

**Species Focus—
White-tailed Deer**

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The Conservation Connection

Hello
from **Mississippi State University**
Department of Wildlife and Fisheries

Welcome to the first issue of *The Conservation Connection*. The dictionary defines **conservation** as "planned management of natural resources to prevent waste, destruction, or neglect." That's what wildlife and fisheries **biologists** across the state and the nation try to do — work to make sure that there will always be wild and natural places and wildlife on our planet. However, it takes more than buying some land, setting it aside, and letting nature take its course. It takes studying animals to answer questions like where and how an animal lives, how many are living, what they need to survive and reproduce, what causes them to die. **Research** allows people to make the best decisions to "prevent waste, destruction, or neglect."

Conservation of natural resources also takes **management** of land so that all the necessary ingredients for success and survival are there for the animals to use. For example, a shrubby field may need to be burned so that there will be grass, not bushes, for grassland birds and butterflies. Trees that grow fruit may need to be planted as food for wildlife.

In every issue of this newsletter, we want to tell you about exciting wildlife or fisheries research, management and conservation that is happening in the state. We plan to have regular columns that introduce you to Mississippi biologists and native animals, challenge you to experiment, and encourage you to hone your powers of observation.

Enjoy!!

Species Highlight : White-tailed Deer

The White-tailed Deer is the most popular game (hunted) species in Mississippi. In the early 1900's, there were only a few thousand animals left in the whole state because of over-hunting for food markets and loss of habitat (suitable places to live). They were saved by enforcing new hunting laws, taking better care of the land, and transplanting deer into

(continued on page 4)



In The Know:

featuring **Dr. Steve Demarais**

Dr Steve Demarais is a biologist in the Department of Wildlife and Fisheries at Mississippi State University. He does research on white-tailed deer, studying those things that are important to keeping a healthy deer herd in the state. He recently answered some questions for us:

Q: When did you decide that you wanted to be a biologist?

A: My passions growing up included hunting and fishing, so I realized in high school that a position as a wildlife biologist would be the most rewarding career for me

Q: What kinds of things do you do in your job?

A: I have three parts to my job: 1. Learning about wildlife as part of a research team of graduate students and faculty, 2. Training future professionals, and 3. Educating the general public and professionals about what we have learned.

Q: What advice would you give to a student who was thinking about a career in wildlife biology?

A: First, make sure that you have the right combination of academic capability and passion for the profession. Second, attend the best possible schools and get work experience. Last, but definitely not least, prove through your performance that you are an excellent "product" of your training.



Research Notes:

Antlers

If you are a deer hunter, or you know someone who is, you know that most deer hunters dream about getting that big buck with a massive rack of antlers. But have you ever thought about what causes some deer to have large antlers and others to have smaller ones? Currently about 80 deer live in large, fenced yards at Mississippi State's Animal Research Facility where their diet, growth and health can be closely monitored. Dr. Demarais and other biologists at Mississippi State are researching the effects of deer [age](#), [nutrition](#) and [genetics](#) on antler size. You might guess that a deer's antlers grow larger every year, and you would be right. They max out when the buck is between 5-7 years old. Research also shows that good nutrition is important for antler development, just like it is important for good bone development in growing kids. Diets that are high in protein (found in foods like clover) are particularly *(continued on page 5)*



Antlers removed from a 1.5-year-old deer at the MSU wildlife research pens.



Antlers from a from 2.5-year-old deer at the MSU wildlife research pens.

Manager's Corner:

Food Plots



One way that sportsmen and sportswomen try to help local wildlife and improve their hunting success is by planting **food plots** so animals will have extra food. Food plots are like gardens planted just for wildlife, except they usually only have 1-4 kinds of "vegetables" planted in them, instead of a lot, like you might have at home. Some people plant crops, like corn, wheat, or sorghum, that provide grain and quick energy to feeding wildlife. Other people sow clover and other forage plants that provide protein. But it is important to know that food plots do not meet all the year-round needs of wildlife. Animals need shelter from predators and bad weather, places to breed and raise their young, and food throughout the year. Food plots only provide one piece of the big puzzle of wildlife management. Good wildlife management tries to provide all the pieces of the puzzle so that all of an animal's needs are met. So go ahead and plant that food plot — it sure makes a good place to see some wildlife! — but just remember the big picture PUZZLE.

Wild Stuff:

Grilled Venison Backstrap



If you have never really liked the "gamey" taste of venison, try this recipe. If you've always loved tenderloin, then definitely try this easy recipe!

INGREDIENTS:

- 2 pounds venison backstrap (tenderloin), cut into 2 inch chunks
- 1 quart apple cider
- 1 1/2 pounds thick sliced bacon
- 2 12-ounce bottles barbeque sauce
- Toothpicks

DIRECTIONS:

1. Place chunks of venison into a shallow baking dish, and pour in enough apple cider to cover them. Cover and refrigerate for 2 hours. Remove venison chunks from the cider (discard the cider), pat them dry, and return them to the dish. Pour barbeque sauce over the chunks, cover, and refrigerate for 2-3 more hours.
2. Preheat a grill, using either charcoal or gas. Remove meat from the refrigerator, let it stand for 30 minutes, then wrap each chunk of venison with a slice of bacon, securing it with toothpicks.
3. Brush the grill grate with vegetable oil when hot, and place venison pieces on the grill so they are not touching. The bacon will cause some flames, so be careful. Grill, turning occasionally, until the bacon becomes slightly burnt, about 15-20 minutes. Venison meat dries easily, so don't overcook.

Source: www.allrecipes.com



Species Highlight: White-tailed Deer (continued from page 1)

good habitat. Today, biologists estimate that there are nearly 2 MILLION deer in Mississippi!

