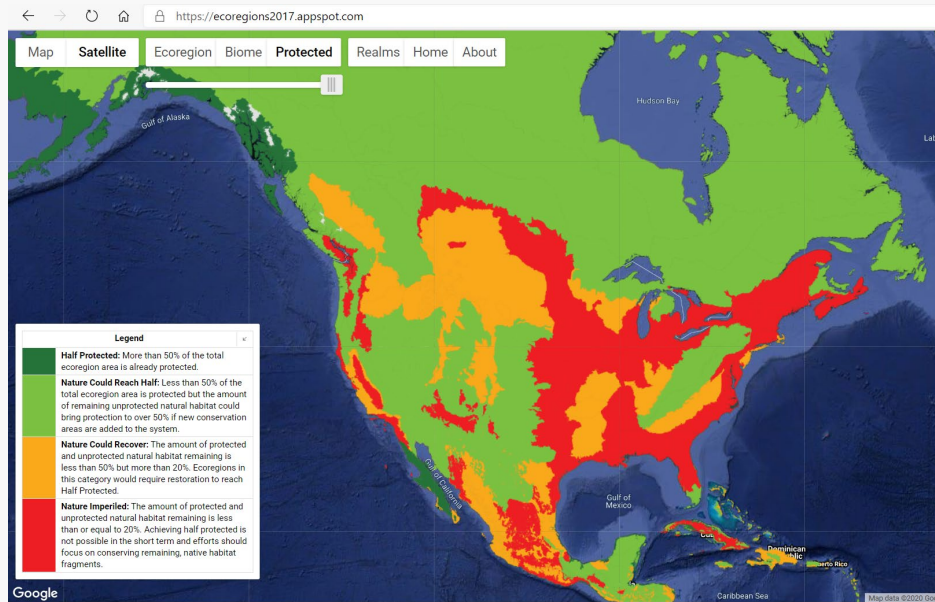


Recovery versus Extinction – Why Local Conservation Efforts Must Drive Global Conservation Initiatives

Center for Plant Conservation
National Meeting
October 9, 2020



International Policy Lead

George D. Gann
www.regionalconservation.org
www.ser.org

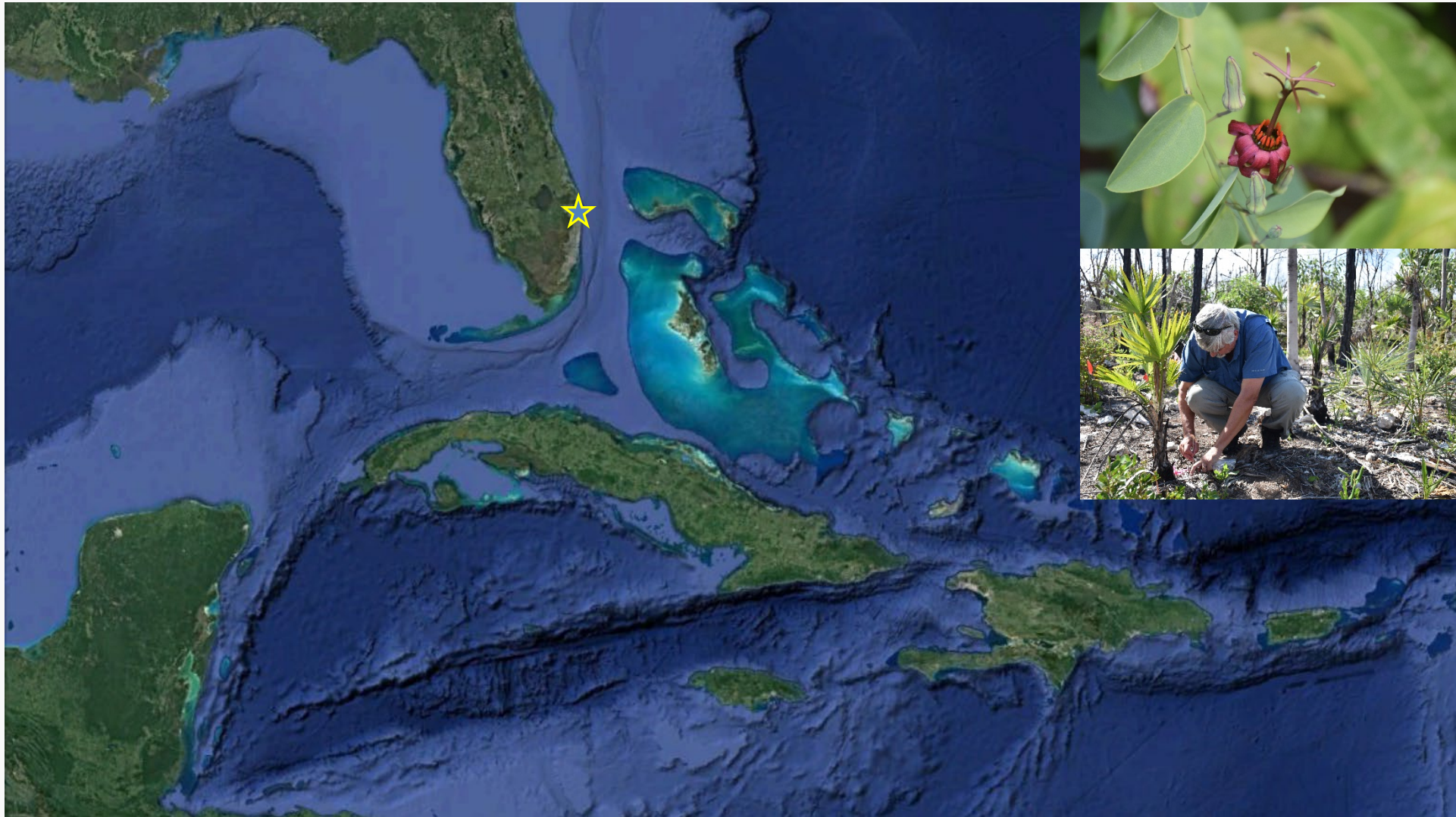


Chief Conservation Strategist

Acknowledgements

- **Joyce Maschinski and Katie Heineman** for the invitation and coordination.
- **All the IRC and SER folks**, past and present, and all our **conservation partners and funders**.
- **Photographers**, including Roger Hammer, Keith Bradley, Shirley Denton, James Johnson, and many others.
- **All of you** attending, and for all that you do to Save Plants!





My Neighborhood



The Institute for Regional Conservation

Conservation of rare plants, animals, and ecosystems

Donate Now

Subscribe

Home

News

About Us

Programs

Online Resources

Leadership

Contact Us



Restoring the link between people and nature

Learn More



Rather than focusing on charismatic animals or plants with narrow global ranges, IRC seeks to protect, restore and manage all biodiversity on a regional basis, and to **prevent local extinctions of rare plants, animals and ecosystems.**

Global and Local Interface



World Conference on Ecological Restoration
Cape Town, South Africa 2019



Restoration site, No Name Key
National Key Deer Refuge, FL, USA

The Bad News

More than 1 million species threatened with extinction



HOME ABOUT DONORS WORK PROGRAMME NEWS CALENDAR DOCUMENTS RESOURCES

[*\(Cliquez ici pour le texte en Français\)*](#)

- Summary for Policymakers, photos, 'B-roll', other media resources: bit.ly/IPBESReport
- Media launch webcast live from #IPBES7 (Paris, France): bit.ly/IPBESWebcast starts at 1p.m. (Paris time – CEST) / 7 a.m. (US EDT) / noon (London – BST)
- For interviews: media@ipbes.net or French: +33 62520-0281 English: +1-416-878-8712 or +1- 415-290-5516 or +49- 176-2538-2223 (After 7 May: +49-152-3830-0667

Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating'

**Current global response insufficient;
'Transformative changes' needed to restore and protect nature;
Opposition from vested interests can be overcome for public good**

**Most comprehensive assessment of its kind;
1,000,000 species threatened with extinction**

Nature is declining globally at rates unprecedented in human history – and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely, warns a landmark new report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the summary of which was approved at the 7th session of the IPBES Plenary, meeting last week (29 April – 4 May) in Paris.

“Preventing extinction is the lowest bar for conservation success we can set, yet we are not always successful,” Wesley M. Knapp, 2020

CONSERVATION CHAMPION

Wes Knapp, M.S.

