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Witch-hazel (Hamamelis virginiana) B. Bradburn

January 2025

SEEDLINGS

Wild Ones|Kalamazoo Area Chapter

"There can be no purpose more enspiriting than to begin the age of restoration, reweaving the wondrous diversity of life that still surrounds us."—E.O. Wilson



Photo J. Hagen

Dear *|FNAME|*,

Happy New Year, Wild Ones. With winter upon us, we are holding our programs on Zoom for the next two months. Our online programs can accommodate up to 300 participants, so we hope you'll join us. In-person programming will resume in March at Portage District Library. Besides our monthly speakers, we are also arranging several field trips this year. And our very popular garden tours will be back in 2025 as well.

You'll notice a butterfly theme (monarchs and others) in this issue of Seedlings, which we hope will be a reminder both of the warmer weather to come and of the purpose and environmental interconnectedness of native landscaping.

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Beth Bradburn

Editor



January Program: Protecting Michigan's Rarest Butterflies *with Ashley Cole-Wick, MNFI* **Wednesday, January 22, 6:30-8:00pm on Zoom**

Ashley Cole-Wick of [Michigan Natural Features Inventory](#) will discuss her research on two of the rarest butterflies that call southern Michigan home: the Karner blue and Mitchell's satyr. Join us to learn about local conservation and what you can do to help.

This program will be on Zoom. Click [here](#) to learn more and register. Or, view the event [on our Facebook page](#).



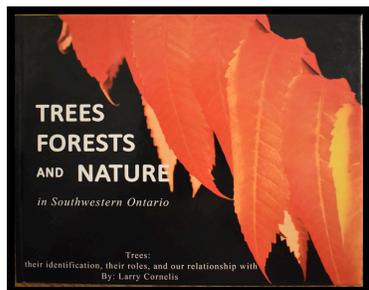
Most of our past presentations are available on YouTube to view at your convenience.

[Click Here to visit our YouTube channel](#)

You can also click on the small red YouTube icon above,
underneath the Table of Contents.

Past issues of Seedlings can be found [here](#), and by clicking the link between the
Facebook and YouTube links above.

Cornelis Book Available at Portage District Library



We make every effort to record our monthly programs at Portage District Library, but once in a while things go wrong. We don't have usable video for our [September 2024 program](#), but the speaker, Larry Cornelis, very kindly donated a copy of his book *Trees, Forests, and Nature in Southwestern Ontario* to [PDL](#). It is now available on the library's shelves.

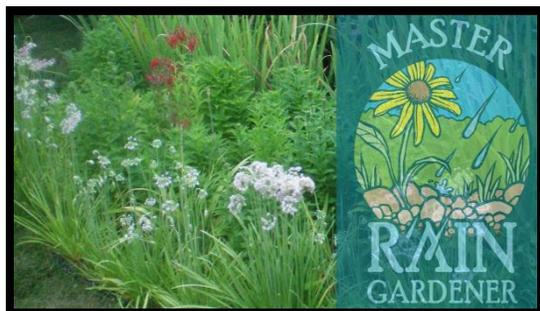
The book reflects both the content and the personal style of Larry Cornelis's presentation to KAWO. There is an introductory section on the ecology and value of trees followed by a guide to individual species, including the author's beautiful photographs. The book is unevenly edited, but the typographical errors don't compromise its voice and substance.

Toward Harmony with Nature Conference

Wild Ones Fox Valley Area Chapter (Wisconsin) will hold its thirty-first annual Toward Harmony with Nature Conference on Saturday, February 8, 2025, with keynote speaker Heather Holm (right) presenting "Creating and Managing Landscapes for Native Bees." The conference will take place both in person and virtually, so KAWO members may want to consider participating. You can download a brochure with a full list of speakers and topics [here](#), or visit the Fox Valley Area chapter [website](#) to buy tickets.



Online Master Rain Gardener Class

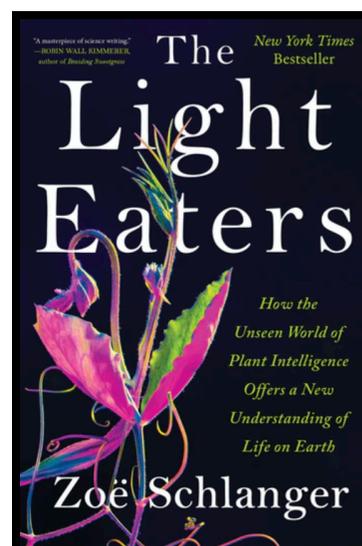


Huron River Watershed Council is offering an online Master Rain Gardener class this winter. The class runs weekly from January 30 to February 27, and includes one in-person garden tour as well as online class sessions. Learn more and register on their [website](#).

