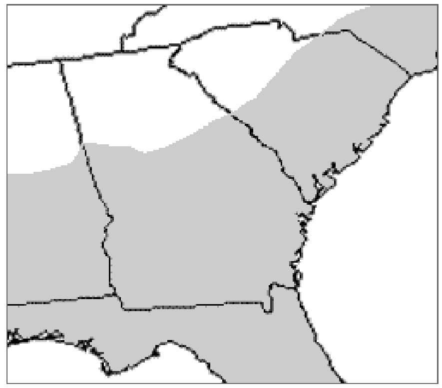
American Alligator (*Alligator mississippiensis*)



Description: American alligators (*Alligator mississippiensis*) inhabit the southeastern United States. Once a federally listed endangered species, American alligators have recovered and are common in many areas of the Southeast. The species is still federally listed as threatened because it looks like the American crocodile, which is endangered.

Alligators are long-lived animals whose life spans can exceed 60 years. Alligators are "cold-blooded," meaning that they are ectothermic animals that cannot regulate their own body temperature, but assume the temperatures of their surrounding environment. To warm themselves, alligators bask in the sun, which is when they are frequently observed on the banks of water bodies. On hot summer days they can sometimes be seen basking with their mouths open. This is a cooling mechanism essentially equivalent to a dog panting. Ecologically, alligators are important predators and create important habitat for other wildlife by digging holes that hold water during droughts.

Range and habitat: Alligators occur on the Atlantic Coast of North America from Florida through coastal North Carolina, and along the Gulf Coast into Texas. Alligators are restricted to the Coastal Plain, which includes the Central Savannah River Area of Georgia and South Carolina. In South Carolina, alligators have been recorded to reach lengths of more than 13 feet.

Alligators live in swampy areas, rivers, streams, lakes and ponds. Females and juveniles occasionally use seasonal wetlands, such as Carolina Bays. Although they are primarily freshwater animals, alligators will also venture into brackish salt water. On the Savannah River Site, alligators are abundant in the Savannah River, its swamp and tributaries, L-Lake, Par Pond and other reservoirs on the site.

How to Be Safe Around Alligators

Did you know?

- Alligators and their relatives are the last of the living reptiles that were closely related to dinosaurs, and their closest modern kin are birds.
- There is only one other alligator species, the Chinese alligator.
- Alligators and crocodiles are related. However, alligators have rounded snouts, while most crocodile species have longer, pointed snouts. Also, crocodiles occur only in tropical and subtropical areas (only south Florida in the United States), while alligators live in somewhat colder climates.
- Being ectotherms, alligators do not need to eat much – a 100-lb dog will eat more in a year than an 800-lb alligator.
- Alligators have fairly poor eyesight. They have a "nictitating membrane" to protect their eyes so that they can see underwater. Alligators hear with ears that are located behind their eyes and are very sensitive to vibrations in the water.

Alligators are frequently seen basking.

Juveniles also bask, but often in more protected areas with more dense vegetation.

When ponds begin to freeze, alligators will stick their snouts above water. The snout is frozen in place, but the animal can still breathe.

Reproduction: Alligators are active year-round, but they are most active in the warmer months in Georgia and South Carolina. With the start of their breeding season in May, males "bellow " to females and other males in the area. Alligator courtship is complex and involves a variety of vocalizations, head-slapping on the water's surface, body posturing, snout and back rubbing, bubble blowing, and pheromone (scent) signals. By June, pairs have mated, and females begin building mound nests out of marsh reeds or other vegetation. This rotting vegetation helps warm the eggs during incubation.

Sometime during late June to mid-July, females lay between 20 and 60 eggs. The hard-shelled, white eggs are about 3 inches long and resemble goose eggs. The mother defends the nest against predators throughout the incubation period, approximately 65 days. When the eggs are ready to hatch, the mother alligator digs into the nest mound, opens any eggs that have not hatched, and carries the young down to the water. Females sometimes aggressively defend their young for more than a year.

Mother alligators that are killed or removed from the area cannot defend their nests or young, and the hatchlings often are doomed. If the young escape predation and can find enough food, they may grow between 3 and 8 inches in length yearly. When they reach lengths of about 6 feet, they are considered adults.

