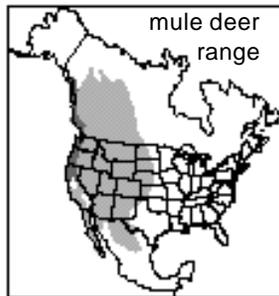
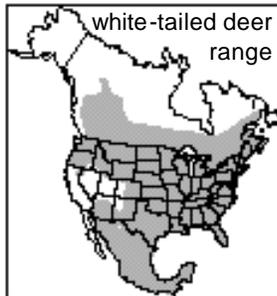


LIVING with WILDLIFE

Deer



North America Range
White-tailed deer are found in every state in the U. S. except Alaska and in only small parts of Utah, Nevada and California. The mule deer range is primarily in western states. There are several subspecies of both deer.



Odocoileus virginianus - white-tailed deer

The genus name *Odocoileus* is from the Greek words *odous* meaning tooth and *koilos* meaning hollow and refers to the hollow teeth of deer.

IDENTIFICATION
Deer are even-toed **ungulates**. Ungulates are mammals with

split hooves. This group also includes elk, moose and pronghorn antelope. Adult deer weigh between 40 and 400 pounds depending on species and location. At birth, **fawns** are rust-colored with white spots. The spotted coat is shed in 3 to 4 months and is replaced by a grayish-brown fall and winter coat. The summer coat of an adult deer is reddish-brown. Tail, belly, chin and throat are white during all seasons.

Antlers grow on males (**bucks**) from April to August. **Antlers** are covered by soft “**velvet**” when growing.

After the antlers stop growing, the velvet layer dries and is rubbed off the antlers before the fall **rut** (breeding season). Deer antlers are shed in mid-winter and regrow the following spring. The size that antlers grow depends upon nutrition, age and genetics of the deer.

HABITAT

Deer are highly adaptable and live in a wide variety of

habitats. They thrive in agricultural areas that have woods and riparian habitat.

FOOD

Deer are **herbivores**. They **browse**. This means they eat the leaves, stems and buds of woody plants. **Forbs** (flowers and weeds) are eaten in the spring and summer when plants are available. Fruits and nuts (called **mast**) are important in the deer diet. Grasses are not as important as forbs and woody plants. On average a deer eats two to four percent of its body weight each day. Deer are **ruminant** animals. They have a four compartment stomach and chew their cud like a cow.

HABITS

Deer are most active in the early morning and evening. They have a home range of several hundred acres or about one square mile. Breeding occurs from October to January. Fawns are born in May or June. Many **does** (female deer) give birth to twins. At birth, fawns weigh seven to eight pounds.

In the West, deer were the most widespread principal source of meat for early Native Americans followed by bison, beaver, bear, moose, raccoon, elk, wild turkey, waterfowl and fish.

Living in Harmony, Living in Conflict

Living in harmony . . .

Most of the time, deer and humans live in harmony.

- deer are valuable big game animals that provide recreation, food and clothing — deer hunting contributes millions of dollars to the U. S . economy each year
- deer are fun to watch
- deer are an important food source for predatory animals such as mountain lions
- deer benefit their habitat, and our wild areas, by “mowing,” “pruning” and “fertilizing” vegetation and **aerating** the soil.

Living in conflict . . .

- auto-deer collisions cause millions of dollars worth of damage and loss of lives each year
- deer like to eat many plants humans use for landscaping and can harm some endangered plant species by eating them
- deer can cause damage to crops such as soybeans, alfalfa and wheat
- deer can be a safety hazard at airports
- deer carry ticks that carry Lyme disease

Preventing Damage Done by Deer

When deer are abundant or crops are valuable, fencing deer out of an area may be the only way to prevent damage by deer.

There are many different types of fence that successfully prevent deer damage.

Browsing of tree seedlings can be prevented by enclosing seedlings in plastic tubing. Woven-wire around trees can keep deer from rubbing tree trunks with their antlers.

Damage to landscaping can be minimized by selecting plants that deer do not like to eat.

Crops can be harvested as soon as possible to prevent deer damage. Crops that deer like to eat can be planted away from wooded areas.

Deer can be temporarily frightened away. Gas exploders set to make loud bangs can be effective. These devices need to be moved around so the deer do not get used to them.

Repellents work best in small areas. There are several taste and odor repellents commercially available. Repellents have limited success in keeping deer away from plants.

Keeping deer populations under control is an important way of lessening deer damage while maintaining herd health. **Hunting** is a successful wildlife management tool for controlling deer populations.



In the 1900s, less than 1/2 million white-tailed deer remained in the nation. Today conservation programs have returned the population to more than 18 million.

Economics of Damage

According to the Jack H. Berryman Institute for Wildlife Damage Management white-tailed deer provided \$19.7 billion in benefits to the U.S. public in 1993. This was broken down to \$2.4 billion for hunter expenditures, \$236 million in value for the meat, \$4.3 billion for value of hunter recreation and \$12.8 billion for non-hunting recreation.

To obtain net value of deer to our society, we need to subtract the negative values of deer (perhaps \$1 billion in automobile repair damage, undetermined damage to agricultural crops, approximately \$367 million in damage to timber, 211 deaths and 29,000 injuries from auto collisions and a proportion of the 10,000 cases of Lyme disease) from the benefits.

Legends and Folklore

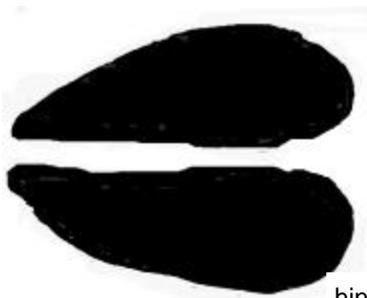
Many Native Americans believed deer and other animals with forked horns and antlers represented forked or double nature. The white-tailed deer was thought to be an animal helper, but the dark-tailed deer meant danger.

