Early successional birds overwinter in restored native grasses in the Southeast

University of Georgia (UGA) researchers have found some notable differences in bird abundance between areas in the Southeast that have been restored with native grasses and those that have not.

"Native warm-season grasses—switchgrass, big bluestem, little bluestem, Indiangrass, and eastern gammagrass and others—have been nearly removed from the Southeastern United States," says Dr. Sara Schweitzer of the Warnell School of Forestry at UGA.

"Over time, the native grassland and grassland savanna habitat has been replaced with a mosaic of cultivated pastureland, cropland, pine plantations, and mixed pine-hardwood forests," she adds. "Most southeastern pastures are now planted in exotic cool- and warm-season grass species such as fescue, bermuda, and bahia."

Dr. Schweitzer supervised graduate research by Angela McMellen that monitored bird use of restored (planted) native grasses in comparison to the exotic grasses that have replaced them.

Researchers monitored the impact on birds in both summer and winter in fields planted with a mixture of big bluestem, little bluestem, Indiangrass, and switchgrass to replace vegetation dominated by Johnsongrass, fescue, and bahia.

By the end of the second season, planted restoration sites had more than 50 percent native grass cover, with taller distinct bunches of grass and higher vegetation diversity than exotic grass pastures.

Native grass sites also had less shrub cover than the exotic grass pastures.

Native grass restoration sites supported more bird species, in greater numbers, during the winter.

Twice as many overwintering birds were found in old agricultural fields replanted to native grasses as in exotic control pastures. The bird community in native grass sites was also more diverse. In forest opening fields, differences were even more pronounced, with more than twice as many birds and more species found in native grasses.

However, during the breeding season, bird numbers and species diversity were similar in native and exotic fields.

Researchers concluded that in the forest-dominated landscape of the Southeast, where early successional habitat is in short supply, patches of native warm-season grasses should be encouraged.

Specifically, they recommended that:

- Local seed sources should be developed through the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Plant Materials Program.
- Landowners should be encouraged to plant road sides, logging decks, fallow fields, and field borders to native grasses.
- Native warm-season grass establishment workshops should be developed for landowners.

The information will be helpful to U.S. Department of Agriculture (USDA) NRCS offices in planning and using conservation measures with landowners, according to Ed Hackett, a biologist with the NRCS Agricultural Wildlife Conservation Center (AWCC).

The study was aided by a grant from the AWCC, a fish and wildlife technology center, located in Madison, Mississippi.

NRCS photo by Lynn Betts

Native grasses and forbs

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