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Preservation in Bloom

## Rare Flowers, Plants Have a Safe Haven in Historic Bok Sanctuary

By [Tom Palmer](#)  
The Ledger

**LAKE WALES** It normally wouldn't seem to be news when someone calls at the cusp of spring to announce a flower was blooming. But this is no ordinary flower.

It is McFarlin's lupine, the pink lupine of the Winter Haven and Mt. Dora ridges of Central Florida.

The call came from David Price, director of horticulture at Historic Bok Sanctuary in Lake Wales.

Most of you know Historic Bok Sanctuary for its serene, oak-shaded walkways, impressive carillon tower and hilltop panoramic view of the surrounding countryside.

Less well-known is its role as a center for studying and propagating rare Florida plants.

McFarlin's lupine is one of the rarest.

Bok's collection is one of two in Florida -- Fairchild Tropical Gardens in Miami is the other -- that form a nationwide network affiliated with the Center for Plant Conservation in St. Louis.

The collection includes plants and seeds from as many populations as they can get material to preserve genetic diversity, which Bok's conservation program Manager Cheryl Peterson said is important for maintaining healthy populations of any species.

"We can use this as a buffer against extinction," she said.

According to Price and Peterson, growing McFarlin's lupine has been quite a challenge.

The plants are impossible to grow from transplants or cuttings, and they won't grow in flower pots. Instead, they require a bed of native soil from the site where they grew and then, if all goes well, the seeds will germinate.

"The seeds were part of a plant rescue in Orange County where they were expanding the turnpike," Peterson said. "We got 24 seeds."

A plant rescue occurs when rare plants are in the path of development, and the landowner is willing to work with an organization such as Historic Bok Sanctuary's Endangered Plant Program to allow workers to collect seeds or entire plants.

Although many plants -- including McFarlin's lupine -- are classified as endangered under the Endangered Species Act, their presence can't stop development or require mitigation or preservation.

Only the presence of endangered animals triggers that kind of review.

As a result, developers can bulldoze endangered plants at will and some do, Peterson said.

Peterson said they planted the seeds three years ago, but only five germinated, and three of the plants were killed when Hurricane Charley damaged the nursery in 2004.

One of the two plants that survived is quite a specimen -- 3 feet across with more than 60 blossoms -- that they hope will produce seeds.

Peterson said there has been little research on the biology of these lupines, so no one's sure how this plant rescue will turn out.

She said they don't know what the plant requires for pollination or what kinds of soil bacteria it needs to form the nitrogen-fixing nodules on its roots to help the plant get the nutrients it needs to survive.



Cheryl Peterson, conservation manager for Historic Bok Sanctuary, examines the blooms of *Lupinus aridorum*, commonly called McFarlin's lupine, an extremely rare plant. PIERRE DuCHARME/The Ledger

Experts don't know much about McFarlin's lupine because they don't have much experience with living lupine plants.

Price said the last time they had lupine seeds was about 12 years ago and only one seed ever produced a plant, though not until a few years after they planted the seed.

Peterson said she is doing a genetic study of lupines and their bacteria to learn more about what each plant needs to sustain it.

In the case of McFarlin's lupine, it could be literally a matter of life and death.

"This plant could go extinct; we're losing populations year by year," Peterson said.

The only protected lupine population in Polk County, Florida or the entire planet for that matter is a 55-acre federal preserve near Lake McLeod in Eagle Lake.

A handful of botanists who have studied the plant have urged establishment of additional populations on appropriate sites within the lupine's range. That would act as insurance against a catastrophic event in which the plants at the single protected site could be wiped out.

Peterson said the bacteria studies will tell scientists more about which sites might be appropriate for starting a new population, providing that plant-propagation efforts succeed.

By the way, the McFarlin from which the lupine gets one of its common names (scrub lupine and pink lupine are others) was James Brigham McFarlin, a former Polk County resident whose family included former Polk County Superintendent of Schools Frank Brigham.

McFarlin collected plants in Polk County in 1930 and 1931 while he was pursuing a doctorate in botany from the University of Michigan.

McFarlin was the first person to consider the lupine a separate species. He collected specimens at sites in Lake Alfred and Winter Haven.

McFarlin's lupine is only one of 39 plant species in Bok's collection of rare plants from various habitats in Central and North Florida.

Some are nearly as rare as the lupine.

One species of mint grows only along a three-mile stretch of ridge in St. Lucie County. One vine grows only around in a small area near Ocala. A gourd grows only in some remote locations around Lake Okeechobee.

"We keep them as a living collection and as a seed bank," Peterson said.

The nursery and laboratory are tucked away in a corner of the sanctuary's grounds.

"People can come here for decades and have no idea of what we do," Peterson said.

She said Bok has made its endangered plant program more visible through the creation of an endangered plant garden along a circular path behind the visitor center.

That garden includes specimens of many of the rare plants being raised in Bok's nursery. It also includes educational displays on the unique scrub and sandhill habitats of the local ridges, the role of fire and species such as the gopher tortoise in scrub ecology, and a discussion on why it is important to save rare species.

"We try to explain to people why we're doing this and why they should care," Peterson said.

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