

Edge and Fragmentation

By Charles Fergus, from *Make a Home for Wildlife*

The area where two different stages of forest growth meet – or where two different ecological communities merge with each other – is called an “edge.” An edge can exist between a field and a stand of mature trees; where low-growing and older, taller trees merge; or where a woods road or a log landing interrupts the forest. An edge can occur between woodlands and wetlands, or woodlands and grasslands. Because two varieties of habitat intersect, a greater diversity of wildlife will often be found along an edge, compared to the two habitats by themselves.

The following is from a 1970s university Extension publication: “It is to the landowner’s advantage to maximize the amount of edge in a woodland.” That view has changed somewhat as research into the habits and populations of various animals has shown that too much edge can cause problems for some wildlife. Raccoons, skunks, foxes, and feral cats hunt along edges and may prey heavily on wildlife there, including songbirds that nest low in trees, in shrubs, or on the ground. Brown-headed cowbirds are *nest parasites*: the females surreptitiously lay their eggs in the nests of other birds, which then raise the baby cowbirds, with fewer (if any) of their own offspring surviving. Brown-headed cowbirds feed in open areas such as meadows, pastures, lawns, and fields, then duck into woodland edges, gaining access to the nests of birds that breed in forests.

A high percentage of edge occurs where the forest has been broken up into small patches by development or farmland. *Forest Management for New York Birds: A Forester’s Guide*, by S.M. Treyger and M.F. Burger (Audubon New York, 2017), recommends that in areas where the landscape is less than 70 percent forested, and where forest cover is fragmented by agriculture or development, landowners who want to help forest birds should keep large, contiguous tracts of mature forest intact. Such core forest areas are important to *area-sensitive* species (scarlet tanagers and wood thrushes, for example) that require large

patches of woodland to establish breeding territories, nest, and rear young. Area-sensitive forest birds need a minimum of 200 acres of forest.



In areas where the landscape is less than 70 percent forested, landowners who want to help deep-forest birds such as scarlet tanagers should keep large, contiguous tracts of mature forest intact. Photo by Tom Berriman.

Still, it can be good to have some gaps within an extensive forest. A small clearcut timber harvest – also called a patch cut – can help birds and other wildlife by creating a food hotspot. After trees are removed, sunlight reaches the ground and spurs the growth of low vegetation. There, adult birds can find insects to feed their nestlings. After young birds leave the nest, their parents can take the fledglings to those thick areas, where the inexperienced youngsters can learn to feed themselves and find plenty of nutritious fruits and insects while the closely spaced shoots of shrubs and small trees shield them from predators like hawks.

Other landowners may decide to aggressively harvest timber to promote edge habitats, because they want to encourage certain kinds of wildlife. A friend of mine periodically logs tracts of forest on his land, both to make money and to create large patches of young forest that attracts and supports ruffed grouse and American woodcock – game birds that my
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friend, using his well-trained pointing dogs, hunts in autumn. In an old orchard, my friend has “daylighted” dozens of apple trees by cutting down nearby taller trees, so that they won’t shade out the apples, whose fruits feed grouse, foxes, coyotes, deer, and black bears. Woodcock, which my friend also hunts, probe for worms in the rich soil under the revitalized apple trees.



It can be good to have some gaps in a forest. A small clearcut timber harvest - also called a patch cut - can help birds and other wildlife by creating a food hotspot. Some landowners harvest timber to promote edge habitats because they want to encourage certain kinds of wildlife such as deer and ruffed grouse. Photo by Justin Fritscher, NRCS.

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The preceding excerpt is from *Make a Home for Wildlife*, by Charles Fergus (Stackpole Books, January 2019), and is printed here with the author’s permission.

Make a Home for Wildlife helps property owners see their land in new ways and gives them the tools and knowledge to effectively improve food and cover for wildlife. Whether you live on a lot in the suburbs or own a 20-acre woodland retreat or a larger working forest, you can make changes to the land that will turn your property into a better habitat for

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wildlife; *Make a Home for Wildlife* is a great reference helping landowners plan and carry out projects.

Focusing on the eastern U.S. from Canada to Florida, the book describes basic habitat types—forests, shrublands, grasslands, and wetlands—and how to create or improve them, along with specific recommendations on how to help many different kinds of wildlife. The book includes inspiring stories of landowners who are making habitat today, including one about forestland owner Bill Owen of Yale, Virginia.

Make a Home for Wildlife costs \$29.95 and can be ordered online or bought in your local bookstores.