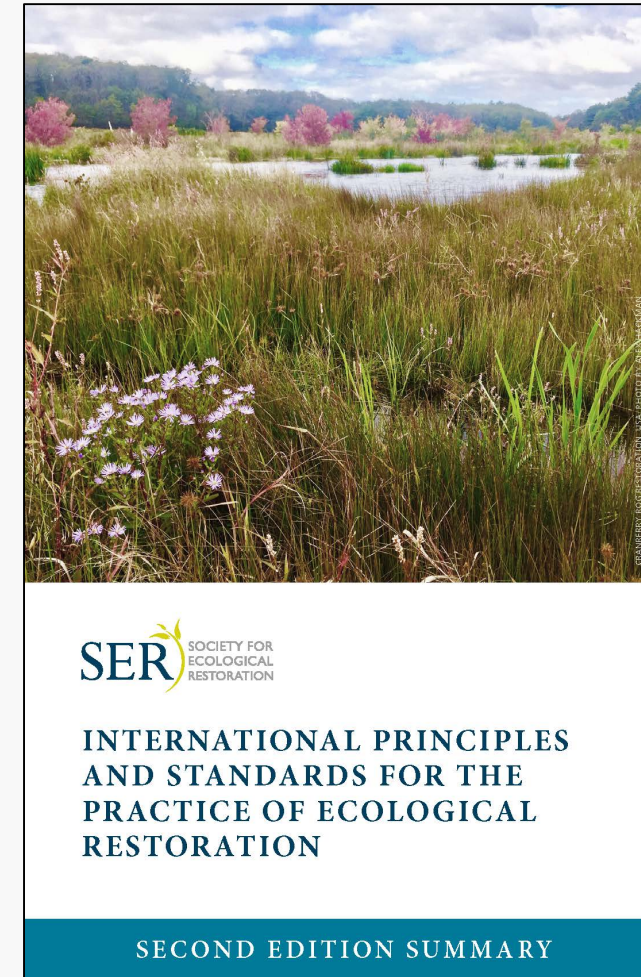
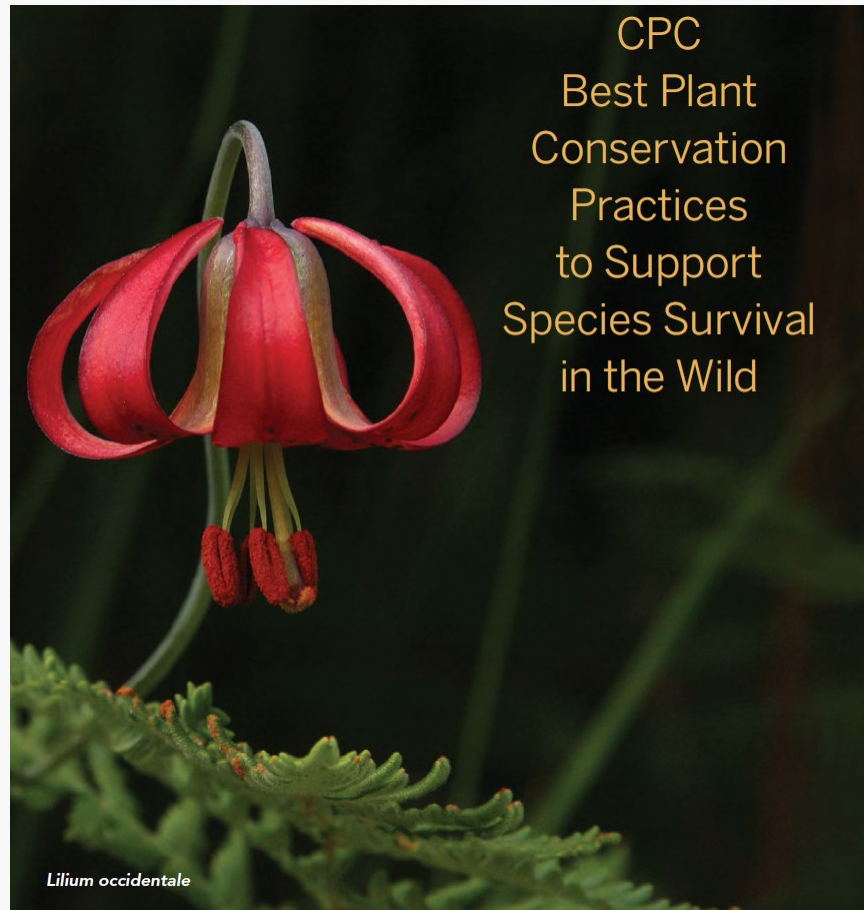
North Carolina Natural Heritage Program

Wes Knapp is leading an important effort to assess plant extinction in North America north of Mexico. Taking up this cause of understanding extinction has opened his eyes to the extent of our knowledge, and sometimes our lack of knowledge, about rare plants. Working with [Natural Heritage Programs](#) and in his spare time, he is helping coordinate field surveys and data sharing efforts to understand extinction so that we can better understand how to prevent it. His infectious enthusiasm for plants is key to leading this effort.

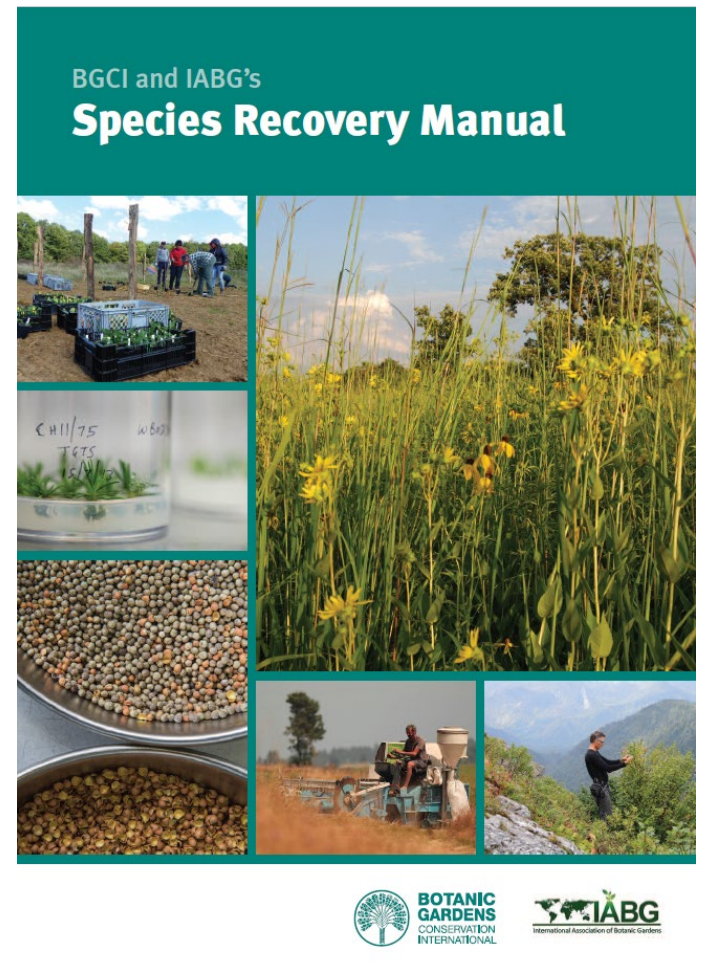
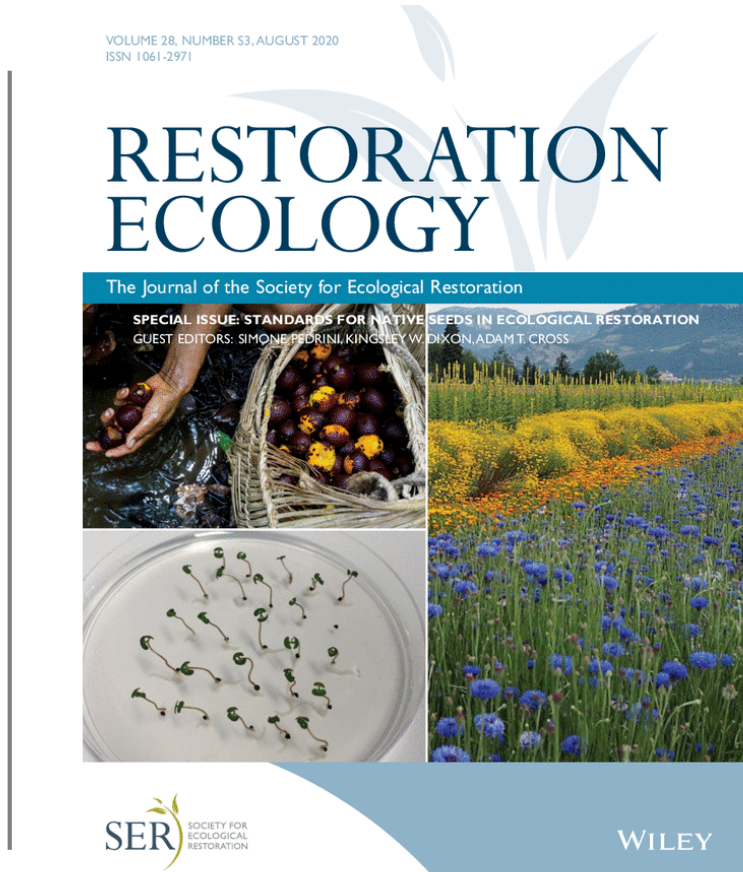
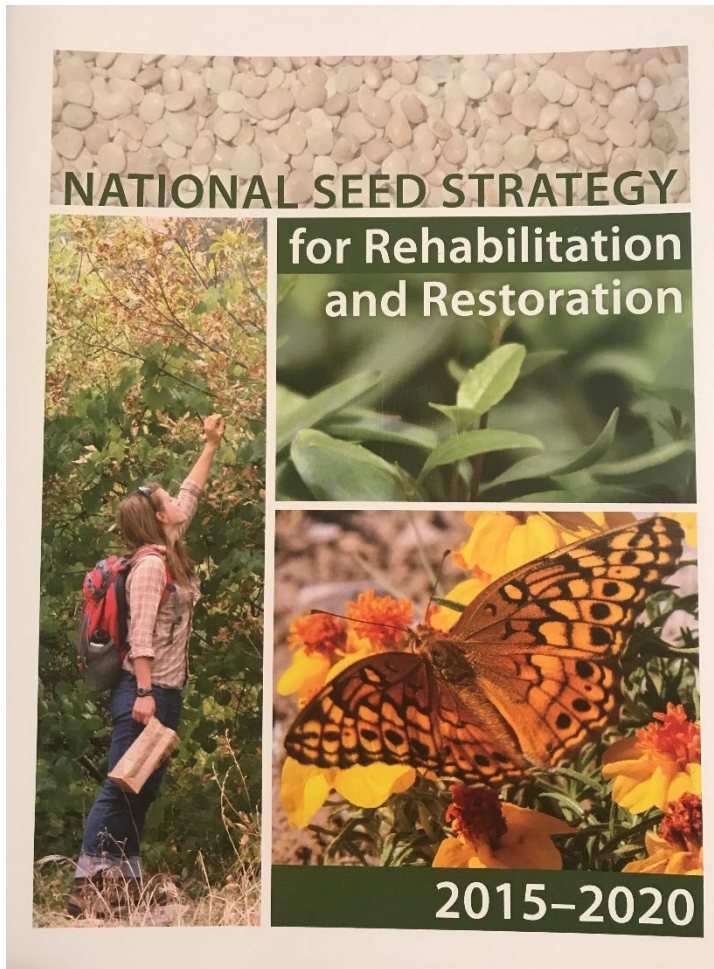
Background Photo: Though Wes Knapp has built a career in the Maryland and North Carolina Natural Heritage Programs, his botanical interests are not confined to the East Coast. **Photo credit:** Scott Schuette.



