



The Conservation Connection

Mississippi State University

Department of Wildlife, Fisheries, and Aquaculture

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Carnivores

The focus of this issue of *The Conservation Connection* is **carnivores**. The word carnivore is derived from Latin and means "meat-eaters". Carnivores are organisms that get their nutrients and energy primarily from eating other animals. Many people think of lions or wolves or polar bears when they hear this term. But alligators, bats, snakes, dolphins, hawks, some species of lizards and turtles, and even some kinds of plants are carnivores.



Mountain lion photo from iStockphoto.com



photo from Wikipedia.com

Most carnivorous organisms have special adaptations that aid them in catching and eating their food. Many predators have eyes that face forward or a well-developed sense of smell that helps them to find prey. Large teeth or claws help to hold prey. In some carnivores, special structures like the sweet drops on a sundew (left) attract prey, where they can be captured by the plant.

Some kinds of carnivores:
Insectivores = insect-eaters
Piscivores = fish-eaters

Name these Mississippi carnivores:



iStockphoto.com

1. _____



iStockphoto.com

2. _____



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3. _____

Species Focus: Mississippi Black Bears

By the time President Theodore Roosevelt came to Sharkey County to hunt bears in 1902, the number of black bears in the state was already dropping quickly. Over-hunting and clearing of swamps, canebrakes and bottomland forests for farms and towns left very few bears. Today, the Louisiana black bear and the American black bear — the 2 subspecies found in Mississippi — are both classified as endangered in the state.

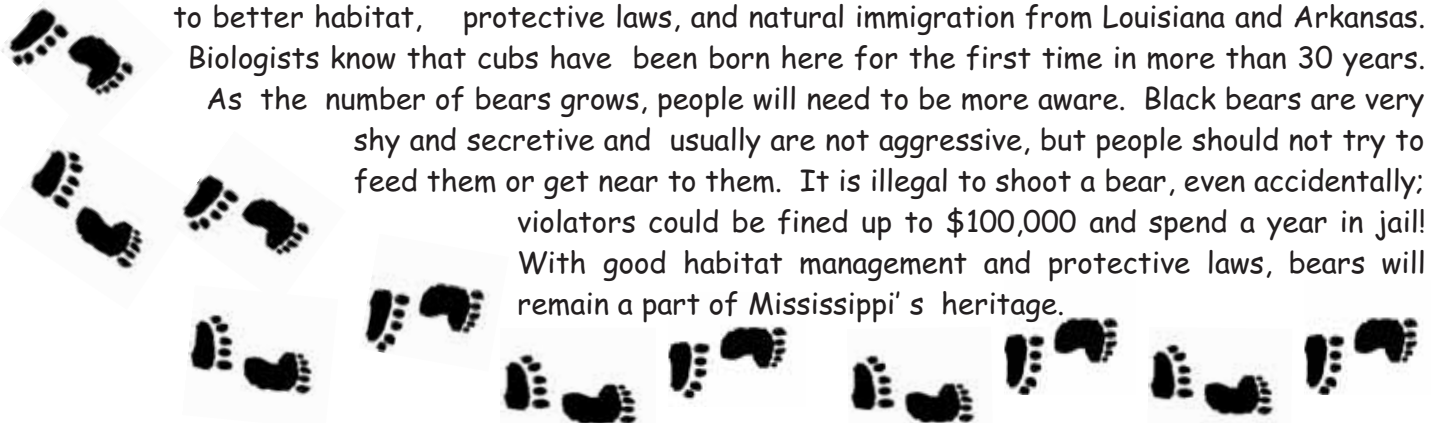


Although black bears are placed within the scientific category *Carnivora* (carnivores), they are not fierce predators. A black bear's diet is made of mostly plant materials like leaves, grass, fruits and nuts. Insects and carrion (dead animals) provide protein. Female bears weigh 120-250 pounds and males range between 150-350 pounds. Mississippi black bears are about 2-3 feet tall at the shoulder.

Today, black bears once again roam parts of Mississippi's river deltas and floodplains, thanks to better habitat, protective laws, and natural immigration from Louisiana and Arkansas.

Biologists know that cubs have been born here for the first time in more than 30 years.

As the number of bears grows, people will need to be more aware. Black bears are very shy and secretive and usually are not aggressive, but people should not try to feed them or get near to them. It is illegal to shoot a bear, even accidentally; violators could be fined up to \$100,000 and spend a year in jail! With good habitat management and protective laws, bears will remain a part of Mississippi's heritage.



