

## Forest and Wildlife Benefits on Private Land



### *Forest Edge Wildlife Habitat*

Conservationist Aldo Leopold once said that many kinds of wildlife are a product of the “edge”. In other words, many living creatures depend on the area that separates a field from a woodland for their existence. Forest edge provides a combination of food and cover that is critical to the amount, diversity and quality of an area’s wildlife population.

Edge quality depends on how gradually the forest becomes a field. Missouri has countless miles of edge, and a good gradual transition zone requires some work on the part of a landowner.

#### **Improving Forest Edge**

Most forest-to-field transitions in Missouri are abrupt changes from short ground cover to tall, closely-spaced trees. This is not very good for wildlife habitat or crop production. Often, crops will not grow within 20 feet of the border strip.

A wide border of grasses, weeds, shrubs, vines and small trees offers more wildlife food like berries, seeds, browse and insects. It also offers better nesting cover and protection from weather and predators.

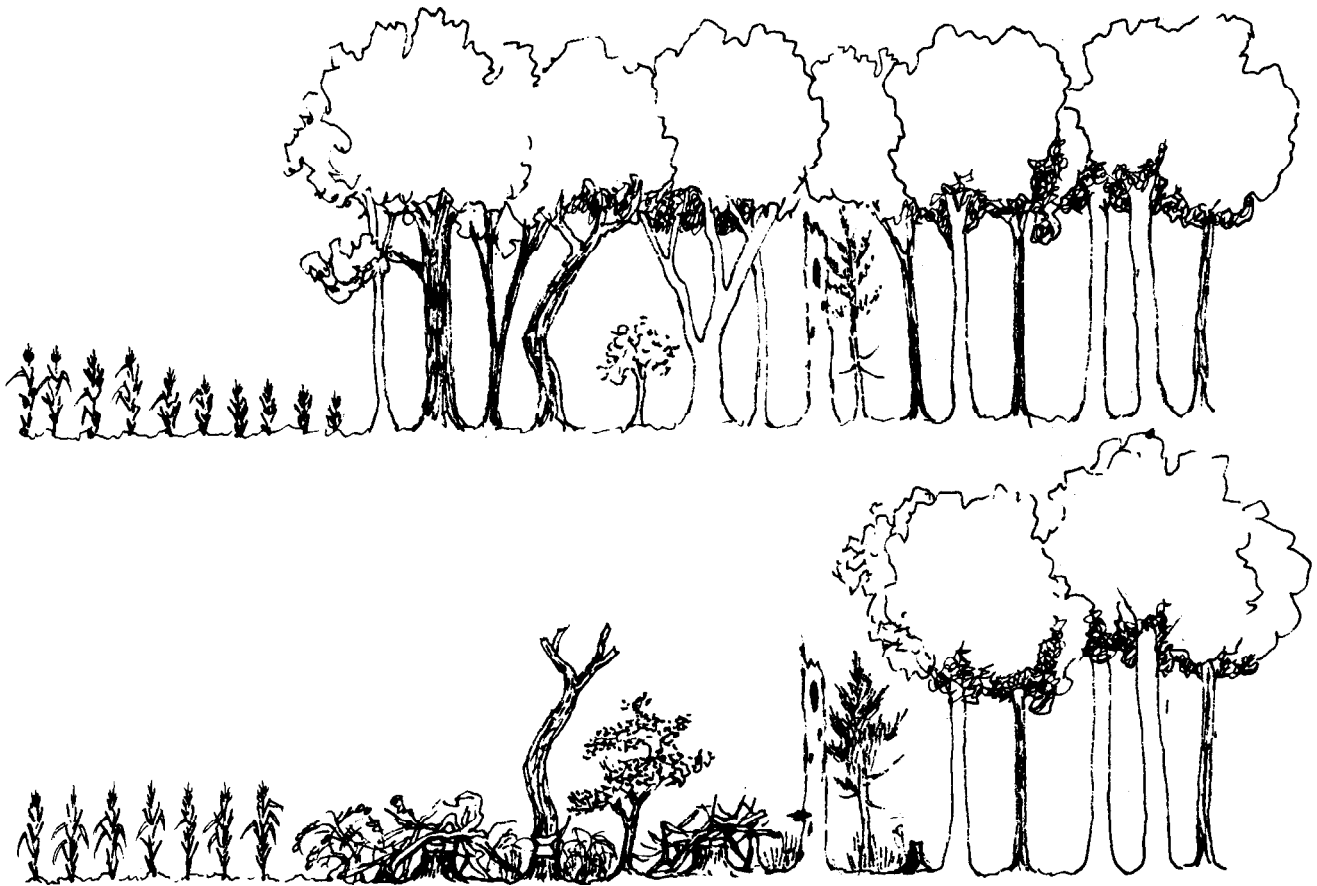
If an already small field makes it impractical to create edge into the field, the border can be created into the woodland. High quality woodland edge contains shrubs or small trees. These can be planted, or the landowner can simply allow the border of the field to revert to native plants, in a 30-foot or wider strip. This natural process is usually quick and reliable, and can be helped by plowing if the border strip has heavy sod.

Remove or deaden large trees within 30 feet of the woodland border. At least one large tree along each 100 feet of edge should be deadened and left standing. Other trees should be cut low to allow sprouting.

Within the first 15 feet, cut small trees like dogwood, hawthorn and redcedar. Leave native shrubs



*Trees often have an adverse effect on crops within 20 feet of the field edge.*



*Large trees such as those shown in the top drawing should be deadened, allowing brush to come up in its place.*

such as sumac, plum and coralberry. Vines such as wild grape attached to a tree should not be cut with the tree. Don't worry about making the border strip a uniform width or length.

