

Reforest near large existing forests to benefit birds

As thousands of acres of forest are restored with assistance from a variety of conservation programs, the value of restored stands for birds and other wildlife is a consideration.

In the Lower Mississippi Valley alone, more than 300,000 acres of agricultural land have been reforested in the last 10 years.

A study by the U.S. Geological Survey (USGS) Patuxent Wildlife Research Center and the University of Georgia shows the location of a restored forest may be critical for bird populations. Researchers looked at bird colonization and productivity associated with reforested sites between 2 and 15 years post-planting in Louisiana and Mississippi.

They compared smaller, isolated reforestation tracts with restored sites adjacent to existing mature forests. They found that:

- Small, isolated forests were likely population “sinks” for birds.
- Reforestation adjacent to existing forest increased forest area and added to interior core.
- Reforestation near mature forest attracted more shrub-scrub birds which had better nest success and were likely “source” populations.
- Older or taller reforestation sites appeared to be more effective as buffers of detrimental edge effects than are tracts dominated by grasses and forbs.

Researchers found grassland birds (red-winged blackbird and dickcissel) were more abundant on isolated reforested tracts whereas shrub-scrub birds (yellow-breasted chat and indigo bunting) were more abundant on reforested sites that were adjacent to

forest. Grassland birds tended to have low (14–18%) nest success, whereas, shrub-scrub birds had higher nesting success (25–37%). Nesting success for most shrub-scrub species was sufficient to maintain their populations on these sites. Thus, reforested tracts are likely population sources for shrub-scrub birds.

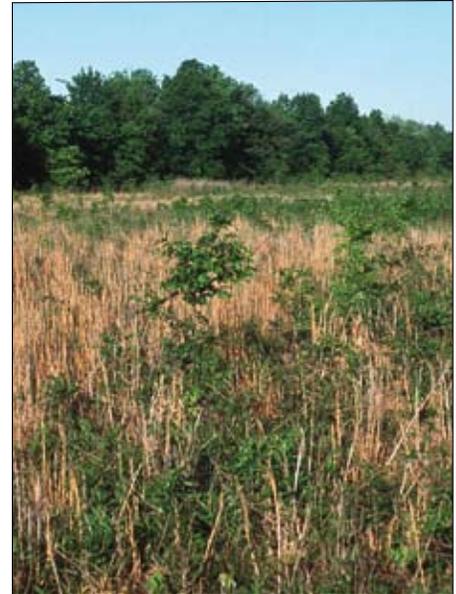
“Because reforestation appears to buffer detrimental effects of habitat edges, we recommend restoration adjacent to existing forests,” says Dr. Daniel Twedt of USGS. “Similarly, because parasitism appears to decrease with distance from forest edge, placement of reforestation near large forest tracts is more beneficial than restoration near small forest patches.”

Managers should encourage rapid succession from colonizing grassland birds towards shrub-scrub and forest birds. Restoration near existing forest stimulates colonization by shrub-scrub birds, but development of vertical forest structure within reforested sites is essential for attracting forest birds.

Twedt says including a high proportion (30–50%) of fast-growing, early successional tree species along with the traditional mix of slow-growing, heavy-seeded species will encourage colonization by high priority forest birds.

A technical note is available from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with more detailed information, including what to plant and how to manage new tree plantings, according to Ed Hackett, a biologist with the NRCS Agricultural Wildlife Conservation Center (AWCC), which funded the study.

The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.



NRCS photo by Lynn Betts

Reforestation area on Wetland Reserve Program site

Summary of:

Agricultural Wildlife Conservation Center
Project # 68-7482-1-775

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