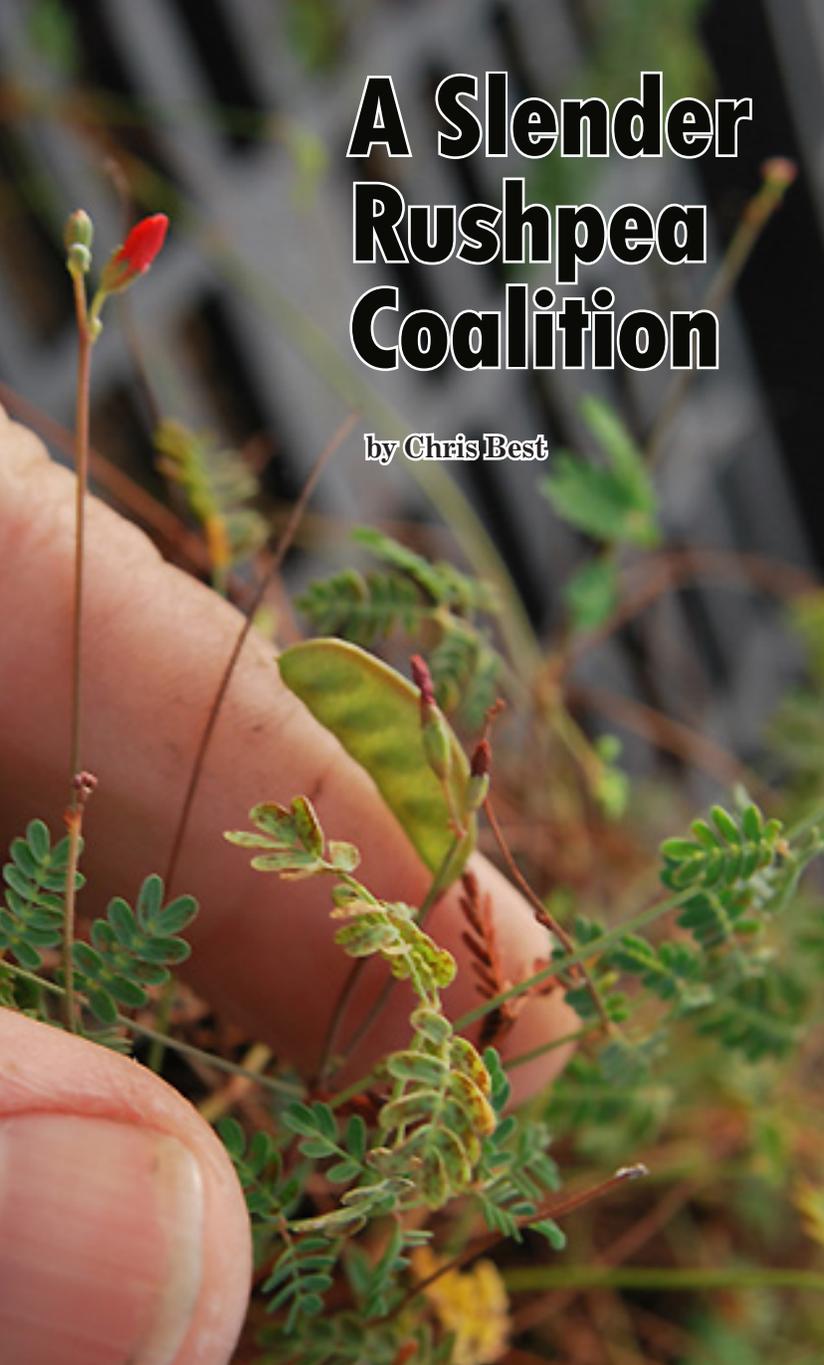


# A Slender Rushpea Coalition

by Chris Best



Slender rushpea in propagation at the Plant Materials Center, Kingsville, Texas.

Photo Credit: Chris Best, USFWS

Slender rushpea (*Hoffmannseggia tenella*), a diminutive, perennial herb in the pea family, has come as close to extinction as any plant in Texas. This federally endangered species is found only in shortgrass prairies of the Texas Coastal Bend in Kleberg and Nueces Counties. The six known populations of slender rushpea occur in tiny fragments of the former prairie, along two highway rights-of-way, the mowed portions of a city park and a county park, a private residence, and a rural cemetery. These populations, ranging from a few dozen to a few thousand individuals each, all lie within a 17-mile (27-kilometer) by 12-mile (19-km) area, and are declining due to intense competition from an introduced invasive grass of Asian origin—Kleberg bluestem (*Dichanthium annulatum*).