The Good News



Confluence of Decades of Experience and Updated Guidance

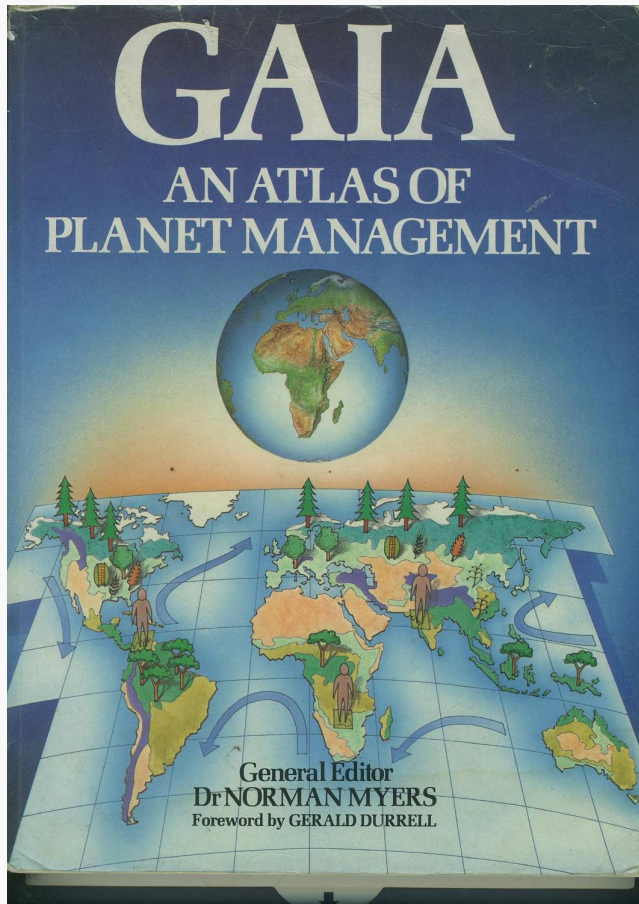




Robust Global Initiatives & Targets

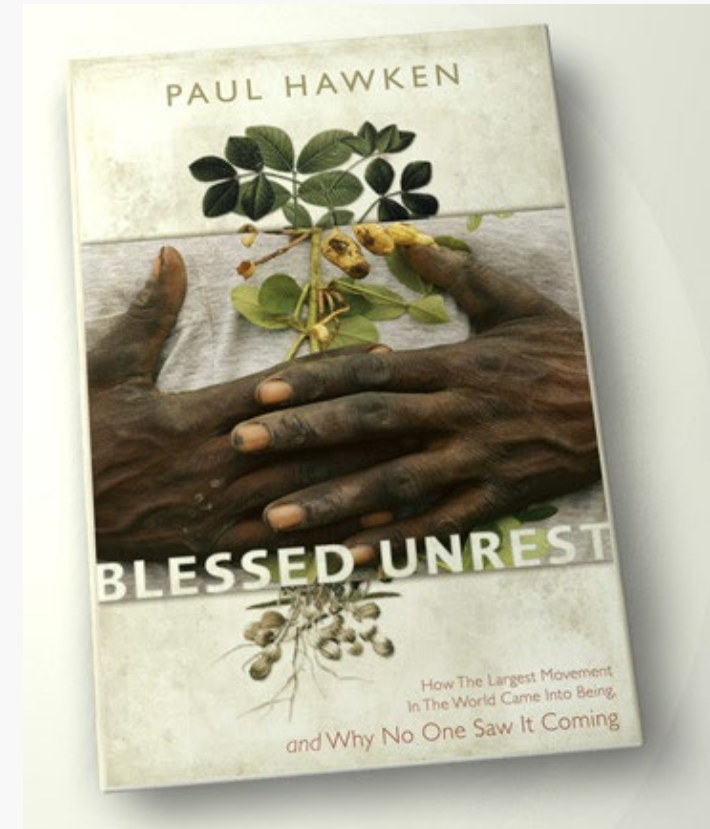
- Reducing emissions from deforestation and forest degradation (REDD+, UNFCCC)
- **UN Convention on Biological Diversity Aichi Biodiversity Targets/post-2020 Targets**
- UN Convention to Combat Desertification, Land Degradation Neutrality (LDN) program
- Bonn Challenge/New York Declaration on Forests, expansion of Forest Landscape Restoration (FLR) concept
- UN 2030 Sustainable Development Goals
- **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)**
- **UN Decade on Ecosystem Restoration from 2021-2030**





In 1984 **Norman Myers** estimated that there were 12,130 international nonprofit groups (INGOS) worldwide, mostly dealing with environmental and social issues.

Incredible Engagement at Community Level



Paul Hawken 2007: estimated that there were more than 1,000,000 nonprofit groups and community organizations dedicated to the “environmental and social justice movement”.

Are we in the
extinction prevention business?

Or the biodiversity recovery
business?

How do we actually Save Plants?

