

SOUTHERN LOWLANDS

Intent:

To depict some of the natural characteristics of the broad lowland arc that sweeps from the Carolinas to Louisiana, and to illustrate wildlife adaptations and interrelations, including man.

Content:

The southern lowland region sweeps in a coastal arc from north of the Carolinas to the Mississippi River. From outlying barrier beaches, there is a landward progression through coastal marshes and savannas to upland scrub country and inland swamps. The coastal swamps and estuaries are a vital link in the chain of life that ties the land to the sea.

Much of this region is delineated by the fall line of rivers and streams, a physiographic feature that results at the point where the flanks of the Appalachians meet the softer sediments of the coastal plain. The streams running toward the Atlantic form waterfalls and cut deep channels into the sediment of the coastal plain. This may be seen on maps by a line of demarcation that approximately joins Macon, Augusta, Columbia, Raleigh, Petersburg, Richmond, Washington, Baltimore, Wilmington, Philadelphia and Trenton. These important cities often found at the fall line are the result of their location at the furthest inland point of navigation.

Most of the region is characterized by a tempered climate and a sandy soil laid down millions of years ago. Local variations give rise to an abundance of life forms in differing communities. This is the land of the live oak and the longleaf pine. These towering stands once marched in an almost unbroken line of 1,500 miles from Virginia to Texas. Seed-eating rodents increased in numbers by intensive cultivation of many areas. These rodents support a large population of predatory snakes: rattlesnakes, copperheads, rat snakes, king snakes and racers. The harmless scarlet king snake mimics the vivid coloration of the deadly coral snake. An array of lizard species pursues prey along the ground or in trees.

Almost everywhere that live oaks grow, one is apt to find them festooned with immense draperies of Spanish moss, a member of the pineapple family. It grows only in areas of high humidity where water can be obtained directly from the air. It is not a parasite, but uses its tree host only as a scaffolding on which it can grow high in the air and catch sunlight.

Extensive forests of bald cypress trees are intermixed with tupelos and other plants that are adapted for growth in wet soil and water. Mature bald cypress trees are often 75 to 100 feet high. They are nearly unique among coniferous trees because they shed their foliage during the winter. The roots often emerge from wet soil or shallow water as conical projections called knees. They may help

supply air to the waterlogged root system or they may simply help stabilize the tree in the wet soil.

A rich community of interrelated life forms inhabits cypress swamps. During times of drought, holes dug by alligators provide a place where aquatic creatures can survive until water returns. Varieties of reptiles and amphibians abound including tree frogs, water moccasins, indigo snakes and the alligator snapping turtle. The swamp is a haven for waterfowl and wading birds. Each species has developed its own repertoire of feeding technique and behavioral response, thereby avoiding conflict at the same time that a maximum number of niches are occupied.

THE EVERGLADES

The Everglades of southern Florida is a vast marshy area in which the most prevalent plant is Jamaica saw grass, a type of sedge with sharp fine-toothed edges. Two kinds of tropical forest occur: hammock and mangrove. Hammocks are dense forests of broadleaf trees with each stand covering five to ten acres. They are often surrounded by marshes or low pine forests, making the hammocks appear as islands above a sea of lower vegetation. The thick, nearly impenetrable growth of the hammock forest casts deep shade, almost entirely checks the wind, and produces a moist microclimate.

Many forms of wildlife occur in the Everglades, including bear, deer, cougar, tree snails (almost extinct), a variety of reptiles and amphibians, flamingoes, spoonbills, pelicans and ospreys. Many forms of tropical plants are found here, including bromeliads and orchids. The scarlet flamingo is a rare bird in the United States, although occasionally a few are seen in the extreme southern end of Florida (at one time they undoubtedly bred there). They feed upside down with head and beak inverted to sift the water for crustaceans, algae, etc. Almost exclusively a fish eater, the osprey is currently in jeopardy due to the accumulation of DDT residues in the fish they eat. They plunge (dive) for their food.

Although not a problem that is unique to southern Florida, this area probably leads all others in the number of foreign species that have established themselves here and openly compete with indigenous forms for food and living space. Species examples include walking catfish, giant land snails, several types of frogs and lizards, and a host of plant and tree species.

