



Semi-grown Painted Lady larvae at home on a prickly but life-sustaining Bull Thistle leaf.

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Thank you, Donors

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Painted Ladies Gone Wild

Chances are, if you've been through preschool or kindergarten in just about any school you've been exposed to the real life lifecycle of the Painted Lady. It's quite an industry. A quick internet search yields scads of companies that supply the whole setup. Little tykes in the classroom watch these butterflies develop through their larval and chrysalis stages. Then, amid varying degrees of fanfare the adult butterflies are taken outside so they can fly 'away.'

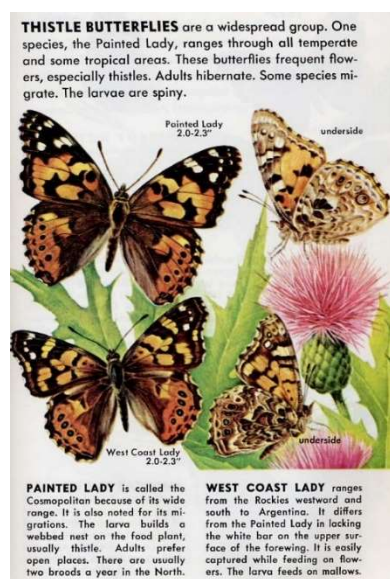
The guidelines on the packaging or promotional copy might say 'for preschool through adult' but invariably the images depict young children gathered around the action. It's easy to get the impression that their chief demographic target is teachers of young children. Indeed, in all the schools we visit, we rarely see the Painted Lady kit being utilized in classrooms higher than second grade. How and why has this been relegated as stuff only for little kids?

Actually, a broader perspective of *Vanessa cardui* reveals a complex - even vast - ecology that is worthy of anyone's engagement no matter your age. It is an easy hop from 'lifecycle' to impactful 'ecology' demonstration that, unfortunately, the suppliers don't encourage or even suggest - and most teachers never consider. The omission is a detriment to the students and to an environment that desperately needs life support.

Butterfly (and, to the tenth power, moth) diversity exists as a wondrous extension of *plant diversity* in the environment. Ergo, nearly every lepidopteran owes its very existence to only one or a handful of plants found in a specific region or habitat. If these plants don't happen to exist in a given locale, are clearcut for ostensibly loftier human land uses, or are selectively cut, pulled or poisoned because we simply deem them 'undesirable,' bye-bye butterfly.

Around 150 butterfly species can be found across Michigan. Everyone seems to know the critical connection between at least *one* of them - yup, the Monarch - and its critical nursery plant, the milkweed. Yet, how many are aware of the procreative parallels the other 149 species have to particular plants? The

sellers of the Painted Lady rearing kits don't divulge what constitutes that green mush pressed into the bottom of the holding container. Youngsters merely observe the caterpillars munching generic 'food.'



From the Golden Guide to Butterflies & Moths.

Why confine the lesson to such stark, artificial, lab-like simplicity when the diverse living world in which the Painted Lady survives, along with the wild-growing components on which it thrives, can to be found right outside the school's back door?

This could aptly be called the 'Thistle Butterfly.' In fact, the page in the little *Golden Guide to Butterflies and Moths* depicts the adult butterfly, wings spread, with the leaves and blooming flower of a thistle - as an entirely appropriate backdrop. It is the only local plant I have ever encountered them on, but, according to *Caterpillars of Eastern North America* in the Princeton Field Guide Series *V. cardui* also utilizes burdock and other composites, mallows, various herbaceous legumes and still many others.

The Painted Lady was once named the Cosmopolitan, and for good reason. It is arguably the most widespread butterfly on the planet! The species has been found breeding in nearly all temperate and tropical regions of the world. It's no wonder then that its larvae are known to utilize a food plant menu of over 300 species circumglobally.

The Painted Lady is a powerful flyer. In fact, its migration capabilities make those of the familiar Monarch look like small potatoes. As spring advances, individuals orient northward from tropical and subtropical regions in Central America, Mexico and southernmost states. All the while they mate and oviposit on choice food plants. Larvae quickly grow, metamorphose into adults and move northward as well, eventually occupying northern states and Canadian provinces by mid-summer, where they then continue to reproduce.

In late summer the most recent crop of adults produced in these northern latitudes begins migrating south, but does so at such high altitudes that ground-bound humans would never know the phenomenon was in progress. In years of especially great abundance their movements on clear days have been found to show up on weather radar, appearing like southward-drifting clouds.