We Must Do Both



CENTER FOR PLANT CONSERVATION
at SAN DIEGO ZOO GLOBAL

NATIONAL COLLECTION ▾

CONSERVATION RESOURCES ▾

PARTICIPATING INSTITUTIONS ▾

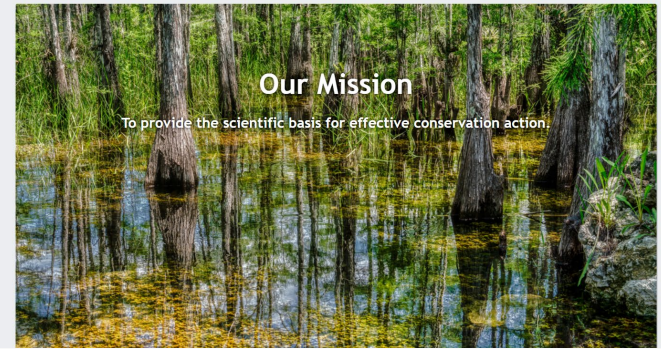


NatureServe
Connecting Science With Conservation

Donate

Connect

Search website



Our Mission

To provide the scientific basis for effective conservation action.



[NPCC HOME PAGE](#)

[Ecosystem Services Resources Sections](#)

[Outdoors Online](#)



The Native Plant Conservation Campaign is a network of Affiliate native plant societies and other native plant conservation organizations throughout the United States.

[Return to NPCC Home Page](#)

EXPERIENCE YOUR AMERICA™

ACCESSIBILITY | [PRIVACY POLICY](#) | [FOIA](#) | [NOTICES](#) | [DISCLAIMER](#)
FAQ | [NO FEAR ACT](#) | [CONTACT US](#) | [USA.GOV](#)

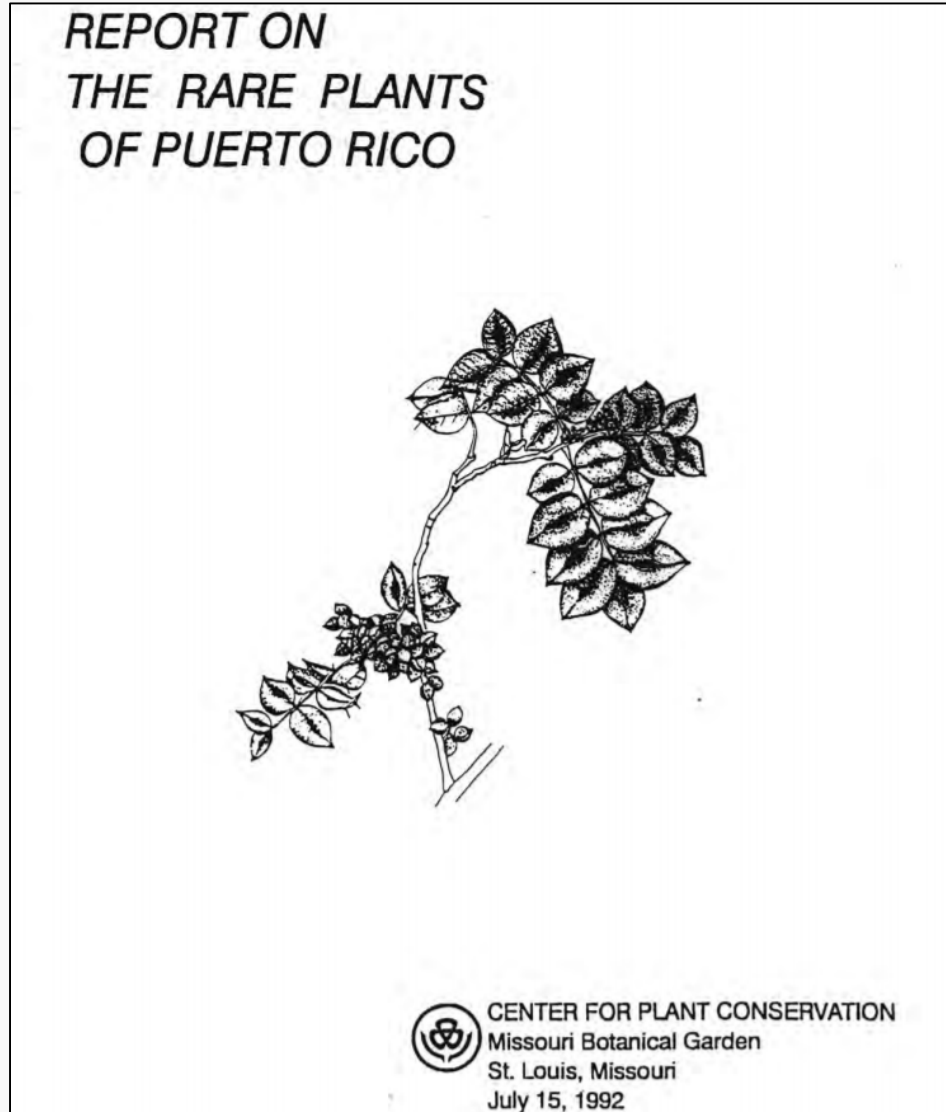
National Park Service
U.S. Department of the Interior

[FACEBOOK](#) [YOUTUBE](#) [TWITTER](#) [INSTAGRAM](#) [FLICKR](#) [iTUNES](#)

National and Regional Leadership Since the 1980s

National Collection and Participating Institutions

Bridge between Local and Global Scales



Extinctions, Rarity, and Scale


nature > nature ecology & evolution > brief communications > article

Brief Communication | Published: 10 June 2019

Global dataset shows geography and life form predict modern plant extinction and rediscovery

Aelys M. Humphreys , Rafaël Govaerts , Sarah Z. Ficinski, Eimear Nic Lughadha & Maria S. Vorontsova*Nature Ecology & Evolution* 3, 1043–1047(2019) | Cite this article

5651 Accesses | 44 Citations | 1292 Altmetric | Metrics

 A Matters Arising to this article was published on 09 March 2020

Abstract

Most people can name a mammal or bird that has become extinct in recent centuries, but few can name a recently extinct plant. We present a comprehensive, global analysis of modern extinction in plants. Almost 600 species have become extinct, at a higher rate than background extinction, but almost as many have been erroneously declared extinct and then been rediscovered. Reports of extinction on islands, in the tropics and of shrubs, trees or species with narrow ranges are least likely to be refuted by rediscovery. Plant extinctions

US and Canada

Global Assessment: 38 extinct species


Regional Assessment: 51 species, 65 taxa

IUCN Red List: 2 species assessed as extinct

Different Methods, Different Results



Regional records improve data quality in determining plant extinction rates

Wesley M. Knapp ¹, Anne Frances², Reed Noss³, Robert F. C. Naczi⁴, Alan Weakley⁵, George D. Gann⁶, Bruce G. Baldwin⁷, James Miller⁸, Patrick McIntyre⁹, Brent D. Mishler⁷, Gerry Moore¹⁰, Richard G. Olmstead¹¹, Anna Strong¹², Daniel Gluesenkamp¹³ and Kathryn Kennedy¹⁴

ARISING FROM A. M. Humphreys et al. *Nature Ecology & Evolution* <https://doi.org/10.1038/s41559-019-0906-2> (2019)

The recent study by Humphreys et al.¹, reporting the extinction of almost 600 plant species globally, represents a groundbreaking effort to compile direct data on seed plants. We applaud Humphreys et al. for quantifying plant extinctions because they formulate an important and testable hypothesis. However, their study missed many extinctions and rediscoveries of seed plants in the United States and Canada. Our team of experts has been compiling a list of extinct plants of North America (north of Mexico). This work is challenging and time-consuming, given the complexities inherent in botanical diversity, the incomplete status of taxonomic understanding, vagaries of reporting and complexities of phytogeography.

We have major concerns about the accuracy of the estimates made by Humphreys et al. *Of the 38 species from North America*

as extinct in California, a 53% increase in extinction over that represented by the apparently extinct taxa reported by Humphreys et al. When compounded across North America, the under-reporting of extinction is probably significant.

