Forestry

Forests are ecosystems, and the current approach to managing our forests is ecosystem management. Forests provide habitat for wildlife and support a great diversity of plant and animal species. They are watersheds that are important to water quality. An ecosystem management approach considers these roles, as well as, soil types, forest protection, wilderness preservation, historical roles, outdoor recreation, silviculture, and timber production.

Our forests are important economic resources, providing lumber and thousands of other products used by man. Forestry is the second largest industry in North Carolina. However, forests also provide many ecological services upon which man and wildlife depend. Some of these services include climate moderation, water and nutrient cycling, prevention of soil erosion and flooding, removal of air pollutants, and social, recreational, and aesthetic values.

The distinguishing vegetation of the forest is its trees, which are second only to grass as the most common and widely distributed plants on earth. North Carolina has diverse forest communities representing forests found from our latitudes to the forests typical of New England. Our forests have been an important part of our history and our economic growth from the time of early settlement.

Forests are our renewable, ecological, and economic resource that supply habitat for wildlife and products for man. Henry David Thoreau suggested their multiple functions and importance when he stated, "In wilderness is the preservation of the world."

Learning Objectives

☺ Understand the beneficial roles of forests.

- Know the historical roles and importance of forests.

- Know the economic value of forests and the many products they provide.

- Explain the various ecological benefits of trees.

☺ Understand forest development, stages, and succession.

- Describe the kinds or stages of forests.

- Explain succession, or biotic change, and its various stages, the characteristics and organisms common to each stage.

- Describe edges and know their importance.

☺ Understand the concept and processes of forest ecology.

- Know that forests are ecosystems, and be able to identify the components of the ecosystem.

- Describe the niches of organisms, the biotic factors within the forest ecosystem, and be able to give examples.

- Identify the abiotic factors in the forest ecosystem and know their importance.

- Explain the processes of photosynthesis and nutrient cycling.

- Know the importance of forest soils.

☺ Understand the developmental stages, structuring, and types of forests.

- Recognize the specific developmental stages of a forest.

- Know crown classifications.

- Describe vertical stratification, and know its importance to wildlife.

- Describe the two main forest types and their importance as ecosystems.

☺ Understand the structure, processes, reproduction, life cycle, identification, and pests and diseases of trees.

- Know the parts of a tree and their functions.

- Describe the life cycle of a tree.

- Explain the reproduction of the two main types of trees.

- Know how to identify trees, and be able to identify the trees listed for student identification.

- Know the common pests and diseases and the steps foresters and landowners can take to control them.

☺ Understand silviculture practices.

- Define silviculture and know silviculture practices.

- Know tree harvesting and regeneration methods.

- Describe forest management for various purposes, such as wildlife, and know forestry best management practices.

- Know how to use basic forest measurements.

☺ Understand the role fire has and does play in forest management and ecology.

- Know how fire affects wildlife and fire dependent ecosystems.

- Know the three major factors influencing wildfire and the role each plays.

- Describe the categories of wildfires.

- Know management practices to minimize wildfire risks and the use of prescribed burns.

☺ Know the different types of forest ecosystems found in North Carolina and be able to explain how they differ.