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▶ **Download video (23MB)**

Prey: Alligators are opportunistic feeders; adults eat fish, turtles, wading birds, snakes, frogs, small mammals and even smaller alligators they find near the shoreline of their habitat. Young alligators feed on small fish and aquatic invertebrates, but in turn, they can be food for raccoons, crabs, large snakes, turtles, various types of wading birds and even fish.

Research: Scientists at the Savannah River Ecology Laboratory have studied American alligators on the Savannah River Site for more than 35 years. They have recorded population sizes, genetic patterns, distribution patterns and long-term population trends; animal sizes, sexes, activity periods, growth rates and reproductive efforts; diet, nutrition and energetics; responses to thermal effluent from reactors into cooling reservoirs; uptake of radionuclides; and the conservation of the species. Currently, SREL researchers work with alligators through long-term mark-recapture surveys, characterization of mating and paternity systems, and through studies on the effects of contaminants in long-lived reptiles.

Capuchin monkey

Habitat:
The exact range of the capuchin monkey is not known, although it is assumed that they inhabit a large range in Brazil and other parts of Latin America. Capuchin monkeys usually live in large groups (10 - 35 individuals) within the forest, although they can easily adapt to places colonized by humans. Each group is wide-ranging, as members must search for the best areas to feed. They communicate with each other using various calls. Capuchins can jump up to nine feet (three meters), and they use this mode of transport to get from one tree to another. To mark their territories, capuchin monkeys leave a scent by soaking their hands and feet in urine. Remaining hidden among forest vegetation for most of the day, capuchin monkeys sleep on tree branches and descend to the ground only to find drinking water.

Diet:
A typical diet for capuchin monkeys includes fruit, insects, leaves and small birds. They are particularly good at catching frogs and cracking nuts, and it is suspected that they may also feed on small mammals.

What is the daily routine of the Capuchin Monkey?
With the exception of a midday nap, they spend their entire day searching for food. At night they sleep in the trees, wedged between branches. They are undemanding regarding their habitat and can thus be found in many differing areas.

How do Capuchin Monkey's communicate?
Capuchin Monkeys are very vocal animals that scream, whistle and bark. In this way, they call each other in order to maintain contact and may express their dislike if someone or something disturbs them.

Eastern Gray Squirrel

The eastern gray squirrel is a very common, North American, tree dwelling rodent. It is found in a great variety of woodland, parkland and suburban and even urban habitats. The principle requirement to make a habitat suitable for a gray squirrel is a predictable abundance of food. The primary food required by the gray squirrel is "mast" (i.e. the fruits (nuts) of forest trees such as oaks, beeches, hickories etc). This is the essential calorie source needed for the seasonal buildup of over-wintering fat and also represents an ideal storage food product for the long winter season.

Gray squirrels bury large quantities of mast in communal cache zones within their overlapping territories in forest ecosystems. These communal mast burial areas not only assist the gray squirrels in their over-wintering survival and also contribute to the dispersion and germination of many hardwood trees. Gray squirrels also consume many other foods through the year (including mushrooms, tree flowers and buds, caterpillars, and plant shoots). They seem to require a diverse food base in order to accumulate needed micro-nutrients for both normal growth and for reproduction. The ideal habitat for a gray squirrel, then, must have abundant mast producing trees and a diverse array of other food sources that typically come into availability at different times of their growing seasons.

Gray squirrels live in two types of dwelling structures: dens, which are holes typically constructed in healthy, living trees (often by the expansion of abandoned woodpecker holes) and nests, which are densely packed masses of sticks and leaves (and a great variety of any other available natural and human-made materials). Nests are usually located high up in the forked branches of large trees. Dens are preferred for over-wintering and for brood chambers, but nests are (with constant maintenance) very weather proof and sturdy habitations.

U.S. Fish & Wildlife Service

Gray Wolf *(Canis lupus)*

Photo by John & Karen Hollingsworth/USFWS

Second only to humans in adapting to climate extremes, gray wolves once ranged from coast to coast and from Alaska to Mexico in North America. They were absent from the East and the Southeast, which were occupied by red wolves (*Canis rufus*), and from the large deserts in the southwestern States. By the early 20th century, government-sponsored predator control programs and declines in prey brought gray wolves to near extinction in the lower 48 States.

