

# Save the seeds: Scientists are relocating plants that may be affected by climate change

November 17 2009, By Jessica A. Knoblauch

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As warmer temperatures threaten to devastate plant species across the globe, scientists are taking the lead by relocating plants to safer grounds, according to a recent New York Times article.

Known as "assisted migration," the practice of transplanting [plants](#) to more agreeable climates is taking hold among scientists who fear that global warming will wipe out many existing plant species.

"In 50 to 100 years, because habitats or climates are so altered, we might end up trying to move species in a restoration context, in assemblages of species," said Pati Vitt, a conservation scientist and curator of the Dixon National Tallgrass Prairie Seed Bank at the Chicago Botanic Garden.

In the 1990s, the botanic garden began collecting and growing pitcher's thistle -- a plant whose fuzzy leaves once grew along the Great Lakes -- at the garden after development, drought and weevils decimated the plant in regions where it once thrived.

Though the results of plant relocations are mixed, many more of them have been occurring since the creation of the Bureau of Land Management's Seeds of Success project, which was started in 2001 in response to a Congressional mandate to plant native seeds to restore public lands devastated by wildfire.

According to the Times, the project intends to collect seeds of the entire flora of the United States, which totals about 14,000 native plant species,

excluding those species already under protection and recalcitrant species, or those that cannot survive long-term storage.

"We hope to collect 20 populations across the species' range so we can get 95 percent of the [genetic diversity](#) of the species," said Peggy Olwell, the plant conservation program manager at the bureau. "Because frankly, we don't know what it is we're going to need when we're talking restoration in light of climate change. It's going to be one big experiment."

So far, a consortium of botanic gardens and other institutions have collected groupings of 3,200 species.

But not everybody is excited about taking plants out of their native habitats and experimenting with them elsewhere.

"Even given our best science, we're not good at predicting which species will be invasive," said Jason S. McLachlan, a biologist at the University of Notre Dame who has studied postglacial population spread. "And it's going to be especially complex as climates change."

Take the American beech, for example. Though it was rarely found during the ice age, it's now so abundant in Eastern forests that it's threatening almost all the other species, said McLachlan.

As the debate continues, Seeds of Success is currently sending one collection of every species to the Millennium [Seed Bank](#) Project, at the Royal Botanic Gardens at Kew in Britain, the National Center for Genetic Resource Preservation in Fort Collins, Colo., and the Western Regional Plant Introduction Station in Pullman, Wash.

Collecting and growing huge amounts of native seeds in the U.S. is expected to take 10 years and at least \$500 million, but with the

uncertainty of climate change looming ahead, many agree that it just may be a risk worth taking.

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