

Managing Forest Succession for Wildlife

Just as every human undergoes changes from newborn to mature adult, the forest also undergoes predictable changes from old field to mature forest. The orderly progression of plant communities from bare earth to mature forest is called **forest succession**, and is one of the most basic principle that guides the development of forests and changes in wildlife habitat. Forest succession commonly begins when a crop field or pasture is abandoned and grasses invade the area. Soon, seeds of sun-loving (shade intolerant) trees and shrubs blown by the wind and contained in bird droppings germinate and grow. Tightly-packed trees and shrubs start to crowd the site, and the dense vegetation no longer allows sunlight to reach the ground, resulting in the loss of abundant herbaceous vegetation found in earlier successional stages. As the trees continue to grow and compete for available sunlight, some overtop the others, and others die. It is under this dense crown of forest trees and shrubs that plants adapted to the shady conditions (shade-tolerant) thrive.

A second important ecological principle is **edge**. Edge is the boundary between two different stages of succession, or, in general, between any two ecological communities. Examples of edge include the interface between a pond and stand of trees, a field and a forest, a road and forest. Often the diversity of wildlife is greatest along an edge, because the transitional area around the edge allows a variety of habitats to exist in close proximity to each other.

Succession and Wildlife Habitat

Different species of wildlife rely on one or more stages of forest succession to meet their needs for survival. The basic needs of wildlife, or wildlife habitat, are **food, cover, water** and **living space** that will carry it through the entire year and its lifetime.

Food may include nuts, berries, grasses, as well as other flora and fauna such as grubs and the insects they

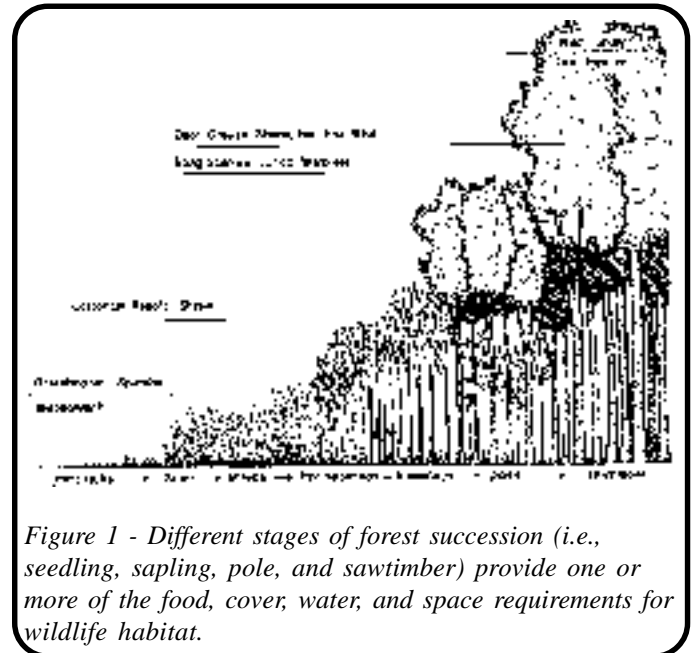


Figure 1 - Different stages of forest succession (i.e., seedling, sapling, pole, and sawtimber) provide one or more of the food, cover, water, and space requirements for wildlife habitat.

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become. Cover has to be adequate to provide not only nesting cover but rearing cover, roosting cover, escape cover, loafing areas and travel lanes, protection from the cold as well as protection from the heat of the summer. Water has to be present and variety again is important, streams provide water; vernal pools (seasonal springtime puddles and pools) and swamps provide breeding places for insects, reptiles and amphibians such as salamanders, frogs and toads. Living space has to be varied so needs are met at all stages of life and the year. For example, mature turkey's need mature trees in which to roost and provide acorns as food, but the young or "polts" need short grassy clearing to find insects they need to grow after hatching.

Edges can provide diverse range of successional habitats that allow more wildlife species to meet their needs met in a smaller area. However, some wildlife species do not benefit from increased edge. For example, forest interior dwelling birds need mature forest, but their numbers dwindle quickly as the forest is fragmented. Therefore, you need to know what you want to manage for and the habitat needs of that species.

Managing Forest Succession

The process of forest succession precedes whether we do anything or not. Therefore, wildlife habitat changes as well. Forest management practices provide some of the best opportunities to improve the health and productivity of forests for forest products, recreation and aesthetics, as well as alter wildlife habitat.

