

MOUNTAINS

Don't kill It! Spiders protect us from disease



Word from the Smokies
Frances Figart
Columnist

This time of year, some varieties of spiders may seek shelter from the cooler temperatures by coming into your house. If you find one, consider this before you take action: Most spiders are harmless, they provide essential services for humans, and they are actually critical for the balance of our ecosystems.

“Without spiders we would probably succumb to some nasty insect-borne disease while waiting to starve to death,” said Kefyn Catley, who has studied the evolutionary biology of spiders on four continents. Some of his work has been done in Great Smoky Mountains National Park, where a number of researchers have recorded 531 species of spiders, 41 of them new to science.

For years Catley taught and conducted research as a professor of biology at Western Carolina University in Cullowhee. He was a research scientist at the American Museum of Natural History and has taught the “Spiders of the Southern Appalachians” course at Highlands Biological Station for the past 15 years.

Spiders are part of a larger group of species called arthropods, which Catley — who holds a Ph.D. in arthropod systematics from Cornell — describes as the little and largely unseen creatures that run the world.

“Arthropods provide the life support systems that humans and the whole terrestrial biosphere rely on for their continued existence,” he said. “Without them it has been estimated that all almost all life on land — including humans — would go extinct in nine months.”

Spiders have two main body parts and two unique characteristics: silk produced through “spinnerets” located at the tip of the abdomen, and the male “pedipalp” as an organ for transferring



The tan jumping spider (*Platycryptus undatus*) is shown above. It is estimated that the spiders on about two acres of forest in Western North Carolina can consume 48 metric tons of insects in a year. KEFYN CATLEY/ COURTESY PHOTO

sperm to the female.

“Spiders have an ancient lineage originating some 400 million years ago,” Catley said. “They are the largest and most important group of predators on the planet.”

These tiny creatures regulate all our land-based ecological systems by con-

trolling herbivorous insect populations. It is estimated that the spiders on about two acres of forest in Western North Carolina can consume 48 metric tons (105,840 pounds) of insects in a year.

“Spiders also provide us with excellent models for studying ecology, biochemistry, competition, and sexual se-

lection, among other fields,” said Catley who is retired but still teaches courses on spider biology and insect photography. “They contribute to research in pest control, venom chemistry, and the cloning of silk.”

Even with all of these benefits, many people are afraid of all spiders because a few have harmful bites. Catley points out that less than one percent of spider species are toxic to humans.

This less than one percent of spiders are not poisonous; they are venomous (poison is ingested; venom is injected). Catley says the evolution of venom is one of two innovations (the other being silk) that makes spiders the hugely successful group they are. Most spiders produce venom that paralyzes their prey and starts the process of digestion by breaking down cells and tissue.

The only spider native to this area that — very rarely — envenomates humans is the black widow. Fortunately, like most spiders, these are shy and retiring and do not threaten humans.

Between 1979 and 1991, the United States saw 1,135 deaths attributed to lightning strikes, 591 attributed to bee stings, 72 to snake bites, and 57 to alleged spider bites — but as many as 80 percent of spider bites are wrongly diagnosed. This translates to a 20 times greater chance of being struck and killed by lightning than being killed by a spider!

Some spiders, like the cellar and parson varieties, live with us indoors all year round. If you protect your living space from pesticides, these constant companions will be at your service, significantly reducing your undesirable insect populations.

So, what should you do if you see a spider in your home? Catch it with a cup and postcard and put it out — or simply let it be.

Frances Figart is the editor of Smokies Life magazine and the Creative Services Director for the 34,000-member Great Smoky Mountains Association, an educational nonprofit partner of Great Smoky Mountains National Park. Reach her at frances@gsmassoc.org.

Motion: Man imprisoned with coronavirus should be released

Joel Burgess Asheville Citizen Times
USA TODAY NETWORK

ASHEVILLE — Local advocates have filed a new motion trying to get a Buncombe County man released from an Eastern North Carolina prison after he became seriously ill with COVID-19.

Attorney Alexandra Cury filed a Sept. 9 motion for Buncombe Superior Court Judge Alan Thornburg to reconsider his denial this spring of a motion to release Robert Thomas Sr.

Thomas, 59, was born in Asheville and lived in Candler. He serving a nine-year sentence at Neuse Correctional In-

stitution in Goldsboro for robbery with a dangerous weapon, second-degree kidnapping and using a fake bomb in 2012. He has a projected release date of Feb. 5, 2022.

In April, Thomas became ill with COVID-19 and was intubated and put into a medically-induced coma for two weeks.

Advocates have argued Thomas, who is the father of Asheville Racial Justice Coalition Community Liaison Robert Thomas Jr., should be let free. They have pointed to his prison record, which has no infractions, and his underlying health conditions including cardiomyopathy, diabetes and high blood pres-

sure.

Thomas is being used as an example in a separate Wake County case against the N.C. prison system. The NAACP is saying prison conditions are not safe during the pandemic. A trial date is set for 2021, but this month plaintiff’s argued the system was violating a judge’s requirement that some relief be given to prisoners’ before the trial. On Sept. 11, Wake Superior Court Judge Vince Rozier declined to take any additional actions, such as requiring early release for Thomas or other prisoners.

The plaintiffs’ attorney, Elizabeth Simpson said on Sept. 16 there had not

been a decision yet on whether to seek any more changes before the trial.

The motion in Buncombe is a different effort to free Thomas through local courts. In it, Cury, his attorney, pointed to an August order of appropriate relief entered by Buncombe Superior Court Judge Marvin Pope identifying the virus as an “imminent threat to the health of the community, requiring emergency protective actions, and that individuals like Defendant and others in congregate settings are at risk for contracting COVID-19.”

She also argued that inmates’ exposure to the virus “is a violation of rights that requires an adequate remedy.”

It is not clear when any action might be taken on the motion.

Cury and Buncombe District Attorney Todd Williams did not respond to requests for comment.

APD responds to shooting into home on Chunns Cove Road

Eric Narcisse Asheville Citizen Times
USA TODAY NETWORK

No one was injured during a shooting into an occupied home Sept. 17, according to a press release from the Asheville Police Department.

The APD responded to a call of shots fired at 2:30 p.m. Thursday into a home on the 400 block of Chunns Cove Road. Officers found the home had been struck with a number of bullets from a semiautomatic handgun, the release said.

APD determined the shooter targeted the home from a nearby wood line and escaped the area in a white Cadillac or General Motors SUV, police said.

The case remains under investigation and APD is requesting anyone with information about the incident to call

828-252-1110.

Since Jan. 1, the APD has responded to 431 calls of shots fired and a total of 32 people have been shots during the same time period.

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