



THE EDWARD L. ROSE CONSERVANCY



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The Great American Outdoors Act





Perhaps lost in the noise of the current political wars is one encouraging development. On August 4 President Trump signed into law The Great American Outdoors Act, which enjoyed rare, enthusiastic bi-partisan support in both the House and Senate.

The Act contains two main attributes. Through the National Park and Public Lands Legacy Restoration Fund it will allocate up to \$9 billion over the next five years to fix deferred maintenance at national parks, wildlife refuges, forests, and other federal lands. There is now a \$12 billion backlog of deferred maintenance on all aspects of national parks infrastructure including roads, trails, campgrounds, monuments, fire safety, utilities, and visitor centers. Those parks have seen a 50 percent increase in attendance since 1980, while the parks' budget remained virtually unchanged.

Also, the Act fully funds the Land and Water Conservation Fund, originally created in 1964, assuring \$900 million will be available each year, in perpetuity, to protect natural resources and recreation areas. Historically, that fund has received less than half the authorized \$900 million. Those funds support four main federal land programs—National Parks, National Forests, Fish and Wildlife, and Bureau of Land Management—and provides grants to state and local governments to acquire land for recreation and conservation.

The money allocated to fund this new law actually comes from federal revenue from offshore oil and gas operations.

Wild Things in Your Woodlands

Eastern Milk Snake

The Eastern Milk Snake (*Lampropeltis triangulum triangulum*) is a medium-sized, boldly-patterned snake with smooth scales and a small, blunt head that is distinct from its body. While there is a lot of color and pattern variation, milk snakes usually have a series of 30-47 large squarish blotches on top of their bodies, and a row of smaller, alternating blotches running along their sides. On adults, these blotches vary from reddish brown to a light or dark brown, bordered by a black line. Juveniles often have bright reddish brown or orange blotches. The background coloration varies from beige to gray. The underside of the milk snake is a creamy white color, with black squarish markings that form a checkerboard-like pattern. Another way to identify milk snakes is by the "V", "U" or "Y" shaped blotch on the top of the head.

Adult milk snakes are generally between 24 to 52 inches in length, averaging around 33 inches for males and 30.75 inches for females.



Milk snakes are like the misunderstood teenagers of the snake family. While they are abundant throughout the state, they can sometimes be secretive and often may not be seen out in the open. People often fear them for their more dangerous look-a-likes, and even their name is misleading. We hope we can clear up some of the mystery surrounding milk snakes in this edition of "Wild Things in Your Woodlands."

The Eastern milk snake has a very broad range, reaching up to Quebec and Maine, westwards to eastern Minnesota and southwards all the way to Alabama. The Eastern milk snake is actually one of 24 subspecies of milk snakes, a species that boasts the biggest range of any native snake in North America. Milk snakes are found nearly everywhere in the United States, except for the West Coast, and can be found as far south as Venezuela and up north into Canada.

With such a broad range, it is unsurprising that milk snakes thrive in a wide variety of habitats. They inhabit deciduous forests, rocky hillsides, open fields and ecotones (areas of transition between two types of ecosystems). Eastern milk snakes commonly dwell in human habitats, such as farms and power-line right-of-way. Milk snakes are rarely encountered in the open, and the best way to find them is by searching under objects, like rocks, logs, boards, tin or other building debris.

People often find milk snakes hiding in barns, giving rise to the myth that these snakes were sucking on teats and "milking" the cows. Milk snakes are actually drawn to barns for their warmth and abundance of their favorite foods: rodents! This makes milk snakes a highly beneficial species for farmers because they help control rodent and other pest populations.

In ecosystems, milk snakes are also important predators of small mammals, birds and other snakes. Their diet changes dramatically with age, where younger snakes feed mostly on other species of snakes (not just red-bellied snakes especially, but eastern garter snakes, northern ringnecked snakes, and northern water snakes also make the menu). On the other hand, adults feed almost exclusively on small mammals, amphibians and, on the rare occasion, birds. Milk snakes are constrictors, meaning that they coil themselves around prey and squeeze until the animal suffocates. After the prey is dead, the milk snake swallows its food whole.

Milk snakes are active from April to October, with peak activity in June. They are mainly nocturnal, but are occasionally out during the daytime when it is warm enough. They enter brumation (like hibernation) in the fall, hunkering down in shale banks, wells and under debris.