2. Taxon concepts. Considerable literature has been devoted to what constitutes a species^{2,3}. The underlying dataset used by Humphreys et al. includes at least seven species that are taxonomically dubious (that is, accepted by <85% of floristic sources, such as manuals and floras). These 7 species represent 19% of the dataset for the United States and Canada. Humphreys et al. use the World Checklist of Selected Plant Families⁴ as their taxonomic standard. Although a global checklist is necessary for a global project, geographically broad checklists have limitations. Varying taxonomic interpretations with different regional

Vascular plant extinction in the continental United States and Canada

Wesley M. Knapp, Wesley.knapp@ncdcr.gov, North Carolina Natural Heritage Program, Asheville, NC 28805, USA

Anne Frances, NatureServe, 2550 South Clark Street, Suite 930, Arlington, VA 22202-3926, USA

Reed Noss, Florida Institute for Conservation Science, 112 Half Moon Trail, Melrose, FL 32666, USA

Robert F. C. Naczi, Institute of Systematic Botany, New York Botanical Garden, 2900 Southern Blvd., Bronx, NY, 10458-5126, USA

Alan Weakley, Biology Department, Campus Box 3280, North Carolina Botanical Garden, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3280, USA

George D. Gann, The Institute for Regional Conservation, 100 E. Linton Blvd. #302B, Delray Beach, FL 33483, USA

Bruce G. Baldwin, Jepson Herbarium & Department of Integrative Biology, 1001 Valley Life Sciences Bldg. #2465, University of California, Berkeley, CA, 94720-2465, USA

James Miller, Missouri Botanical Garden, 4344 Shaw Blvd. St. Louis, MO, 63110, USA

Patrick McIntyre, NatureServe, 2550 South Clark Street, Suite 930, Arlington, VA 22202-3926, USA

Brent D. Mishler, University and Jepson Herbaria & Department of Integrative Biology, 1001 Valley Life Sciences Bldg. #2465, University of California, Berkeley, CA, USA, 94720-2465

Gerry Moore, National Plant Data Team, United States Department of Agriculture, 2901 East Gate City Blvd., Suite 2100, Greensboro, NC, 27041, USA.

Richard G. Olmstead, Department of Biology and Burke Museum, University of Washington, Seattle, WA, USA.

Anna Strong, Texas Parks and Wildlife Department, 4200 Smith School Rd, Austin, TX, 78744, USA.

Accepted Article

Pisonia floridana => *Guapira discolor*
a pubescent form that is taxonomically dubious and extant



Atlas of Florida Plants
Institute for Systematic Botany

Scientific Name Search
Advanced Search Search Help

Contact Us Support the Atlas

Home Browse By Search Herbarium Specimen Search Institute for Systematic Botany Links About References

Atlas of Florida Plants » Species Page

Guapira discolor

Jump to a section: [Classification](#) | [Citation](#) | [Source](#) | [Synonyms](#) | [Specimens](#) Print

Family:	NYCTAGINACEAE
Species:	<i>Guapira discolor</i> (Spreng.) Little
Common Name:	BEEFTREE; BLOLLY
Status:	Native, FAC (DEP)
Specimen:	View details of USF Herbarium specimens

** Not applicable or data not available.

Classification

Order **CARYOPHYLLALES**
Family **NYCTAGINACEAE**
Genus ***Guapira***
Species ***Guapira discolor* (Spreng.) Little - BEEFTREE; BLOLLY**

Citation

Citation	GUAPIRA DISCOLOR (Sprengel) Little, Phytologia 17: 368. 1968.
Basionym:	<i>Pisonia discolor</i> Sprengel 1825.
Type:	JAMAICA: Without data, Bertero s.n. (holotype: B (destroyed?)).

** Not applicable or data not available.

[Map](#) | [Photo Gallery](#) | [Browse Photos](#) ?

Distribution Map: Based on **vouchered** plant specimens from **wild** populations. **Cultivated** occurrences are not mapped. View county names by placing the cursor over the map.

Species Links

- [Biota of North America Program \(BONAP\)](#)
- [EDD Maps](#)
- [Flora of North America](#)
- [iNaturalist](#)
- [NatureServe Explorer](#)

Extinct in Humphreys et al. 2019

Documenting extinctions and rarity since 1996

The Floristic Inventory of South Florida

Afield celebrates...
Orion



80 Species To Be Added to Florida's
Endangered Species List

The Floristic Inventory of South Florida
1995 – present, Online since 2001

Castellow Hammock Park

County: Miami-Dade County
Size: 114.29 acres
Latitude: 25.59872° Longitude: -80.45528°
Section: 17 Township: 36 Range: 29
Notes: Historically spelled as Castell Hammock or Castell's Hammock. For a map and more information click [here](#).
Managing Agency: Miami-Dade County Department of Parks and Recreation

There are 379 taxa reported for Castellow Hammock Park

Group By Family: Show Results

Scientific Name	Occurrence:	Native Status:	Introduced Status:	Invasive Status:	Cultivated Status:	Reference:	Voucher:
Acanthaceae	Present	Not Native, Naturalized	Introduced	Potentially Invasive		2122	2122
<i>Belvisia discolor</i>	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
<i>Belvisia discolor</i>	Present	Not Native, Naturalized	Introduced	Potentially Invasive		14721	
<i>Belvisia discolor</i>	Present	Native	Not Introduced			14721	
Amaranthaceae	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
<i>Amaranthus spinosus</i>	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
Anacardiaceae	Present	Not Native, Naturalized	Introduced	Invasive		14721	
<i>Miconia coccinea</i>	Present	Not Native, Naturalized	Introduced	Invasive		14721	
<i>Miconia coccinea</i>	Present	Not Native, Naturalized	Introduced	Invasive		14721	
<i>Miconia coccinea</i>	Present	Not Native, Naturalized	Introduced	Invasive		14721	
<i>Miconia coccinea</i>	Present	Not Native, Naturalized	Introduced	Invasive		14721	
Anemaceae	Present	Native	Not Introduced	Native		14721	
<i>Anemone pulchella</i>	Present	Native	Not Introduced	Native		14721	
Annonaceae	Present	Native	Not Introduced	Native		14721	
<i>Annona glabra</i>	Present	Native	Not Introduced	Native		14721	
Apiaceae	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
<i>Conium maculatum</i>	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
Apocynaceae	Present	Native	Not Introduced	Invasive		14721	
<i>Strobilanthus tenax</i>	Present	Native	Not Introduced	Invasive		14721	
<i>Strobilanthus tenax</i>	Present	Not Native, Naturalized	Introduced	Invasive		14721	
<i>Strobilanthus tenax</i>	Present	Not Native, Naturalized	Introduced	Ruderal		14721	
<i>Strobilanthus tenax</i>	Present	Native	Not Introduced	Native		14721	
<i>Strobilanthus tenax</i>	Present	Native	Not Introduced	Native		14721	
Aquifoliaceae	Present	Native	Not Introduced	Native		14721	
<i>Ilex glabra</i>	Present	Native	Not Introduced	Native		14721	
<i>Ilex glabra</i>	Present	Native	Not Introduced	Native		14721	
Araceae	Present	Not Native, Cultivated Only	Not Introduced	Invasive		14721	
<i>Beccaria grandis</i>	Present	Not Native, Naturalized	Introduced	Invasive	Cultivated	14721	
<i>Beccaria grandis</i>	Present	Not Native, Cultivated Only	Not Introduced	Native Only	Cultivated	14721	
<i>Beccaria grandis</i>	Present	Not Native, Cultivated Only	Not Introduced	Native Only	Cultivated	14721	

SOME QUESTIONS

- Are very small, fragmented conservation areas important?
- How well does the current conservation system protect rare vascular plants?
- Have there been regional extirpations/extinctions?

