Habitat

- Terms and Definitions
- Hierarchical Habitat Selection
- Habitat is Species Specific

Terms & Definitions

- Habitat
- Habitat Use
- Habitat Availability
- Habitat Quality
- Critical Habitat
- Habitat Preference
- Habitat Suitability

Habitat Definition

- Food, water, and cover arranged spatially.
- Resources and conditions present in an area that produce occupancy—including survival and reproduction—by a given species.
- Habitat implies more than vegetation or vegetation structure.
- It is the sum of the specific resources that are needed by an organism.
Habitat Type?
- Habitat ≠ Habitat Type
- Habitat much more than the vegetation in an area
- Vegetation type or vegetation association
- Avoid using the term “Habitat Type”

Habitat Use
- The way an animal uses or consumes a collection of physical and biological components (food, water, cover)
- Used for foraging, cover, nesting, escape, denning, or other life-history traits.
- A species may use 1 habitat in the summer and another in the winter.

Habitat Selection
- The hierarchical process involving a series of innate and learned behavioral decisions made by an animal about what habitat it would use at different scales of the environment (Hutto 1985).
- Habitat may be selected for:
  - Forage quality
  - Loafing
  - Denning sites
  - Competition
  - Predation
  - Cover
Habitat Preference
• The disproportional use of some resources over others.

Habitat Availability
• Accessibility and procurability of physical and biological components of a habitat by animals.
• Don’t confuse availability with the abundance of resources, which only refers to their quantity in the habitat.
• Measuring actual resource availability is important to understand wildlife habitat, but in practice it is seldom measured because of the difficulty of determining what is and what is not available.

Habitat Quality
• Ability of the environment to provide conditions appropriate for individual and population persistence.
  - Low – individual survival
  - Medium – reproduction
  - High – population persistence
• Should be based on animal demographics and not vegetative features.
• Animal density can be misleading.
Critical Habitat
- The physical or biological features essential to the conservation of a species which may require special management considerations or protection (USFWS 1988).
- Critical habitat should be linked to the concept of habitat quality.
- Survival, reproduction and population persistence.

Macrohabitat and Microhabitat
- **Macro**
  - Landscape scale features
    - seral stages
    - vegetative associations.
- **Micro**
  - Fine scale habitat features
    - Vegetation height
    - Canopy cover

Johnson’s Hierarchical Habitat Selection
- **First order**
  - Physical or geographic range
- **Second order**
  - Home range
- **Third order**
  - Components within home range (foraging areas)
- **Fourth order**
  - How components of habitat are used (forage species)
Red-cockaded Woodpecker

**Geographic Range**

**Home Range**

**Forage Area**

**Nesting Cavity**

Habitat is Species Specific

- “Excellent wildlife habitat”
- Species specific
- Consider species survival and reproductive requirements

End of Lesson

- Terms and Definitions
- Hierarchical Habitat Selection
- Habitat is Species Specific