Wolf groups, or packs, typically include a breeding pair (the alpha pair), their offspring, and other non-breeding adults. Wolves are capable of mating by age two or three and sometimes form a lifelong bond. Wolves can live 13 years and reproduce past 10 years of age. On the average five pups are born in early spring and are cared for by the entire pack. For the first six weeks, pups are reared in dens. Dens are often used year after year, but wolves may also dig new dens or use some other type of shelter, such as a cave.

Pups depend on their mother's milk for the first month, then are gradually weaned and fed regurgitated meat brought by pack members. By seven to eight months of age, when they are almost fully grown, the pups begin traveling with the adults. After a year or two, wolves may leave and try to find a mate and form a pack. Lone, dispersing wolves have traveled as far as 600 miles in search of a new home.

Wolf packs live within territories, which they defend from other wolves. Their territories range in size from 50 square miles to more than 1,000 square miles, depending on the available prey and seasonal prey movements. Wolves travel over large areas to hunt, as far as 30 miles in a day. Although they usually trot along at 5 miles per hour, wolves can run as fast as 40 miles per hour for short distances.

Studies at Yellowstone National Park indicate that wolves support a wide variety of other animals. Ravens, foxes, wolverines, coyotes, bald eagles, and even bears feed on the carcasses of animals killed by wolves. Antelope are swift, elk are alert, and mountain goats are adept at climbing steep cliffs, in part because of the long-term effects of wolf predation. Wolves also help maintain the balance between these ungulates (hoofed animals) and their food supply, making room for plant-eaters such as beavers and small rodents.

Wolves use their distinctive howl to communicate. Biologists have identified a few of the reasons that wolves howl. First, they like to howl. They also howl to reinforce social bonds within the pack, to announce the beginning or end of a hunt, sound an alarm, locate members of the pack, and warn other wolves to stay out of their territory. Wolves howl more frequently in the evening and early morning, especially during winter breeding and pup-rearing.

Settlers moving westward depleted most populations of bison, deer, elk, and moose – animals that were important prey for wolves. Wolves then increasingly turned to sheep and cattle as a replacement for their natural prey. To protect livestock, ranchers and government agencies began an eradication campaign. Bounty programs initiated in the 19th century continued as late as 1965, offering $20 to $50 per wolf. Wolves were trapped, shot, dug from their dens, and hunted with dogs. Poisoned animal carcasses were left out for wolves, a practice that also killed eagles, ravens, foxes, bears, and other animals that fed on the tainted carrion.

By the time wolves were protected by the Endangered Species Act of 1973, only a few hundred remained

in extreme northeastern Minnesota and a small number on Isle Royale, Michigan. Gray wolves were listed as endangered* in the contiguous 48 States and in Mexico, except that in Minnesota they were listed as threatened.** Alaska wolf populations number 6,000 to 7,000 and are not considered endangered or threatened.

The wolf's comeback nationwide is due to its listing under the Endangered Species Act, resulting in increased scientific research and protection from unregulated killing, along with reintroduction and management programs and education efforts that increased public understanding of wolf biology and behavior. Wolf recovery has been so successful that the U.S. Fish and Wildlife Service has removed the gray wolf in the western Great Lakes area from the threatened and endangered species list. Today about 3,020 wolves live in the wild in Minnesota, 30 on Lake Superior's Isle Royale, about 434 in Michigan's Upper Peninsula, and at least 465 in Wisconsin.

In the northern Rocky Mountains, the U.S. Fish and Wildlife Service reintroduced gray wolves into Yellowstone National Park and U.S. Forest Service lands in central Idaho in 1995 and 1996. The reintroduction was successful, and the recovery goals for this population have been exceeded. By December 2006 there were about 1,100 wolves in the Yellowstone area and Idaho; in total, at least 1,240 live in the northern Rocky Mountains of Montana, Idaho, and Wyoming. Wolf recovery has been so successful that the Service has proposed removal of the gray wolf in the northern Rocky Mountains from the threatened and endangered species list.

The Mexican gray wolf, a subspecies, *Canis lupus baileyi*, has also been reintroduced into Arizona and New Mexico. Native to the Southwest, the wolves existed only in zoos until

Photo by Tracy Brooks-Mission

1998, when 13 of the animals were released in Arizona. By the end of 2006, there were about 60 wolves in the wild in Arizona and New Mexico with another 300 in zoos and other facilities. Since 2002, wolf packs have produced pups in the wild. The goal is to establish a self-sustaining wild population of at least 100 wolves in their historical range.