Milk snake mating season occurs from March to May. Since milk snakes are a solitary species, mating season and hibernation are the only times milk snakes will be found with others. Sometimes snakes will mate while still inside their winter den. Other times, females will exit their den and leave a pheromone trail behind for males to follow. Once the male finds a female, he will sometimes mate for several hours to prevent other males from copulating with the ovulating female.

About thirty days later, the female selects a warm, humid nest site and lays her eggs. Nests can be found in a variety of materials, including rotting wood, sawdust piles, rubbish heaps, loose soil and under rocks. The female usually lays around 10 white, leathery eggs each slightly longer than an inch and a half (though clutch sizes range from 5-24). After laying the eggs, the female is freed from her motherly duties, and leaves the eggs to incubate.

Incubation varies from 49 to 61 days, and hatchlings first appear in mid-August. Using a special "egg tooth" to hatch out of their eggs, the baby milk snakes are about 9 to 10 inches long, and look like a smaller, more brightly colored version of the adults. The pattern of the eastern milk snake usually gets darker and duller with age. As young milk snakes are common prey, those that are able to avoid predation become fully grown within 3 years. This is not to say that adult snakes are free of predation, as raccoons, skunks, foxes and coyotes all prey on milk snakes.

When threatened, milk snakes will shake their tails in an attempt to mimic a rattlesnake and scare the predator away. The eastern milk snake does not actually have a rattle, but can create rattling noises from the shedding of dry leaves and vibrations. In some areas, the coloration of milk snakes mimics that of copperheads or cottonmouth snakes, both venomous species. Mimicking venomous snakes is a useful strategy to help avoid predation.

Unfortunately for milk snakes, this tactic often backfires when humans mistake them for a dangerous snake and kill them. This species is by far one of the most confusing species of snake, since its rattling behavior of people into thinking they've encountered a rattlesnake. The eastern milk snake is also commonly confused with the copperhead because they have similar markings on their back. However, only the eastern milk snake has the characteristic "Y" or "U" markings on the back of its head, and the copperhead also lacks the milk snake's underbelly checkerboard pattern. Other species frequently confused with the eastern milk snake are juvenile black rat snakes, northern black racer and the northern water snake.

Even though they are commonly confused for dangerous species, the eastern milk snake is harmless and non-venomous. If an intruder approaches, they may vibrate their tail and strike a couple times, and they even bite if cornered or captured. Milk snakes may also release a musk or feces upon capture and handling. Regardless, milk snakes pose no real issues for humans, and for anyone looking to rid their yard of rodents, snakes make wonderful allies.

By Karen Ceballos and Kristi Sullivan

Quarantine of Another Sort

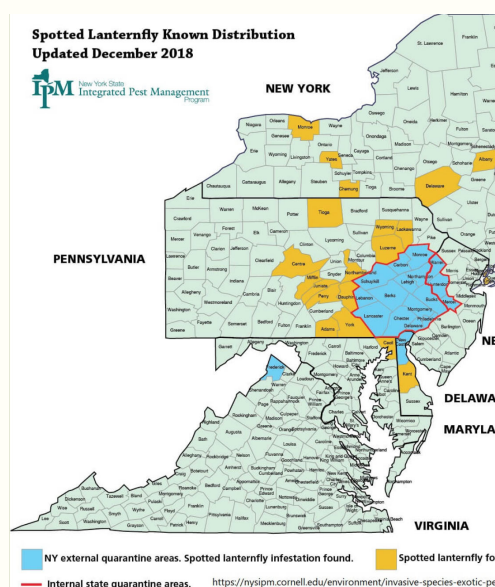
Curbing the Spread of the Spotted Lanternfly

Humans are not the only species experiencing the effects of quarantine to foil the expansion of a pernicious invader. Quarantining is also being encouraged to stop the spread of the Spotted Lanternfly into eastern counties of Pennsylvania. The insect had already made its way as far north as Luzerne County. At the same time as COVID was exploding in early March, the Pennsylvania Department of Agriculture added 14 counties to the south and east of Luzerne.

