

16. OLD FIELD MANAGEMENT

“Old field” is a broad term that applies to many open habitats transitioning from field to forest. They are dominated by forbs, grass, shrubs or small trees based on the length of time since abandonment and management history. Similar to grasslands, the benefits of this habitat to wildlife depend on the size, configuration, vegetation height, percent woody vegetation cover, as well as density and composition of the area.

Old field habitats in Vermont are important for shrubland birds, which use a variety of habitats, including old fields, shrublands, and young forest. Old fields are also used by other wildlife such as butterflies and bees, cottontail rabbits, deer, snipe, turkeys, bobcats, green and rat snakes, frogs, and many others. Shrubland birds are the focus of many management plans because 22 of 40 birds associated with shrubland habitats are currently undergoing significant population declines in eastern North America. Additionally, 139 species of reptiles, amphibians, birds, and mammals either prefer shrub and old-field habitats. Shrubland bird species in Vermont include common yellowthroat, white-throated sparrow, field sparrow, Eastern towhee, American woodcock, brown thrasher, and more rare species such as prairie warbler, golden-winged warbler, and vesper sparrow.

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Figure 16.1 Although larger areas of old fields provide better quality habitat for wildlife, even old fields less than five acres in size can be important to a variety of wildlife.

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While small areas of old field less than five acres in size can be important to a variety of wildlife, as a land manager, you should prioritize the management of large blocks or within large blocks of similar habitat. Some shrubland birds are “area sensitive” which means they prefer and select large areas of contiguous habitat for breeding. Birds such as the brown thrasher will use smaller fields but the more uncommon species such as vesper sparrows or golden-winged warblers require areas of 25 acres or more.

AREA SELECTION

As the term implies, old fields are habitats that exist were previously used for agricultural activities on the landscape. Therefore, management for old field habitat is largely focused on maintaining areas that already exist, rather than creating new non-forested habitat. These areas are best maintained by removing larger trees and periodically mowing or brush hogging.

Focus your attention on areas that are still primarily open and that are more than five acres in size. Large, wide areas of old field habitat are favored because they have a more interior nesting habitat relative to the amount of edge where predators often search for food. Long, narrow fields have less interior nesting habitat relative to the amount of edge.

The actual field size for shrubland birds becomes less important when the field is within a landscape of similar habitat, so it is important to consider the landscape when determining your management plan. Managing old fields, pasture, or hayfields with hedgerows, scrub-shrub wetlands, young forest, power line rights-of-way, or similar habitats is a great way to maintain or improve conditions for shrubland birds.

MANAGEMENT TECHNIQUES AND GUIDELINES

Wildlife that use old field habitat tend to rely on the short, woody vegetation for cover and for hunting prey. Maintain a minimum range of 10 percent shrub and young tree crown cover. Lower percent woody cover in the field may limit abundances of some species and favor others. Allow some areas to become shrubby by brush hogging around them or by maintaining the field in its current condition and incorporating even-aged forest management on adjoining lands. You should also maintain herbaceous habitat including bare ground, grasses and forbs. These are productive areas that provide food such as insects, nectar, and fruits, as well as courtship areas that are critical to many species. They also serve other important habitat functions.

Proper management of old field habitat increases plant species diversity, structure (the different heights of vegetation) and patchiness (arrangement of vegetation) in order to provide a mosaic of different vegetation conditions. Brush hogging should not take place on the entire field at once; the field should be broken up into sections that will be mowed on a rotation. This is particularly important for late nesting birds, migrating birds, small mammals, and pollinators that may be active late in the summer.

Recent research indicates that old fields and wildlife openings should be managed on much longer rotations than managers have historically used. Many species will use low woody vegetation for cover but many others need taller wood vegetation in these successional areas. Maintaining these types of old field habitats on a 10-year rotation with a brush hog can be difficult. A good alternative would be to mow the

field in a mosaic where certain areas will be disturbed on long rotations (10+ years) and others on 1- to 2-year rotations. This will create a diverse habitat with patches of woody vegetation dominated by shrubs of different heights interspersed with grass/forb areas with a few taller trees about the field. By selecting, designating and retaining patches of valuable wildlife shrubs across the field and limiting taller trees, you can prolong the successional process as shrubs will not grow very tall and shade out the habitat below. This approach will provide valuable habitat for a long period of time.

Scattered tall trees can serve as mast sources and perches. But too many tall trees can come to shade the management area reducing the amount of low cover. Tall trees can be cut, girdled, or treated with herbicide. Cut trees can be used to construct brush piles. Girdled trees will become snags that provide perches for hawks, roosting sites for bats, and cavity sites for nesting birds.

Mowing or brush hogging must occur outside the primary nesting season which is April 15 to August 1. Tree cutting should also take place outside the primary nesting season. Minimum mower deck height should be 6 inches. Where wood turtles, rat snakes or other reptiles of concern are known to occur, mow after October 1. Mow or brush-hog in old fields every 2 to 5 years depending on site conditions and prescriptions for different parts of the field. Leave shrubs that are valuable for wildlife such as serviceberry, elderberry, alder, viburnums, willows, dogwoods, and hazelnut.

MAINTENANCE

Benefits of old field habitat decline over time as trees mature and out-compete grasses, forbs, and shrubs. Be sure to monitor old fields and remove trees as they detract from the old field habitat (generally by excessive shading from groups of trees). In some cases, shrubby areas may need to be set back to re-energize the patch. Winter cutting is recommended to maximize re-sprouting. Also, monitoring is critical for invasive plant species that tend to thrive in old fields such as bed straw, honeysuckle, multiflora rose and buckthorn.



RESOURCES

- U.S. Department of Agriculture, Natural Resources Conservation Service. "Conservation Practices Benefit Shrubland Birds in New England." 2012. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046969.pdf
- . "Early Successional Habitat Mgt. Job Sheet (647) – Old Field Management." http://efotg.sc.egov.usda.gov/references/public/VT/JS647VT_OldField_FillableForm.pdf.
- . "Ecology and Management of Scrub-shrub Birds in New England: A Comprehensive Review." 2007. <ftp://ftp-fc.sc.egov.usda.gov/NHQ/nri/ceap/schlossbergkingreport.pdf>
- . "Shrubland Bird Info Sheet." 2012. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1081112.pdf
- . "What is Early Successional Habitat?" 2009. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1081109.pdf

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