At the ocean's edge where land meets water, mangrove swamps serve as silent builders of the land. Mangroves grow in the salty waters of the Atlantic and the Gulf of Mexico. They are living breakwaters that protect the shores from wave erosion. They also aid in building new land farther out into the sea by gradually accumulating mud, peat and shells around their many roots. Red mangroves grow on the outer zone and develop an extensive tangle of prop roots. These roots resemble curved rods extending out from the trunk into the sea bottom.

Seedlings germinate while the elongated fruits still dangle from the parent trees. The black mangroves form a middle zone and lack prop roots, but have vertical extensions that resemble asparagus tips growing up into the air. The tangled roots of the mangroves provide shelter for many forms of aquatic life, including fish, crab, shrimp and oyster.

Off the tip of Florida's southern coast, living corals carry on land building underwater. The exquisite fauna of the coral reef community is both beautiful and bizarre; a myriad of aquatic organisms compete and cooperate for survival. The coral reef is one of the most productive communities known. Countless algae and one-celled plants carry on a tremendous amount of photosynthetic activity. In turn, this supports the life and death activities of the reefs many inhabitants. Some of these algae actually live symbiotically within the tissues of living coral. Coral reefs are built from the calcified skeletons of millions upon millions of once living coral. Their intricate structure provides a variety of niches, which have been occupied by specialized forms of fish and invertebrates. Certain small fish and shrimp glean parasites and fungal growths from the mouth, gills and skin of willing hosts. Sea anemones, jellyfish and certain corals sting both prey and predator with poisonous barbs. Other coral residents are sharks, moray eels, sea urchins, sea stars, sea cucumbers, angelfish, damselfish, butterflyfish, parrotfish, and the porcupinefish that bloats itself into an underwater mace.

CARNIVOROUS PLANTS

From tropical swamps to upland marshes and rain-drenched mountainsides, carnivorous plants grow in many shapes. Scientists have identified approximately 450 species of carnivorous plants growing on the ground, climbing in trees, and living underwater. They all thrive in wet, acid soil that lacks nutrients necessary for ordinary plants to grow. In order to make up the missing nutrients, these plants lure and devour small forms of animal life. Insects are attracted by sweet-smelling nectar and bright colors. Once the plant traps the prey, enzymes are secreted that digests the soft portions of the prey. Carnivorous plants capture their prey in a wide variety of ways, but botanists have never discovered one that harms a human in any way.

Venus flytrap is the best known. They have hinged leaves with tiny trigger hairs on each lobe. A victim brushes the hairs, the leaf lobes instantly close, and the digestive juices begin to work. The trap opens again in a few days to await the next meal.

Pitcher plant: The leaves of the pitcher plant form a tubular column that is a liquid-filled pitfall trap. Stiff hairs point downward to prevent the prey's escape.

Sundew: The leaves are covered with glands, secreting sticky dew-like nectar that attracts insects. The feet of the insects become glued to the leaf. The leaf folds the prey inward to be digested.

Bladderwort: This aquatic plant has branches that are covered with tiny, bladder-like pouches with a flap of tissue acting like a trap door. When the prey stimulates the trigger hair, the door snaps forward and sweeps the insect into the trap.

INDIAN CULTURES OF THE SOUTHERN LOWLANDS

As an integral part of the southern lowland setting, many Indian cultures witnessed the land and wildlife that preceded the arrival of European man. The southern Indians possessed an extensive community of culture and custom and a great similarity of social and economic patterns. Distaste for isolation made them all town dwellers, with only their outcasts and pariahs living their lives alone. Their towns were invariably located on the banks of a stream or, if inland, close to a spring. They commonly straggled prodigiously over areas wholly disproportionate to the population. The dwellings were widely scattered, haphazardly placed, and centered socially rather than geographically around a square. The buildings for government and public utility were located on the sides of the square. After the introduction of axes, the dwelling places of the people were log cabins with makeshift roofs without floors. Bunks served double duty as beds and chairs. There was a fireplace in the center with most of the smoke and heat ascending through a hole in the roof. Cooking was done in the open whenever possible, so there was no need for a kitchen. The houses were dirty, flea-ridden, uncomfortable, and unsightly, but they served their purpose as points of departure. Being both southern and Indian, the southern Indian regarded his house as a place in which to sleep at night and to find a haven from inclement weather; he lived out of doors.

