseases are caused by parasites. His insight anticipated the later affirmation of the germ theory of disease by Louis Pasteur and Robert Koch.



Emerald ash borer
Emerald ash borer (*Agrilus planipennis*).
Photo courtesy of Pennsylvania Department of Conservation and Natural Resources – Forestry, Bugwood.org.

bacteriologist Augustino Bassi determined that the disease, which was wiping out silkworms that were the basis of a thriving industry northern

Today, the fungus is used as a control for a host of harmful insects, including grasshoppers, locusts, bed bugs, and house flies. The emerald ash borer may be next on its hit list.

The emerald ash borer (EAB) beetle was detected for the first time in North America in Detroit, MI, and Windsor, ON, Canada, in 2002, but examination of tree rings suggests that it was present

(Continued on page 6)

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(Continued from page 5)

from the early 1990s. Newly-hatched larvae chew through the bottom of the egg and tunnel by D-shaped holes into the ash tree host, where they feed on phloem and xylem tissues, destroying the plumbing that distributes food and water and killing the tree. The borer has claimed thousands of ash trees as it has spread to 35 U.S. states and five Canadian provinces.

When the beetles come into contact with the white, powdery spores of the fungus, the spores germinate, penetrate the cuticle of the insect, and grow inside the insect's body, killing it. White mold grows out of the dead insect and generates new spores, which can then spread to other beetles and repeat the process.

"EAB males are the promising vector to transmit mycosis to their partners during mating," write the authors. "[The results of the study] strengthen the potential of the fungal autodissemination device as a powerful biological strategy to control EAB populations."

During experiments, male borers were placed in a chamber containing a beanbag-like pouch, made of fiber-glass mosquito netting filled with pearl barley, whose surface had been inoculated with a suspension containing the fungus. Males picked up the fungus when they crawled over the pouch. They were then allowed to have contact with females and successfully transmitted the fungus.

"To reduce the risk of indirect contamination [of females] associated with insect movement, females were glued on the surface of all experimental units," says Claude Guertin, Ph.D, one of the authors on the paper.

The research followed up previous work by Dr. Guertin and colleagues on the development of a sys-

tem that would allow the beetles to infect themselves by contact.

The use of fungus as a control tool may provide managers of forests, including trees in urban areas, with an alternative to chemical insecticides. The research suggests that, as in some other insects, males are better transmitters of the fatal infection than females. The lethal effect of the fungus can be enhanced by the fact that some males mate with at least two females, multiplying the control impact.



Ed Ricciuti is a journalist, author, and naturalist who has been writing for more than a half century. His latest book is called *Bears in the Backyard: Big Animals, Sprawling Suburbs, and the New Urban Jungle* (Countryman Press, June 2014).

His assignments have taken him around the world. He specializes in nature, science, conservation issues, and law enforcement.

A former curator at the New York Zoological Society, and now at the Wildlife Conservation Society, he may be the only man ever bitten by a coatimundi on Manhattan's 57th Street.

You may also want to check out...

Journal of Economic Entomology – the most-cited entomological journal – publishes articles on the economic significance of insects and other arthropods and includes sections on apiculture & social insects, insecticides, biological control ...

Horizontal Transmission of the Entomopathogenic Fungal Isolate INRS-242 of Beauveria bassiana (Hypocreales: Cordycipitaceae) in Emerald Ash Borer, Agrilus planipennis (Coleoptera: Buprestidae)

Abstract

Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an invasive and destructive beetle that causes extensive damage to ash trees in North America.

The entomopathogenic fungus *Beauveria bassiana* Vuillemin is considered as an effective biological control agent for EAB adult populations. Using an autodissemination device with a fungal isolate of *B. bassiana*, our research aims to investigate the possibility of horizontal transmission of the fungal disease from infected to uninfected EAB adults during mating.

Results show that the efficiency of fungal transmission is significantly related to the sex of EAB carrying the fungal pathogen.

EAB males are the promising vector to transmit mycosis to their partners during mating. Results strengthen the potential of the fungal autodissemination device as a powerful biological strategy to control EAB populations.



