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Surveying and Documenting the Richness of the Land



Rae Crandall, a doctoral student from LSU, marks GPS coordinates for a patch of flowering wiregrass gentians.



A grasshopper, or some other creature of the woods, watches as Rae Crandall, with a reporter tagging along, walks by.



A wiregrass gentian in full flower, one of several found on a recent morning excursion on the St. Joseph State Buffer Preserve.

by Tim Croft

Rae Crandall, clad in knee-high black rubber boots, traipses through the grass and palmetto near a stand of cypress trees.

She is hunting, video camera and GPS device at the ready, eyes trained on the ground in front of her

boots.

The quarry on this particular postcard morning, cotton puffs sliding across an azure cathedral, rises a mere few inches, centimeters might be more accurate, above the brush below her boots.

When fully dressed out, this elusive target stands out, proudly, in white and forest green.

But while in the closet, it appears to be no more than an emerald and sea foam green chrysalis, from which a caterpillar will crawl sometime next spring, until one looks closely, peers down the barrel of the plant and sees nesting seeds.

This target is the wiregrass gentain, a threatened species of flora.

And on this day last week a find of about eight or nine bright white flowers clustered within a distance which could be covered by an SUV represented another pretty good day for Crandall.

Who has basically volunteered some time - the reasons to become clear shortly - to survey the buffer preserve's 5,000-plus acres to document its rich and diverse plant life.

"I walk around and look for anything flowering," Crandall explained. "You want something in flower or in fruit."

While the work can be painstaking, though Crandall, who attests to being one for the outdoors, seems passionately energized, it is significant stuff for state wildlife managers.

In essence, saying something is out there doesn't prove it.

"It is one thing to say they are out there, it's another to document what is here," Crandall said, as she trained her GPS device to document the exact spot where the wiregrass gentain pod was found.

"This documents the plants that are here."

To date, Crandall has identified more than 200 individual species of plant, adding, "I anticipate the number is twice that."

Among them are threatened species and endangered species, including the Chapman's rhododendron - the buffer preserve is one of the last lands in public ownership with the child-cheek's pink flower growing in such abundance.

If there are at least 12 individual plants of a species Crandall discovers, she will harvest one plant; if there are sufficient numbers she will harvest a second.

The first is for the buffer preserve, its archives and data base.

The second is destined for the herbarium at Louisiana State University, where Crandall is a doctoral student.

There the plants will be identified in the most precise, Latin-based terms, cataloguing all its ecological characteristics.

"They go through a lot of stuff," Crandall said with a laugh. "The more information that can go on a

label the better."

The plants are then dried, pressed, frozen and mounted on acid-free paper and put in one of the many huge revolving machines, sort of like a large microfiche vault, which is the main hub of the herbarium, Crandall explained.

"People from all over come there to do research," Crandall said of what is considered one of the finest such facilities in the Southeast.

Crandall has in reality dovetailed the plant survey with a larger, and more compelling project, being conducted by Dr. Bill Platt out of LSU.

Platt is currently engaged in a multi-year study on the impact of sea level rise on coastal communities, particularly animals and plants.

"We may not recognize the difference in our lifetime, but it's happening," Crandall said of the rising levels of the seas which surround us being caused by the gradual warming of the globe.

As part of that study, Platt, Crandall and others put up, with care and considerable fortitude, a transect line through the buffer preserve to the shoreline of St. Joseph Bay.

That transect line, in turn, served as Crandall's guide - a compass also comes in handy - on her plant survey through the buffer preserve.

"This is a particularly valuable survey for us," said Jean Huffman, who oversees management programs at the buffer preserve. "It is a way for us to have some real vegetation monitoring.

"I can go out there and see a lot of what's there, but they are looking at every species."

And providing particularly valuable information on the controlled burns the state has undertaken at the buffer preserve.

On the day she ran across the wiregrass gentain colony, Crandall was in an area where burns were completed in the past year.

"Burning really improves the richness of the land," Crandall said. "It returns nutrients to the soil, clears out (underbrush) opening areas for sprouting."

And Crandall's study is akin to an afterword, providing a final chapter for wildlife managers on their burn program.

"The more you know about the species that are out there, the more you know about what you are doing to them," Huffman said.

In particular, Crandall has been examining the St. John's Wort population in such burn areas.

Huffman pointed out that no one has ever studied how the plant, well-known for its purported medicinal facets, might be impacted in nature by such things as fire.

Regardless of the task, or its significance, Crandall, once a wildfire fighter, schooled as a botanist,

seemed happy simply to be walking in one of the finest classrooms a student could have.

"We call it richness, the more plants the more rich the area," Crandall said. "This area is definitely rich.

"This helps the preserve, they have a sample of all the plants, and it helps me. This is the nicest place I've ever worked."