Methods of the FISF

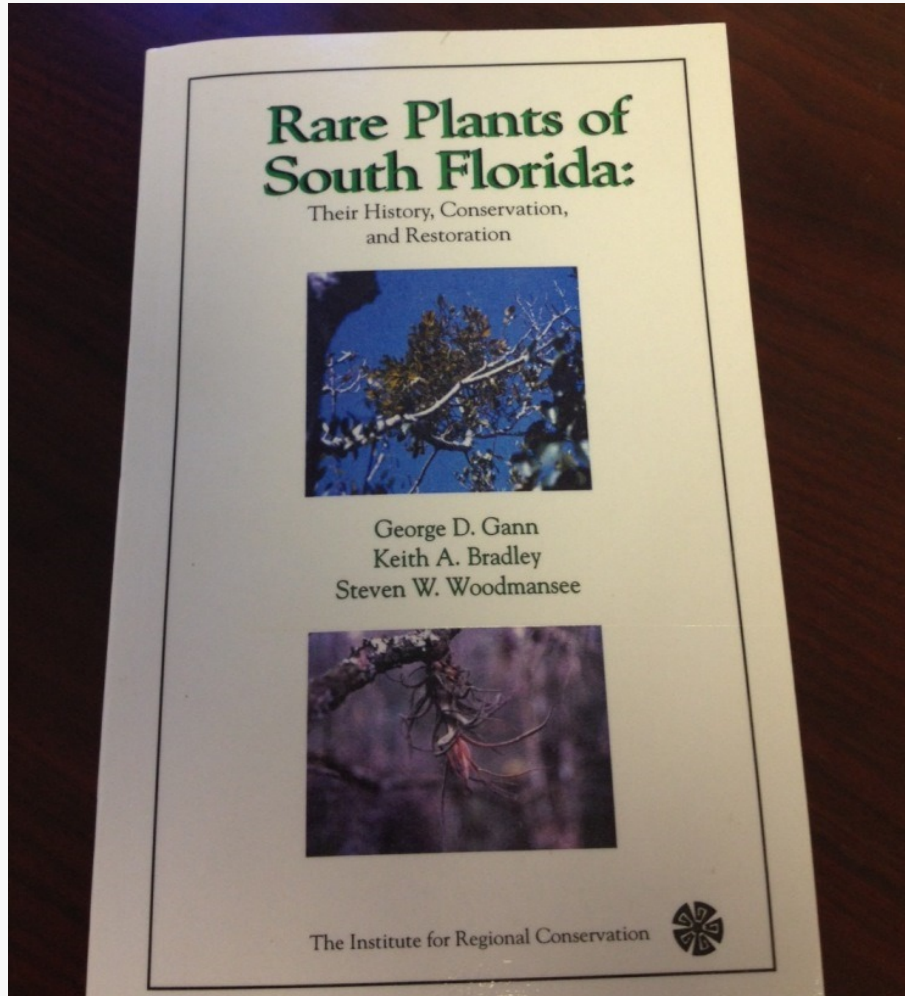


Botanist George Avery, c. 1970s
Courtesy Sally Channon

- Comprehensive (looks at all species in region)
- Collates all available data on conservation areas (published and unpublished, FNAI data, herbarium specimens, field notebooks, personal communications)
- Uses NatureServe assessment methods at a regional scale
- Filters for rarest species (SF1, SFH, SFX)
- Intensifies work on rarest species and conservation areas with little or no data



2002



Bulbophyllum pachyrachis

1 in 4 native plant species were critically imperiled or extirpated.
About 8% were reported as presumed or possibly extirpated or extinct (now 6%).
All four of the South Florida taxa reported as extinct in Knapp et al. were documented by IRC in 2002.

Down the Rabbit Hole

Reviewing historical accounts of the South Florida endemic grass, *Digitaria pauciflora*.

FLORA OF MIAMI

BEING DESCRIPTIONS OF
THE SEED-PLANTS GROWING NATURALLY ON
THE EVERGLADE KEYS AND IN THE ADJACENT EVERGLADES
SOUTHERN PENINSULAR FLORIDA

BY
JOHN KUNKEL SMALL, Ph.D., Sc.D.
HEAD CURATOR OF THE MUSEUM AND HERBARIUM OF THE NEW YORK BOTANICAL GARDEN

NEW YORK
PUBLISHED BY THE AUTHOR
1913

[Apr. 26]

See position in Bull. Torrey Club., 1914, xli, p. 11

12. **SYNTHESISMA** Walt. Diffuse plants with an inflorescence of spike-like racemes. Spikelets narrow, acute, in 2's or 3's on one side of the flat and winged or triangular rachis, one of the spikelets usually longer-pedicelled than the rest. Scales 3 or 4, the 3 outer membranous, the first small or wanting, the fourth scale chartaceous, glabrous and shining, at length indurated.—CRAB-GRASS or FINGER-GRASS.

Rachis of the racemes with the angles naked, not winged: first scale wanting or sometimes present as an inconspicuous rudiment.

Second and third scales pubescent with appressed glandular tipped hairs: stems simple or sparingly branched at the base; nodes 5 or fewer.

Second and third scales glabrous.

Rachis of the racemes with the lateral angles broadly winged, thus making it appear flat: first scale usually present.

Racemes very slender, the rachis usually less than 0.5 mm. wide: spikelets $\frac{1}{5}$ as wide as long, acuminate: fourth scale greenish when mature.

Racemes stouter, the rachis usually exceeding 0.7 mm. wide: spikelets $\frac{1}{4}$ as wide as long or more, acute: fourth scale yellowish white when mature.

1. **S. fliforme** (L.) Nash. Stem 1.5–7 dm. tall: leaf-sheaths papillose-hirsute; blades 3–20 cm. long, 1–4 mm. wide: axis of the inflorescence 1–3 cm. long: racemes 2–5; spikelets 0.75 mm. wide, elliptic, acute, in pairs, the fourth scale exceeding the third, deep chestnut-brown when mature.—Hammocks and pine-lands.—F. K. (*Bah., Cuba, Ant.*)

2. **S. Simpsonii** (Vasey) Nash. Stems 8–12 dm. long: leaf-blades 7–30 cm. long, 5 mm. wide or less, papillose-hirsute on both surfaces: axis of the inflorescence 4–6 cm. long: racemes 6–8, 10–13 cm. long, erect or ascending, usually scattered: spikelets a little exceeding 3 mm. long, about 1 mm. wide, elliptic-lanceolate, acute, in pairs.—Pinelands.—(*Cuba.*)

1. *S. fliforme*.
2. *S. Simpsonii*.

3. *S. digitatum*.

4. *S. marginatum*.

Misapplied to *D. pauciflora* in South Florida

Misapplied to *D. ekmanii* in Cuba

Misapplied to *D. texana* in NE Florida

Known only from the type (Webster & Hatch 1990)

Treated as G2, N2, S2 in NatureServe (1999)

Not tracked by Florida Natural Areas Inventory

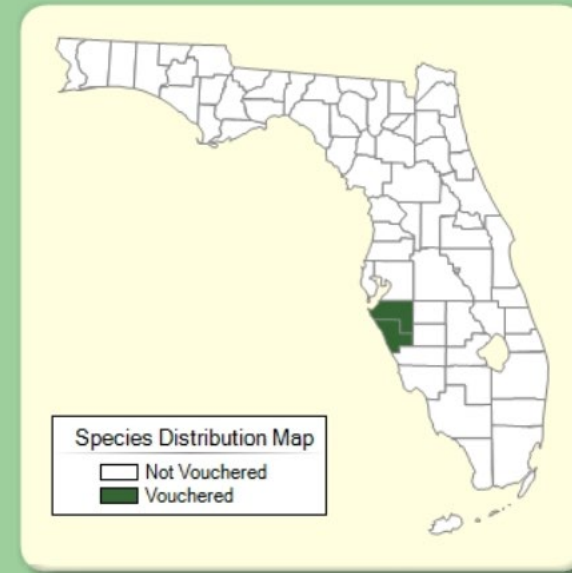
Not listed by State of Florida or US FWS

Digitaria simpsonii (Vasey) Fernald



Map | No Photos Available

Distribution Map: Based on **vouchered** plant specimens from **wild** populations. **Cultivated** occurrences are not mapped. View county names by placing the cursor over the map.