Photo credit: Debbie Miller,
USDA Forest Service, Bugwood.org

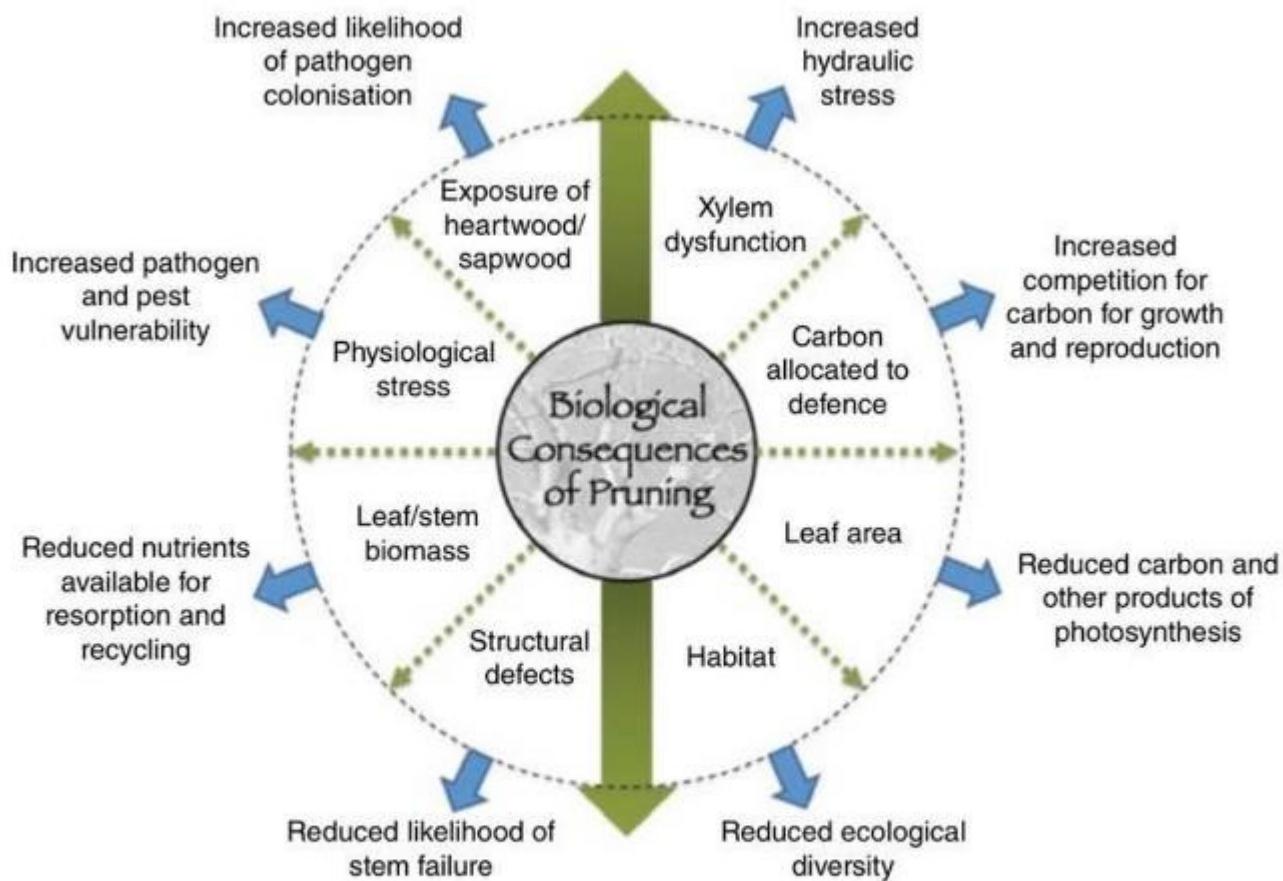


Figure 3.37 The biological consequences of pruning. The inner circle represents some important main outcomes whilst the outer circle gives likely secondary outcomes. The lower portion of the figure gives characteristics that are likely to be decreased as a consequence of pruning; the upper portion of the figure gives characteristics that are likely to be increased.

This diagram is from a Facebook page called Arbor Culture and included the following quote:

"Not pruning trees must be considered a valid management option" (Hirons and Thomas, 2018)
Other quotes supporting the above are below.

"As Alex Shigo, the father of modern arboriculture, said, 'many of the tree care practices that were developed centuries ago have changed little over the years'. It has been a 'take' relationship without any due consideration for the tree's health". Shigo further stated that 'practices are deep-rooted in attitudes'

"Pruning is one of the best things an arborist can do **for** a tree but one of the worst things we can do **to** a tree"
Alex Shigo

"Pruning is a double-edged sword either helping or hurting depending on where, when, how and why it is applied. Pruning that is well executed results in a variety of benefits, including reduced likelihood of whole tree, branch, and stem failure; appropriate (or required) clearance for utilities, buildings, vehicles, and pedestrians; improved health, and appearance; and enhanced view."