Deer begin breeding in mid-November. Fawns are born from June through August after a 200-day **gestation period** (the amount of time it takes for a mammal to grow and develop inside the mother).



Young does (the plural of "doe" is "does") have only 1 fawn, and older does that are 2.5 years or more usually have twins. For the first few days of life, the fawn's spotted coat will keep it hidden while the doe is away. An important wildlife fact to remember and to share with others — if you find a fawn hiding in the woods or grass, please leave it alone. It is not lost, and its mother is somewhere nearby. When fawns are about 3-4 weeks old, they begin hanging out with their mother, learning what to eat and where to hide from danger and bad weather. In the Disney movie, Bambi's dad stayed around to teach him the facts of life. In real life, bucks are not around to help raise fawns.

Successful recovery of white-tailed deer in Mississippi required cooperation between biologists and the public. Today, populations of deer are high enough that thousands can be harvested by hunters every year. In fact, there are so many deer that there are now problems — deer are colliding with cars, damaging landscaping and crops, and eating all their available food. As long as research, management, and cooperation continue, there will always be deer in Mississippi for all to enjoy.

Outdoor Happenings: Migration

The onset of fall means winter is not far away. Winter is a challenging time of year for wildlife. There is not as much food as during the summer growing season, it can be hard to find food and shelter when there is snow and ice on the ground, and cold temperatures arewell, COLD! So, to avoid these perils, many birds, and even some mammals and insects, leave their summer homes and travel to a another place where living conditions are better. This is called **migration**. The snow geese in the top photo fly from their breeding grounds on the arctic tundra to the lower Mississippi River and Gulf coast. Elk in the western US migrate, but they only move from cool summer homes in the forests and high meadows of mountains to lower elevations and valleys. As nectar-producing plants begin to fade in late summer, monarch butterflies fly south to a few wintering spots in the mountains of central Mexico. We don't have elk here, and most monarchs will have moved on by the time you read this, but you can watch for migrating water-fowl , shorebirds and songbirds in the coming months.



Research Notes: Antlers (continued from page 2)

important. Genes (no, not the kind you get from GAP) also affect antler size. It works like height in people. If both of your parents are tall, you are more likely to be tall, more so than someone who has shorter parents. If a fawn has a father with large antlers, and his mother's father had large antlers, he will have a greater chance of having large antlers.

In early October, MSU researchers carefully remove antlers from the bucks at the research pens to keep them from hurting each other and the biologists. Measurements are taken to add more data to their ongoing research on deer antler size, genetics, nutrition and age.



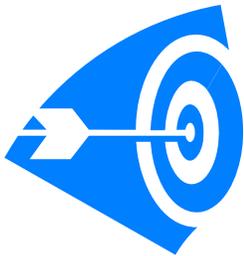
Antlers from a 3.5-year-old deer at the research pens.



Antlers from a 4.5-year-old deer at the MSU research pens.

In Season:

Fall Hunting



When mornings hold a breath of cool, northern air, and leaves begin to show tinges of red and orange, bows, shotguns and rifles come out of closets and safes in anticipation of the fall hunting season. Many people don't realize that **hunters help** pay for conservation across the nation. How? Hunting licenses and a tax on hunting equipment (such as guns, ammo, archery) are used to fund wildlife management, helping conservation professionals buy land for public use, build wetlands, plant trees, conduct research and so on. In fact, without this important tax act, commonly known as the **Pittman-Robertson Act**, the deer restoration we talked about on page 1 would not have been possible. So if you enjoy seeing wildlife on the public lands of Mississippi, thank a hunter.

Mark it Down:

Fall Calendar Dates



Hunting Season Opening Dates (www.mdwfp.com)

Deer: Archery: Oct. 1 (Zone 1); Oct. 15 (Zone 2)

Squirrel: Sept. 27 (North); Oct. 11 (Central); Oct. 18 (South)

Rabbit: Oct. 18

Trapping: Nov. 1

Deer - Youth Gun: Nov. 15

Bobwhite Quail: Nov. 27

National Wildlife Refuge Week, Oct 12-18

Go to www.fws.gov/refuges/refugeLocatorMaps/index.html for locations of the 15 refuges in MS

Make plans to check out one near you!

For info on majoring in natural resources at MSU go to www.cfr.msstate.edu/prospective_students/

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Dear Friends,

First, I want to thank our staff and partners for helping create an exciting summer camp that blends outdoor recreation and natural resource education. We would not be able to do this without the Noxubee National Wildlife Refuge, US Fish and Wildlife Service, the Mississippi Department of Wildlife, Fisheries and Parks, USDA Wildlife Services, the MSU Extension Service, MSU Colleges of Veterinary Medicine, Landscape Architecture, & Forest Resources, and our own Wildlife and Fisheries Department staff and grad students. The outstanding campers made it fun for us, too!

We are working on camps for next summer and hope to announce our final plans soon. We are considering offering one camp that focuses on aquatic ecology and Boater Safety and another featuring terrestrial wildlife and Hunter Education. We are also designing an advanced wildlife and fisheries camp that will focus more heavily on wildlife ecology, featuring exhilarating activities and a conservation project. MSU also offers a summer Entomology Camp. For more info on this camp, or the companion newsletter, *the Gloworm*, go to <http://msucare.com/newsletters/pests/gloworm/index.html> or contact us.

- Dr. John

**Explore
outdoors**



What is this berry?

This is **American Beautyberry**, a shrub found across the southeastern US. Green berries form during the summer, turning purplish-red in August. These berries will stay on the woody stem through out the fall and into early winter.

Beautyberry is an important wildlife food. More than 40 kinds of birds eat it. It is especially important in the winter when food is hard to find. (Remember, some birds migrate in the winter, but those that stay have to work hard to find dinner). Raccoons, opossums, armadillos, and white-tailed deer also chow down on these tasty berries.