

Grassland birds colonize restored CRP grasslands, return each year to breed

Grassland birds will quickly begin to use newly planted Conservation Reserve Program (CRP) grass fields to breed and nest and will return each year to native coastal grasslands if they are burned or otherwise managed. That is one of the conclusions of a 7-year study on 12 CRP fields established on former cropland at the Chester River Field Research Center at Chino Farms in Maryland. The U.S. Department of Agriculture (USDA) CRP provides technical and financial assistance to eligible farmers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner

Five mixtures of native warm-season grasses with various growth form heights were established in a replicated, experimental design on 225 contiguous acres of CRP in 1998.

After 6 years, plant species richness increased to 261; about 40 percent were exotics.

“Grassland birds are among the most threatened of bird groups because of their required habitat,” says Douglas Gill of the University of Maryland. “We’re learning how to best restore coastal grasslands to be effective habitat for grassland birds.”

As soon as the CRP grasslands began growing, several grassland obligate bird species with recent histories of serious population decline promptly colonized them. Researchers found horned lark, killdeer, grasshopper sparrow, field sparrow, and dickcissel use of the fields.

The primary focal species chosen for detailed study was the grasshopper sparrow, which was formerly more common in the Northeast. A comprehensive banding program resulted in more than 2,000 grasshopper sparrows, as well as dickcissels, being marked for future study in the first

7 years. In 2004 alone, 1,435 birds of 49 species were banded. Other birds caught, but not banded, included northern bobwhite, common grackle, northern flicker, and ruby-throated hummingbird.

“The migratory grasshopper sparrow has successfully established a sustained breeding population at the center, and has returned as a dominant breeding species every year in late April,” Gill says.

“Both adult grasshopper sparrows and, remarkably, juveniles have been returning to the center as breeding adults at unprecedented high rates,” Gill adds. “Predictably, adults return to the same territories held in previous years, but they will shift to new locations if habitat is overgrown.”

The high annual return rate—60 percent for adult males, 40 percent for adult females, and 15 percent for hatch-year young—was based more on physical vegetation structure than on species composition. Researchers also found high densities of grasshopper sparrows the year after prescribed burns or herbicide treatment of grasses.

The study offers guidelines for managing native grass stands in the Mid-Atlantic Region to maximize habitat quality for grassland obligate nesting birds, according to Charlie Rewa, a biologist with the USDA Natural Resources Conservation Service (NRCS) in Beltsville, Maryland, who facilitated the study for the NRCS.

The 7-year study was supported by the Sears Foundation. Funding for 2002 and 2004 research was provided by the NRCS Agricultural Wildlife Conservation Center (AWCC), formerly the Wildlife Habitat Management Institute. The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.



Photos by Doug Gill, UMD

CRP field established in native grass; Grasshopper sparrow (inset)

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