When poorly performed, pruning can harm the tree's health, stability, and appearance. Negative consequences can also occur if pruning is not performed at all. Pruning live branches reduces the tree's capacity to photosynthesize and manufacture sugar. Pruning also creates wounds the tree must expend energy to close and defend. Therefore, the costs and benefits of pruning healthy branches should be assessed when developing pruning objectives"



From: <https://interestingengineering.com/7-of-the-oldest-trees-in-the-world>

By Christopher McFadden
January 18, 2019

The oldest trees in the world have 'seen' many momentous events in Earth's and human's history. They truly are living relicts of the past.

Trees are truly ancient beings. They have a very long evolutionary history, but some of the oldest trees in the world have overseen the rise and fall of some of the greatest empires in human history.

These magnificent plants provide us with oxygen, food and raw materials today, and their ancestors have helped fuel and build our civilizations for thousands of years.

The following 7 are some of the oldest trees in the world and all are true ancient lifeforms. In fact, many of these could, conceivably, live for a lot longer if left to their own devices.

What/Where was the first tree on earth?

Trees are some of the oldest organisms on the planet. They first evolved around 370 million years ago and it is currently estimated that there are over 3 trillion mature trees in the world.

The earliest forms for trees in the fossil record are tree ferns, horsetails, and lycophytes. These plants evolved sometime in the Carboniferous period.

However, there might be some evidence that pushes their evolution back by around 15 million years to the Middle Devonian period - roughly 385 million years ago. A fossil, called Wattieza, was found in New York State that could be the oldest tree ever discovered.

Like many early plants of this period, these early trees produced spores rather than seeds like modern trees.

Trees would later diversify throughout the Mesozoic where one genus, Ginkophyta, still exists in one form today called *Ginkgo Biloba*. This is considered to be a living fossil and has virtually unchanged since the Triassic Period.

1. This is thought to be the oldest individual clonal tree in the world

A single spruce tree in the Dalarna province of Sweden was found to be the oldest tree in the world in 2008.



1. Source: Karl Brodowsky/Wikimedia Commons

Dubbed "Old Tjikko" this tree is truly ancient.

Technically speaking, this tree is the oldest individual of a colony of trees. Clonal trees, like spruces, are able to propagate using their root systems to produce new offspring.

Carbon dating of the tree indicates that it at least 9,550 years old. That's almost double that of previous record holders in North America.

Interestingly, it was previously thought that spruce trees were newcomers to Sweden. This discovery completely blew this theory out of the water. Other neighboring trees were found to be of similar age and, more importantly, of the same genetic makeup as this arboreal ancient. Scientists have also found clusters of other

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spruce trees from Lapland to Dalarna that are generally over 8,000 years old on average. These are some very hardy plants indeed.

2. Here are some more clonal trees that are truly ancient



2. Source: Apollomelos/Wikimedia Commons

Whilst the discovery of "Old Tjikko" is impressive, there is a much older clonal colony in the world. This colony called the Pando or "Trembling Giant", is made up of over 40,000 individual trees with the entire colony believed to be over 80,000 years old.

The colony is made up of "Quaking Aspen" (*Populus tremuloides*) and is located in Fishlake National Forest in South-Central Utah. Not only is it ancient, but this dense superorganism is estimated to weigh a total of around 13 million pounds or 5,896,701 kg.

It spreads over a total of 106 acres and is thought to have originated at the end of the last ice age. Whilst the oldest individual trees in the colony rarely exceed 130 years old, the entire colony has been shown to be of exceedingly old age. Its enormous size, weight, and age have made Pando

famous worldwide. Sadly, recent observations seem to indicate that the colony is in decline. This has been attributed to a lack of regeneration along with insects and disease as well as environmental factors.

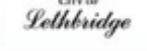


3. Source: TruthBeethoven/Wikimedia Commons

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(Continued from page 9)

3. This tree is thought to have been planted by Zoroaster

"Sarv-e Abarkuh" (Abarkuh Cypress) is also believed to be one of the oldest trees in the world. Its age has been estimated to be anywhere between 4,000 and 5,000 years old.

The tree has been cultivated for many years so its very difficult to be absolutely sure of its exact age. Local legend indicates that the tree was actually planted by none other than the Iranian prophet Zoroaster or Zarathustra.

This prophet would go on to forge the world's first recognized and still practiced, monotheistic religion, Zoroastrianism, that is widely believed to be the inspiration for the later Abrahamic faiths.

