

# MOUNTAINS

## Monarch butterflies are coming soon



**Word from the Smokies**

Frances Figart  
Columnist

Monarch butterflies have begun their yearly northward migration and are due to arrive in Great Smoky Mountains National Park any day now.

This time of year, you may start to see *Danaus plexippus* flying around the region. These attractive orange and black butterflies have made the long journey from their overwintering sites in central Mexico and are looking for mates and milkweed plants.

“Each of a male monarch’s hindwings has a scent gland that looks like a small black spot on its top surface,” said Todd Witcher, executive director of Discover Life in America (DLiA), a park partner organization. “These glands help entice females during courtship and are also helpful for distinguishing the sexes.”

After mating, the female lays a single egg on the underside of a young milkweed leaf. She may travel far and wide to find enough satisfactory plants on which to lay her 300 to 400 eggs. After that, her job is done, and she will die.

The tiny monarch caterpillar emerges from its egg about 10 days later. It will devour its own eggshell and then begin to eat the milkweed plant that its mother carefully selected, chewing through the thick leaves with its powerful mandibles. Commencing an eating frenzy, the caterpillar will grow and shed its skin five times over about two weeks before it pupates into a green chrysalis accented with golden spots. It emerges as a new monarch butterfly after 7 to 10 days.

In eastern North America, east of the Rocky Mountains, the northward migration in monarchs takes place in stages. The first wave flies from Mexico to southern US states in the spring. There, the butterflies reproduce on milkweed and die. When their progeny (the second wave) emerges in the summer, they fly further northward into the northeastern and north-central US and eastern Canada to repeat the process. Amazingly, their progeny (the grandchildren of the first wave) will travel thousands of miles to Mexico in one single trip in the fall.

Monarch caterpillars will only feed on milkweed plants and require it to reach adulthood. The plant’s name comes from its thick white sap, which oozes out when a leaf is pierced or a stem is broken. The sap is distasteful to



The monarch butterfly is shown on its foodplant, milkweed, the sap of which contains chemicals that become concentrated in the caterpillars as they feed and grow so that monarch larvae and subsequent adults are distasteful to birds and other predators.



During its eating frenzy, the monarch caterpillar will grow and shed its skin five times over about two weeks before it pupates into a green chrysalis accented with golden spots. PHOTOS PROVIDED BY WARREN LYNN

most herbivores, including insects, but monarchs love it.

This “milk” contains a class of defensive chemicals called cardiac glycosides, which provide additional protection to the plant from would-be herbivores. These chemicals become concentrated in the caterpillars as they feed and grow, so that monarch larvae and

subsequent adults become distasteful to birds and other predators. The contrasting black and white stripes on the caterpillars and orange and black pattern on the adults warn predators not to eat them.

“Eight different milkweed species have been documented in the Smokies as part of the All Taxa Biodiversity In-

ventory,” said Witcher, referring to a project managed by DLiA to catalog every species living in Great Smoky Mountains National Park. “They take on a variety of shapes, sizes, and flower colors.”

According to the U.S. Forest Service, at least seven of the park’s milkweed species can serve as hostplants for monarchs.

“Monarch caterpillars can be seen in Cades Cove,” said Becky Nichols, entomologist at Great Smoky Mountains National Park, “as well as Cataloochee Valley and other sunny meadows in the park where milkweed is present.”

The park has mapped milkweed in Cades Cove and works to schedule management activities, such as mowing and prescribed burning, to accommodate the monarch life cycle.

“Timing is critical so that plants are ready and available for the monarchs,” said Nichols.

Despite efforts to protect them, monarch populations have been declining in recent years. The Xerces Society, a Portland-based nonprofit devoted to insect conservation, has reported an 80% decline in monarch numbers east of the Rocky Mountains. The organization attributes this dramatic drop in monarchs to three main causes: habitat loss from development and agriculture, increased usage of pesticides and herbicides, and climate change. Researchers have documented a similar plight for many other pollinating insects, as well.

How can you help? One of the best ways is to plant native milkweed in your yard or other greenspaces.

“Ask your local nursery for native milkweed that has not been treated with insecticides,” said Witcher. “Most places sell non-native milkweed species, but these can carry diseases that can harm monarchs.”

Milkweed is not just good for monarchs, it also provides nectar for a wide variety of other insect pollinators, including bees, other butterflies, and even some fireflies, and serves as the host-plant for a few other insect species that can tolerate its defensive chemicals.

“Milkweed is a wonderful addition to any native garden in Southern Appalachia,” said Witcher, “it looks nice, it smells nice, and it’s a great source of nourishment for lots of species.”

*Will Kuhn is the Director of Science and Research at Discover Life in America, which seeks to discover, understand and conserve the biodiversity of Great Smoky Mountains National Park. Learn more at [dlia.org](http://dlia.org) and reach the author at [will@dlia.org](mailto:will@dlia.org).*

## Henderson ends mask requests in county buildings

**Lurah Lowery**

Hendersonville Times-News  
USA TODAY NETWORK

After hearing that there has only been a slight uptick of COVID-19 cases in Henderson County and those that contract the virus aren’t getting as sick now, the Board of Commissioners on April 21 voted to no longer encourage masks be worn inside county-owned buildings.

They also intend to push Gov. Roy Cooper to lift restrictions by sending a letter to him, which states the board believes it’s time to end mandatory mask-wearing at schools and private businesses.

Cooper said April 21 he plans to lift mandatory social distancing, capacity and mass gathering restrictions by June

1. An executive order is expected to be issued next week on safety restrictions for May.

The draft letter, which hasn’t been approved yet, reads in part:

“After review of all the pertinent data it has become apparent to us that the continuance of further restrictions on the personal liberties of our citizens and business owners is no longer justified.”

The letter requests that Cooper issue an executive order to “return the freedoms and liberty that has been taken from our citizens for over a year.”

It seeks to have the governor lift the mask requirement for Henderson County Public Schools students, teachers, and staff as well as privately owned business employees and patrons.

The board also wants Cooper to remove limited capacity restrictions on

private businesses.

“These restrictions, in our opinion, are not having any significant impact on the spread of the virus in our community,” the letter states. “Continued limitations on our business community have had and will continue to have a substantial negative economic impact.”

Daily new cases in Henderson County as of April 21 were at 20.7 per 100,000 people, according to the Harvard Global Health Institute. That’s compared to 14.5 per 100,000 on April 13.

Board Chairman Bill Lapsley said the county has done a good job with “addressing this unique situation.”

“The numbers as I see them here today are telling me we’re getting near the end, if not already there, on the need for county government, or state government for that matter, to be addressing

these things,” he said. “We got a vaccine. We’ve made provisions to get it to the folks in our community.”

Commissioner Rebecca McCall said there are multiple reasons some shouldn’t wear masks, including allergies and asthma, because it inhibits their breathing.

“The fact that people have been vaccinated and are told they still have to wear a mask is illogical to me,” she said.

McCall held back tears when she talked about how hard she believes it is for children to wear masks at school and what they miss out on emotionally as well as academically by their teachers wearing masks.

“Masks are dehumanizing,” she said. “They erase our facial expressions.”

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