

THIS ISSUE

Volunteer to Pull Invasives

Raise a Polyphemus Moth, August 28

Around the State in August

Rear Huge Caterpillars Now!

If you recall last month's newsletter, you are aware of the giant silk moth farm in operation here this summer. The huge larvae of all four species (Cecropia, Polyphemus, Luna and Promethea) have maxed-out in size and most have spun cocoons. A photo taken this summer of each of the four species deep into its fifth and final instar can be found through the pages of this issue. They've cumulatively eaten many thousands of leaves of red maple, black cherry, American elm, gray dogwood, boxelder, black walnut, pignut hickory, black willow and lilac. The farm chores associated with their feeding and cleaning have averaged close to two hours each day.



This late 5th instar Cecropia Moth caterpillar is a beast! At four inches in length and nearly an inch in girth it's the largest caterpillar on the continent.

Field guides that give details about Luna, Polyphemus and Cecropia life cycles cite them as being "single-brooded" in the northern states. These moths have historically undergone a one-year life cycle in Michigan. A moth emerges in June, quickly mates, lay eggs and dies. The larva hatches, then eats and grows over the next couple of months, finally spinning the cocoon in mid to late August. It remains in the cocoon nearly ten months until finally emerging as an adult moth the following June.

In southern states, these moths are cited as "double-brooded." The lengthier, warmer springs and summers cause adults to emerge from over-wintered cocoons in May. Caterpillars eat and grow at a faster rate with increased temperature. As a result, cocoons are spun by mid-July. The intense heat of mid-summer causes a new generation to emerge from cocoons a couple of weeks later. These larvae manage to grow and enter cocoons by the end of September, well before the first killing frost.

As an up-and-coming boy naturalist in Chicago, then, as an adult, in mid-Michigan, I've watched and reared giant silk moths annually for over thirty years. Not once had I seen evidence of double-brooding at this latitude... until last summer.

Last summer's single-species (Luna) farm at Nature Discovery produced a double brood. Just like the southern populations, caterpillars were in cocoons by mid-July and a second generation of larvae was hatching in mid-August.

This provided an unprecedented opportunity for teachers as school began in September. Luna larvae were available to rear in the classroom with still another few weeks of growth in front of them. What a great opportunity for an eyes-on, daily reinforcement to a unit on life cycles and metamorphosis for any grade level, including high school biology classes.



A late 5th instar Promethea Moth caterpillar is blue-green with colorful tubercles, like the Cecropia. It may be noticeably smaller, but is no less impressive.

even an option for an entertaining and informative Nature Discovery presentation, is available only through the first few weeks of September. They grow quickly, and will be spinning cocoons before the month is over. Read on for more...

With this summer's temps considerably hotter than last, who could expect anything else? Here we go again! Some Polyphemus moths began emerging last week. Our first "second-brood" pair mated several nights ago and eggs quickly followed. Larvae of this species, and possibly others, will once again be available to any teacher, parent or amateur naturalist later in the month and at the start of this school year.

Teachers, would you like to try a unique "live in the classroom" alternative to the same old painted lady butterfly kits? How about a live caterpillar experience that debunks the anatomical and life cycle inaccuracies disseminated in *The Very Hungry Caterpillar*? A package of semi-grown Polyphemus (or other giant silk moth) caterpillars with detailed care instructions, and

-Jim McGrath



Hemlock parsley is gaining invasive steam.

One mid-summer bloomer that has exploded across the local landscape over the past decade is hemlock parsley. The umbels of minute, white flowers are much smaller than the larger, flat, disk-like umbel of the familiar and abundant wild carrot or Queen Anne's lace. Also, one hemlock parsley plant has many small umbels where a single wild carrot usually has only one or two.

Let us help you identify some of the most ecologically damaging species, including hemlock parsley, garlic mustard, dame's rocket, European buckthorn, Amur honeysuckle, oriental bittersweet and Phragmites grass. Then, spend as much time as you'd like giving us a much needed helping hand. Just contact us.

Can You Volunteer to Pull Invasive Plants?

Make an ecological difference. Nature Discovery is looking for dedicated volunteers, high school to adult, or even a family effort, to help pull any of a host of alien invasive plants that are eroding the vegetative diversity of our natural area. A look around any public or private land reveals the same invasion across much of our landscape. Everyone should learn to identify these plants and to control them in accessible areas.

THANK YOU to **Juan Bonetti** and **Nathan Martineau** for their volunteer hours in July.

Raise a

POLYPHEMUS MOTH

Sunday, August 28

2pm \$5/person



Doors are open from 1 to 5pm. With the aid of our helpful staff, interact with live snakes, turtles, frogs and salamanders at our huge Michigan reptiles & amphibians zoo.



Late in its 5th instar a Polyphemus caterpillar can consume up to ten whole leaves a day!

are spun in late September, they can be stored in a safe location outside until the beautiful moths emerge in late spring.

While they last, participants can take home extra caterpillars at \$2 each, or 3 for \$5. Caterpillars of the beautiful, green Luna Moth are available, too.

Would you like to rear caterpillars but can't make the date above? Contact us to purchase caterpillars and care information! They are available any time through August.

ATTENTION TEACHERS! Add some extra excitement to the start of the school year by rearing Polyphemuses and/or Lunas in your classroom. Students will be fascinated with this totally unique opportunity. An entertaining presentation can also be scheduled. Contact us for more information or to reserve a date.

Learn about the fascinating life cycle of one of our continent's largest and most beautiful moths in this 2pm Powerpoint presentation and workshop featuring beautiful images, live specimens and other interesting props. Despite the fact that Polyphemus, as well as other species of giant silk moths, like Cecropia, Luna and Prometheus, have declined dramatically over the past few decades, participants have a unique opportunity to rear their larvae. Learn how to properly care for these fast-growing, ravenous, humongous caterpillars. Then, each paying participant will be given two semi-grown Polyphemuses to rear through the last 3-4 weeks of their larval stage, along with printed care sheets full of detailed information. Once cocoons



A 5th instar Luna feeds on the compound leaves of Black Walnut.

Around the State in August

- ❖ Saturday, August 6: 10am & 1pm. Michigan Turtles & Snakes presentations; Mitchell State Park, Cadillac. Public is welcome.
- ❖ Saturday, August 6: 1pm. Dinosaur Days Reptiles & Amphibians presentation; Leila Arboretum, Battle Creek. Public is welcome.
- ❖ Friday, August 12: 7pm. Michigan Snakes presentation; Hartwick Pines State Park, Grayling. Public is welcome.
- ❖ Saturday, August 13: 1pm. Michigan Forest Herps presentation; Hartwick Pines State Park. Public is welcome.
- ❖ Saturday, August 13: 10am. Michigan Snakes presentation; Huron County Nature Center. Public is welcome.
- ❖ Thur-Sat, August 18-20: 10am-8pm. Michigan Reptiles & Amphibians exhibit; MDNR Pocket Park, UP State Fair, Escanaba. Public is welcome.



Sunshine reveals a Viceroy Butterfly chrysalis's intricate detail.

Nature Discovery donated this live specimen to UPrep Academy in Detroit after showing it to students in a Butterflies & Moths presentation. Students got to see the Monarch-mimicking butterfly emerge the next week.

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NATURE DISCOVERY 5900 N. Williamston Road Williamston, MI 48895

(517) 655-5349 naturedisc@cablespeed.com www.naturediscovery.net