As you might expect, the tree is a protected national monument. It is also one of the most popular attractions in the city of Abarkuh where it is located.

4. This Bristlecone Pine is yet to be confirmed as the oldest individual tree



4. Source: Dcrjsr/Wikimedia Commons

An unnamed Great Basin Bristlecone Pine (*Pinus Longaeva*) might be the eldest individual tree in the world. It was originally identified and cored by Edmund Schulman in the 1950s but he never got the chance to age it before passing away in 1958.

The tree's age was later determined in 2010 by Tom Harlan who was

working on Schulman samples he had collected before he died. The tree is still alive and was dated to be over 5,060 years old.

But as of 2017, the age of this tree has not been able to be confirmed; the core dated by Tom Harlan has not been located at the Laboratory of Tree-Ring Research. This does throw the entire claim into question, but this is certainly a very old tree whichever way you cut it.

5. Prometheus was a very old tree indeed



5. Source: Jrbouldin/Wikimedia Commons
Called "Prometheus" this Great Basin Bristlecone Pine was one of the oldest trees in the world. Sadly the tree died in 1964.

It was located in a grove of several other old trees in Wheeler Park, Nevada. In 1964 a geographer, Ronald R. Currey, was given permission to core the tree which he suspected to be over 4,000 years old.

The circumstances behind the tree's demise are a little hazy. Whatever the case was, the tree was felled and a core sample obtained once it was down.

It was only later that the tree's true age was determined but by then it was too late to save this ancient tree. Researchers were able to count the tree's rings and found that it was around 4,860 years old.

Some have even raised this estimate to about 4,900 years old as it probably didn't grow a ring every year due to the area's harsh climatic condi-

tions in the past.

6. Methuselah is very old and still going strong

Named after the long-lived Biblical figure "Methuselah" (who according



6. Source: Oke/Wikimedia Commons
to canon lived to be 969 years old) was found in 1957 by Edmund Schulman. It's age, like the previously unnamed Great Basin Bristlecone Pine, was found to be 4,789 years old at the time.

Its exact location is kept a secret from the general public to prevent any risk of vandalism. But it is located somewhere in the White Mountains of Inyo County in California.

It is also in good company with various other ancient trees surrounding it. Based on the tree's age, it is estimated that Methuselah germinated around 2832 BCE, making it older than the famous Egyptian pyramids. That's, frankly, absolutely incredible when you think about it.

7. The Llangernyw Yew is one of the oldest trees in Europe

The Llangernyw Yew is an ancient Yew tree in the churchyard of St. Digain's Church in the idyllic Welsh

(Continued on page 11)

village of Llangernyw in Conwy, North Wales.

Its exact age is contested but it holds an authorized certificate that states that "according to all the data we have to hand" the tree is somewhere between 4,000 and 5,000 years old. Other theories suggest the tree is actually much younger, around 1,500 years old.

It's very hard to narrow this down further as the tree has become highly fragment- tree's diameter at its base be-

ed with various enormous offshoots. It has a truly enormous girth with the

ing 10.75 meters.



Because of its current extent, the core (or oldest part of the tree) is nigh-on impossible to identify.

As an aside, legend holds that the tree is associated with a figure from ancient Welsh mythology. It is linked in legend with a special spirit called "Angelystwr" (the "Recorded Angel") who visits every Halloween to foretell which of the parishioners will die the following year - nice.



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From: <https://treecanada.ca/>
Written by Gerard Fournier

As I write this, it is actually November 5 and has been snowing all day, with -17 in tonight's forecast for a low. So, I guess this means it is finally winter now on the Prairies?

It is possible, even in Southern Alberta, where warm westerly Chinook winds provide us with intermittent reprieves from winter's cold embrace, that winter may be here for a while now. This is not the first snow we've seen this season though.

In early September, there was cold weather and a significant snow fall in Southern Alberta, where 100 cm fell in Waterton Lakes National Park, bringing about a swift end to the tree planting season there and the commencement of tree removal season. As thousands of trees burnt in the forest fire there a few years ago, they still need to be identified as hazard trees and removed safely, before they impact areas frequented by park visitors.



Elsewhere on the Prairies, it was a different story. In Northern Alberta, there was no early snow and summer hung on with a gentle ease into autumn.