Book Review: *The Light Eaters*

Beth Bradburn

The Light Eaters: How the Unseen World of Plant Intelligence Offers a New Understanding of Life on Earth, by Zoë Schlanger (Harper, 2024) is not about gardening or native plants specifically, but those deeply interested in plants will appreciate this in-depth report on recent botanical research. Schlanger embraces the term “plant intelligence” while clearly explaining its controversial status and exploring its philosophical implications in a way that leaves readers free to draw their own conclusions. This is partly because of the documentation (the footnotes include references to the pertinent scientific papers) and partly because of her skill as a science journalist writing for a lay audience.



If you just like plants and want to understand them better, then there is all kinds of fascinating reporting in here, such as research on *Boquila trifoliolata*, a vine that can morph into shape of almost any other plant species nearby. Schlanger is a climate journalist whose subject began to seem so morbid and depressing that she turned to learning about plants as a way of affirming life. This personal angle is engagingly woven into the book.

Monarch Proposed for ESA Protection

from Ilse Gebhard

On December 10, the U.S. Fish and Wildlife Service proposed that monarch butterflies be protected under the Endangered Species Act. The next steps in the process are a [public comment period](#), currently open and closing on March 12, 2025, followed by a review of the 4(d) rule, which will lay out the specific regulations to protect monarchs. You can get a detailed [report on the proposal and its status](#) from Monarch biologist Karen Oberhauser, writing at [Journey North](#). The site will provide future updates on the proposed 4(d) regulations. Oberhauser comments that voluntary efforts to support monarch habitat are "probably the reason that monarchs are not doing worse than they are."

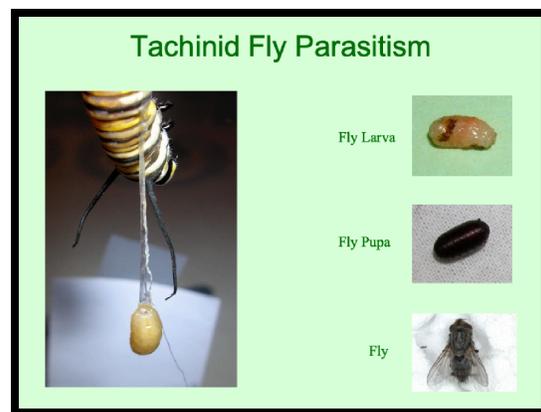
Studying Tachinid Fly Parasitism of Monarch Butterflies

Ilse Gebhard

The steep decline in insect populations due to the effect of human activity on the environment has been well documented. But what kept insect populations in check before the clear-cutting of forests, plowing up prairies, and draining of wetlands? Before the advent of pesticides and genetically modified crops? Before the persistence of toxic chemicals and plastics in our environment? Before cars and climate change? Nature kept nature in check, and in the case of insects, insects preying on other insects did for the most part.

One of the ways that insects prey on other insects is by outright eating them. Other ways are less obvious, like when the adult insect does not eat its prey but instead provisions its developing larva with an insect to feed on. A third way is called parasitism.

It had been documented in the past that fourth and fifth instars (larval stages) of monarch (*Danaus plexippus*) caterpillars in the wild are frequently parasitized by flies in the family *Tachinidae*.



These flies are usually referred to as tachinid flies or simply tachinids. The fly lays its eggs on a caterpillar and when the eggs hatch, the fly larvae burrow into the caterpillar. As the caterpillar grows, so do the fly larvae, consuming the inside of the caterpillar and eventually killing it, either at the fifth instar or the chrysalis (pupal) stage. The fly larvae emerge from the host, pupate, and two weeks later flies emerge from their pupae.



Tachinid Fly Parasitism

Tachinid fly parasitism photos I. Gebhard

Theoretically, monarch eggs and instars 1-3 could also be parasitized in the wild but no such study had been done. I was encouraged by Dr. Karen Oberhauser, the founder of the Citizen Science [Monarch Larva Monitoring Project](#) (MLMP) to conduct such a study by collecting monarch eggs and caterpillars at all five larval stages and raising them.



