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Conserving species on and off the Ridge

ARCHBOLD BIOLOGICAL STATION

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Florida Hartwrightia growing along a right-of way at Cary State Forest.

STEPHANIE KOONTZ PHOTO

One major thrust of scientific research from Archbold Biological Station focuses on the flora and fauna of the Lake Wales Ridge, which runs from northern Glades County, through the middle of Highlands and Polk counties, and up into parts of Lake, Orange and Osceola counties. However, much of the work done by scientists here is applicable to other ecosystems and much of the knowledge gained at Archbold has trickled off the ridge, providing valuable information for management, monitoring and protection for many of Florida's valuable natural areas. Sharing knowledge is a key component of science.

In early October, research assistant Stephanie Koontz from the Plant Ecology Program at Archbold and Plant Conservation Officer Houston Snead from Jacksonville Zoo and Gardens shared their knowledge and experience with Florida Natural Areas Inventory (FNAI) staff searching for the plant, Florida Hartwrightia. Florida Hartwrightia is not state listed as an endangered or threatened plant in Florida, however, historic records suggest drastic population declines and probable local extirpations, most likely due to habitat alteration and loss. Based on records compiled by FNAI, this species once extended from Highlands County, north to Nassau County and up into southern Georgia. However, many of these records have not been confirmed since they were first documented, most prior to the 1990's. FNAI staff are currently leading surveys to update many of these historic occurrences which may be used to modify this species status to threatened or even endangered in the state of Florida.

Staff from Archbold and the Jacksonville Zoo had originally joined up in 2018, designing and implementing a protocol to identify and search suitable habitats for Florida Hartwrightia in Highlands County.

“We have done this for two seasons now,” explains Koontz, “and we have searched several historic occurrences for Florida Hartwrightia, some with success in locating populations, other searches were not as fortunate. But this has helped us identify specific attributes within the habitat where Florida Hartwrightia tends to grow.”

Florida Hartwrightia prefers wet habitats, but not too wet. “The preferred habitat seems to require water, but not standing, stagnant water. Rather a slow flowing source just above or below the soil surface. This type of flow is typical of a narrow habitat margin known as seepage slopes, where water is literally seeping slowly out of the ground through Florida's sandy soils from higher to lower elevations,” describes Koontz. “When we marked the locations of individual plants on a map, the occurrences weave their way along like a ribbon between slightly higher, drier habitats and lower, wetter habitats.”

In addition to discussions, emails and sharing of reports and data, Koontz and Snead were able to join FNAI staff in the field to search for Florida Hartwrightia in October 2020. Several element occurrences are located in northeast Florida within the boundaries of John Bethea and Cary State Forests and Bayard and Black Creek Ravines Conservation Areas. The crew explored for three days, through wet forests and along wetland margins, touching many leaves that looked similar, but did not belong to Florida Hartwrightia.

“When not in flower, this plant lives as a cluster of leaves on the ground. These leaves feel tacky unlike other look-alikes which are smooth. It is easiest to locate this species when it is in flower, as it sends up a stem ~4 feet tall with pale purple flower clusters. This is much easier to spot above the shorter palmettos, grasses, and oaks,” describes Koontz.

On the second day, the crew struck gold, as a large flowering population was first located by Snead.

“We estimated more than 1,000 plants, most of which were in full flower,” describes Snead. “And sure enough, slightly up hill from this population, was a pond where water must be slowly seeping through the soil, providing the ideal habitat for Florida Hartwrightia.”

This is the story of many plants. Many populations simply have never been documented, or documented well, but when the right conditions combine, they flourish.