

# Envirothon New Brunswick Wildlife Learning Objectives

## **Key Point 1—Knowledge of Wild Birds, Mammals and Herps**

### **Learning Objectives:**

1. Identify wildlife species using mounted specimens, skins/pelts, pictures, skulls, silhouettes, decoys, wings (waterfowl), scats, tracks, animal sounds, or other common signs. Animal tracks may be original or molds made of the prints. Wildlife signs may be real or reproduced.
  - Smithsonian National Museum of Natural History
  - Animal Scat
  - Frogs of New Brunswick
2. Use a key or field guide to identify wildlife species or signs. Wildlife species or signs may be presented in any form as described above.
  - Tracking Down Winter Wildlife
  - Furbearers of Canada
  - Animal Tracking
3. Identify general food habits (herbivore, omnivore, carnivore), habitats (terrestrial, aquatic, fossorial), and habits (diurnal, nocturnal) using skull morphology and/or teeth.
  - American Skull Identification & Dichotomous Key
  - North Woods Animals

## **Key Point 2—Wildlife Ecology**

### **Learning Objectives:**

1. Know the meaning of “habitat”, and be able to name the habitat requirements for wildlife and the factors that affect wildlife suitability.
  - Environment Canada – How much habitat is enough
2. Know and understand basic ecological concepts and terminology.
  - Wildlife Glossary
  - Concepts and Terms for Wildlife
3. Understand the difference between an ecosystem, community and population. Be able to explain how communities interact with their non-living surroundings to form ecosystems.
  - Organization of Life
4. Understand wildlife population dynamics such as birth, mortality, age-structure, sex ratio, and mating systems. Understand the impact of limiting and decimating factors of common wildlife species on wildlife management.
  - The Basics of Population Dynamics
5. Recognize that all living things must be well-adapted to their native environment in order to survive. Be able to identify, describe and explain the advantages of specific anatomical, physiological and/or behavioral adaptations of wildlife to their environment.
  - Habitat and Adaptation
  - Wildlife in winter - Adaptations for survival
6. Know the meaning of the term “Biodiversity”, and understand why biodiversity is important to people and wildlife.
  - What Are the Benefits of Biodiversity

- Enhancing wildlife and Biodiversity – Benefits
7. Understand the importance of the 3 levels of biodiversity: genetics, species and ecosystem or community, and understand the implications of biodiversity loss at each level.
    - Canadian Biodiversity
    - Different levels of biodiversity

### **Key Point 3—Conservation and Management of Wildlife**

#### **Learning Objectives:**

1. Know the preferred habitat types and specific habitat requirements of common wildlife species. Understand how this knowledge helps us to better protect both the land and the wildlife species that depend on it.
  - North Woods Animals
  - Woodland Fish and Wildlife Management
2. Understand the difference between biological and cultural carrying capacity, and be able to identify social and ecological considerations where human use of land conflicts with wildlife habitat needs.
  - Biological and Cultural Carrying Capacity
  - Human-Wildlife Conflict Prevention
3. Identify common wildlife management practices and methods that are being used to manage and improve wildlife habitat.
  - Wildlife Management Practices
4. Understand the role of federal, state and provincial Fish and Wildlife Agencies in the management, conservation, protection, and enhancement of fish and wildlife and their habitats.
  - Protected Areas in Canada
  - Canada's Wild Places - Seen From Far Off Places
5. Know that all states and provinces have a hunting safety course and mandatory hunter education program developed specifically for each state or provincial government's hunting and wildlife agency.
  - Hunter Education in New Brunswick

### **Key Point 4—Issues Involving Wildlife and Society**

#### **Learning Objectives:**

1. Understand how non-native (exotic), invasive species threaten our environment and the biodiversity of many wildlife species. Understand that non-native (exotic), invasive plants impact wildlife habitat and thus have a tremendous impact on native wildlife.
  - Invasive species in Canada
2. Learn about the complexities of decision-making in making land use decisions that affect wildlife, and understand that wildlife resources are under constant pressure caused by human population growth, environmental degradation, and habitat reduction.
  - Habitat Loss & Degradation
3. Know that Wildlife species are subject to diseases resulting from exposure to microbes, parasites, toxins, and other biological and physical agents.
  - Wildlife Health

4. Understand the terminology and factors that affect threatened and endangered wildlife species. Know the meaning of extinct, extirpated, endangered, threatened, candidate species and reintroduction.
  - What is threatening Species?
  - Environment Canada – Climate Change and Wildlife
5. Identify the characteristics that many extinct and endangered species possess, and be able to identify many species wildlife that are endangered and threatened.
  - What is threatening species
  - Species Status in Canada
6. Understand the role of the Endangered Species Act in helping to conserve endangered and threatened species. Know the organizations and agencies responsible for listing and protecting endangered species on global, federal, state and provincial levels.
  - Canada's Species at Risk Act
  - COSEWIC
  - Species at Risk Policies
  - Natural resources- species and status

**Additional Resources:**

Communities and Ecosystems

Canada`s Boreal Forest

Canada`s Coastal Rainforest

Managing Forests for Fish and Wildlife

[http://www.clemson.edu/extension/natural\\_resources/wildlife/publications/fs14\\_habitat\\_requirements.html](http://www.clemson.edu/extension/natural_resources/wildlife/publications/fs14_habitat_requirements.html)

<http://www.cwf-fcf.org/en/about-cwf/50th-anniversary/our-history.html>