Monarch egg and instars 1-5 MLMP

Methods

Collection: I collected monarch eggs and larvae weekly throughout the summers of 2002-2005. Specimens were collected from common milkweed (*Asclepias syriaca*) mainly, but also from swamp milkweed (*A. incarnata*) and butterfly milkweed (*A. tuberosa*).

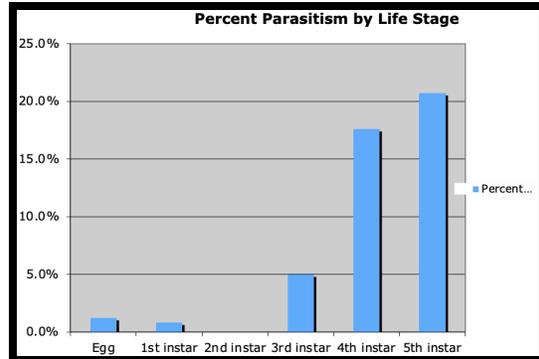
Monarch rearing: I raised the monarchs in individual containers, transferring them to larger containers as they grew. Containers were sterilized between each use. I reared the eggs and larvae inside the house at 68-78°F and ambient light. Frass was removed as needed (at least once a day), and fresh common milkweed leaves added at least every day or as consumed. I collected leaves every day, soaked and washed them in cold water, and stored them in the refrigerator before use.



Sample size: 693 monarchs over 4 years

Results: The overall fate of monarch eggs and larvae was 84% healthy adults, 6% parasitized by tachinid flies, and 10% death of unknown cause.

Over the four years, parasitism was found not only in the expected fourth and fifth instars but also in eggs and first and third instars, with occurrence in second instars in years following the study. Clearly most parasitism occurs at the fourth and fifth larval stages.



Only one tachinid fly specimen was keyed out to species and was the expected *Lespesia archippivora* found by others in earlier studies. Other species could have been present as [a study reported in 2017](#) showed that “based on results of rearing >20,000 monarchs by MLMP volunteers, overall parasitism by tachinids across life stages was 9.8% (17% for monarchs collected as fifth instars). We identified the flies that emerged from 466 monarch hosts, and found seven *Tachinidae* species.”

Read more by Ilse Gebhard [here](#).

Who Am I?

A native fauna ID quiz from Ilse Gebhard



Photo I. Gebhard



Photo S.C. Menasian

Click [here](#) for the answer!

Community Events of Interest

Sunday, January 12 - 10:00am-12:00pm: Volunteer Day, Kleinstuck Preserve. Meet at the Maple Street YMCA tennis courts.

Monday, January 20 - 9:00am-12:00pm: SWMLC volunteer workday in honor of Dr. Martin Luther King, Jr., Bow-in-the-Clouds Preserve. [Learn more.](#)

Monday, January 20 - 7:00pm-8:00pm: Michigan Botanical Society Program: "Interdunal Wetlands Macroinvertebrates," with Dr. Tiffany Schriever, People's Church, Kalamazoo. [Learn more.](#)

Wednesday, January 22 - 6:30pm-8:00pm: "Taking Action to Protect Michigan's Rarest Butterflies" with Ashley Cole-Wick, a monthly presentation by Kalamazoo Area Wild Ones at Portage District Library. **This month's program is on Zoom.** [Learn more and register.](#)

Saturday, January 25 - 11:00am-12:30pm: Foraging the Edible Wilderness, Kalamazoo Nature Center. [Learn more and register.](#)

Editor's note: If you know of any local events pertaining to native plants that you feel may interest our readers, please send them along to us at the address below. Thanks!

What's Happening at the National Office

Check out our [National Office web site](#)

To read the most recent reports from the board of directors,

[Log In to the Member Only Area.](#)

Thank you for your interest and support of Wild Ones!

Not a member? [Click Here](#) for information on how you can support Wild Ones.

SEEDLINGS is edited by Beth Bradburn. It appears mostly monthly.

The next regular issue will arrive in February. **Deadline for the February issue is January 20.**

[Contact the editor](#)

Contributing Editor:

Ilse Gebhard

To share comments and suggestions, simply reply to this email.

We look forward to hearing from you!

Find more information and news at www.KalamazooWildOnes.org

and www.Facebook.com/KalamazooAreaWildOnes



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