Harvest practices can be used to create important or missing habitat components on a piece of property. Harvest practices can be used to create forest openings; stands of seedling, sapling, pole timber or mature timber; mast trees; and snags and cavity trees. Many forest practices cause forests to revert to early successional stages and favor those species, while the planting of trees and shrubs pushes succession ahead to provide sources of food and shelter more quickly than nature would. Forest stewardship can also assure that special wildlife habitats such as wetlands, spring seeps, cliffs, caves and nest boxes are protected and enhanced.

Forests change naturally can be manipulated to change by sound forest management practices that alter forest succession and create or minimize edge. As result, the habitat needs of wildlife, especially for food and cover, will be affected. Contact your local forester on how sound forest stewardship practices can be used to make wildlife more abundant on your land.

Forestry Board Receives Honor

Efforts of volunteers in local forest and wildlife management programs are key to reaching the diverse citizenry of our state. The Frederick County Forest Conservancy Board was recently presented the Wildlife Conservation Award of the Maryland/Delaware Chapter of the Wildlife Society.

The award is presented to a person or organization which does not have wildlife management as its primary purpose or source of income. In accepting the award, Board Chairmen John Blake said, "We are all pleased by this recognition that what we do is appreciated by others. Board members are volunteers who collectively contribute over 1,000 hours a year in volunteer efforts aimed at promoting a proper appreciation of the value of urban and rural trees and forests, and their management.

Forestry boards located in each county believe that good forest management and wildlife conservation are compatible.

Books for Your Library

Working with your Woodland A Landowner's Guide: by Mollie Beattie, Charles Thompson and Lynn Levine. This detailed, but easy-to-understand book provides forest landowners information on how to make decisions involving the management of forests. Chapters include assessing woodland potential for a range of objectives, using foresters, developing management plans, management techniques, harvesting forest products and financial considerations of forestry. While targeted to New England forests, most of it is applicable to Mid-Atlantic forests. Available from your bookstore or: University Press of New England, 17 1/2 Lebanon St., Hanover, NH, 03755, (603) 676-3349.

Branching Out

Vol. 4, No. 1, Summer 1996

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Branching Out is published quarterly and distributed to 8,300 woodland owners, resource professionals, and others interested in forest stewardship. Calendar and news items are welcome. Items must be received by July 15 for the summer newsletter.

The sponsoring agencies' programs are open to all citizens without regard to race, color, sex, age, religion, national origin, or disability.

7th American Forest Congress

The 7th American Forest Congress, titled "Many Voices, A Common Vision", was held in Washington, D.C. from February 20-24. Any description of this meeting must include the word "intense", as over 1400 people with deeply held emotions and beliefs came together in goodwill to explore common ground in hopes of developing a forest vision that would take us into the 21st century. As a Maryland forest owner, I attended along with other forest owners, educators, government agencies, environmentalists, wildlife groups, urban and community forestry and students. The Congress was not without controversy as a few environmentalist delegates from the western US attempted to use the forum to air their view, however, this was not well-received by the majority of delegates who had committed to work together for the three days.

The Congress process was based on breaking the group into tables with 10 people of diverse backgrounds and interests. Tables established introductions and conduct rules.

Congress organizers were hard at work for over a year prior to the meeting. Draft vision elements and principle for achieving the vision were collected at 50 grass roots round tables held across the country.

The first phase of the Congress was to develop a vision, or a desired state of being. Seven vision elements that arose from the round tables were discussed and added to by participants at each table. All suggestions were compiled, and the acceptance of each was determined. Intermingled in the process were two sets of concurrent dialogue sessions offered to broaden perspectives on 40 forest-related issues.

The second phase was to develop principles to support

our common vision. Nineteen principles were submitted for discussion that provided guidelines on how to achieve the vision. Break-out sessions provided a total of 61 principles and supporting statements were prepared to provide evidence or rationale for the principle. Acceptance of the principles were again determined by a consensus process.

The third phase was to develop "next steps" to bring us closer to achieving the vision. Participants relocated to tables of their home states to recommend actions needed to achieve the vision.

Most people I met were impressed by the goodwill, knowledge, commitment of this diverse group. Discussions focused on the broad center of the bell curve where most could find common ground. While most tables had constructive experiences, a very few tables had members that tried to impose their positions on all.

When the Congress adjourned my vessel was brimmed with new information, and most participants were optimistic that our inclusive vision is achievable. While agreement on how this vision will be attained was not resolved, all departed motivated to try in their own way.

- Submitted by Sandra West, a Maryland forest owner, Coverts Cooperator, and attendee at the Forest Congress

Forest Health Update

Spraying for gypsy moth has started and landowners can expect to see defoliation begin in the next month. Forest owners in southern Maryland and on the lower eastern shore are on the leading edge as the gypsy moth spreads south and can expect the worst defoliation. The best protection against gypsy moth is to reduce the amount of oak in the stand to 40 percent of the stocking and thin forests to promote vigorously growing trees. However, keep an eye on your forestland. If trees die, contact a professional forester and consider selling the dead or dying trees while they still retain their value.