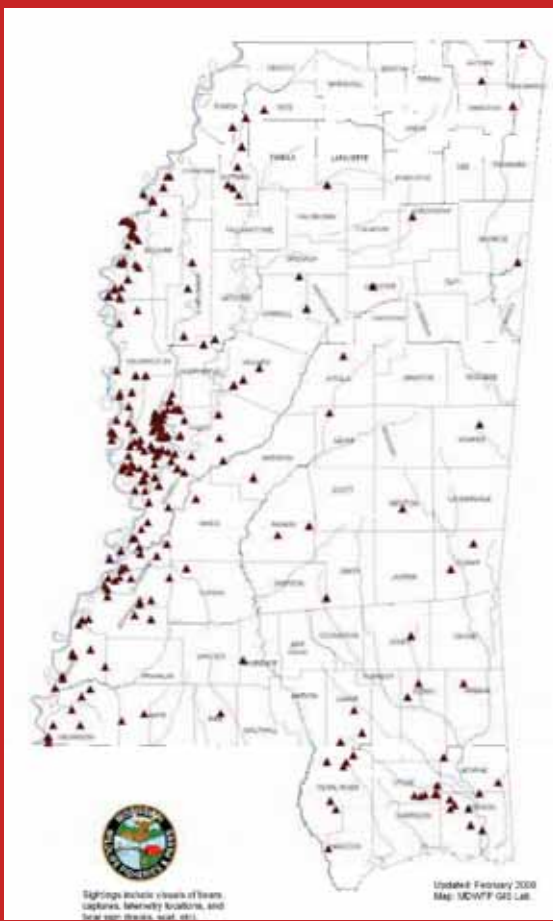
Research Notes: Telemetry

The black bear in this photo was captured and tranquilized so biologists could safely collect data about the animal. A radio collar was put around his neck and an identifying tag is being placed in his ear. Ice bags were used to keep him cool while information on his size, age, and health was collected. The blindfold protected his eyes.

Trapping, marking and following bears gives biologists important information that is used in their recovery.

(article continued on next page)





Black bear sightings in Mississippi, 1996-2006

Sightings reported by the public (see the map to the left) are helpful, but they only tell where a bear was at the time it was spotted. A single sighting doesn't tell biologists where a bear is feeding, sleeping, traveling or spending the winter.

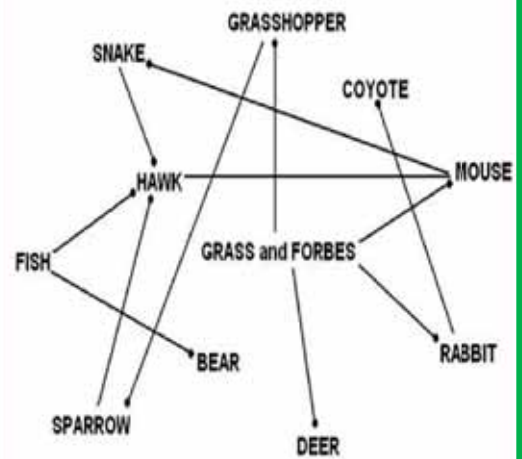
Radio- or satellite-telemetry allows biologists to learn more details because they can follow exactly where a radio-collared animal is going. For example, biologists with the Mississippi Department of Wildlife, Fisheries, and Parks have learned that radio-collared male bears (called boars) go into their winter dens in late December or early January and do not come out until the first week of April. They also discovered that Mississippi bears do not truly hibernate. Bears occasionally wake from their winter "nap," so it is definitely not a good idea to bother a bear in its den!

The use of telemetry helps biologists to know more about these fascinating animals. It helps them plan where and what kind of habitat and protection is needed to help bears find their place once again in Mississippi.

Wildlife Ecology Basics: Food Webs

A **food chain** is the step-by-step passage of matter (chemicals and nutrients) and energy (food) through an ecosystem. A typical example of a food chain is: clover → rabbit → coyote. A **food web** is a network of interconnected food chains.

Since plants can make their own food, they are known as **producers**, and they serve as the support for all food webs. Without plants, all food webs would collapse. The next level of a food web is **primary consumers** — herbivores or plant-eating animals. Examples of primary consumers are rabbits, mice, deer, and grasshoppers. Primary consumers are eaten by **secondary consumers**. This group includes carnivores such as hawks and owls, snakes, foxes, and wild cats.



Acorns

Acorns are the fruits of oak trees. They are an important source of food to a lot of different kinds of wildlife including squirrels, deer, bears, and ducks. Acorns are high in nutrients that animals need, particularly as they get ready for difficult times in winter. Acorns do not easily rot, so they can be stored in the ground or in hollow spaces for eating later when food is scarce and hard to find.



An easy way to help wildlife in your community or schoolyard is to plant oak trees. Oaks are strong and not easily broken during storms. They live a long time and provide shade for neighborhoods and communities. Oak trees also provide homes and food for wildlife.



Explore
Outdoors !!

For more information
on Mississippi's black
bears, check out these
sites:

<http://www.msbear.org/>

<http://www.mdwfp.com/Level2/Wildlife/Game/Bear/Default.asp>

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Answers to photo
quiz on page 2:

1. Coyote
2. Bobcat kitten
3. Red fox



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