While Monarchs perennially overwinter in a forest preserve west of Mexico City, reproductive activity is arrested until they begin their northward journey in late February. By contrast, Painted Ladies invade the country across a wide swath of the landscape and with a reproductive attitude that doesn't quit. They continue to seek appropriate food plants in these balmy winter climes and manage to run through another life cycle or two before the early spring generation orients northward anew. In all, up to six generations of the Painted Lady can occur over four seasons as it rambles across the latitudes. Spectacular movements of Painted Ladies also take place through Europe and Asia, southward into Africa, India, the Malay Peninsula, Indonesia and Australia, then back again.

Mass Painted Lady movements are not limited to north-south orientations over the seasons. In more arid climates they have been found to follow the advance of significantly large systems of precipitation. Soaking rains stimulate the rapid growth of herbaceous plant life. A burst of nectar sources for adult butterflies also stimulates them to launch another generation. Larvae dine and grow on the fleeting leafy sustenance before arid times return.

Wikipedia presents a quite detailed summation of the Painted Lady's life history and migration across the globe: https://en.wikipedia.org/wiki/Vanessa_cardui

You can read up on, and perhaps choose to participate in The Worldwide Painted Lady Migration, a global citizen science project in which members can monitor and report sightings for the worldwide database: <http://www.butterflymigration.org/>

Returning to Painted Ladies in the classroom, and getting them out where they belong...

Every spring primary teachers at Montessori Children's House in Lansing and at Stepping Stones Montessori in East Lansing order fresh batches of newly-hatched larvae in cups of feeding medium so young students can observe the process. When the larvae have advanced to the chrysalis stage either I or the teacher will extricate a small Bull Thistle rosette, root intact, from a lawn and transfer it to a small flower pot. It is placed into the sheer net cage within which the chrysalises hang.

When adults emerge and begin feeding on the provided sugar water, males and females soon find each other and copulate. After this, locating thistle becomes any fertile female's primary objective. They find it in the enclosure, then, for lack of any other options, cumulatively coat the leaves with tiny green eggs. The class eventually releases the butterflies outside on a sunny day, but not before the females have left behind hundreds of eggs that will be due to hatch in little more than a week. Larvae are then released on wild-growing thistles found around the outside of the school.



Every spring we mow around a few Bull Thistle rosettes. By early August they are 6 feet tall and loaded with spiky buds that open into big magenta flowers - magnetic to hordes of bees, butterflies and hummingbird moths.

Last week, Candy Voigt at MCH contacted me to inquire whether Nature Discovery could make use of an extra several hundred eggs and young larvae still on hand in her room at school year's end. Heck yeah!

We are able to announce that right now, and for a limited time (Did I mention they grow fast?) we are able to provide the 'Painted Lady-on-Thistle' experience for interested enthusiasts of any age to take home. We will include a printed Painted Lady Larva care sheet to help increase your chances of success.

Participants in day camps here will learn about the butterfly and its food plant then take a few home to rear to adulthood for release. Visitors by appointment to our nature center are also welcome to take some home to raise. Teachers and parents with interested children can to arrange to pop by and pick some up while supply lasts. We often meet adults who have never experienced the process of butterfly metamorphosis first-hand. We'll set you up, and suggest only a small donation for the opportunity.

Got thistle growing in your yard or around your neighborhood? Simply clip a few of the prickly leaves and insert them with some caterpillars from us in a large, air-tight jar (no holes in the lid!).

You can also deposit caterpillars on wild thistles where they grow around your property or neighborhood, then check periodically on their progress. Here you'll likely witness even more intricacy in the Painted Lady's ecology. Predators of lepidopteran larvae abound in all shapes and sizes. Few caterpillars survive the gauntlet to take wing as adults. The majority will become food themselves, sustaining other organisms that reside in the intricate web of life right outside our doors.

- Jim McGrath

Nature Discovery

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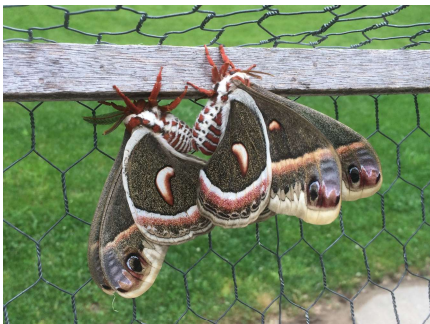


Visit Our Nature Center by Appointment

***Suggested Minimum Donation:
\$5/person/hour***

The sky's the limit for natural science learning here – with a Michigan twist! Individual adults, couples, families and small groups are welcome to schedule an intimate indoor/outdoor visit to what we call “The Biggest Little Nature Center in Michigan,” and “Home to the Largest Zoo of Michigan-native Reptiles and Amphibians.” The unique hands-on experiences here are unrivaled in any conventional zoo or nature center! We will bring snakes, turtles, frogs and salamanders out of tanks to interact with adults or kids of any age or grade-level.