From these towns of no typical size or shape, the Indians went out to their work in field and forest. All southern Indians depended for their subsistence on agriculture. Every town and village was surrounded by cultivated fields from which it drew its food supply. Everywhere, the favorite and largest crop was corn. Its importance to the Indians was seen in the custom of timing their festivals and councils to its appearing and ripening grain. They raised melons for current consumption, and beans, potatoes, squash, and pumpkins for deferred as well as immediate use. Planting and harvesting were communal enterprises in which both men and women participated. Cultivation was scanty because of the crude implements in use. When a field wore out as it eventually did even under the lenient and undemanding Indian cultivation, there was no recourse but to abandon it and move the town to another location.

The Indian male held women in high esteem, admitting them to share his private labors as well as his public councils, imparting to them secrets which they frequently revealed, and conceding to them a freedom of action and an immunity to regulation such as modern women has nowhere obtained.

Most of Georgia and Alabama were occupied by the Creek confederacy made up of several different tribes including the Muskogee, Alabama, Coushattas,

Hitchitees, and Tuskegees. They were later joined by the survivors of the Natchez, a distinctive tribe of the lower Mississippi that had an elaborate system of sun worship, hereditary nobility, and a royal family of divine attributes and prerogatives. The Seminole tribe of Florida was an Offshoot of the Creeks.

The Creek town was typical of the economic and social life of the populous tribes of the Southeast. The public buildings were at the center of town and were set on terraces in the more important towns. This was the 'square. Four shed-like structures enclosed an opening of hard-packed earth with the sacred communal fire in the center. Seated according to official rank, the men sat in council to decide matters of war and peace, planting and hunting, disputes between citizens, and other affairs of the town. Just off the corner of the square was a tall conical building, the hot house, where the people met for business or recreation during inclement weather. Close by was the chunky yard, a level sunken rectangle surrounded with banks for the seating of spectators. This was the place for games and informal dancing. Grouped around the public center with some semblance of a street arrangement were the individual dwellings. Arranged around a little square similar to the town square, usually each dwelling had from one to four separate buildings: cook room, winter lodging house, granary, and so on.

Close to each dwelling was a private garden plot tended by the women. The main food supply was grown on a large field belonging to the town. The field was laid out in family plots. The planting and cultivation were done by the whole town working together under the orders of the chief, who worked side by side with the other citizens. The town also turned out together for the harvesting. Each family gathered the produce of its own plot and placed it in its own storehouse. Each also contributed voluntarily to a public store in a large building in the field. Distribution for public needs was under the direction of the town chief. The Creeks called an abandoned town site a tallahassee. The name, common in the south, is sometimes modified to talassie or tulsas.

CREEK INDIANS

One misconception about the Creek Indians is that only a single tribe is represented. Actually, the Creeks are a confederacy of closely related tribes, including the Muskogee, Alabamas, Coushattas, Hitchitees and Tuskegees. The Natchez people, a tribe that was a historical glimpse into the Mississippian way of life, later joined them. The Natchez retained their elaborate system of sun worship, death cult, and hereditary nobility that was a true monarchy with a royal family of divine attributes and prerogatives.

The Creek town formed a strong governmental unit. Each town had a ceremonial center, possessing such properties as the discoidal chunky stones and owned land in habitual use. A dual division into civil and war officials was found. The chief or miko was the head of the civil administration. In his administration were a twin chief as well as precinct officers, speaker and war speaker and counselors.

In time of peace and leadership in war, police action was in the hands of the war chief and other war speakers. War was decided in council and announced by the head war chief. The conduct of war was ritualized. When the war leader beat his drum, the warriors assembled, feasted for three days together, and partook of an emetic before departing. When the party returned in triumph with their prisoners and trophies, they were ceremoniously received. Peace was restored with solemn ceremonies.

In peace and war, whatever concerted action existed was dominated by the Confederacy. Two geographical divisions were known, the Upper Creek and the Lower Creek. The Lower Creek was fewer in number.

The Creek world was peopled by supernatural creatures. The snakes had a peculiar fascination. Many examples are the mythical horned snakes, celestial snakes, tie snakes, and sharp-breasted snakes. Birds and other animals were also endowed with supernatural powers and dwelt apart from man in their own towns.

The Horned-Owl Dance, the Buffalo Dance, Fox, Snake, and Skunk Dances are a few of the social dances that bore animal names. The women danced the Fox and Skunk dances.