Edge effect can be even better by thinning the woods beyond the border strip to make a more gradual transition. A timber sale often makes this possible. For the best results, terms of the sale should include not only the removal of commercial timber, but also require an additional thinning according to the owner's specifications. A landowner can also create edge habitat by cutting firewood or other wood products for home use.

Another suitable technique is to cut only a portion of the large trees along the forest edge. Thinning allows sunlight to reach the smaller plants so they can produce more food and cover. Harvesting more trees than normal in the border strip will also help create edge. Proper selection should leave a variety of den trees, snags, and good nut and fruit producing trees.

## **Creating Edge With Forest Openings**

Large tracts of woodlands do not have the variety of plants necessary for a diverse wildlife population. Ungrazed forest clearings provide additional edge, while offering a different kind of habitat. Small openings of 1 acre in a forest can often supply as many edible plants as can 10 acres of woods. Plus, the annual weeds, grasses and seedlings found in these openings produce nesting sites and escape cover.

In a 100 acre woodland area, a total of 5 to 10 acres of small clearings is best, with each clearing being from 1 to 3 acres in size. Smaller woodlands surrounded by pastures and farm fields would need fewer forest openings, as long as the surrounding fields are not overgrazed or fall-plowed. In larger woodlands, roads, utility rights-of-way, log landings or small clearcuts can provide all or part of the necessary open space.

There are two types of forest openings, permanent and temporary. Permanent openings include plants such as le-

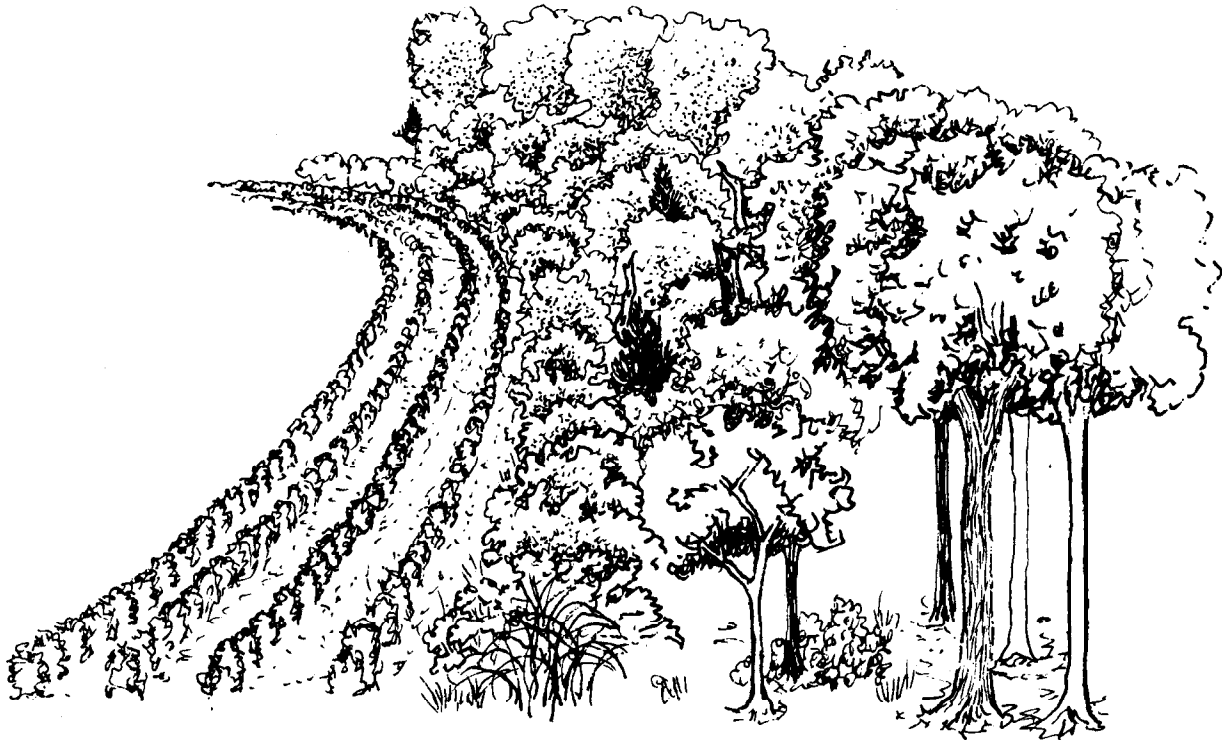
gumes, annuals, perennials and small woody vegetation. They remain permanent by discing, burning, mowing, or by selectively using herbicides when large woody vegetation makes up more than 20 percent of the cover. Another way to keep openings permanent is by planting small grains or other plants each year to control woody plant invasion. Such clearings are most valuable when food, cover and water are all close together. Every 3 to 5 years, landowners should check the openings to make sure the soil is still producing a good mixture of plants.

Temporary openings may result from a timber sale or from a naturally occurring disaster. The log decks or yards established during a timber sale can remain open by plant-

ing annuals such as wheat or lespedeza. These plantings provide additional forage until the areas revert to woody vegetation.

An opening produces the most wildlife food during its first five years. Location determines which wildlife feeds where. For example, south-facing slopes contain more flowering plants and plants preferred by quail and turkey. But all well-scattered openings provide some benefit for many kinds of wildlife.

It is important to plan ahead for wildlife survival by maintaining good forest edge and by keeping forest openings throughout woodlands. For free material or technical assistance, contact the Missouri Department of Conservation.



*An ideal edge has crops, brush, small trees, and large trees.*