

Attributes that Attract Wildlife

Forests have evolved over time with the irregular occurrence of natural disturbances such as windstorms, fire, insects, disease outbreaks and drought. These disturbances create a variable mosaic of different stand types, ages and quality, allowing renewal and play an integral role in providing habitat for a wide variety of wildlife. Disturbance builds resiliency into the ecosystem and promotes a 'healthy forest condition.' A healthy forest can easily recover from natural events like fire and insect infestations; is resilient enough to resist extreme weather events like drought and is able to support a variety of plants and wildlife.

Compared to plants, wildlife makes up a small part of the total mass of the ecosystem. Despite this, wildlife plays an important part in shaping and maintaining natural environments. Many habitats are directly influenced by the way animals live. For example, grasslands exist partly due to the relationship between grazing animals and grasses that prevents other plants from taking hold. Animals also play an important role in pollination and distributing seed. By providing habitat for wildlife, landowners can help maintain the ecological balance of nature.

Wildlife habitat must provide food, cover and water and have a spatial structure or arrangement that creates habitat 'niches' (physical environments that a species is adapted to). Woodlots and shelterbelts are small patches of forest and should be designed to increase wildlife habitat when planning and managing the land.

This factsheet explores the attributes of a forest conducive to wildlife:

- Forest Health
- Horizontal Structure
- Vertical Structure
- Travel Corridors
- Species Diversity

By understanding these attributes, landowners can incorporate them into the landscape to promote wildlife habitat through the creation of a healthy forest. By benefiting wildlife, landowners benefit from building resilience into their forest.

What is a Healthy Forest?

Healthy forests have a mixture of trees with different species, age structures and shapes and sizes. They also have a mixture of dead standing trees and fallen decaying logs that create habitat for smaller species and insects. The best habitat is created when the forest is arranged in a mosaic pattern with features such as watercourses and openings or meadows inter-dispersed throughout that satisfy different habitat requirements. All wildlife species require a space to hide, rest, feed, move about and mate. Some species' habitat needs change through the course of the day with different activities and throughout the seasons as well. By considering both horizontal and vertical diversity and structure, you can provide cover for a myriad of species.

Horizontal Structure

Horizontal structure refers to the openness and spacing of trees and other forest elements:

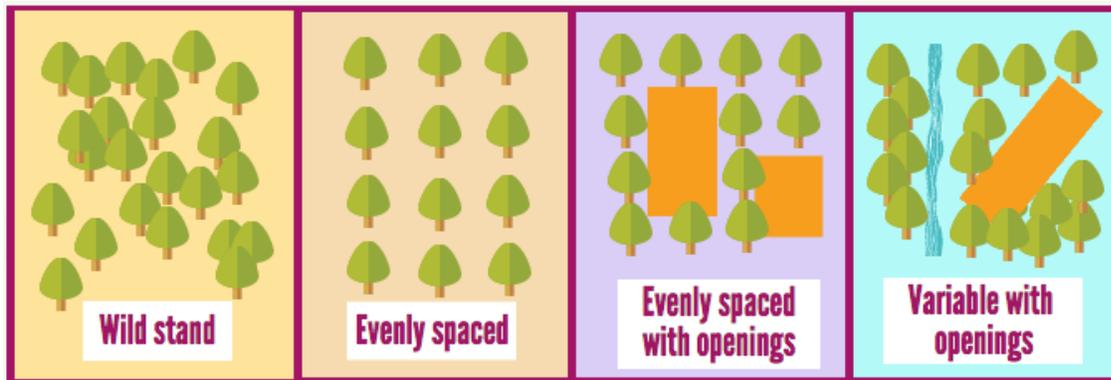


Figure 1. Four examples of horizontal structure in the forest

The best horizontal structure is the most diverse with variable densities, some thick areas of forest and some more spaced out areas with few or no trees that allow for shade intolerant shrubs and grasses to grow in.

Vertical Structure

Vertical structure refers to the layers of the forest. A healthy woodlot will have a mixture of all different layers as each one creates distinct niches. Five or more layers are optimal and include the canopy, understory, shrub layer, herb layer and forest floor.¹ There should be some “clumps” of each layer together and other areas where all layers are equally present. A good shelterbelt design will look something like **Figure 2**.

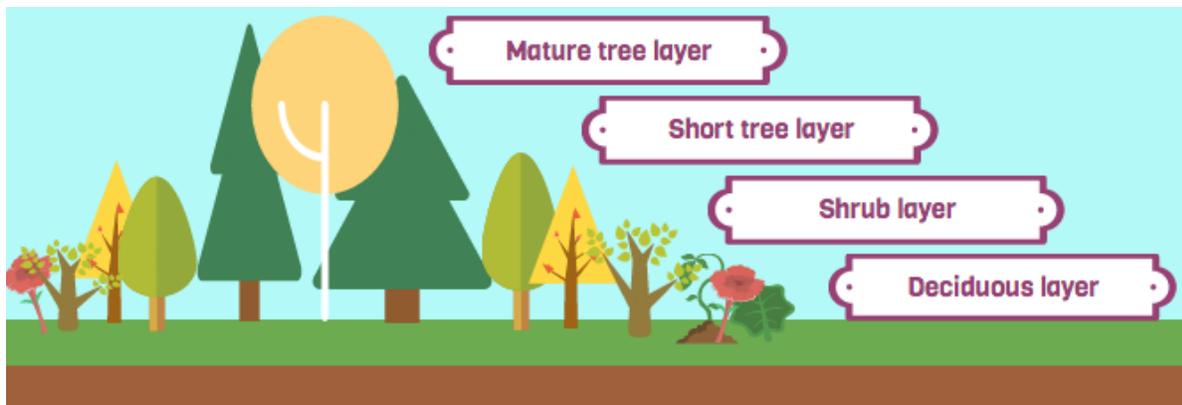


Figure 2. Vertical forest structure

Diversity is the key to attracting wildlife. Mixing up the horizontal, vertical structure of the area and diversifying the species will provide the greatest amount of habitat for wildlife... “Build it and they will come!”

Travel Corridors

Another important point to consider is location. Creating a habitat isolated from natural areas can create a predator trap. When possible, shelterbelts or woodlots should be planted in areas that already have some natural habitat present to improve travel between wooded patches. As a rule, a wildlife habitat should be no smaller than 1 hectare (2.5 acres)¹. Creating corridors that link small isolated areas together or to a larger natural area will allow wildlife to travel under cover, increasing the viable space for wildlife.

Species Selection

It is important to consider wildlife needs during each season. Planting and encouraging the growth of species that flower and produce seed and fruit both early in the season and late into the fall is ideal. "Mast" is nourishment provided by forest species and includes: nuts, seeds, berries, fruits, shrubs, vines and herbaceous plants.² Nuts and seeds are "hard mast" while fruits and berries are "soft mast." Having a combination of both hard and soft mast provides food for a wide variety of species. Using native species and controlling exotic species is also important to ensure the needs of local wildlife are being met.

You can find more information through the following resources:

Nova Scotia Natural Resources: Woodlot Management

<http://woodlot.novascotia.ca/book/export/html/208>

Clemson University – Forestry and Natural Resources Extension

http://www.clemson.edu/extension/natural_resources/wildlife/publications/fs14_habitat_requirements.html

Agriculture and Agri-Food Canada

http://publications.gc.ca/collections/collection_2010/agr/A125-2-2010-eng.pdf

For more information on attributes that attract wildlife please contact:



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www.awes-ab.ca

¹http://publications.gc.ca/collections/collection_2010/agr/A125-2-2010-eng.pdf

²<http://woodlot.novascotia.ca/book/export/html/208>