Identify and feed “the grand slam of Michigan turtles,” all ten species native to our state, as they swim in pools at your feet. Meet, pet and feed “Milberta”, our always hungry Red-footed tortoise.



Handle any or all of Michigan's three species of garter snakes while learning how to tell them apart, then watch them gobble up worms and live frogs. Hold or “wear” a gentle 6-foot Black Rat Snake – the largest in the state! Many more snakes, turtles, frogs and salamanders to identify and feed.

See huge, beautiful giant silk moths newly emerged from cocoons. Take a guided walk around the yard and on our trails to identify birds, insects, trees, vines, and invasive plants.

Contact us for more info or to make an appointment.

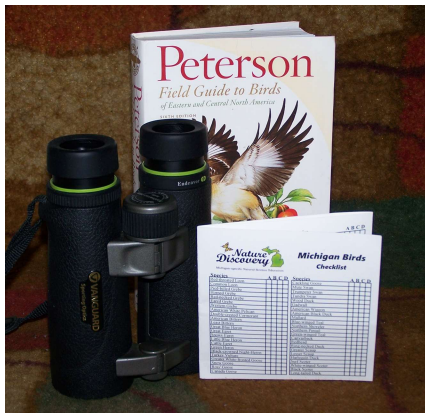
Summer Field Day Camp: Mid-Michigan Birding

June 19-22

8am to 2pm

For students 5th grade & older

In this whirlwind 4-day adventure Jim will lead an intimate group of only 5 participants as we attempt to encounter as many birds as possible in a variety of Mid-Michigan habitats.



Each day we'll head in a different direction within an hour drive of Nature Discovery to see up to 90 species, many of which you don't find just anywhere. Birders will keep their own daily checklists of birds encountered. Bring a good pair of binoculars. Compact binoculars NOT recommended. Inquire about borrowing a pair of ours.

COST: \$325 (\$150 NR deposit).

Raise Giant Silk Moths this Summer

*It's like
raising Monarchs...
on steroids!*



Eggs and young larvae of huge and beautiful Polyphemus, Cecropia and Luna Moths are available for sale now thru early July.

**Five eggs/larvae (per species): \$15.
Additional eggs/larvae 3 for \$5 while supplies last.
Includes detailed care instructions.
Contact us to make purchase arrangements.**

