LANDOWNERS FOR WILDLIFE

Private Lands Program

Wildlife Habitat Corridors

By Amity Bass & John Leslie, Wildlife Biologists

Red-winged Blackbird (*Agelaius phoeniceus*)

Photos by Amity Bass, LDWF

Imagine that an unknown force divides your city into two sections, isolating you from essential places such as your job, home and the grocery store. It may have isolated you from other members of your own species. What if this new barrier made your water supply inaccessible? In summary, your access to critical, life sustaining resources has been restricted or even possibly eliminated, making your life much more difficult. You essentially now live in a fragmented habitat, a problem that has increasingly impacted more and more wildlife species throughout the United States.

Wildlife biologists call this process "habitat fragmentation" that may occur either on a large regional scale or a smaller local scale. It can be either natural or man-made and either temporary or permanent. Urban sprawl and agricultural expansion are examples of large, man-made, usually permanent causes of habitat fragmentation. River flooding (a natural process) can produce habitat fragmentation on either a permanent basis (e.g. Mississippi River course changes) or a temporary basis (e.g. seasonal Mississippi River flooding). Regardless of its cause, the result of habitat fragmentation is a patchwork of small, isolated pieces of wildlife habitat.

Habitat fragmentation is a leading threat to the survival of many terrestrial animal species. For example, new road construction can drastically impact the relatively small range of an eastern box turtle or the very large range of a Louisiana black bear.

Wildlife corridors offer the best solution to habitat fragmentation.

Wildlife corridors are usually defined as strips of habitat that help animals move between disconnected areas of their home range. In the personal example above, physically establishing a corridor between your job, home and grocery store would solve your habitat fragmentation problem. The solution is the same for wildlife.

TYPES OF HABITAT CORRIDORS

Habitat corridors are classified by several different factors.


Black Bear (*Ursus americanus*)
Photo by Dave Telesco

SIZE

Based on physical area such as acres or square miles. A large, regional habitat corridor would be necessary to join the disjunction home ranges of the Louisiana black bear, but a small, local habitat corridor (something as simple as a road culvert) could join two wetland swamps isolated by road construction.

FUNCTIONALITY

Based on how or when the corridor is utilized by wildlife. Is it used all year long or only during seasonal migrations? Is it an aquatic habitat corridor (such as a fish ladder around a hydroelectric dam) or does the road culvert allow for movement of amphibians and reptiles? Is it a riparian corridor that follows both banks of a meandering stream, providing an important hunting area for mink, otters and raccoons?

OBJECTIVE

Simply, the reason the corridor was established. Unfenced, open corridors benefit the movements of pronghorn antelope in the western states, while fenced corridors prohibit intrusion by domestic livestock in other areas. Was the corridor species-specific (planned to benefit a particular species)? Was the fish ladder constructed to allow two isolated salmon populations the chance to breed, promoting species diversity and lessening the negative impacts of long-term interbreeding?

COMPLEXITY

Allowing a fencerow to become overgrown with dense vegetation can create a simple, but effective habitat corridor for smaller terrestrial wildlife and songbirds. This natural process also reduces long-term maintenance costs for farmers and landowners. Reforestation of an abandoned agricultural field is an example of a long-term project, but only the initial investment is expensive.

Regardless of what type habitat corridor emerges, the final product helps to benefit wildlife species that have been negatively impacted by habitat fragmentation.


Habitat corridor in East Carroll Parish consisting of grasses.

Photo by Eran Robinson, Natural Resources Conservation Service

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Photo by Amity Bass, LDWF

ENVIRONMENTAL BENEFITS OF HABITAT CORRIDORS

Corridors provide direct benefits to wildlife and the environmental ecosystem as a whole. Some of these positive ecosystem benefits include:

WATER QUALITY IMPROVEMENTS

Corridors help to control storm water runoff, remove pollutants, decrease turbidity and sedimentation in downstream waters, decrease soil erosion, and increase dissolved oxygen concentrations. Corridors may provide both temporary or permanent water storage. Several of these factors increase both the quality and quantity of underground aquifer recharge.

AIR QUALITY IMPROVEMENTS

Both large and small-scale habitat corridors increase the vegetative component of an ecosystem. This increased vegetation density helps to remove airborne pollutants, especially carbon dioxide and greenhouse gases.

SOIL FERTILITY IMPROVEMENTS

Habitat corridors planted with vegetation that provides nitrogen fixation, a process that removes nitrogen (a component of most fertilizers) from the atmosphere and combines it with soil particles. Increased plant biomass helps to maintain soil organics and protect soil moisture from evaporation.

PHYSICAL BARRIER BENEFITS

Corridors provide a physical barrier against the dispersal and spread of noxious plants by preventing wind-blown seed dispersal. They also prevent wind-blown soil erosion and serve as natural firebreaks, halting the progress of destructive wildfires. In cold, windy climates, they provide both protection and energy savings for houses and outbuildings.

ELEVATIONAL RELIEF

Corridors are often located at a higher or lower elevation than the surrounding landscape. Different species of plants may be present in the corridor, increasing plant biodiversity.

HABITAT CORRIDORS ON PRIVATE LANDS

Since almost 90 percent of all land is privately owned, private landowners are essential to the issue of preventing habitat fragmentation by planning, establishing and maintaining habitat corridors on their land. Landowners interested in wildlife conservation can easily implement habitat corridors on their property. The first step is to contact an LDWF wildlife biologist with the Private Lands Program.

LDWF Private Lands Program biologists will gladly discuss the goals and methods for establishing habitat corridors. They will survey the property, discuss ideas and goals, and help guide the process for the method chosen. They may also have ideas for obtaining funding for the cost of the project.

Photos by Amity Bass, LDWF

Riparian (streamside) corridor in Madison Parish.

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