

Successional Habitat

BLUE MOUNTAIN—
KITTATINNY RIDGE
CONSERVATION
PROJECT

The mature forests of the Kittatinny Ridge are well-known for hosting nesting songbirds, but successional areas or “scrub,” dominated by shrubs, small trees and saplings, are also heavily used by birds during breeding season and migration. Often created when an old field is let go or a forested area is timbered, successional habitat is required by many bird species, including Pennsylvania’s state bird, the Ruffed Grouse.



The Brown Thrasher (left) is a well-known successional habitat specialist that has declined dramatically both in Pennsylvania and across its range in the past forty years. Thrashers nest in thickets, wide hedgerows and openings in deciduous forests. A male thrasher has remarkable mimicry skills, with the ability to produce more than 1,000 unique sounds.

Why are birds in successional habitats declining?

In a natural setting, forested areas are periodically cleared by fires, severe storms, wind shears, and other disturbances. This natural disturbance regime creates a landscape mosaic in which there is always a mix of habitat types available to wildlife; areas that were disturbed very recently (grasslands), areas disturbed within the last several years (successional/scrub), and areas that have not been disturbed for many years (forests). With modern fire suppression, and the loss of many natural areas to agricultural, residential and commercial uses, successional habitat is becoming harder to find. As a group, successional habitat birds have declined more than species in any other habitat type except for grasslands over the past four decades.

How large do successional areas need to be for nesting birds?

Unlike grassland- and forest-specialist birds, many successional habitat species do not require large tracts of land in order to breed successfully. Even areas less than an acre can provide important bird habitat, although larger sites are likely to attract more avian diversity. Also unlike grasslands or forests, long linear patches can be suitable for management as scrub bird habitat. Sites larger than 20 acres may be better off being managed as grasslands or forests, especially if they are adjacent to larger patches of similar habitat.

Successional Habitat (cont'd)

A SELECTION OF NATIVE PLANTS FOR SUCCESSIONAL HABITATS

Small trees

Flowering dogwood
Redbud
Hawthorn
American Hornbeam
Serviceberry
Eastern Red Cedar
American Chestnut
Dwarf Willow
Winterberry Holly

Large shrubs

Alder
Witch-hazel
Spicebush
Common Chokecherry
Elderberry
Rhododendron
Viburnum species
Dogwood
Sumac species
Chokeberry

Small shrubs

Mountain laurel
American Yew
Sweetfern
Trumpet Honeysuckle
Huckleberries
Blueberries
Meadowsweet (Spirea)
Wintergreen
Trailing Arbutus
Blackberry (Allegheny)
Raspberry
Hazelnut
Scrub Oak species

For more information on native plants, please visit the **Audubon at Home** website at http://pa.audubon.org/Audubon_at_home.html



What are the key components of successional habitat for birds?

An ideal successional habitat provides birds with thick cover interspersed with ground openings for foraging, abundant native food sources (berries, seeds, insects), and appropriate nest locations. Dense growth of primarily native shrubs and small trees is preferred. Native plants attract more insects, which are the most critical food source during the breeding and post-breeding seasons. Berry- and seed-producing shrubs will attract migrant birds and winter residents.



Photo by Brian Byrnes

The successional habitat shown here features a diversity of native shrubs and small trees, with a larger woodland in the background. Periodic mowing or selective removal of invasives and taller-growing trees can prevent or prolong succession to forest.

How can successional habitat be managed?

If an area is being managed to remain as successional habitat, a form of disturbance must be used periodically to re-start succession, or to remove larger tree species that would ultimately dominate the habitat. Where appropriate, controlled burns are an effective method of management. Alternately, successional areas can be mowed every three to ten years using a brushhog or similar device. Selective removal of larger tree species (those that grow to reach heights over 25 feet) when saplings begin to grow can greatly extend the period in between needed disturbances. This type of management is often practiced in powerline rights-of-way to prevent growth of anything that could interfere with the powerline, but it is applicable to any area where maintaining successional habitat is a management goal.

What about controlling invasive plants? Aren't many successional areas overrun with them?

Left untreated, the amount and type of invasive plants that will colonize successional areas varies greatly with site conditions, including the soil type, type of vegetation on nearby properties, and amount of sun the site receives. Many of the best successional habitats are found in sites that have soils that are less hospitable to large trees, including extremely wet or dry soil types. In areas with infertile soils, shrubs may dominate for many years even in the absence of active management. Controlling invasives aggressively in the first two years of a conversion to successional habitat will dramatically reduce the long-term effort needed for management.