The coastal shortgrass prairie is itself a vanishing ecosystem. In 1834, French botanist Jean Louis Berlandier described the landscape south of the Nueces River as a prairie abounding in excellent forage and wildflowers; trees and shrubs were confined to the watercourses. Just over a century later, Marshall Johnston documented just 34 isolated fragments of “Kleberg clay prairies.”

The shortgrass prairie is dominated by native grasses, including buffalograss (*Bouteloua dactyloides*), slimspike windmillgrass (*Chloris andropogonoides*), curly-mesquite grass (*Hilaria belangeri*), filly Panicum (*Panicum hallii* var. *filipes*), Texas grama (*Bouteloua rigidisetata*), and Texas wintergrass (*Nassella leucotricha*). Several rare and endemic plants, including the federally endangered South Texas ambrosia (*Ambrosia cheiranthifolia*), lila de los llanos (*Echeandia chandleri*), plains gumweed (*Grindelia oolepis*), and jicamilla (*Jatropha cathartica*), also occur here. Nearly all of the shortgrass prairie in Nueces County has now been converted to cropland and improved pasture, or has been developed for commercial or residential uses.

In 2009 the U.S. Fish and Wildlife Service (Service) awarded a grant, in the form of a cooperative agreement with the Nueces County Soil and Water Conservation District, to prevent the imminent extinction of slender rushpea. A partnership of concerned parties, including the Natural Resources Conservation Service Plant Materials Center in Kingsville (PMC-K), researchers and students at Texas A&M University-Kingsville (TAMU-K), Texas Department of Transportation (TxDOT), San Antonio Botanical Garden, and the North American Butterfly Association (NABA), joined forces to accomplish this goal.

In May 2008, Dr. Alice Hempel, a botanist at TAMU-K, discovered a few surviving slender rushpea plants along Petronila Creek. TxDOT mowed the site, an abandoned highway right of way. John Reilley and Shelly Maher, of the PMC-K, applied grass-specific herbicide seven times over a two-year period to suppress Kleberg bluestem. Over 100 slender rushpea plants then emerged and flowered as a result of these efforts, allowing Reilley and Maher to collect 524 viable seeds by May 2012. Not long after, Dr. Hempel and her students discovered additional populations at a Nueces County park and Bishop City Park, and collected over 1,000 seeds. To date, over 5,200 seeds have been collected from five of the six known populations. These seeds will be used for seed banking, seed increase, refugium populations, augmentation of the existing populations, and reintroductions to suitable

habitats, according to a Controlled Propagation and Reintroduction Plan completed earlier this year.

In January 2010, the partners set out to establish shortgrass prairie refugia for each known slender rushpea population in well-managed sites where invasive grasses could be controlled. NRCS created the first refugium at the PMC-K. In October 2011, NABA established a second refugium at the National Butterfly Center in Mission, Texas, with support from a team of local volunteers and farm laborers. According to Jeff Glassberg, president of NABA, the native grasses and wildflowers in the refugium attracted many visitors in spring of 2012. Slender rushpea plants flowered by June, and the buffalograss thrived under the blazing heat and drought of the south Texas summer. Glassberg stated that the refugium demonstrates that low-maintenance xeriscaping with rare native plants provides excellent habitat for butterflies and other pollinators while conserving precious water. And as NABA's treasurer Jane Scott observed, it is also surprisingly beautiful.

Dr. Sandra Rideout-Hanzak, restoration ecologist at TAMU-K, joined the slender rushpea coalition to study its fire ecology. When a prolonged drought delayed her prescribed burning trials this summer, she began a related project: training dogs to search for the tiny rushpea plants that often elude human surveyors.



**Top: Volunteers establish slender rushpea refugium at the National Butterfly Center, Mission, Texas, October 2011.**

**Bottom: (Left to right): Shelly Maher, Dr. Alice Hempel, Robyn Cobb, and Amber Miller examine slender rushpea plants in propagation at the Plant Materials Center, Kingsville Texas, December 2009.**

*Photo Credits: Chris Best, USFWS*

Recently, John Reilley observed how important it has been to break down barriers between agencies and to create partnerships with academia and private landowners to achieve common goals.

It is remarkable that a single grant from the Service sparked a coalition to save slender rushpea, gathering partners and purposes along the way.

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