



# 2022 Report Florida Plant Rescue



**Florida Plant Rescue (FLPR)** is a statewide seed and plant collection initiative administered by the Center for Plant Conservation (CPC). Our aim is to make conservation collections of all rare plant species in Florida in order to safeguard wild populations against the myriad impending threats to their existence. Collections are made according to CPC Best Practices and are stored within protected *ex-situ* locations.



CENTER FOR PLANT CONSERVATION

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## BACKGROUND

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The formation of FLPR was primarily inspired by three equally important elements: 1) the hundreds of rare plant species that occur in Florida, 2) the numerous threats their wild populations face from climate change, habitat destruction, and random detrimental events, and 3) the success of a similar project based in California (California Plant Rescue, or CaPR). After our successful pilot season in 2021, the project has continued and in 2022 we were able to make seed collections from 12 species of conservation concern, as well as initiate an exceptional species project.

## EXECUTIVE SUMMARY

In 2022, FLPR continued its progress toward securing Florida's rare plants in *ex situ* collection through seed banking and the expansion of our network. Two additional FLPR members participated in seed collection efforts in 2022 compared to the pilot year of 2021 and twelve species were added to our partners' collections (a 50% increase from the prior year!), many of which had not been previously collected at all. These efforts took place across the entire state, from the panhandle to northeast Florida to the central peninsula to south Florida and the Keys. Undoubtedly, it is the passion and expertise of our partners that produces these impressive accomplishments. This progress was shared with the plant conservation community in the state at the Rare Plant Conference through a presentation prepared by the FLPR Coordinator. CPC and FLPR partners continue to meet on an annual basis to discuss progress, challenges, updates, priorities, and opportunities.



## GOALS

The long-term goal of FLPR is to secure all of Florida's rare plant species in conservation collections, with an emphasis on long-term *ex situ* seed banking, with additional exceptional species work as needed. In the near term, we are focusing on protecting the most vulnerable and rarest plants first.

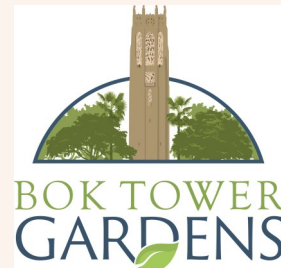
Conservation collections of both seeds and living plants, stored in seed banks and living collections at botanic gardens, provide the raw materials for the enhancement, restoration, and reintroduction of wild plant populations, while also providing an insurance policy against extinction. As we advance the long-term conservation of these rare plants, we also increase our understanding of their biology and ecology via field observations, germination testing and propagation. Thus, our seed banking efforts not only provide for long-term storage of invaluable genetic material, but also feed directly into comprehensive strategies for plant conservation and recovery.

## Our PARTNERS



For more than 35 years FTBG has safeguarded the rare plants of highly urbanized South Florida through reintroductions, ex situ collections and strong partnerships with land managers.

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BTG has proven their commitment to Florida plant conservation through their work to perform plant rescues, research rare species' life history traits, and reintroduce plants into the wild.

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MSBG provides invaluable expertise to the FLPR initiative with their focus on epiphytic orchids, bromeliads, gesneriads and ferns, and other tropical plants.

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NBG has cultivated partnerships with several local, state and federal organizations to conserve native flora in their living collection and in native south Florida habitat.

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FNPS works throughout the state to promote the preservation, conservation, and restoration of native plant species and their communities all while engaging the public in their efforts.

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While based in adjacent Georgia, ABG conducts extensive conservation work in Florida's panhandle, which contains multiple hotspots of plant biodiversity and rarity.

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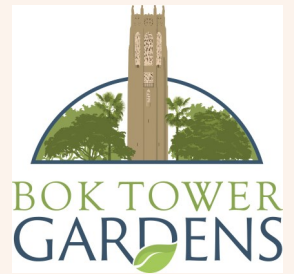


As the state's natural heritage program, FNAI provides crucial plant occurrence information to other partners and helps to coordinate FLPR.



IRC is dedicated to the protection, restoration, and long-term management of biodiversity and has special expertise of South Florida's flora.

