

Restoring Habitat



Habitat – what is it?

- **Habitat** (which is Latin for "it inhabits") is the place where a particular species lives and grows. It is essentially the environment—at least the physical environment—that surrounds (influences and is utilized by) a species population. We use "species population" instead of "organism" here because, while it is possible to describe the habitat of a single black bear, we generally mean not any particular or individual bear, but the grouping of bears that comprise a breeding population and occupy a certain geographical area. Further, this habitat could be somewhat different from the habitat of another group or population of black bears living elsewhere. Thus, it is neither the species, nor the individual, for which the term habitat is typically used. A **microhabitat** or microenvironment is the immediate surroundings and other physical factors of an individual plant or animal within its habitat.
- However, the term "habitat" can be used more broadly in ecology. It was originally defined as the physical conditions that surround a species, or species population, or assemblage of species, or community (Clements and Shelford, 1939). Thus, it is not just a species population that has a habitat, but an assemblage of many species, living together in the same place that essentially share a habitat. Ecologists would regard the habitat shared by many species to be a biotope.



Habitat

General components

- Food
- Water
- Cover

Others not always considered

-Space

-Arrangement

-Ability to access components





Habitat Needs are Generally Species Specific



SAGE GROUSE



PRONGHORN



LARK SPARROW



Sage Grouse

Leks or Breeding Areas

- open areas with less herbaceous and shrub cover than surrounding areas
- leks appear to be located in sparser shrubby vegetation typically surrounded by potential nesting habitat, and are adjacent to relatively dense sagebrush stands





Sage Grouse

Nesting Habitat

- most nests are located under sagebrush plants
- greater spring forb cover, and tall grass cover
- greater sagebrush height and canopy cover





Sage Grouse

Early Brood-rearing Habitat

- Less live sagebrush and total shrub cover*
- Shorter average sagebrush heights*
- More total herbaceous cover*

*Compared to nesting habitat





Sage Grouse

Winter Habitat

- Taller sagebrush
- Greater sagebrush canopy cover
- Typically on south- or southwest-facing aspects





Pronghorn

Habitat Suitability Model

(7 major criteria)

1) Vegetation Quality Rating

- Forbs (0-20 pts)
- Grasses (0-5 pts)
- Shrubs (0-10 pts)

2) Vegetation Quantity Rating (1-10 pts)





Pronghorn

Habitat Suitability

(cont'd)

3) Vegetation Height Rating
(1-10 pts)

4) Vegetation Diversity
Rating

- Forbs – 0-15 pts
- Grasses – 0-10 pts
- Shrubs – 0-10 pts





Pronghorn

Habitat Suitability

(cont'd)

5) Water availability rating
0-10 pts

6) Water quantity rating
0-10 pts

7) Limiting Factors (can
subtract 60 pts)

Fences; Snow Depth;
Habitat Disturbance.





Other Species





Some Key Variables to Consider

- Structure – Vegetative Heights
- Vegetative Classes (eg grasses, forbs and shrubs)
- Diversity – Numbers of vegetative species and vegetative classes
- Rangeland Site Potential or Capability
- Wildlife species and other needs - Balance





Ecological Site Potential

- NRCS – Ecological Site Descriptions
 - Successional Dynamics/Transitions
 - Species list of vegetation that could occur on the specific sites (e.g. Loamy, Shallow Loamy, etc.)
 - Addresses site potential and gives information on Historic Climax Plant Community
 - Website: http://efotg.nrcs.usda.gov/efotg_locator.aspx?map=WY





What about the Landscape?

- Considerations pertaining to wildlife should also include what may needed or lacking on a landscape scale.





Excerpts from the “Wildlife Reclamation Manual”

Deput (1982) suggested the following in relation to seed mixtures:

- 1) Include species of varying seasonal growth patterns (phenologies)
- 2) Include species with different growth forms (above and below ground)
- 3) Calculate appropriate seed rates for individual species based upon differences in characteristics (vigor, competitiveness, etc.) and ultimate composition objectives.

Website: <http://www.ott.wrcc.osmre.gov/library/hbmanual/handbook.htm>





More Excerpts

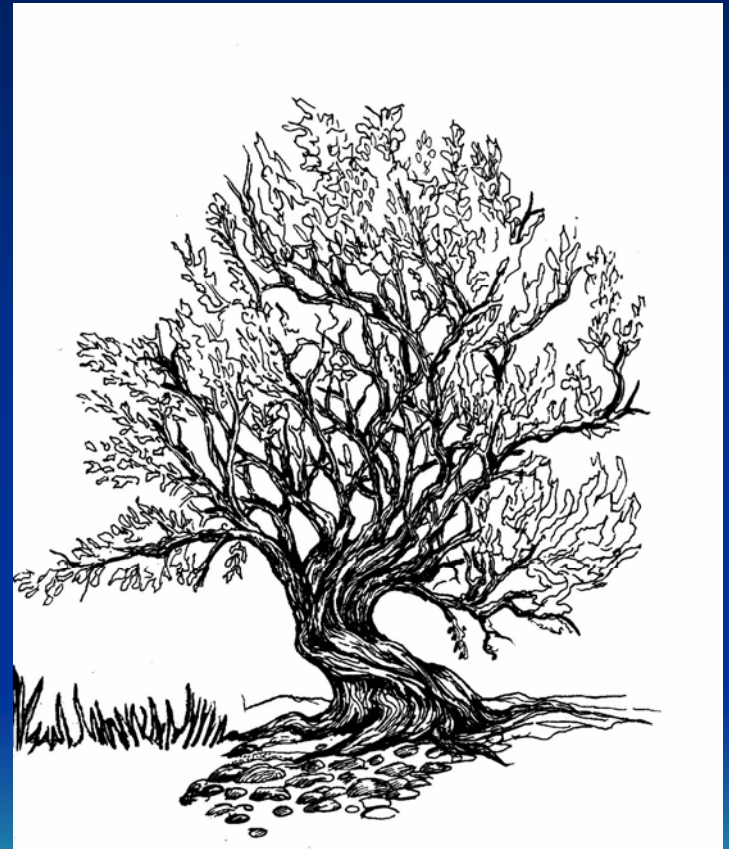
- Forbs

- Adapted legumes can increase total production when used with grasses. They also improve the forage nutritive value for many wildlife species.
- A diversity of vegetation can provide plants that may have attributes which make them valuable during different parts of the year



Shrubs

- Important Attributes
 - Structure
 - Cover
 - Snow Accumulation
 - Moisture conservation
 - Forage and Cover in severe snow years
 - Increased diversity
 - Aesthetic enhancement
 - Winter Nutrition





Importance of Localized Seed Collections

- May have specific attributes not found in existing seed sources
 - Gosiute sage and associated palatability for mule deer
- Adaptability – potential differences
- Genetic variability



Habitat Restoration - Conclusion

- Dependent upon species and season
- Structure and Diversity are Important
- Address needs from a successional and landscape scale objectives where possible



QUESTIONS?

