

Background Information

- In 1925, American geographer Carl Sauer introduced the concept of “landscape,” which he defined as “the imprint of humans on the surface of the earth” (Kovacik and Winberry, 1989). Geography is more than the study of the natural environment. Geographers also look at the ways different **cultures** use and alter the surrounding landscape.
- A **cultural landscape** is formed from culture operating through time, in the form of new people groups or changing technology, imprinting itself on the natural environment.

Culture + Time + Natural Landscape = Cultural Landscape (Kovacik and Winberry, 1989).

- Landscapes change over time, but importantly, new landscapes do not completely erase what came before. Past landscapes persist and contribute to the identity of places.
- From the definition of cultural landscape, it is easy to view the natural environment as simply a resource for raw materials or a space to be manipulated by human culture. However, the natural environment is an important entity that forms the framework within which humans have structured history.
- It is also easy to think of the physical environment as a pristine natural setting, but the physical environment is just as much a product of human actions as it is of natural processes. In South Carolina, precontact period **shell rings** built by Native Americans created unique **ecosystems**. Colonization and commercial agriculture introduced new plants and animals, dramatically altering the state's physical landscape. Modern reservoirs and the planting of pine trees for timber continues to affect South Carolina's physical environment.
- The South Carolina Department of Natural Resources Heritage Trust Program was begun in 1974 to document and protect rare, threatened, and endangered species and communities. Concerned with the state's growing population and development, the South Carolina State Legislature passed the South Carolina Heritage Trust Act in 1976, allowing portions of the state's natural and **cultural resources** to be set aside as **heritage preserves** to be protected and studied in perpetuity. The Program's defined purpose is to inventory, evaluate, and protect the natural and cultural materials considered to be the most outstanding representatives of South Carolina's heritage.
- Currently, over 80 properties covering approximately 100,000 acres have been dedicated as heritage preserves. While 19 are dedicated as cultural heritage preserves, the remaining are natural heritage preserves. These properties are located throughout the state, in every landform region.
- South Carolina has an area of 32,020 square miles, making it the smallest state in the southeastern United States. Despite its small size, there is tremendous diversity in the state's physical geography, extending from the coast to the mountains.
- South Carolina can be divided into five landform regions: the Coastal Zone, the Coastal Plain (which is divided between the Inner and Outer Coastal Plains), the Sandhills, the Piedmont, and the Blue Ridge.
- **Coastal Zone**
 - South Carolina's coastline is approximately 185 miles long. The Coastal Zone extends about ten miles inland from the coastline, encompassing roughly 1.2 million acres of land and water. Elevation ranges from sea level to no more than 50 feet above sea level.
 - The zone contains three geographic regions: the Grand Strand, the Santee River Delta, and the Sea Islands.
 - The Grand Strand is a 60-mile-long arc-shaped beach extending from the North Carolina border to Winyah Bay. The Grand Strand is built on a

stable 100,000-year-old barrier sand formation that is paralleled by the Waccamaw River.

- The Santee River Delta is about 20 miles wide and is the largest river delta on the eastern coast of the United States. The delta has suffered severe erosion due to the construction of Lake Marion and Lake Moultrie, which have diverted the Santee River's water away from the delta and into the Cooper River and Charleston Harbor.
- South Carolina's Sea Islands extend from Bull's Bay to the Savannah River. The Sea Islands, also called **barrier islands**, are separated from the mainland by salt marshes and protect the mainland from storms and coastal erosion.
 - How South Carolina's barrier islands were formed is debated, but one theory suggests that they were formed during the **Pleistocene**. Massive **glaciers** caused sea levels to decline, leaving old beach dunes far inland. New dunes formed along the new coastline, but when sea level began to rise as the glaciers melted, some of the new dune ridges remained above water, forming the cores of barrier islands. Over time, wind and waves brought more sediment, building out the barrier islands.

