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**It's September:
Got Milk Snakes?**

Although the uber-successful ad campaign of the 90s has been heavily used, abused and, thankfully now left for dead, we couldn't resist one more spinoff on the eve of our fifth annual Celebrate Michigan Snakes Day.

Of seventeen species, Michigan only harbors one venomous species, the state-protected Eastern Massasauga Rattlesnake. It has been encountered in every county in the Lower Peninsula, but is certainly locally extinct or nearly so in most areas. In our eight or so encounters with wild ones this behavioral observation has been unanimous: All displayed non-confrontational actions, either remaining perfectly still or attempting to get the heck out of our way. Only a couple vibrated the tail (which sounds very close to a buzzing bee). It is obvious that these creatures would prefer not to waste their precious venom in self-defense since they need it to secure their prey.



Our friend, Claud Agnello, snapped this photo of a massasauga near his cottage in Kalkaska County. Note the cloudy eyes - an indication it is about to molt.

Given that we are presenting and exhibiting on this topic to audiences throughout the state, we've heard our share of "snake stories." In conversation over the years, we've spoken with four people who claimed to have been bitten by a massasauga. When we heard each of their stories, our immediate thought was *Yeah, you deserved to get bitten!* Three actually reached toward the snake attempting to pick it up. One erroneously thought it was a water snake. The other two knew it was a rattlesnake, but wanted to try to pick it up anyway. What were *they* thinking?

The fourth person was bitten in the toe. While wearing open-toed sandals at Kensington Metropark near Milford he decided to leave the trail and wade through some overgrowth, despite signs throughout the park that massasaugas are present. He managed to step on one, whereby it had no other choice but to bite in order to get the large mammal off it.

It is possible to live in close proximity to this species with very limited risks. All it takes is a more mainstream educational effort. There is a simple strategy to its accomplishment. Assimilate a massasauga, or, more broadly, Michigan snakes unit into all public school science curricula.

Since massasaugas, among most other vipers, sport a spotty pattern, many folks become nervous when they encounter a snake with this look. An act of aggression toward the snake may follow. Five non-venomous species in Michigan have a spotty look as adults: Eastern Milk, Fox, Eastern Hognose, Northern Water, and the state-endangered Kirtland's. The young of the Blue Racer and Black Rat Snake have a spotty pattern that fades as they age.

Behavioral adaptations take many generations to evolve, some taking hundreds or thousands of years to develop. The fact that a behavior evolves at all evinces its advantage to the species' survival. In a number of non-venomous Michigan snakes a behavior has evolved to effectively mimic a rattlesnake by vibrating the tail. The snakes using this ability include Michigan's three constrictors (rat, milk, fox) as well as the racer. Since none of these possess a rattle, one may assume the vibrating tail is soundless. However, the tail vibrates at an intensity that makes it a blur to the human eye. If it vibrates against any surface – the ground, a wall or even its own body – a buzzing noise is generated.



A lifted item in the garage may expose a hiding milk snake. The mutual surprise may elicit tail-vibrations from one, a shriek from the other.

With the exception of predators that feed specifically on snakes, larger animals will simply move away from any rattlesnake or tail-vibrating mimic. Only since humans have entered the mix has this adaptive behavior begun to work against these species. Hey, who's not playing by the rules here?!

In our neighborhood, the milk snake is the most frequently encountered tail-vibrating rattlesnake mimic. Most often in late summer and fall we receive a call from someone who suspects they just found a rattlesnake in their garage or basement. The eggs of most oviparous species hatch in late summer. Thus, the calls often revolve around a suspect no more than nine inches in length.

Once the size has identified it as a hatchling our first question is whether the snake is wider or thinner than a pencil. Milk snakes are slim-bodied for their length. The massasauga may be the stoutest of all. A new-born may be over two pencil-widths at its widest point. The answer is invariably "thinner."

About ninety percent of the time a prominent visual characteristic works to aid identification: a tan, forked shape thinly outlined in black on top of the base of the head. The quality of this fork varies widely and may look like a V, Y, U or a check mark if one arm is longer than the other. We refer to the other ten percent as exhibiting still another variation of the pattern – a broken fork. Imagine a V with a missing arm or with the bottom apex erased. It becomes much more difficult to recognize as a fork variation. However, with experience, viewing the most atypically-forked marking on a milk snake's head should not stump the viewer.



The telltale head...

In most rural areas, the discovery of a milk snake should be considered a benign, if not, fortuitous encounter. By necessity, after all, it would gladly move out of your garage or barn if it weren't such a high-yield mouse-hunting-ground.

-Jim McGrath

Come Celebrate our 5th Annual



Most people are unaware that our state has three species of garter snakes. Here's a chance to get to know them and to become adept at telling them apart. Why is this important? One species has declined dramatically right here in mid-Michigan over the past two decades.

Michigan SNAKES Day

**Sunday, September 7
1 to 5pm; \$5/person**

Join us for **Celebrate Michigan Snakes Day**. If you love snakes, this day is for you. If you loathe snakes, this day is *definitely* for you! Meet live specimens of 12 of our state's 17 species! Do you know anyone who is afraid of, dislikes, or otherwise has uncomfortable feelings toward snakes? Coax them into coming. We bill this event as the most benign setting you will ever encounter to help you feel better about snakes!

