

# *Wildlife*

Wildlife cannot be separated from the environment that supports it. The living and non-living portions of the environment help to define an organism's niche and determine the species and numbers of each that can survive in a given ecosystem. Thus, wildlife cannot be studied without studying its habitat. To maintain wildlife populations, the habitat must be preserved. **“All things are connected.”**

Usually, the vertebrate animals (fish, amphibians, reptiles, birds, and mammals), are the organisms that are thought of as wildlife; but in fact, wildlife is all non-domesticated plant and animal species. More attention will be given to the vertebrate animals, but the plants and other organisms, on which they depend and with which they interact, will be examined also.

## *Learning Objectives*

☉ Understand the basics of wildlife ecology.

- Know the parts of the environment and the dependence of living organisms on non-living portions (water, temperature, soils, mineral nutrients, and sunlight) of the ecosystem.
- Understand the organization of life and the relationships among organisms.
- Identify the source of energy for all life, the processes for producing energy, and the flow of energy through an ecosystem. Describe food webs, food chains, and energy pyramids.
- Know the essential mineral nutrients and gases for life and the importance of their cycling through the ecosystem.
- Describe the various niches of wildlife and give examples of organisms in each niche.
- Identify the feeding relationships and interactions among wildlife and state examples of organisms for each.
- Understand the importance of habitat for wildlife. Identify what a habitat must provide, and define each of the components of a habitat
- Explain the carrying capacity of an ecosystem, the factors that affect carrying capacity, and its importance to wildlife populations.

- ☺ Understand the importance of habitat, the various types of habitat, and the species associated with particular habitats.
  - Describe how suitable habitat varies for some species during different stages of their life, different seasons, different times of the day, or during reproduction.
  - Identify the habitat requirements of different species: large animals, generalists, and specialists.
  - Describe important habitat areas and the wildlife dependent upon them (ecotones, wetlands, fields or meadows, riparian areas, forest clearings, beaver ponds, and snags and downed logs.
  - Explain techniques and practices applied to create and preserve habitats.
  - Describe succession, its importance to wildlife species, and the animals, which benefit from each stage of succession.
  - Define fire-maintained ecosystem. Describe a native fire-maintained ecosystem and the wildlife adapted to the system. Identify practices used to manage fire-dependent ecosystems (prescribed burns).
- ☺ Understand what the term “wildlife” includes, the identifying characteristics of various species, representative members of the species, the roles of various species, and the interaction of society and various species.
  - Describe how insects are both “pests” and beneficial to man and wildlife.
  - Define keystone, indicator, game, and non-game species and give examples of each.
  - Recognize the identifying characteristics, roles, types, habitats, adaptation, interactions, threats to, and representative species of fish, amphibians, reptiles, birds, and mammals.
  - Describe the reproductive processes and behaviors of the vertebrate animals.
  - Identify some types of animal adaptations – physical and behavioral – and provide examples of each.
  - Describe the migratory pattern of animals including types of migration and activities associated with migration.
  - Identify the activity patterns and cycles of animals – circadian rhythms, activity and sleep, reproductive, and tidal.
  - Describe the types of animals signs used to identify species, and recognize species by characteristic signs.
  - Display knowledge of the natural history of species in the designated set of wildlife profiles.

- ☺ Understand the concepts and practices of wildlife management and conservation.
  - Define and identify representative endangered and threatened species, and describe what makes some species more vulnerable.
  - Identify the agencies responsible for wildlife management and conservation.
  - Describe the role of hunters in wildlife management and conservation.
  - Describe the principles of wildlife management and recognize the difference between conservation and preservation.
  - Identify how wildlife management laws protect wildlife.
  - Describe various wildlife management tools and the benefits of each.