The Hopi deer dance was to bring the rain, the California Yurok White deer dance was for a bountiful wild crop and the Zuni deer dance was to bring a cure for illness. When the Cherokee traveled during harsh winter weather, they rubbed their feet in warm ashes and sang a song to acquire powers for the four animals whose feet never were frostbitten — opossum, wolf, fox and deer.

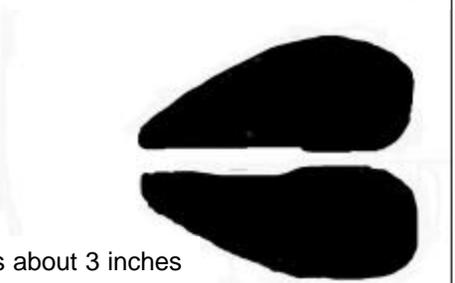
Deer were harvested for food and clothing by both the Native Americans and colonists. Deer hide clothing included leggings, shawls, dresses, breechcloths, moccasins, sashes, shirts, robes, skirts, headwear and mittens.

Commercial trade in deer hides reached its height in the 1700s. The best buckskins were sent to England, the next best to Germany and the poorest hides were used within the colonies.

Other products from deer were sinew used as thread and string and bones which were made into needles, awls, hoes, digging sticks, hide scrapers, fishhooks, arrowheads, clubs, arrow straighteners, corn scrapers, cutting tools and decorative beads. Hooves were made into glue and rattles. White-tail deer hair was used for insulation in moccasins and for embroidery.



front foot is about 2 1/2 inches long



hind foot is about 3 inches

Your turn . . .

Carrying capacity . . .

Carrying capacity is the number of animals that can live in an area without harming it. Carrying capacity varies depending upon the type of vegetation, the amount of moisture, the time of year and other animals living in an area. Sometimes 15 acres of land can support one deer; at other times 30 or more acres are needed to support a deer.

One square mile = 640 acres. If 20 acres are needed to support a deer, how many deer could live in the square mile?

If an area is 10 square miles and it takes 30 acres to support a deer, how many deer could live in an area?

An area is 6 square miles in size and it takes 40 acres to support a deer, a recent count of the deer population shows 125 deer present. Will this region support this population?

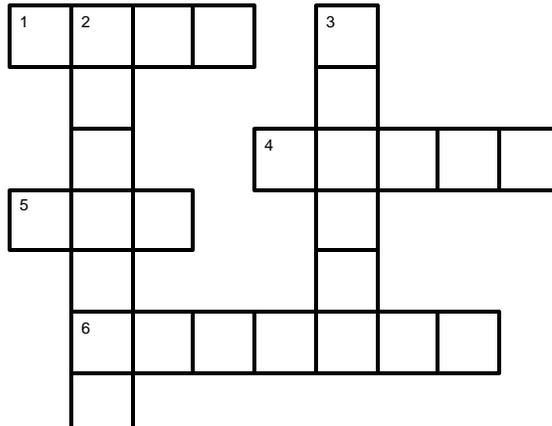
ACROSS: 1. buck, 4. forbs, 5. rut, 6. antlers, 7. herbivores, 9. fawn, 10. doe
DOWN: 2. ungulate, 3. browse, 8. velvet

Math Answers: 1 = 32 deer
2 = 213 deer
3 = NO deer

CROSSWORD REVIEW

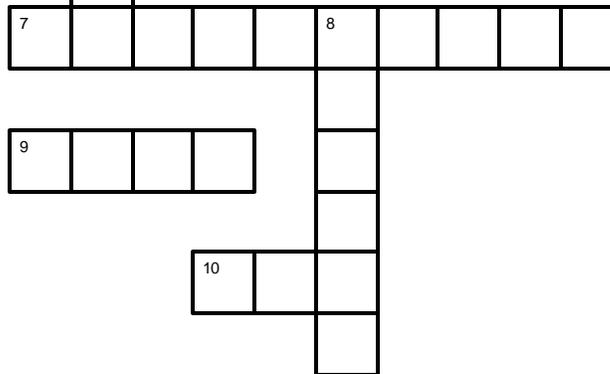
ACROSS

1. male deer
4. flowers and weeds
5. deer breeding season
6. horn-like growths on male deer; they are shed in mid-winter
7. animals that eat plants
9. young deer
10. female deer



DOWN

2. a mammal that is even-toed is call an
3. to eat leaves, stems and buds of woody plants
8. the covering on growing antlers



Study the heads of the white tailed deer and the mule deer. How are the deer different?



white tailed deer



mule deer

On the white tailed deer the lines of the antlers come out of the main beam while on the mule deer the main beam is forked. Coloring and shape of face are different.

Additional Resources

Wildlife Activity Book and
1998 Wildlife Issue of the
Colorado Reader
Colorado Foundation for
Agriculture
P.O. Box 10
Livermore, CO 80536

Prevention and Control of
Wildlife Damage CD ROM
or Handbook
202 Natural Resource Hall
University of Nebraska
P.O. Box 83819
Lincoln, NE 68583

Jack H. Berryman Institute
for Wildlife Damage
Management
Utah State University
Logan, Utah 83431-5210



This activity sheet has been developed by USDA Wildlife Services. For more information about deer contact your state's Wildlife Services office or USDA Wildlife Services at 301 734-7921.