In Winnipeg however, the worst early snowstorm that any arborist has ever seen dumped up to 75 cm of heavy, wet snow. The snow started falling on October 10th and hit really hard on the 11th. Reminiscent of the "Snowpocalypse" the City of Calgary experienced in "Snowtember" of 2014 that damaged or destroyed hundreds of thousands of trees, City officials in Winnipeg are still working on the damage estimate and have been extremely busy since the storm hit.

Martha Barwinsky, a city forester for Winnipeg was quoted on October 17 on CTV News estimating that up to 30,000 of the 300,000 trees in the city's canopy may have been impacted. Urban forestry crews from the cities of Saskatoon, Calgary and Regina were sent to help with the disaster, in the true spirit of Canada.

We are a nation that loves its trees, and as arborists and urban foresters, we are ready and willing to help when disaster strikes. Incidents like this one, along with the recent windstorm in Quebec and New Brunswick, as well as Hurricane Dorian in the Maritimes earlier this year,

bring home the fact that severe damage to our cities' green infrastructure could come at anytime, anywhere in Canada.

Given the increased frequency of these severe weather events due to our current climate crisis, it is only further evidence that Canada needs a Red Seal trade for arborists to help with the mobility of qualified labour between provinces when these events happen.

Many thanks to Chris Barkman (The Barkman Professional Tree Care & Recreational Tree Climbing) and Rob Knight (Timberland Tree Service) in Winnipeg, and to Sam Heisler of the City of Saskatoon for the pictures.



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This article by NOEL KIRKPATRICK from November 22, 2019, is from the Mother Nature Network. To see the complete article in its original form, go to: <https://www.mnn.com/earth-matters/animals/stories/falling-insect-populations>

We may think of insects as pests, but they play an important role in maintaining the natural order of the world. They provide food for plenty of other species. They pollinate plants. They recycle nutrients.

All of this is why a scientific review of global insect populations published in Biological Conservation is so troubling. More than 40% of the world's insect populations are in decline, and they're declining fast. "The trends confirm that the sixth major extinction event is profoundly impacting life forms on our planet," the researchers wrote in their conclusion.

A widespread drop in bugs

The writing has been on the wall about insects' demise. A German research team announced in October 2018 that the country's insect population had fallen by 77% between 1989 and 2016. A researcher in Puerto Rico reported similar declines in insect biomass when he revisited research sites, comparing data from the 1970s to what he found in the 2010s.

Local can often be global, however, and the review published in Biological Conservation points to that.

In addition to the 40% decline, a third of insect species are endangered. Chain these facts together with the finding that insect biomass — the mass of organisms living in an area — is declining by 2.5% a year, and the researchers warn there could be widespread insect extinctions by the end of the century.

"It is very rapid," lead author and University of Sydney professor Francisco Sanchez-Bayo told The Guardian. "In 10 years you will have a quarter less, in 50 years only half left and in 100 years you will have none."

Sanchez-Bayo, writing with co-author Kris A.G. Wyckhuys from the University of Queensland, found real reason to worry:

Because insects constitute the world's most abundant and (species-diverse) animal group and provide critical services within ecosystems, such events cannot be ignored and should prompt decisive action to avert a catastrophic collapse of nature's ecosystems.

To judge the decline of insects, Sanchez-Bayo and Wyckhuys collected 73 of the best studies done so far about insect population drops. Most were centered around European and American insect populations, but Sanchez-Bayo and Wyckhuys also included studies from Australia, China, Brazil and across South America.

Butterflies and moths are the insect canaries

According to the review, butterflies and moths are among the worst hit, with bees and beetles not far behind. Butterfly populations have fallen by 58% on farmed land in England between 2000 and 2009, for example, and Ohio lost a third of its butterflies between 1996 and 2016. California's monarch butterfly population reportedly dropped by 86% between 2017 and

2018.

Other species, like ants, flies and crickets are difficult to measure, but there's little reason to believe they're doing any better.

As for the reasons behind the drops, Sanchez-Bayo and Wyckhuys point to our current agricultural practices as one culprit. "The main cause of the decline is agricultural intensification," Sanchez-Bayo told The Guardian. "That means the elimination of all trees and shrubs that normally surround the fields, so there are plain, bare fields that are treated with synthetic fertilizers and pesticides."

Stronger insecticides that harm the bugs and the soil around crops aren't helping matters, either, he added.

Where heavy agricultural practices aren't present, climate change and its rising temperatures are wiping out other populations, particularly in the tropics.

Both researchers recommend drastic changes in our agricultural methods, "in particular a serious reduction in pesticide usage and its substitution with more sustainable, ecologically based practices."