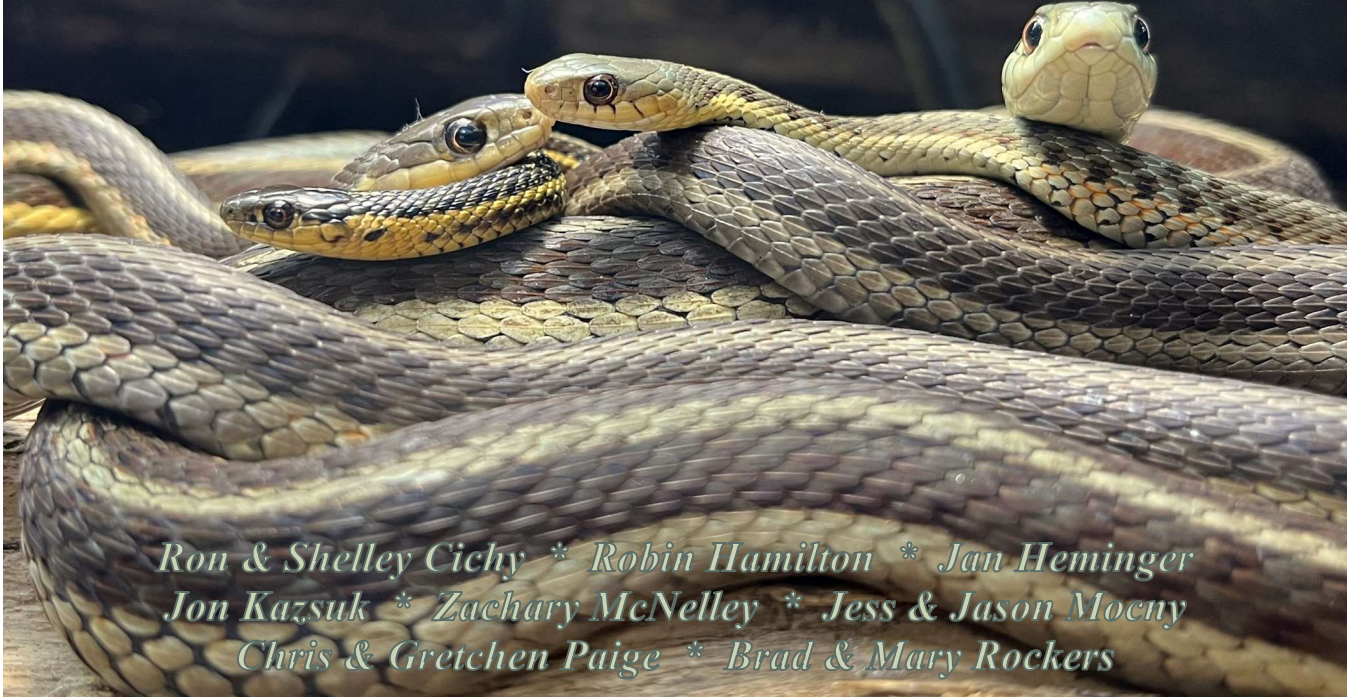


Around the State in June

- ❖ Saturday, June 3: 10am-3pm. MI Reptiles & Amphibians Exhibit; Sturgeon Festival; Port Huron.
- ❖ Saturday, June 3: 10am-4pm. Michigan Snakes Exhibit and Presentation; Kirtland's Warbler Wildlife Festival, Roscommon.
- ❖ Saturday, June 10: 10am-2pm. MI Reptiles & Amphibians Exhibit; Get Outdoors Day, Baldwin.
- ❖ Saturday, June 10: 1-4pm. MI Reptiles & Amphibians Exhibit; Lyon Twp Library, South Lyon.
- ❖ Sunday, June 11: 1-3pm. MI Reptiles & Amphibians Exhibit; Oak Park Public Library, Oak Park.
- ❖ Saturday, June 17: 11am. MI Wildlife Presentation; Betsie Valley District Library, Thompsonville.
- ❖ Sunday, June 18: 10am-2pm. Giant Silk Moths & MI Amphibians Exhibit; Eastern Ingham Farmers Market, Williamston.
- ❖ Saturday, June 24: 10:30am. MI Reptiles & Amphibians Presentation; Huron County Nature Center, Hume Twp.
- ❖ Wednesday, June 28: 10:30am. Michigan Reptiles & Amphibians Presentation; Bullard Memorial Library, Vassar.



*We wish to express gratitude to all our supporters,
including generous donors this past month...*



*Ron & Shelley Cichy * Robin Hamilton * Jan Heminger
Jon Kazsuk * Zachary McNelley * Jess & Jason Mocny
Chris & Gretchen Paige * Brad & Mary Rockers*

Recommended Reading

Supreme Court Limits EPA's Power to Address Water Pollution

https://www.nytimes.com/2023/05/25/us/supreme-court-epa-water-pollution.html?campaign_id=9&emc=edit_nn_20230526&instance_id=93532&nl=the-morning®i_id=97652655&segment_id=133967&te=1&user_id=e2b8dd8c9b543fb8c35d5dd30658067e

The Supreme Court is Crippling Environmental Protections. Where is Congress?

https://www.nytimes.com/2023/05/29/opinion/supreme-court-congress-environment.html?campaign_id=9&emc=edit_nn_20230530&instance_id=93785&nl=the-morning®i_id=97652655&segment_id=134235&te=1&user_id=e2b8dd8c9b543fb8c35d5dd30658067e

Rise in Extreme Wildfires Linked Directly to Emissions from Oil Companies in New Study

https://www.cbc.ca/news/canada/wildfires-climate-change-carbon-88-1.6852178?_vfy=medium%3Dsharebar&fbclid=IwAR0MC5lDAb8l0CMCpr4hSWuEJ3-C0R4tGpZ3teRJqOgoniFFtR5raXuAdP4

-JM

The next generation would be justified in looking back at us and asking, "What were you thinking? Couldn't you hear what the scientists were saying? Couldn't you hear what Mother Nature was screaming at you?" - Al Gore

I don't want you to be hopeful. I want you to panic. I want you to feel the fear I feel every day. I want you to act. I want you to act like you would in a crisis. I want you to act like your house is on fire, because it is. - Greta Thunberg

The personal actions that cut climate pollution fast are to go flight-, car-, and meat-free. Start with the one that feels most feasible for you; if you can't totally go without, aim to cut your consumption today at least in half. - Kimberly Nicholas, Under the Sky We Make

What if we had storytelling mechanisms that said it is important that you know about the well-being of wildlife in your neighborhood? -Robin Wall Kimmerer

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