Species Links

- [Biota of North America Program \(BONAP\)](#)
- [EDD MapS](#)
- [Flora of North America](#)
- [iNaturalist](#)
- [NatureServe Explorer](#)
- [Plants of the World](#)

Amaranthus floridanus: Last Collected in South Florida in 1985

Amaranthus floridanus [Jump to a section: Classification | Citation | Source | Synonyms | Specimens](#) [Print](#)

Family:	AMARANTHACEAE
Species:	<i>Amaranthus floridanus</i> (S.Watson)J.D.Sauer
Common Name:	FLORIDA AMARANTH
Status:	Native, Endemic, OBL (DEP) , OBL (NWPL)
Specimen:	View details of USF Herbarium specimens

** Not applicable or data not available.

Classification

Order	CARYOPHYLLALES
Family	AMARANTHACEAE
Genus	<i>Amaranthus</i>
Species	<i>Amaranthus floridanus</i> (S.Watson)J.D.Sauer - FLORIDA AMARANTH

Citation

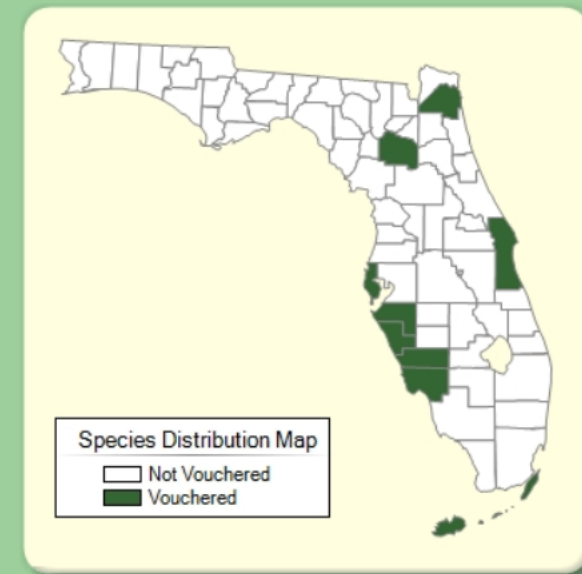
Citation	AMARANTHUS FLORIDANUS (S. Watson) J. D. Sauer, Madroño 13: 25. 1955.
Basionym:	Acnida floridana S. Watson 1882.
Type:	FLORIDA: Monroe Co.: Key West, s.d., Blodgett s.n. (lectotype: GH). Lectotypified by J. D. Sauer, Madrono 13: 25. 1955.

** Not applicable or data not available.

Treated as G3, N3, S3 in NatureServe (1993)
Not tracked by Florida Natural Areas Inventory
Not listed by State of Florida or FWS
Not on CPC National list

Map | No Photos Available

Distribution Map: Based on **vouchered** plant specimens from **wild** populations. **Cultivated** occurrences are not mapped. View county names by placing the cursor over the map.



Species Links

- [Biota of North America Program \(BONAP\)](#)
- [EDD MapS](#)
- [Flora of North America](#)
- [iNaturalist](#)
- [NatureServe Explorer](#)
- [Plants of the World](#)

Paucity of Records

← → ↻ 🏠 🔒 https://www.gbif.org/species/5384371

☆ ☆ 🗑️ 👤 ⋮

Classification

Select a species

Kingdom Plantae

Phylum Tracheophyta

Class Magnoliopsida

Order Caryophyllales

Family Amaranthaceae

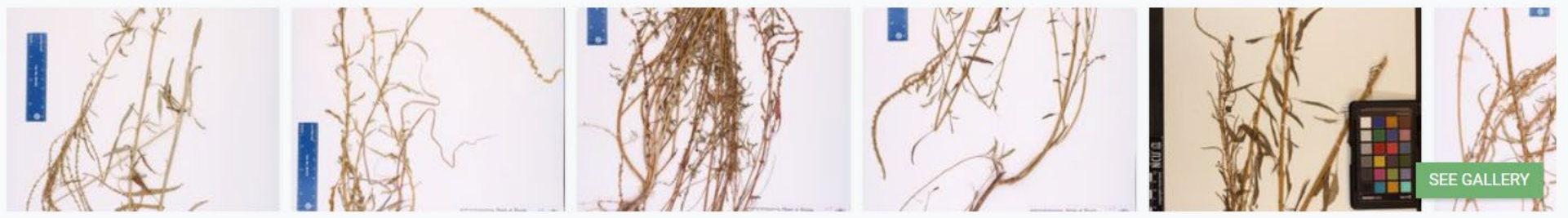
Genus *Amaranthus* L.

Species *Amaranthus floridanus* (S.Watson) Sauer

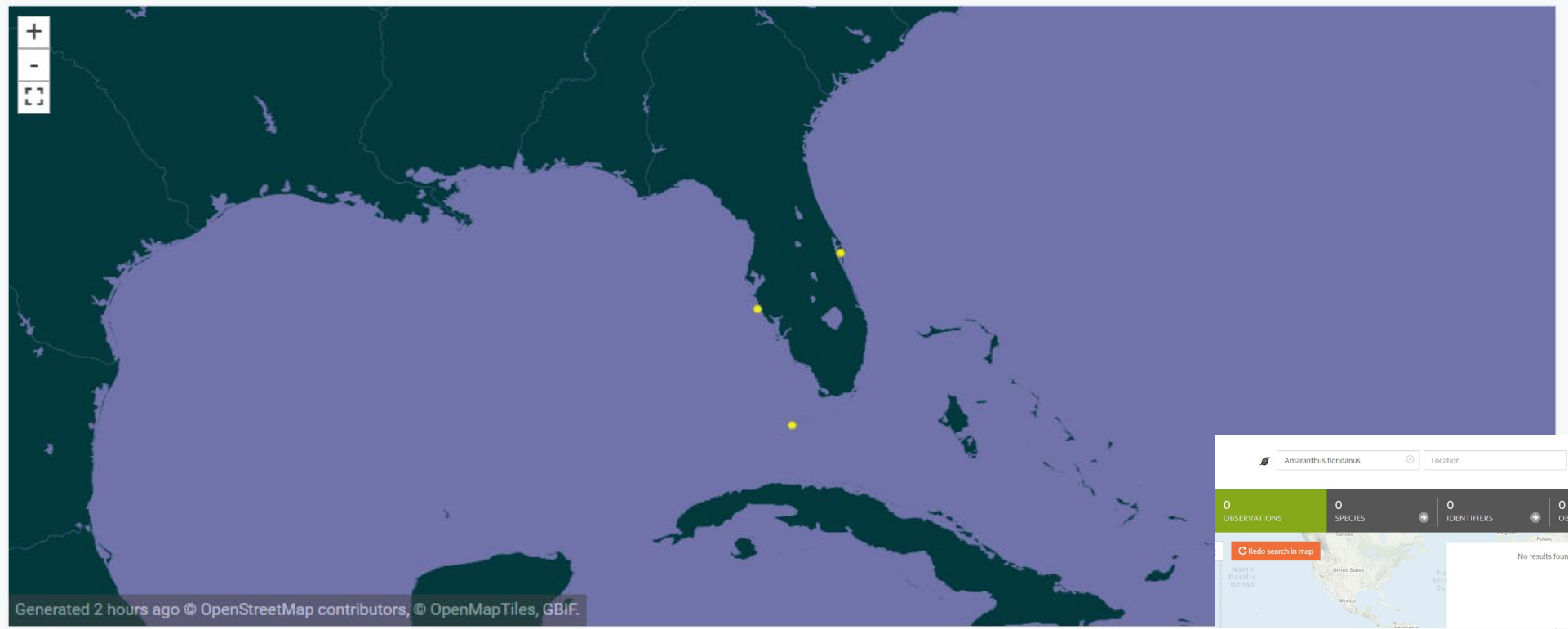
≡ *Acnida floridana* S.Wats.

No children

40 OCCURRENCES WITH IMAGES



3 GEOREFERENCED RECORDS



Year 1896

🔍 Amaranthus floridanus Location Go

0 OBSERVATIONS 0 SPECIES 0 IDENTIFIERS 0 OBSERVERS

🔄 Redo search in map

No results found

EXPLORE AREA

Crop Wild Relative

https://npgsweb.ars-grin.gov/gringlobal/accessiondetail?id=1448050



Welcome!

Welcome to the new NPGS GRIN-Global site! [Read More](#)

Details for: PI 553078, *Amaranthus floridanus* (S. Watson) J. D. Sauer, DB 8916

- Summary
- Passport**
- Taxonomy
- Other
- Pedigree
- IPR
- Observation

Core Passport Data

Taxonomy:	<i>Amaranthus floridanus</i> (S. Watson) J. D. Sauer
Top Name:	DB 8916
Origin:	Collected – Florida, United States
Maintained:	North Central Regional PI Station
Received by NPGS:	01 Nov 1989
Improvement Status:	Wild material
Reproductive	
Uniformity:	Population
Form Received:	Seed

Source History

Collected
20 September 1989. Florida, United States
Locality: Construction site, full sun with annual weeds, exposed soil derived from sea shells. Casey Key Estates, 50 meters east of Casey Key road, at address #1106. Less than 3 km north of Albee road. Casey Key, near Nokomis, in Sarasota County.
Coordinates: 27.1333, -82.4667 ([Map it](#))
Elevation: 4m.