Such a reduction could help save the food web that we rely on for sustenance.

"The conclusion is clear: unless we change our ways of producing food, insects as a whole will go down the path of extinction in a few decades," they wrote.



Photo from Google Can Geo Photo Club

An insect apocalypse

Another culprit that is often overlooked is light pollution. New research, published in the Biological Conservation journal, points to artificial light at night (ALAN) as another key driver behind insects' rapid decline.

"We strongly believe artificial light at night — in combination with habitat loss, chemical pollution, invasive species and climate change — is driving insect declines," the scientists wrote after a comprehensive review of past studies. "We posit here that artificial light at night is another important — but often overlooked — bringer of the insect apocalypse."

With the rapid expansion of human development this past century, light pollution is affecting insects' mating habits, movement, foraging and overall development. Think of the flurry of moths that always cluster around a light bulb, thinking it's the moon, or the millions of insects that die an untimely death from vehicle headlights at night.

Insects are also a crucial form of food for other species, especially birds. But insect predators often work ALAN to their advantage, preying on bugs that gather around artificial light, and furthering their speedy decline.

Luckily, this is one habitat disturbance that has an easy solution: turn off the lights at night. It can also help to avoid blue-white lights, use shades and consider switching your outdoor lights to motion-activated. Brett Seymour, senior author of the review, told The Guardian: "Once you turn off a light, it is gone. You don't have to go and clean up, like you do with most pollutants. I am not saying we need to get rid of light at night; I think we just need to use it wisely."





International Society of Arboriculture – Prairie Chapter
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PRAIRIE CHAPTER MEMBERSHIP APPLICATION – 2020

Please provide new and current contact information in the space below.

Name: _____

Company: _____

Address: _____

City: _____ **Province:** _____ **Postal Code:** _____

Home Ph: _____ **Bus Ph:** _____ **Fax:** _____

Email: _____

Certified Arborist Yes **No**

Method of Payment: **Cheque (Payable to ISA Prairie Chapter)** **MasterCard** **Visa**

Card # _____ **Exp:** _____ **Name on Card:** _____

FOR STUDENT MEMBERS ONLY: I verify that _____ will continue during 2020 as a Full Time Student in arboriculture, or supporting allied fields at a recognized educational institution. Signature of Faculty Advisor _____	MUST BE SIGNED BY ALL MEMBERS: I hereby agree to abide by the ISA Code of Ethics for Arborists in all matters relating to technical arboricultural activities, business operations and civic responsibility, furthermore, I will also conduct myself as to improve the status of Arboriculture as a respected industry professional.
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ISA Code of Ethics can be viewed at: <https://www.isa-arbor.com/code-of-ethics>

2020 Membership Dues

Dues are for the calendar year: January 1 thru December 31, 2020, and not pro-rated for any portion thereof. All prices below are in Canadian funds. There is no GST payable on membership dues.

Prairie Chapter Only:	\$ 125.00
Senior (62+):	\$ 75.00
Student:	\$ 15.00
Sustaining Membership (Corporate)	\$ 600.00

I would like a paper copy of the newsletter. Check Here **\$ 30.00**

Total

Sustaining Membership (Chapter): A Sustaining Membership allows Companies and Corporations an opportunity to promote their business, and show colleagues, clients, and other consumers that you support our industry at an elevated level. Sustaining members are recognized in the newsletter, on the website. They receive one voting membership as well as member rates for four representatives to attend the annual ISA Prairie Chapter conference and other Chapter sponsored workshops (other than the TCC and TRAQ), also receive member rates on books and other learning materials.

Note: If you would like to have your information added to our “Hire a Certified Arborist” page on the ISA Prairie Chapter website, please contact the ISA Prairie Chapter Office. You must have a current ISA Prairie Chapter membership and be an ISA Certified Arborist in order to be listed

For the International ISA Full Membership (Professional or Individual), Student Membership, Senior Membership, or Patron Membership please go to : <https://www.isa-arbor.com/Membership/Renew-Membership>

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Half Page	250	290
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1/4 page	125	150
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(10% discount for ads in all 4 newsletters)

Newsletter submission deadlines

Issue Dates: **Submission Deadline**

March	February 27
June	May 31
September	August 31
December	November 30

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Submit articles, ads, letters and written requests to:

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The statements and opinions expressed herein are those of the individual authors and do not necessarily represent the view of the Prairie Chapter, ISA, or its executives. As well, the advertisements do not constitute an endorsement of the advertiser's products or services.





Photo by Keith Anderson