Gray wolf populations fluctuate with food availability, strife within packs, and disease. In some areas wolf populations may change due to accidental or intentional killing by people.

There is some concern that wolf recovery may pose a threat to human safety. However, wolf attacks on humans are extremely rare in North America, even in Canada and Alaska where there are consistently large wolf populations. Most documented attacks have been in areas where wolves habituated to people when they were fed by people or attracted to garbage.

Special features of the Endangered Species Act have been used in parts of the wolf range to allow the removal of wolves that prey on livestock. There are programs to compensate for the loss of livestock and pets in most of the recovery areas.

The Yellowstone and Idaho wolves and the Mexican wolves in the southwestern United States are designated as non-essential, experimental populations under the Endangered Species Act. This designation allows more management flexibility while contributing to recovery.

Wolf recovery efforts have restored a top predator to its ecosystem and improved our understanding of the complex interactions among species in their natural environments.

For more information:
http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=A00D

*Endangered means a species is considered in danger of extinction throughout all or a significant portion of its range.

** Threatened means a species is likely to become endangered in the foreseeable future.

U.S. Fish & Wildlife Service
1-800-344-WILD
http://www.fws.gov

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Grey Wolf Additional Information

Shyness: Wolves in the wild are inherently shy creatures, this will serve to help keep them safe from potential dangers such as hunters in the wild. After around 14-16 weeks the window of opportunity for a pups socialization to others is already starting to close. Meaning anything they come upon not socialized to prior they become wary of and shy away from. In captive situations to help with this issue, and so that wolves are comfortable in a captive situation and not stressed, pups are socialized to as many people as is possible such as veterinarians, young people, old people, doorways, umbrellas, different clothing such as winter jackets and mittens, hats, tractors, and other machinery, etc, otherwise the pups as adults will view such things as something to be suspicious of, and may even freak out in fear over.

Diggers: Wolves like to dig, they can dig holes so deep that a 6 foot tall man can completely disappear. Wolves typically will dig for a few different reasons

a) to create dens for pups to be born in the spring

b) To dig to keep cool in the hot summer months, the colder earth serves as a sort of air conditioning.

c) *digging up roots/shrubs,mice/voles/rabbits they may smell

d) digging out of boredom

Territorial**:** In the wild wolves are highly territorial for good reason; it is a hard life and resources (food, mating rights of females) become a competition. Wolves will thus drive out even kill other wolves or stray roaming dogs infringing upon their marked territories. Contrary to popular belief that wild wolves mate with free ranging dogs, most dogs will be viewed as either a meal or enemy trespassing to be killed.

Tammar Wallaby

Geographic Range
Tammar wallabies are found in Australia, New Zealand, and various islands off the western and southern coast of Australia. (Grzimek, 1990; Nowak, 1991)

Habitat
These wallabies live in areas of dense vegetation with low trees and bushes, in thickets and around the outskirts of forests.

Behavior
Macropus eugenii are a very social species. These wallabies socialize, feed, and mate in groups. These groupings are called "mobs". Higher ranking individuals are usually males. Dominance is determined through aggressive encounters, and the victor is the highest ranking individual. Males wrestle with one another until one proves he is the strongest male.

The style of fighting of all macropodids consists of the use of the limbs to grab and hold an opponent around the head, neck or shoulders. Also, all macropodids use their hindlimbs to kick forward, in the meantime using their tails for balance and support.

Mobs have a territory that may extend to 1/3 of a square mile. This territory may be partly shared with other mobs in the peripheral areas. Mobs are comprised of all ages and usually have up to 50 members.

Macropus eugenii is primarily nocturnal.

Tamar wallabies have two natural enemies: dingos and birds of prey. Dingos catch and hunt kangaroos. Tamar wallabies demonstrate an anti-predator behavior that entails the same hind leg kicking mentioned earlier. When attacked by a dingo, a tamar wallaby is often trapped with its back up against a tree. It then attempts to strike the dingo with its forepaws, and finally thrusts its hindlimbs forward, aiming for the attacker's belly. The force of the hindlimbs or gashes made by a wallaby's sharp claws can seriously injure a dingo.

Food Habits
Macropus eugenii is an herbivore that specializes on grass. Members of the family Macropodidae have the characteristic ability to move the lower jaw forward and backward, maximizing the shredding effect.