At 2pm, sit-in on the presentation, ***Facts Over Fear: Things Everyone Should Know About Snakes***. While showing live Michigan-native specimens discussion touches on an array of erroneous beliefs spread through society that produce bad feelings toward these surprisingly gentle reptiles. Will a snake bite? Are snakes slimy? Will a snake chase you? Do snakes have fangs? Will a venomous snake ever appear in your yard? One question after another produces a factual explanation that sheds light on the unthreatening reality of these needlessly-persecuted creatures. Identify all of them through up-close inspection.

Watch a snake climb a tree. See snakes eating worms, fish, frogs and mice. Lots of handling and photo opportunities, too. Visit Nature Discovery's entire zoo that also includes Michigan-native turtles, frogs, salamanders and lizards. Knowledgeable staff is on hand to help visitors of all ages make the most of their visit.



The Eastern Hognose is a stout-bodied, slow-moving snake. To counter this limitation it is loaded with a mix of behavioral tricks to discourage large creatures that get too close. Biting is NOT one of them.

Catch Nature Discovery on WLNZ Radio's Coffee Break on Monday, September 29

Jim is scheduled to appear on Monday, September 29 at 9:15am, topic to be determined. The show airs weekdays from 9 to 10am on 89.7 FM. Listen live online at lcc.edu/radio/onair/ or watch it live (or later in the day at 6pm) online at lcc.edu/tv/watch. We'll post a reminder on our Facebook fan page.



Hawk-Watching at Lake Erie Metropark Friday, September 12 8:30am to 4:30pm

Mid-September is prime time for fall migration of many birds of prey, especially if conditions are right (sunny skies, northerly air flow). Lots of migrant songbirds, too. The western tip of Lake Erie is especially good because most hawks prefer not to migrate directly over such a large expanse of water which offers no thermals to aid

in keeping them airborne. At the metropark, we catch concentrated numbers (hundreds or thousands) squeezing around the corner! This guided trip includes round-trip transportation for an intimate group of five adults. Checklists are provided to keep personal tallies of the day's finds. Contact us in advance to reserve your spot! FEE: \$60. Meet at Nature Discovery or plan for us to pick you up on the way. In case of inclement weather, the trip will be rescheduled on Wednesday, September 17.

Around the State in September

- ❖ *Saturday, September 6: 9am to 3pm. Michigan Reptiles & Amphibians Exhibit; Sportsmen for Youth Day, Muskegon Co. Fairgrounds.*
- ❖ *Saturday, September 13: 10am to 3pm. MI Reptiles & Amphibians Exhibit; Salmon Festival, Grand Haven.*
- ❖ *Sunday, September 14: 10am to 2pm. "Feeding Frenzy" Interactive Exhibit; Williamston Farmers Market.*
- ❖ *Saturday, September 20: 10am to 5pm. MI Reptiles & Amphibians Exhibit; Bio-Blitz Event, Chippewa Nature Center.*
- ❖ *Saturday, September 27: 9am to 1pm. MI Reptiles & Amphibians Exhibit; Park-It Event, Lakelands Trail State Park, Hamburg.*

Do the Right Thing: *The Great Plastic-Waste*



Have you heard about the earth's new, boundless multi-national marine garbage dump? If not, here's a link to get you started:

<http://education.nationalgeographic.com/education/encyclopedia/great-pacific-garbage-patch/?ar a=1>

After decades of accelerating production, consumption and disposal of petroleum-based plastic products - as with the planet's associated climatic collapse - this downside of modern excess needs to be addressed as soon as possible. Producers of the stuff won't like the "War on Plastic," but what better place to start than with personal purchasing habits. Pick a day to look around with an

objective eye at the plastic waste that exists in every facet of our modern lives. Start with a peek in any public trash receptacle.

Here are two especially stark cases we've come to notice:

1. About a year ago, the circulation department of the Lansing State Journal decided that every newspaper delivered every day to every subscribing household in the Greater Lansing area was to be encased in a plastic bag. This, despite the fact that no precipitation falls, by far, over most days of the year, and despite the fact that, on these days, a timely, torrential wind-blown downpour is required to ruin the paper that rests for a few hours inside the roadside box.

2. Next time you pick up a sandwich at Subway, plan on your sale being stuffed in a plastic bag, no questions asked. No matter if a customer plans on eating there. The bag wrapped around a sandwich travels a grand total of twenty feet to be pulled off and chucked into the closest receptacle. We've never seen an effort in any store to provide a special receptacle to recycle them. Perhaps more alarmingly, customers revolve through the store, accepting and tossing Subway bags unquestioningly, like well-conditioned automatons. So far, we've talked with an employee at two locations about the store's corporate policy on plastic bags. Both stated that employees were to always place sandwiches in a plastic bag unless specifically ordered to refrain by the customer.

We're sending communication to LSJ and to Subway regarding their plastic-wasting policies. Stay tuned if/when responses arrive.

Now, what state would you most expect to lead the way toward curbing plastic waste? Hopefully, this legislation makes its way eastward before long. Until then, we're all on our honor to do the right thing.

<http://www.huffingtonpost.com/news/california-plastic-bag-ban/>

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