Moving Harper’s beauty off road

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The first week of March found a team of plant biologists down on their knees in a highway right-of-way in the Florida Panhandle searching for Harper’s beauty, one of Florida’s rarest native plants.

A perennial lily with a solitary yellow flower and iris-like leaves, Harper’s beauty (Harperocallis flava) is listed as federally endangered and found in only three Panhandle counties, with most plants growing in the Apalachicola National Forest.

Volunteers from the U.S. Forest Service, its Southern Research Station, the U.S. Fish and Wildlife Service, the Florida Department of Transportation, and Florida Natural Areas Inventory were there to take the first step in a project to move the endangered plants from the roadside to a more secure home.

Harper’s beauty prefers to grow in the acidic, sandy soil of longleaf pine forest sedge and seepage-fed shrub bogs maintained by regular prescribed burning. The species was first discovered in the 1960s and most of the plants identified at that time were found in the right-of-way of a state road where regular mowing created the conditions they needed to grow.

“With increases in growing season prescribed burning and intensified search efforts, populations of Harper’s beauty have been located within the forest. Studying those populations helped us understand more about its habitat requirements,” says Joan Walker, research plant ecologist with the Southern Research Station’s Restoring Longleaf Pine Ecosystems unit. “Meanwhile plants have persisted through decades in the roadsides, but they’re increasingly exposed to effects of traffic and necessary maintenance activities.”

Recognizing the likelihood that roads through the national forest will continue to be improved to meet growing transportation needs, Fish and Wildlife and the Florida Department of Transportation approached Walker to work with them to develop a reliable method to move the roadside plants to more secure locations in the national forest.

In early March, a team of volunteers dug the first 60 plugs of Harper’s beauty plants from two roadside populations and replanted them to their new homes in the forest.

“At the end of the project we expect to understand how different factors affect the survival of Harper’s beauty transplants, and to produce a guide for moving plants and selecting new habitats,” Walker said.
Felling as a Pre-Treatment for Prescribed Fire Promotes Restoration of Fire-Suppressed Florida Sandhill


Fire suppression in sandhill ecosystems leads to biotic impoverishment and reduces fine fuels needed for frequent fires. We investigated the restoration dynamics of a long-unburned endemic-rich sandhill on Florida's Lake Wales Ridge using prescribed fire with and without prior chainsaw felling of the hardwood subcanopy. Our goals were to promote survival of longleaf pines (*Pinus palustris*), decrease subcanopy and shrub densities and lichen cover, and increase cover of graminoids and rare forbs. Treatments were applied in 2001 and responses monitored annually through 2005. Prior felling of the subcanopy increased fire temperatures, residence times, and coverage compared to the burn-only treatment. The saw and burn treatment was effective in removing the subcanopy, but caused an undesirable increase in longleaf pine mortality. Pine mortality decreased with distance from saw and burn plots. Post-treatment shrub densities initially decreased, then increased in both treatments relative to controls. Forb densities and graminoid cover increased in both treatments and controls; increases were greater with burn treatments. Both treatments, especially saw and burn, caused compositional shifts relative to the control. Subcanopy felling as a pre-treatment for burning was effective in beginning restoration. We recommend additional fires and protection of longleaf pines to continue restoration progress. Saw and burn treatments can accelerate restoration and are a good first step toward re-establishing a frequent low-intensity fire regime.

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