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#### COLUMNS

# Campbell Vaughn: Coming in so many shapes and sizes, bats are fascinating

#### Campbell Vaughn Columnist

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I went by to visit my buddy Eric the other evening while killing some time running my son from this activity to the other. We always have a good time hanging out. Eric always has some questions about his yard, so we usually do a walkabout when I visit.

It was approaching dusk, and he asked me to come watch the bats that come out of his neighbor's attic through a louvered gable opening. Bats are super cool, so we stood there, waited and nothing. In trying to figure out why they weren't out flying, we guessed they might be hibernating.

Later at the office I looked it up and sure enough, they do. Looks like we will have to wait until spring to get to see the neighbor's bats.

Georgia is home to 16 species of bats and all of them eat insects exclusively. Bats are mammals just like you and I, being warm-blooded, covered in hair, have live babies and nurse their young called pups.

Unlike you and me, they are the only mammals that can fly. If you are thinking, what about flying squirrels? They do not fly but glide or parachute by means of a furred membrane.

Bats have a complex bone structure that allows full powered flight. A bat's skeleton is remarkably like those found in birds as well as humans.

Bats are also nocturnal and use a system of sound waves and echoes called echolocation to find food, navigate and communicate with others, sometimes in total darkness. This type of biological sonar is an ultrasound created by the larynx and emitted by both the mouth and sometimes nose of these flying mammals. Essentially, the bat yells all the time while flying and when the sound bounces off something else, it can tell what it is by hearing the echo.

Researchers also record these ultrasonic calls with devices called "bat detectors" to tell what type of bat is in the area by the frequency of the calls. In recent years, researchers in several countries have developed "bat call libraries" that contain recordings of local bat species that assist with identification.

Campbell Vaughn: If you want to plant fruit in your gardens, blueberries are just right

## What else can we learn about bats?

Ever heard 'blind as a bat'? It is a misnomer. Bats can see well.

Bats live on every continent except Antarctica, and you find high frequency screamers as far north as Alaska and as far south as Argentina.

There are more than 1,300 species of bats and most species live in tropical regions near the equator where it is nice and warm.

Most bats feed on insects and can consume copious amounts of bugs. A nursing mom can consume her body weight in insects every day. A favorite food of some bats is the earworm moth, also called cotton bollworm or tomato fruit worm.

Worldwide crop damage from this moth is estimated at \$1 billion per year. In Texas alone, the bats save cotton farmers \$740,000 in potential damage in a year.

Some tropical bats eat fruit and are critical for dropping seeds to restore cleared or damaged forests. Some bats are also pollinators, which is a big positive.

The smallest bat is the bumblebee bat from Thailand and is the size of your thumb. The bumblebee bat weighs less than a penny and has a wingspan of about 6 inches.

The largest bat on record is the flying fox. These bats have a wingspan as large as 6 feet. Flying foxes are fruit-eating bats and are found in the tropics, including Asia, Australia, Indonesia, and the Philippines.

The common vampire bat is found in the tropics of Mexico, Central America, and South America. They only feed on blood. This bat has a special chemical in their saliva that keeps blood from clotting.

Scientists studied this anti-clotting chemical and used it to develop medicine that helps humans who suffer from blood clots and strokes.

Bat droppings are called guano. It is a fantastic amendment to the garden. It is a natural fertilizer with a 7-3-1 Nitrogen, Phosphorus and Potassium makeup. Tractor Supply has it available in some stores and online.

### Where do bats make their homes?

Depending on the species, bats can live in hollow trees, under big leaves, roost under loose bark while others will hang from tree branches. Several species of bats roost in caves, cliff walls, and abandoned mines.

Caves are a common home for bats. Bracken Cave in Texas is home to almost 20 million Mexican free-tailed bats.

City bats can be found roosting under bridges and in buildings. You can also find them during warmer weather in Eric's neighbor's gable vent.

You probably don't want a bat living inside your house, so make sure that gable vents and soffits are closed off with wire mesh. Certain species of bats can enter your home through a hole three-eighths of an inch wide.

**More:** Cast as scary creatures, bats actually are useful and locals are enticing them with new homes

If you are trying to get rid of bats that have invaded the inside of your home, avoid using Naphthalene (moth balls). The quantity of moth balls it would take to deter bats will sicken humans before it affects the bats.

Inside the house, bat guano may provide a growth medium for microorganisms, some of which are pathogenic to humans. Histoplasmosis is an infection caused by breathing spores of fungus often found in bat droppings. Symptoms of this infection include fever, chills, headache, cough, and muscle aches.

Histoplasmosis in infants and the immune-depressed if untreated can be fatal.

When working in an enclosed area where bat droppings are present, make sure you wear some type of respiratory safety device like a mask.

If you would like to decrease the population of insects in your yard a natural way, buy or build a bat box. There are many types to choose from. Placement is critical and best suited with a lot of sun, at least 15 feet off the ground and near water. Mounting on a pole or the side of a building is good but avoid mounting bat houses to trees. This can lead to increased predation, branch obstruction and too much shade.

## Should I be Afraid of Bats?

Some people are afraid of bats because they think bats carry rabies. Like any other mammal, they can get the disease. However, very few bats have rabies. And you can only get rabies if a rabid animal bites you or if you come in contact with its saliva.

Maybe when spring rolls around I will find some time to go back to visit Eric and his family. Hopefully, it will be warmer, and he will have some chairs set up for us to watch his neighbor's bats take flight when they finally wake from their winter's rest.