# 2022 Collection Highlights

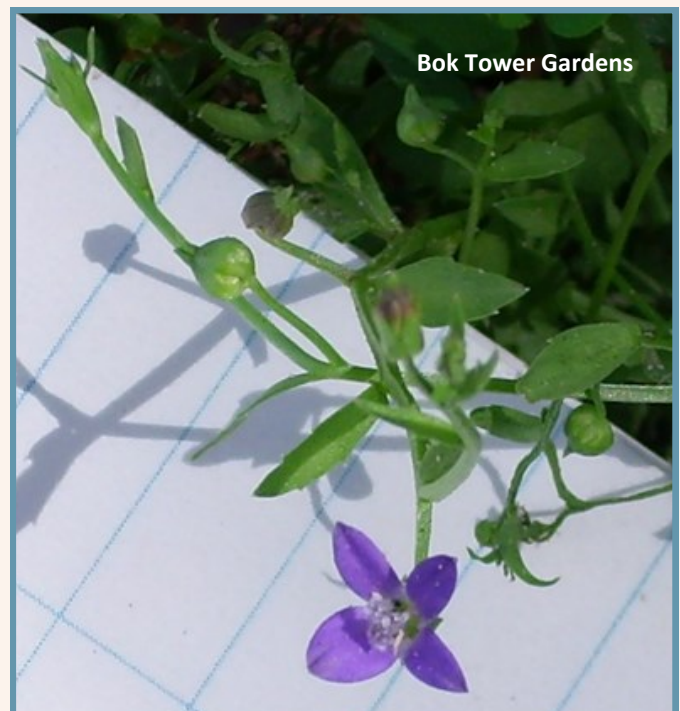


## ***Orbexilum virgatum* (Pineland Scurfpea)**

While this species historically occurred in Georgia and South Carolina, Florida is the only state where populations remain today, making *ex situ* preservation a top priority and the unique responsibility of Florida. Sadly, many populations have been lost to habitat destruction of the flatwoods community it occupies. Fortunately, populations are protected within Jennings State Forest in NE Florida, from which seeds were collected and are now stored within Bok Tower's seed bank.

## ***Campanula robinsiae* (Robins' Bellflower)**

This member of the bellflower family occurs only in only a couple of counties in central Florida, occupying ephemeral wetland habitat. Due to its annual life cycle and the short period of time during which fruits ripen and seeds mature, timing the collection for this species must be precise. Seeds are miniscule and must be extracted very carefully from their capsules by gently tapping on the fruits, which allows the seeds to exit through the hole at the top of the capsule. Bok Tower developed this technique and were thus able to collect over 1,000 seeds from plants at a population in Withlacoochee State Forest.



## 2022 Collection Highlights



### ***Euphorbia deltoidea* spp. *adherens* (Goulds Wedge Spurge)**

This critically imperiled subspecies- at both the state and global levels- as it is endemic to the pine rocklands of south Florida. While the vast majority of historic pine rockland habitat has been destroyed, a small remnant is protected at Goulds Pineland Preserve which also harbors a population of this species. Collecting seed from this species required Fairchild staff to make five separate field visits. The seeds are so tiny that back in the lab, a microscope was required to sort out the seeds. This careful work was well worth the effort, with the species now conserved in conservation collection.

### ***Tragia saxicola* (Florida Keys Noseburn )**

If you are wondering how this imperiled, South Florida endemic plant got its interesting common name, look (but don't touch) toward the silvery stinging hairs that cover all parts of the plant. This includes the fruit where the seeds needed for collection lie! Not wanting to experience the eponymous burning, staff wore gloves while collecting seeds to protect their skin, tying bags around fruits to capture seeds before their explosive dispersal.



### ***Pisonia rotundata* (smooth devil's-claw)**

In the state, *P. rotundata* occurs only in the lower Florida Keys and its global range does not extend far beyond this. A collaboration with the University of Florida allowed Fairchild to collect over 8,000 seeds from this species. The challenge had just begun, however, as fruits of this plant have a very sticky outer layer that, if removed, could risk damaging the seeds inside. Luckily, Fairchild's research showed that removing the exterior is not needed for seeds to germinate, so seed banking was possible while ensuring the integrity of the seeds.