The insect was introduced from Asian countries and first spotted in Pennsylvania in 2014. Lanternflies lay egg masses on smooth bark, including willow, maple, poplar, sycamore, evergreen species, and a variety of fruit trees. Although prevalent on so many types of bark, the insects also lay eggs on brick, stone, and other vertical surfaces, including items stored outside in yards. They drain sap from stems and leaves that impacts the plants' ability to utilize photosynthesis. They also leave behind large amounts of fluid which allows mold to grow on the host. The secretions also attract wasps, hornets, bees, and ants.

If you spot masses of eggs on trees and other surfaces you are encouraged to scrape them off, dispose of them, and take photos to send to the Pennsylvania Department of Agriculture, which is maintaining a survey of the population spread. Visit this page to help track the invasion:

<https://extension.psu.edu/have-you-seen-a-spotted-lanternfly>



Egg Masses: September – May



Nymphs: April – October



Adults: July – November



Natural Gas Drilling in Pennsylvania

SHALE PLAY | Natural Gas Drilling in Pennsylvania

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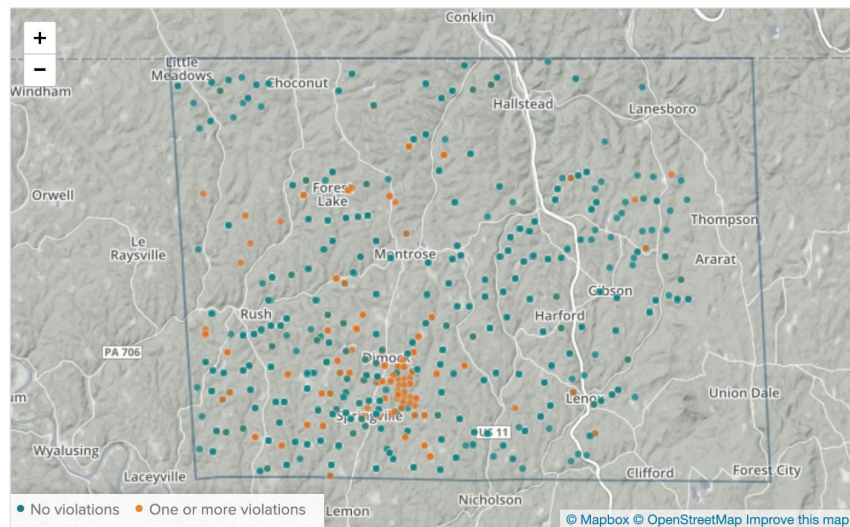
Susquehanna County

ACTIVE WELLS

1,079

VIOLATIONS

795



Click [HERE](#) to access this interactive map that shows details on these sites.

In case you missed it...

A two-year Pennsylvania grand jury investigation culminated in charges filed in June against the Cabot Gas Company for environmental crimes. “The grand jury presentments prove that Cabot took shortcuts the law and damaged our environment — harming our water supply and public health,” Attorney General Shapiro announced. “They put their bottom line ahead of the health and safety of Pennsylvanians.”

The jury determined that methane pollution in the water supply of Dimock township in northeastern Pennsylvania was not the result of naturally-occurring methane, but due to seepage from poorly constructed natural gas wells. The company had argued that the presence of methane was unrelated to their drilling activity.

But researchers now have much better tools to distinguish the significantly improved their ability to distinguish between naturally occurring methane and methane mobilized by drilling. The jury was persuaded that release from local residents of gas surging from faucets in “violent blasts,” as well as water set ablaze right out of the kitchen sink was inconsistent with natural causes.

Full disclosure: The E.L. Rose Conservancy receives periodic royalties from Cabot Oil and Gas from leased property now under the Conservancy’s stewardship. In 2019 that amounted to \$10,095.46.

And...if you thought fracking risks only included spills and fires in your faucet...

Researchers at Binghamton University, using data from NASA satellites, only available within the past few years, have determined that people are dying unnecessarily from increased particulates in the air as a result of fracking. Although the Clean Air Act mandated monitoring of wells, in actuality that monitoring is only in effect near major population areas. By using this new technique to analyze satellite data, wells in rural areas, such as those in a Pennsylvania backyard, can now be assessed as well. The technique involves calculating the refraction of light near the ground, which BU researchers have concluded is impacted by the presence of particulate matter released during the drilling process.

For the complete story click [HERE](#).