

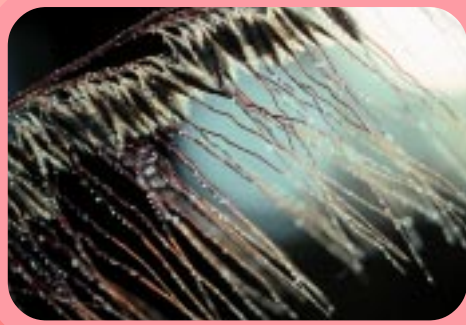
The Sandhills Habitat

Description

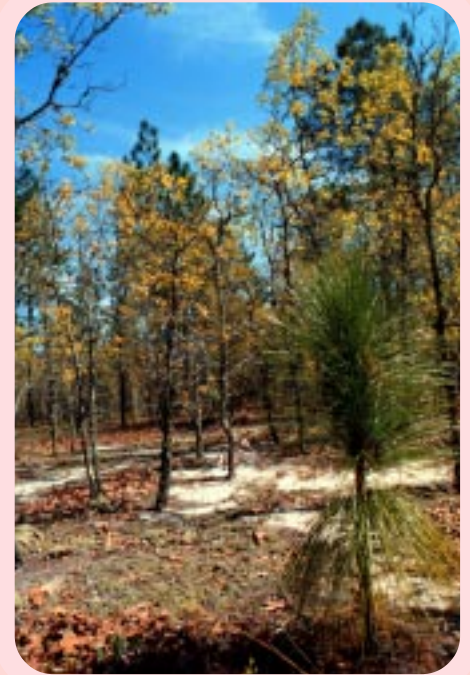
Sandhills are an inland habitat type, characterized by rolling hills capped by deep coarse sands. They are wedged between the Coastal Plain and Piedmont regions of North and South Carolina and Georgia. Scientists believe sandhills were formed by ancient oceans that rose and then receded in response to melting and freezing of polar ice caps. Beaches formed wherever the water met the land. Each time a beach formed, dune lines were left behind when the ocean receded.

Sandhills Plant Life

Because sandhills contain dry, nutrient-poor soil, this habitat contains only plants adapted to such harsh conditions. Turkey oak and longleaf



pine trees are typical sandhills tree species. The root systems of these two species allow them to extract water from various soil depths. These trees are also well adapted to the frequent, lightning-induced fires that strike sandhills. Longleaf pines have a thick, fire-resistant bark, and turkey oaks that are burned above ground will resprout because the fire does not damage their root systems. Several fire-resistant grass species also inhabit sandhills, including wiregrass, sorghastrum, broomsedge and three-awn grass.



Sandhills Wildlife

Sandhills support many reptile and amphibian species that are adapted to the habitat's dry, sandy conditions. The gopher tortoise, which is a state-listed threatened species in South Carolina and Georgia, digs underground burrows in sandhills. The burrows are typically 20 to 30 feet long and from 6 to 8 feet deep. Gopher tortoises eat sandhills' grasses and berries, and may even help distribute such vegetation throughout sandhills by spreading plant seeds in their feces. Also, gopher tortoises are keystone species — other animals and plants in the habitat are affected by tortoise activities. Other animals, such as gopher frogs, several species of snakes and several small mammals, use tortoise burrows on a regular basis.



Other reptiles and amphibians that inhabit sandhills include broadhead skinks, oak toads, six-lined racerunner lizards, glass lizards and hognose snakes. Mammals that inhabit sandhills include white-tailed deer, opossums, gray foxes, bobcats, fox squirrels and cottontail rabbits. Birds include the mourning dove, sparrow hawk, red-tailed hawk and wild turkey.

Research

Since the early 1950's, scientists at the Savannah River Ecology Laboratory have conducted a variety of animal and plant studies in sandhills of the 310-square-mile Savannah River Site near Aiken, S.C. Studies have included plant and animal inventories, forest dynamics, longleaf pine/wiregrass restoration, fire ecology of the sandhills and the ecology of southern hognose snakes. Recently, scientists have confirmed that periodic fires — whether they be lightning-induced or prescribed burning by forest managers — increase plant biodiversity in the sandhills. Fire returns nutrients to the nutrient-poor sandhill soils and temporarily creates more open space that allows new species to become established. Research has shown an increase in both the number of plant species and the number of individual plants. Scientists say such increases mean there is a potential for increase in the number of animal species that inhabit sandhills.



Did You Know?

- * The sandhills support one of the remaining strongholds of longleaf pine in the entire southeastern United States. Longleaf pines were once the dominant tree species in the Southeast. Much of the virgin longleaf pine forests of the region were cut by 1930; the wood produced timber, tar, pitch and turpentine.
- * Sand depths in sandhills can reach as deep as 60 meters (198 feet).
- * About 800 hectares (1,976 acres) of the 310-square-mile Savannah River Site support sandhills vegetation.
- * Plant species diversity increases for about seven years after a fire in a sandhills forest.
- * The seeds of two sandhills grass species, wiregrass and Indian grass, have awns that may help them penetrate the sandy soil and promote germination. They have also adapted to summer soil temperatures that measure as high as 122 degrees Fahrenheit (49.5 degrees Celsius) at two inches below the surface.
- * An average of 24 different insect families inhabit the sandhills. Families include ants, roaches and beetles.

Where to See Representative Sites

- * About 45,000 acres of sandhills are found in the Carolina Sandhills National Wildlife Refuge in Chesterfield County, S.C., near McBee. Call 803-335-8401.
- * About 45,000 more acres of sandhills are found in the Sandhills State Forest, also in Chesterfield County, S.C. Call 803-498-6478.
- * More information is also available from the South Carolina Heritage Trust, a division of the S.C. Department of Natural Resources. Call 803-734-3918.



Photos by David Scott

This information is provided as a public service by the

Savannah River Ecology Laboratory Outreach office and the Student Partners in Amphibian and Reptile Conservation program (SPARC).