The Northeast Decision Model (NED) is a computerized system designed to provide forest managers, forest landowners, policy makers, and the public with information on how to best manage specific forest sites according to landowners goals and objectives. The first two modules of the model are now available free upon request.

- * **The Forest Stewardship Planning Guide (FSPG)** module is a windows-based program very useful to private forest owners. The program leads users step-by-step through the process of determining the goals for their forests. Five planning options are available: ecological aspects, visual and scenic qualities, water quality, wildlife, and wood production. The program makes limited recommendations on how to manage the forest for specific goals.
- * **The Stand Inventory Processor and Simulator (NED/SIPS)** module is well-suited to natural resource professionals. It provides an effective means of creating, editing, managing, and analyzing forest inventory information, and simulates future growth of the forest at the stand level, including economic projections. NED/SIPs runs on MS-DOS-based computers.

To receive a copy of either module, send your name, mailing address, and daytime phone number to: USDA Forest Service, Publications Distribution, c/o Art Francis, 359 Main Road, Delaware, OH 43015, (614) 368-0127

Take Note ...



* **Timber Harvesting: An Essential Management Tool:** Forest Stewardship Bulletin No. 7: Provides practical information of great value. Free from Penn State Cooperative Extension, 7 Ferguson Bldg., University Park, Pa. 16802-4300. Six other bulletins in this series are also available.

* **Biodiversity for Forests and Farms:** this 28-minute video is useful to natural resource management professionals, land-use planners, agriculturalist, forest owners, educators and others. Ecologists have documented the complex relationships between plants and animals, and their habitats, and society. It has also been demonstrated the wise stewardship of farms and forests will continue to protect and enhance these relationships. The video explains concepts of biodiversity and ecosystem management that allow resource managers to apply traditional techniques in innovative ways to enhance species diversity in forests and on farms. Available for \$24.95 from: Cornell Univ., Med. Serv. Res. Ctr., #7 B&T Park, Ithaca, NY, 14850. (607) 255-2090.

What About Grapevines?

Most landowners pay little attention to the grapevines in their woodlands except as a source for decorative wreaths. Over the decades, most vines have been left to grow. After each timber harvest or natural disturbance, they slowly advance in their quest to take over the land. As they spread, they compete with trees for necessary sunlight and their weight often disfigures the shape of crop trees. After many years, with the help of ice and snow storms, they can cause tree tops to bust.

To insure diversity and balance in your woodland, some vines are necessary. Grapes formed on the vines are a source of food for wildlife, particularly when other food sources are slim. It is normally wise to leave vines along wood's edges, and in permanent wildlife trees. A variety of wildlife will be grateful.

However, most landowners need to control will vines to protect future productivity of the forest. Cut vines at the ground in crop trees with value for forest products and mast for wildlife. If you cut the vines a few years prior to any harvesting in the area, the shade of the forest cover will kill the vines with no need for herbicides.

Upcoming Stewardship Events...

- 🌿 **June 8: Forest Stewardship Seminar:** workshop on forest and wildlife management. Contact Dave Rieneke (410) 543-1950.
- 🌿 **June 15: Walnut Council Workshop:** Western Maryland Research and Education Center, Keedysville: workshop speakers will cover various aspects of black walnut management including trees shelters and fertilization. \$15 for non-members of Maryland Walnut Council. Includes lunch field tour. To register contact: Bert Thornton (301) 371-8980 by June 11th.
- 🌿 **June 22: Garrett County Forest Management Tour:** Concepts of forest wildlife management will be incorporated into a tour of two properties: a timber harvest at the Western Maryland 4-H Center near Swanton and a thinning operation at a private woodland. \$6 includes lunch and materials. To register contact the Garrett County Extension Office at (301) 334-1990
- 🌿 **June 22: Christmas Tree Growers Association:** Summer meeting held in Harford County. To register contact: Md. Christmas Tree Assn. (800) 661-3530.
- 🌿 **June 24: Alternative Income Bus Tour:** Specifically for bankers and investors will tour sites in Queen Anne's County. Contact Paul Gunther (410) 758-0166.
- 🌿 **June 30-July 4: 4-H Natural Resources Camp,** Patuxent River 4-H Center, Upper Marlboro. Contact: Doug Appleman (301) 403-4249.

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Maryland Cooperative Extension Service
18330 Keedysville Road
Keedysville, MD 21756
Vol. 4, No. 1
Spring 1996

