

Eastern Deciduous Forest

Physical description

Most of the terrain is rolling except for the Ozark Mountains, which can be steep. The average annual precipitation ranges from approximately 35 inches to 90 inches and is usually well-distributed throughout the year. Summers are hot; winters are cold.

Dominant vegetation

Deciduous trees dominate the landscape across the Eastern Deciduous Forest ecoregion where there is a lack of disturbance. Depending on location, trees such as oaks, hickories, maples, American beech, basswood, buckeye, yellow poplar, walnut, and birches are common in the overstory and can be indicators of a climax successional stage. Prevalent midstory trees include flowering dogwood, sassafras, sourwood, eastern redbud, hophornbeam, American hornbeam, and striped maple. Common shrubs include arrowwood, black huckleberry, blueberries, hawthorn, pawpaw, spicebush, viburnums, and witchhazel. A wide variety of forbs and ferns may be found in the understory. Common evergreen trees on many sites undergoing succession include eastern redcedar and shortleaf pine.



Figure 2. Deciduous forest cover occurs over the Eastern Deciduous Forest ecoregion, except where areas have been cleared for agriculture and livestock.

Changes in the composition, structure and function of the Eastern Deciduous Forest have already occurred during the past 100 years with the loss of American chestnut and the near total exclusion of fire. Prior to fire suppression, savannas and woodlands dominated by oak and shortleaf pine were prevalent over much of this ecoregion.

Well-interspersed with forested areas in the Eastern Deciduous Forest ecoregion are agricultural fields, pastures and hayfields, and fields undergoing succession. Virtually all of these “old- fields” have been cropped in the past, and the vast majority has since been planted to nonnative grasses, especially tall fescue. Restoring old-fields and other open areas that contain nonnative sod grasses to native grasses and forbs is a major objective concerning wildlife conservation in this ecoregion.

Native grasses, forbs, brambles, and shrubs occurring naturally in openings and savannas include bluestems, panicgrasses, indiagrass, switchgrass, asters, lespedezas, tick-trefoils, partridge pea, pokeweed, blackberry, wild plum, and sumacs.

Commonly occurring nonnative invasive plants in the Eastern Deciduous Forest ecoregion include tall fescue, orchardgrass, bermudagrass, sericia lespedeza, royal paulownia, tree-of-heaven, calory pear, autumn and Russian olive, Japanese honeysuckle, bush honeysuckles, Chinese privet, and bicolor lespedeza.

Farming and ranching

Large areas of the Eastern Deciduous Forest ecoregion have been cleared for crop production and livestock forage.

- The major agriculture crops in the ecoregion are corn, soybeans, wheat, grain sorghum, and cotton.
- The dominant grasses grown for pasture and hayfields include tall fescue, orchardgrass, bermudagrass, dallisgrass, and bluegrass, all of which are nonnative.

Depending on how croplands and pastures are managed, some wildlife species benefit. Unfortunately, crop-fields are usually harvested in late summer or early fall (unless winter wheat is growing), pastures are most often overgrazed (leaving no cover for nesting or loafing), and hayfields are composed of nonnative sod grasses that provide poor structure for most wildlife species.

The vast majority of fields that are not in crop production are hayed (or mowed for aesthetic purposes) at least twice per year, usually once during the height of the nesting season for grassland birds, and once in late summer/early fall, which destroys any value as winter cover for wildlife.

Plant succession



Figure 3. Annual forbs (such as common ragweed shown here) and grasses with a few perennial species represent the **initial successional stage**.



Figure 4. Perennial forbs and grasses (such as broomsedge, goldenrod, ironweed (purple flower), and thoroughwort (white flower) and brambles represent the **second successional stage**.



Figure 5. Young trees and shrubs (such as wild plum and winged sumac shown here), often with perennial grasses and forbs, represent the **third successional stage**.



Figures 6 and 7. Young forests (left) provide a different structure than older forests (right).

Hardwood forests typically represent the **fourth successional stage**. In some areas of the Eastern Deciduous Forest ecoregion, pine forests represent the third or fourth successional stage. Regardless, forests are young before they are old. Wildlife associated with forests that are only 2- to 4-years-old are often the same species associated with brushy cover provided in the third successional stage (such as eastern cottontail, northern bobwhite, brown thrasher).

Wildlife associated with Eastern Deciduous Forest

American woodcock
black bear
bluegill
bobcat
brown thrasher
eastern box turtle
eastern cottontail
eastern gray squirrel
eastern meadowlark
elk
gray fox
great horned owl
Indiana bat
largemouth bass
mourning dove
northern bobwhite
ovenbird
timber rattlesnake
white-tailed deer
wild turkey
wood duck