# 2022 Collection Highlights



## ***Euphorbia cumulicola* (Sand-dune Spurge)**

The sand-dune spurge is a low-growing plant found only in south Florida scrub and coastal strand habitats. As a direct result from this project, NBG staff discovered two new populations of this species on preserves where it is protected, including at Rookery Bay National Estuarine Research Reserve where they collected seed. Now that these locations have been confirmed, the species can be better monitored and managed.

## ***Dyschoriste angusta* (Pineland Twinflower)**

While pineland twinflower can be common in pine-lands on the Miami Rock Ridge, this species is still considered imperiled due to its restricted range and rarity in all other regions. Luckily, NBG picked a very prolific population, with plants in the thousands! Nonetheless, collection was still tricky, as only a small proportion of plants would flower or fruit at any one time, necessitating many visits on the part of NBG staff.



Wade Collier



**MARIE SELBY  
BOTANICAL  
GARDENS**

## ***Rhynchospora megaplumosa* (Largebristle Beaksedge)**

This species was only described this century and is endemic to the central Florida peninsula. It gets its name from the feathery bristles that are attached to the base of the seed. As a sedge, it takes some care to find and correctly identify plants, but that's exactly what MSBG was able to do at Lake Manatee State Park where they found about 5,000 plants! To capture maximum diversity, they collected seeds from throughout the sizeable population, in the scorching heat of July no less!

# 2022 Collection Highlights



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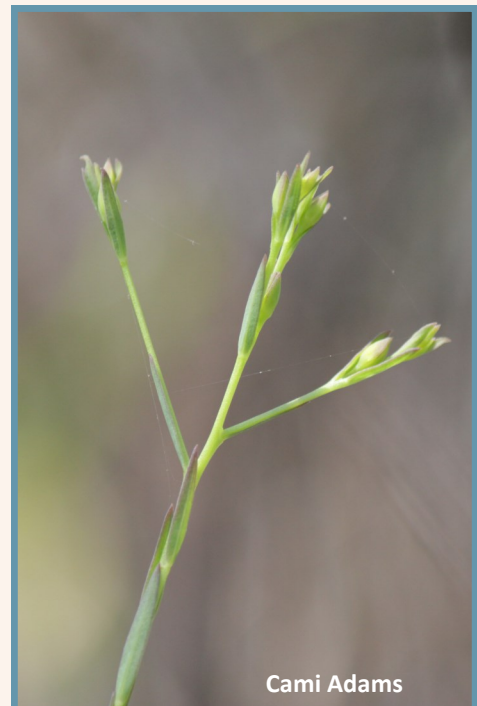
Amy Jenkins

## ***Eurybia spinulosa* (Pinewoods Aster)**

Pinewoods aster is a species with a very limited range in the Apalachicola region of the panhandle, growing in flatwoods, wet prairies, and seepage slope habitats. Unfortunately its habitat in this region has rapidly declined, largely due to conversion of land to pine plantations. Luckily, plants are protected within the St. Joe Buffer Preserve, where ABG staff was able to collect enough seed to store both within their seed bank and at the National Laboratory for Genetic Resources Preservation (NLGRP).

## ***Linum westii* (West's Flax)**

Not a morning person? Then we have a species for you! The critically imperiled West's flax has small yellow flowers that only open in the afternoon to evening. Only a fraction of the population visited by ABG staff produced fruits and seeds for collections, but those that did were collected, prepared, and secured for seed banking.