- The Coastal Zone is characterized by maritime forests, salt marshes, fresh marshes, and sand dunes. Tides, currents, and storms are continuously altering the zone's morphology. Vegetation in the Coastal Zone is often resistant to salt water and coastal winds. Common vegetation includes live oaks, palmetto trees, and slash pine. Smooth cordgrass or *spartina alterniflora* is the predominant plant of the salt marsh ecosystem because of its ability to withstand being inundated with salt water.
- Natural heritage preserves in the Coastal Zone protect maritime forests (Tom Yawkey Wildlife Center Heritage Preserve), tidal marshes (Botany Bay Plantation Heritage Preserve / Wildlife Management Area), and seabird nesting sites (Deveaux Bank Seabird Sanctuary).
- Cultural heritage preservers in the Coastal Zone protect precontact period shell bearing archaeological sites (e.g., Greens Shell Enclosure Heritage Preserve), the oldest tabby structure in South Carolina (Fort Frederick Heritage Preserve), and Civil War sites (e.g., Fort Lamar Heritage Preserve).

- **Coastal Plain**

- The Coastal Plain is the largest landform region in South Carolina, covering around 20,000 square miles or about two-thirds of the state's total area. The Coastal Plain ranges in elevation from sea level near the coast to around 300 feet above sea level near the Sandhills.
- The Coastal Plain can be subdivided into the Inner Coastal Plain and the Outer Coastal Plain.

- The Inner Coastal Plain features a gently rolling **topography** and a higher elevation compared to the Outer Coastal Plain.
 - The Outer Coastal Plain's topography is flatter than the Inner Coastal Plain with very little variation in elevation.
 - During the Pleistocene, which lasted 2 million years, sea level rose and fell due to the advancement and retreat of glaciers. Glaciers never reached as far south as South Carolina, but by locking up water and releasing water when they melted, temporary coastlines formed across the Coastal Plain, evidenced today by a series of terraces leading to the coastal zone.
 - A distinctive landform feature of the Coastal Plain is the **Carolina Bay**. Carolina Bays are oval-shaped depressions that look like isolated swamps with buttressed trees. They range in size from a few acres to several thousand acres. In South Carolina, Carolina Bays are all oriented in a northwest-southeast direction. The origin of Carolina Bays is unknown. One theory is that they are the result of meteorite scars left by a huge meteor that broke apart into thousands of pieces before hitting the earth.
 - The Coastal Plain features many rivers, floodplains, and swamps. Common vegetation includes longleaf pines, various oaks, sweetgum, and bald cypress. Carolina bays feature bay trees around their edges, hence their name.
 - Natural heritage preserves in the Coastal Plain protect Carolina Bays (Cathedral Bay Heritage Preserve), bottomland hardwood forests (Congaree Bluffs Heritage Preserve), and longleaf pine savannah (Lynchburg Savannah Heritage Preserve).
 - Cultural heritage preserves in the Coastal Plain protect colonial settlements and former rice plantations (Childsburry Towne Heritage Preserve).
- **Sandhills**
 - The Sandhills is a narrow region that runs northeast to southwest through Aiken, Lexington, Richland, Kershaw, Sumter, and Chesterfield counties. The region has a rolling hilly topography with gentle slopes.
 - The Sandhills overlap with what is known as the **Fall Line** (also called the Fall Zone). The Fall Line separates the Piedmont from the Coastal Plain, where the harder, erosion resistant rocks of the Piedmont meet the softer sedimentary rocks of the Coastal Plain, producing rocky outcrops and rapids along rivers.
 - 40 million years ago, the eastern and southern parts of South Carolina were underwater, and the shoreline corresponded to the modern-day Sandhills. Just like today, the ocean waves reworked sediment brought by rivers from the Blue Ridge and the Piedmont to form ancient beaches and sand dunes. When the sea began to retreat, these beaches and dunes were left inland, and the remnants of these ancient dunes define the Sandhills region today.
 - The sandy soil of the Sandhills produced a unique **xeric** ecosystem dominated by longleaf pine, turkey oak, and various shrubs, such as wild rosemary and sparkleberry.

