

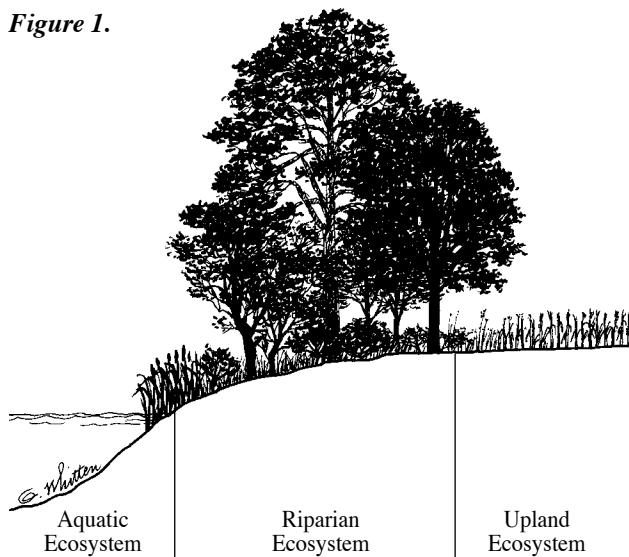
Riparian Habitat Management for Wildlife



Riparian habitat is the land and vegetation that is situated along the bank of a stream or river. Such an area is often referred to as a floodplain, streamside habitat, or bottomland forest. Because the topography is flat, it is subject to frequent seasonal flooding.

Plants commonly associated with riparian habitats include deciduous trees such as silver maple, red maple, sycamore, elm, cottonwood, box elder, buckeye, hackberry, willow, and river birch. Shrubs in the under-story layer of riparian woodlands include elderberry, bladdernut, wahoo, common alder, buttonbush, spicebush, silky dogwood, and red-osier dogwood. The ground cover is composed of flowering plants such as scouring rush, white snakeroot, waterleaf, jewelweed, nettles, and wingstem. See Figure 1.

Figure 1.



Riparian habitats are constantly shifting and changing in physical structure and plant composition due to the sometimes extreme forces exerted upon them by the fluctuating water levels of adjacent streams. As a result, riparian habitats can also be identified by the mixture of live and dead vegetation, especially the predominance of standing dead trees and ground cover debris such as logs and natural litter.

THE VALUES OF RIPARIAN HABITAT

Riparian habitat is one of the richest and most diverse habitat types in Ohio. Even though its dominant plant community is woodland, it usually contains a patchwork of smaller microhabitats such as buttonbush thickets, seasonal spring pools, sedge meadows, and cattail marshes. This mosaic of habitats, together with the surface water and abundant soil moisture, makes riparian land especially appealing to wildlife.

Riparian habitats offer many benefits to wildlife. They provide excellent travel corridors for safe movement between habitat types and promote the dispersal of wildlife populations. This benefit is particularly important to quail in western Ohio, because quail are somewhat limited in their ability to move to, seek out, and exploit surrounding available habitat. Habitats suitable for quail in western Ohio could be considered island oases in a vast cropland desert. Quail cannot reach these uninhabited islands without protected passageways. Riparian lands can provide these critical connecting access links for quail and other wildlife.

Riparian lands also supply an abundance of edge habitat that is spread out over a large area, making cover more accessible to wildlife. Riparian lands present two types of edges, each of which serve the needs of specific wildlife. The edge between the stream channel and vegetated bank is used by species such as the kingfisher, bank swallow, and prothonotary warbler. The edge formed by the merging of upland habitat, such as cropland and bottomland forest, is used by bobwhite quail and cottontail rabbits. The high density of trees with nesting cavities attracts several species of cavity nesters such as the pileated woodpecker and wood duck.

Riparian areas also serve as significant resting, feeding, and staging areas for waterfowl and other migrating birds. In some regions of Ohio, riparian habitat offers the only available habitat for migrating birds.

MANAGEMENT OF RIPARIAN HABITAT

Management of riparian areas involves protection, restoration, or both. It is extremely important that existing riparian habitats receive protection. An estimated two million acres of riparian habitat has been destroyed in Ohio since settlement. Like wetlands, riparian lands have been misunderstood and abused by the human community.

What caused the destruction of these riparian lands? Conversion to agricultural uses (cropland and pasture) has been the most damaging to riparian resources. Stream channel modification to improve cropland drainage by removing silt from the substrate and eliminating meanders is a major agricultural practice that has severely degraded both stream and streamside habitat. Industrial and residential development has also played a role.

Protection

Protection of riparian habitat is the first and best approach because it is less difficult and less costly to protect habitat than to rebuild degraded habitat. To provide quality habitat for riparian wildlife, a strip 125 feet or wider of riparian vegetation (preferably trees and shrubs) should be set aside and preserved along the water course. A minimum of 75 feet must be protected if water quality is to be maintained well enough to support a healthy aquatic community.

Protection may also require restricting livestock use of riparian land and eliminating logging operations.

Restoration

It is also important to try to regain some of what we have lost. This means restoring riparian sites that have been totally or partially destroyed.

Some sites can be restored by simply allowing them to revert naturally. This course of action requires you to discontinue any practice or land use such as mowing, pasturing, or cropping that hinder the development of woody plants. You must be willing to surrender some land and possibly some monetary profit for the cause of conservation. Keep in mind that short-term sacrifice can translate to long-term prosperity.

To speed the development of riparian habitat, you can plant various bottomland bare-root seedling stock. Riparian revegetation plans should aim to achieve high diversity and density of woody vegetation. The types of trees and shrubs to select will depend on soil type and geographic location. It is best to use native woody

plants for restoring streamside habitat. These plants are recommended: hardwood trees such as sycamore, sweet gum, green ash, cottonwood, hackberry, box elder, and silver maple, and shrubs such as silky dogwood, common alder, and red-osier dogwood. The tree seedlings should be placed 10 feet apart within the row and the rows should be 10 feet apart. Shrubs can be intermixed with the hardwood seedlings at five-foot spacings. Alternate species as you plant them.

Bottomland hardwood bare-root seedlings can be purchased in large numbers from the Division of Forestry. Landowners can check for cost share programs for riparian tree and shrub plantings with their local Farm Service Agency (FSA). Many USDA set-aside programs target establishing riparian corridors for water quality benefits.

Competition from existing vegetation (especially sod forming grasses) can hinder riparian reestablishment. Therefore, it is recommended that you spray two- to three-foot wide bands of herbicide approximately 10 feet apart. Apply the herbicide during the fall growing season, preferably in September. (The trees and shrubs will be planted in the center of these sprayed strips.) The first band should be applied at least 10 feet away from the crest of the stream bank. Be careful not to allow overspray to drift into the stream channel. Herbicide application is not necessary in bean or corn stubble fields. Simply plant the trees directly into the stubble. Try to minimize soil disturbance so as not to encourage the growth of annual weeds. Mowing or spraying directly around each seedling may be required until the plants have cleared the competing weed growth. Contact the OSU Extension Service Office for more information on herbicide selection and use.

Plant the trees and shrubs in the spring between March 15 and May 1. Refer to the *Planting Trees and Shrubs for Wildlife* publication for more details on care of seedlings before planting, planting methods, and post-planting maintenance.

The methods described above can also be applied to expand existing riparian strips that are too narrow to furnish quality stream or streamside habitat.

If your stream bank is eroding severely, please refer to the series of publications that deal specifically with stream bank stabilization. Tree revetments, dormant willow post cuttings, and tree deflectors are required to remedy severe stream bank erosion. Once these problems have been taken care of, you can proceed with restoring the remaining riparian habitat.



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