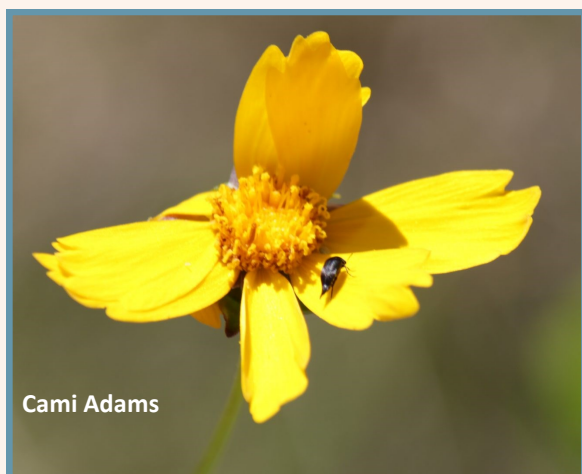
Cami Adams



# 2022 Collection Highlights



ATLANTA  
BOTANICAL  
GARDEN



Cami Adams

## ***Coreopsis bakeri* (Baker's Tickseed)**

Surprisingly, this species was only discovered and described in 2015, from a single county in the panhandle of Florida. As a habitat specialist, plants are only found on calcareous glades. Given the high degree of threat Baker's tickseed faces due to its limited, unprotected habitat, it was imperative to secure this species *ex situ*. ABG collected seeds from almost 700 plants, ensuring the genetic diversity of the population would be captured.

## ***Paronychia minima* (Crystal Lake Nailwort)**

Given the diminutive size of this species, you could easily step over it without even knowing! This species occupies a very particular habitat type: the margins of karst sandhill lakes in the central panhandle. Plants flower in the late summer and fruit in the fall, during which time ABG was able to collect seeds from 50 individual plants for *ex situ* preservation.



Cami Adams

## Exceptional Species Project

This year, FLPR expanded its collection work to include an exceptional species project, led by Atlanta Botanical Garden (ABG). An exceptional species is one that cannot have its seeds conserved via traditional seed banking methods and require alternative methods (e.g. tissue culture, cryopreservation, and field genebanks) for *ex situ* preservation. Thus, they typically require more time, effort, and problem-solving to nail down the appropriate technique. In 2022, the exceptional species chosen by ABG was *Taxus floridana* (Florida yew) a small tree that is a narrow endemic to the Apalachicola River region and is currently ranked as globally imperiled. The relatively few populations are threatened by logging and development, plus there is the added complication that trees are dioecious, meaning separate female and male plants, and trees seem to only infrequently reproduce. Luckily, ABG staff have extensive experience working with the closely related and also highly endangered, *Torreya taxifolia* (Florida Torreya). With this background knowledge, ABG was able to collect cuttings from two populations of Florida yew where they are now being kept in their Conservation Collection. Ideal growing conditions for these cuttings are being investigated and staff will attempt to duplicate genetic lines.



# Looking Ahead

## **Seed Collections**

In 2023, FLPR members are continuing to make progress toward the goal of securing Florida's rare plant species in *ex situ* seed bank conservation collections. Specifically, the initiative received funding for 20 additional seed collections as a result of generous donations. With the direction provided by the updated target species list, these collections will focus on some of the state's rarest and most threatened plant species.

## **Exceptional Species**

This next year will also see the expansion of FLPR exceptional species work with two additional projects that will be conducted by Marie Selby Botanical Gardens and Naples Botanical Garden, one each for *Hymenocallis puntagordensis* (Punta Gorda Spiderlily) and *Asimina manasota* (Manasota Pawpaw). Both are narrowly endemic species in south Florida that are critically imperiled and not yet represented in any conservation collection.

## **Database Launch**

The FLPR seed collection database is expected to launch and be available to partners by the end of 2023. This follows the completion of initial work to tie the state heritage dataset of rare plant population locations to FLPR partners' seed accession data. This will allow for even more precise prioritization of future collection projects, as well as organized record keeping.

## **Website**

The FLPR Coordinator and CPC team have been working to update and improve the FLPR website, both for the public and our partners. In addition to the database described above, partners will be able to access several helpful resources to help them in their seed collection planning.

## **Funding**

To help expand the capacity of this initiative and further our collections progress, additional funding sources will be pursued by FLPR and CPC members. Grants from public agencies at both the state and national levels are looking to be promising options, as are some additional sources of private funding.

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**We thank our donors and funders for their  
generosity in support of Florida's Rare Plants!**

**Individual donors:**

- **Josephine Bush**
- **Coleman and Susan  
Burke**

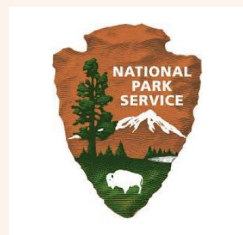


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**Learn more about Florida Plant Rescue at our website and click “Support our Effort” to make a donation toward conserving Florida’s rare plants!**



**[saveplants.org/florida-plant-rescue](https://saveplants.org/florida-plant-rescue)**