- Natural heritage preserves in the Sandhills protect sandstone outcrops and formations (Peachtree Rock Heritage Preserve) and longleaf pine ecosystems (Henderson Heritage Preserve / Wildlife Management Area).
- Cultural heritage preserves in the Sandhills protect precontact period Native American sites, colonial settlements, Civil War battlefields (Congaree Creek Heritage Preserve), and 19th century pottery kilns (Horse Creek, Bear Branch and Gopher Branch Heritage Preserves).

- **Piedmont**

- The Piedmont covers around 10,500 square miles, or about one-third of the state's total area. Elevations in the Piedmont ranges from 300 feet to around 1,200 feet near the Blue Ridge. The region is characterized by its rolling, hilly topography and gently sloped river valleys.
- The Piedmont has a complex geological history, with its basement rock being estimated at 1.3 billion years old. The region is separated from the Blue Ridge by a fault line called the **Brevard Zone**.
- One feature of the Piedmont region is the **monadnock**, also called an inselberg. A monadnock looks like a small, isolated mountain, separated from the main ridge. Over time, the process of erosion wore away the surrounding landscape, exposing the more erosion-resistant formation, which is usually made of granite. Table Rock in Pickens County is a popular example of a monadnock.
- Human action has significantly altered the vegetation of the Piedmont. The region is naturally dominated by hardwoods and short-leaf pines, but during the 19th and early 20th centuries, these mature forests were cleared for large-scale agriculture. As cultivation declined in the 20th century, the abandoned fields were reclaimed by weeds, grasses, and eventually pine trees, particularly loblolly pine. As pine trees grow, they provide the necessary shade for hardwood saplings to thrive. The hardwood saplings slowly grow and begin to dominate the forest floor and eventually oaks, hickories, red maples, and dogwoods will overtake the pine.
- Natural heritage preserves in the Piedmont protect granite outcrops (Forty Acre Rock), Carolina Prairies (Rock Hill Blackjacks Heritage Preserve), and cove forests (Peters Creek Heritage Preserve).
- Cultural heritage preserves in the Piedmont protect Native American soapstone quarries (Pacolet River Heritage Preserve) and American Revolution battle sites (Fish Dam Ford Heritage Preserve).

- **Blue Ridge**

- The Blue Ridge is South Carolina's smallest landform region, only covering around 600 square miles (or two percent of the state's total area) in the northern parts of Oconee, Pickens, and Greenville counties.

- The region has a rugged, mountainous topography with steep slopes, narrow valleys, and waterfalls. Elevations range from 1,400 to over 3,500 feet above sea level, with the highest point in the state being **Sassafras Mountain**, at 3,554 feet.
- South Carolina's mountains are made of erosion resistant metamorphic rock – mostly crystalline schists and gneiss. The Blue Ridge was formed around 470 million years ago by a process called continental drift when a continental fragment, that now exists as the Piedmont, collided with the proto-North American continent.
- The Blue Ridge is characterized by hardwood forests. Because of the region's elevation and precipitation, vegetation from more northern climates populate the landscape. Vegetation includes oaks, tulip poplars, hemlock, white pine, and yellow birch. American Chestnuts used to be common in the Blue Ridge, but in the early 20th century the chestnut population was decimated by a fungus called the Oriental Chestnut Blight. Modern efforts have sought to revitalize the state's chestnut population.
- Natural heritage preserves in the Blue Ridge protect waterfalls (Stumphouse Heritage Preserve), mountain bogs (Ashmore Heritage Preserve / Wildlife Management Area), and granite outcrops (Chestnut Ridge Heritage Preserve / Wildlife Management Area).
- Cultural Heritage Preserves in the Blue Ridge protect the oldest bridge in South Carolina and possibly in the Southeast (Poinsett Bridge Heritage Preserve).