# **CAUTION: DANGEROUS**

If you come across any of these critters, please DO NOT handle them. Chimney Rock State Park is their home, and since these critters play important roles in the natural environment, please DO NOT kill them either.

#### **EXTREMELY VENOMOUS**

The female black widow and brown recluse spiders have extremely venomous bites that can cause serious injury to humans, and in some cases be fatal. Even though you're more likely to encounter these guys in your house, they do live in "wild" habitats as well ... preferring wood piles and fallen debris.



Female black widows can be easily identified by their jet-black color and red hourglass marking on the bottom of their abdomen. The brown recluse - also known as the violin spider, brown fiddler and fiddleback spider - has a violin shaped marking on the top of its cephalothorax.

#### **POTENTIALLY DANGEROUS**



There are other types of critters than can be found here that pose a potentially dangerous threat to humans if bitten or stung. Bees, wasps and centipedes have a mildly poisonous sting / bite that can cause severe reactions in some people, while ticks and mosquitoes can transfer potentially dangerous diseases on rare occasions.



**TRACK and KIP** want You to become a Trail TRACKer

Thank you for joining us on the trail today. We want you to join the Trail TRACKer Team. It's fun, healthy and free. Best of all, by keeping TRACK of your trails on our website, you can earn prizes. For more information about the Trail TRACKer Team, other TRACK Trail adventures near you, or for general information about the Kids in Parks program, please visit our website at:

## www.kidsinparks.com

The TRACK Trail program is part of the larger **Kids in Parks** initiative sponsored by the Blue Ridge Parkway Foundation, the Blue Ridge Parkway and the Blue Cross Blue Shield of North Carolina Foundation. Working together with Chimney Rock at Chimney Rock State Park, the National Park Foundation and other partners throughout North Carolina, our mission is to increase physical activity of children and their families, improve nutritional choices, and get kids outdoors.

#### Kids in Parks ...

for the Health of our Kids, our Communities and our Parks.



# FOUNDATION

# CHIMNEY ROCK'S **BUG OFF** An Investigation into the **Creepy Crawlies of the Forest**

Except for when we see the most beautiful butterfly or interesting insect, most people get "Bugged Out" in the presence of bugs. However, bugs are one of the most beneficial creatures on Earth by helping to pollinate the world's plants and food crops, decompose dead animals and plant material recycling valuable nutrients back into soil and more. On your hike today, use this brochure to identify some the various insects, spiders and arthropods that call Chimney Rock State Park home.

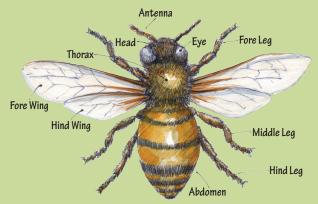


## WARNING:

Some of our insect and spider friends have adaptations that help them survive that can be harmful to you. Be Aware! Please read the back panel for information regarding potentially dangerous spiders and insects before beginning your adventure.

## **INSECTS**

Insects - from the Latin word *insectum*, meaning "cut into sections" - are an extremely diverse group of animals. More than half of all known organisms on Earth are "bugs" with over 1 million different types of insects having been identified.



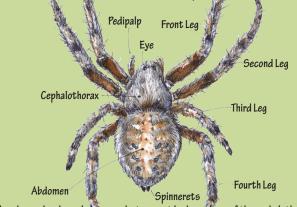
The diagram of the honey bee's body above is typical of most insects. All insects have a hard external skeleton (exoskeleton), a three-part body made up of a head (containing two antennae, compound eyes, and mouth parts), thorax (containing six jointed legs and, if present 2 or 4 wings) and abdomen (containing respiratory, reproductive and digestive organs).



Insects play an important role for the rest of the world by pollinating many flowering plants. Not only does this help plants reproduce, but it provides humans and animals with food. How many different kinds of insects can you find today?

## **SPIDERS**

Spiders have adapted to nearly every environment on Earth (except the oceans and Antarctica) and are the seventh largest group of organians in terms of total species diversity with more than 40,000 different spiders being identified.



Spiders have a hard exoskeleton and a two-part body made up of the cephalothorax and abdomen. The cephalothorax is a fusion of the head and thorax in insects and contains eight legs, pedipalps and venom injecting fangs. The abdomen performs the same functions as an insect's abdomen with the addition of web-making by use of their spinnerets.



Not all spiders live on or make spider webs. Some spiders actively hunt for their prey by crawling through the leaf litter, while others patiently wait on vegetation. Where do you think you will find the most spiders today?

## **OTHER ARTHROPODS**

Arthropods are a large group of organisms that make up approximately 80% of all living creatures on Earth. Arthropods include insects, spiders, crustaceans, and other organisms that have an exoskeleton, segmented body and jointed feet.

#### LOOK SIMILAR, BUT DIFFERENT



Although millipedes and centipedes look similar, they are not. Millipedes are nonvenomous herbivores that like to eat decaying plant matter and centipedes are venomous carnivores that like to eat insects and millipedes.

True centipedes have between 30 and 34 legs, with 2 legs sticking out of each of their 15 - 17 flattened body segments. Most millipedes have between 120 - 160 legs, with each of their 30 - 40 body segments having 4 legs on the underside of their round bodies.

#### LOOK DIFFERENT, BUT SIMILAR



Although these animals look very different, they are both members of the same group: crustacean. Crayfish, also known as crawfish, crawdads or mudbugs, are fresh water crustaceans resembling small lobsters. They can be found in streams with adequate cover to hide from predators and where fresh water is flowing.

Woodlice are actually a type of land dwelling crustacean. They are commonly known as "pill bugs" or "roly polies" because of their ability to roll up into a ball as a defense mechanism against predators in a process known as *conglobation*. Because they breathe through gills, they are often found in damp, dark places such as under logs and rocks.