Accession Names and Identifiers

DB 8916	DB 0889
Type: Collector identifier	Type: Exploration identifier
David Brenner, North	Group: PEO-
Central Regional PI Station,	EXPLORATIONS
Ames, Iowa	Exploration ID links
Ames 10815	
Type: Site identifier	
Group: AMES	
NC-7	

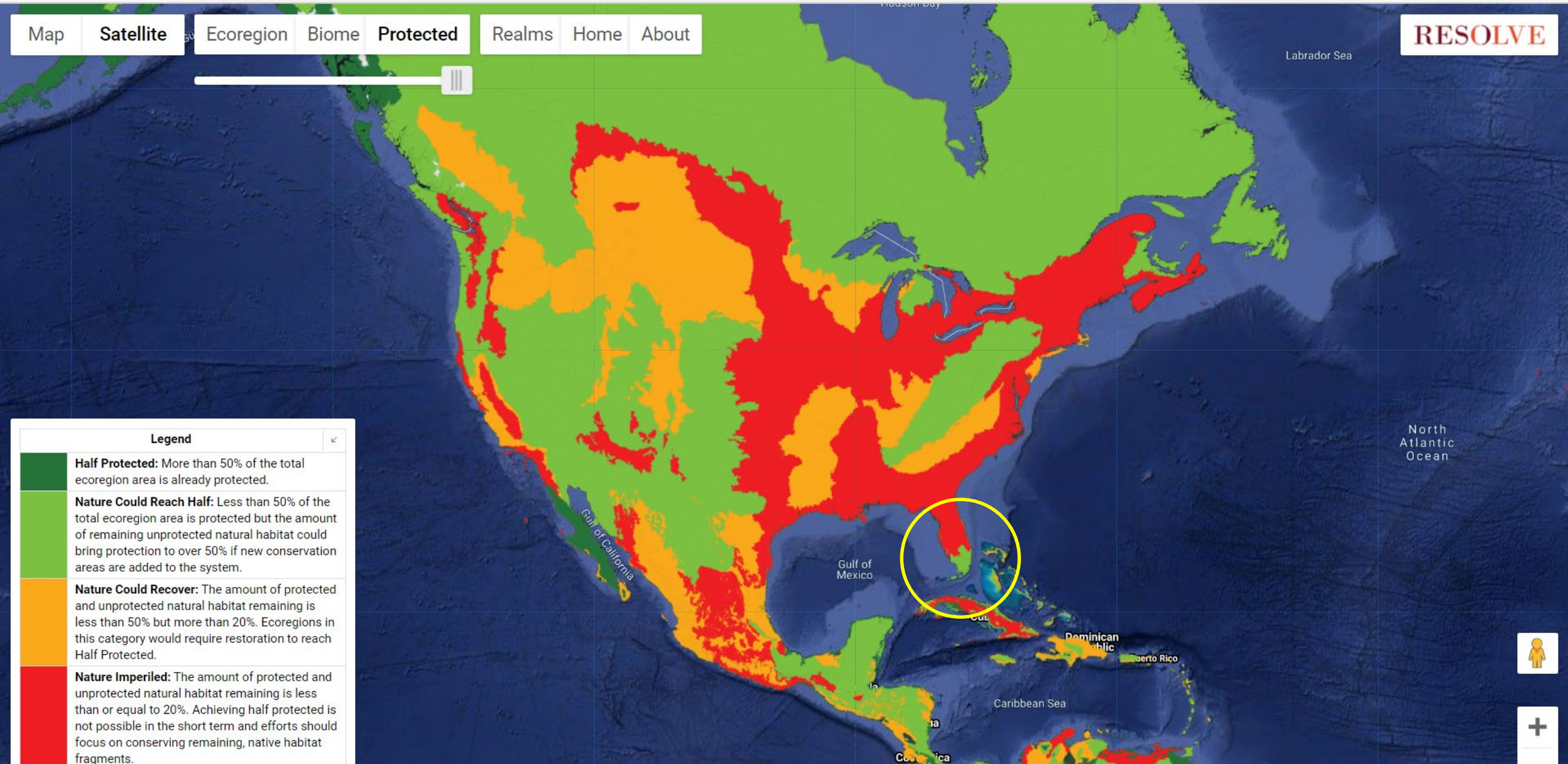
Narrative

After drying the stems are still flexible and therefore easy to thresh. At collection time, males still in bloom, most leaves had fallen. Plants 25 to 50 cm tall, most have one erect stem and approximately nine horizontal stems. Varying amounts of red coloring on stems, utricles, and male tepals. Sample size 15 plants. Plants dioecious.





Global Conservation Tools Are Too Coarse

Map **Satellite** Ecoregion Biome **Protected** Realms Home About

RESOLVE

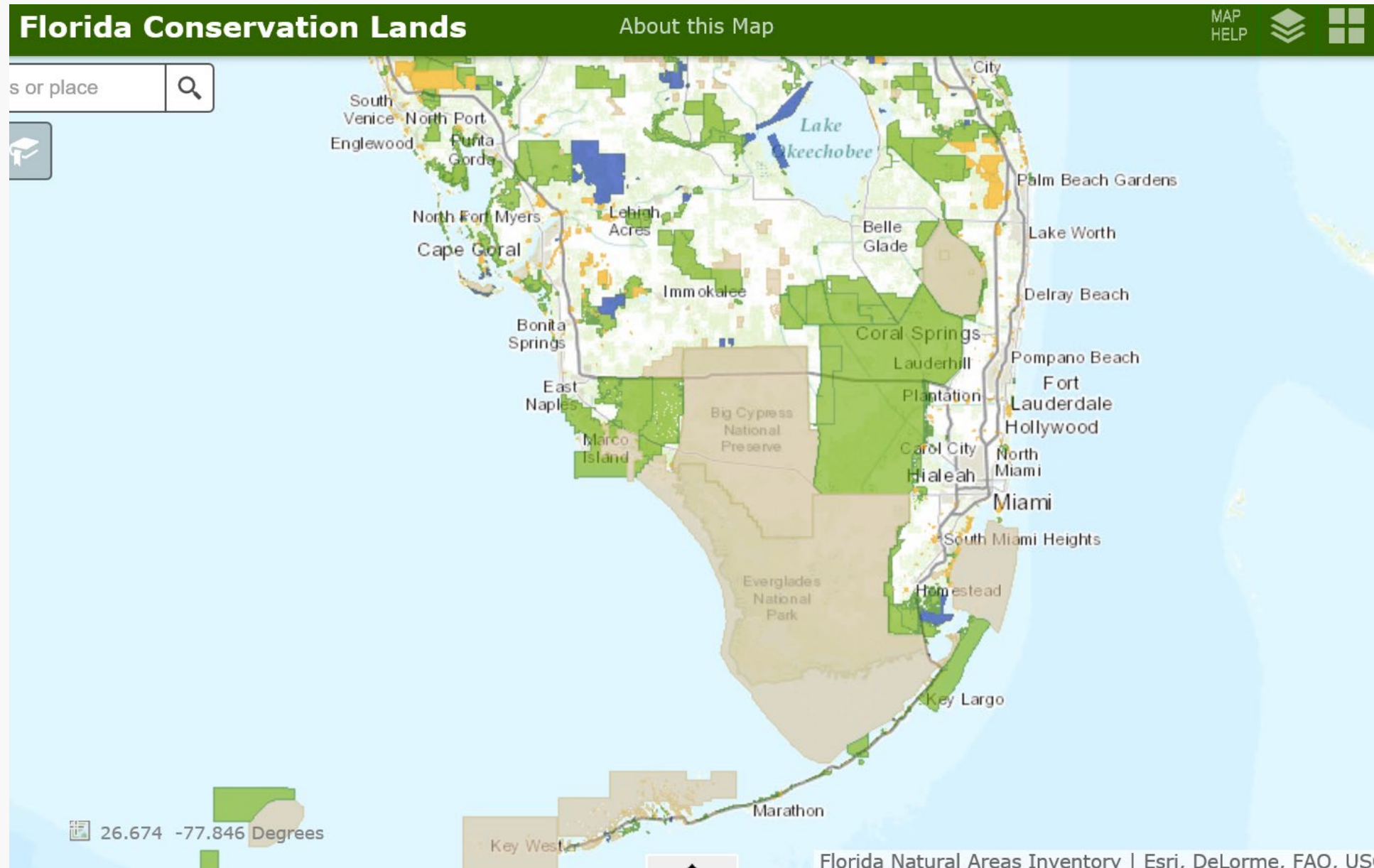


Legend

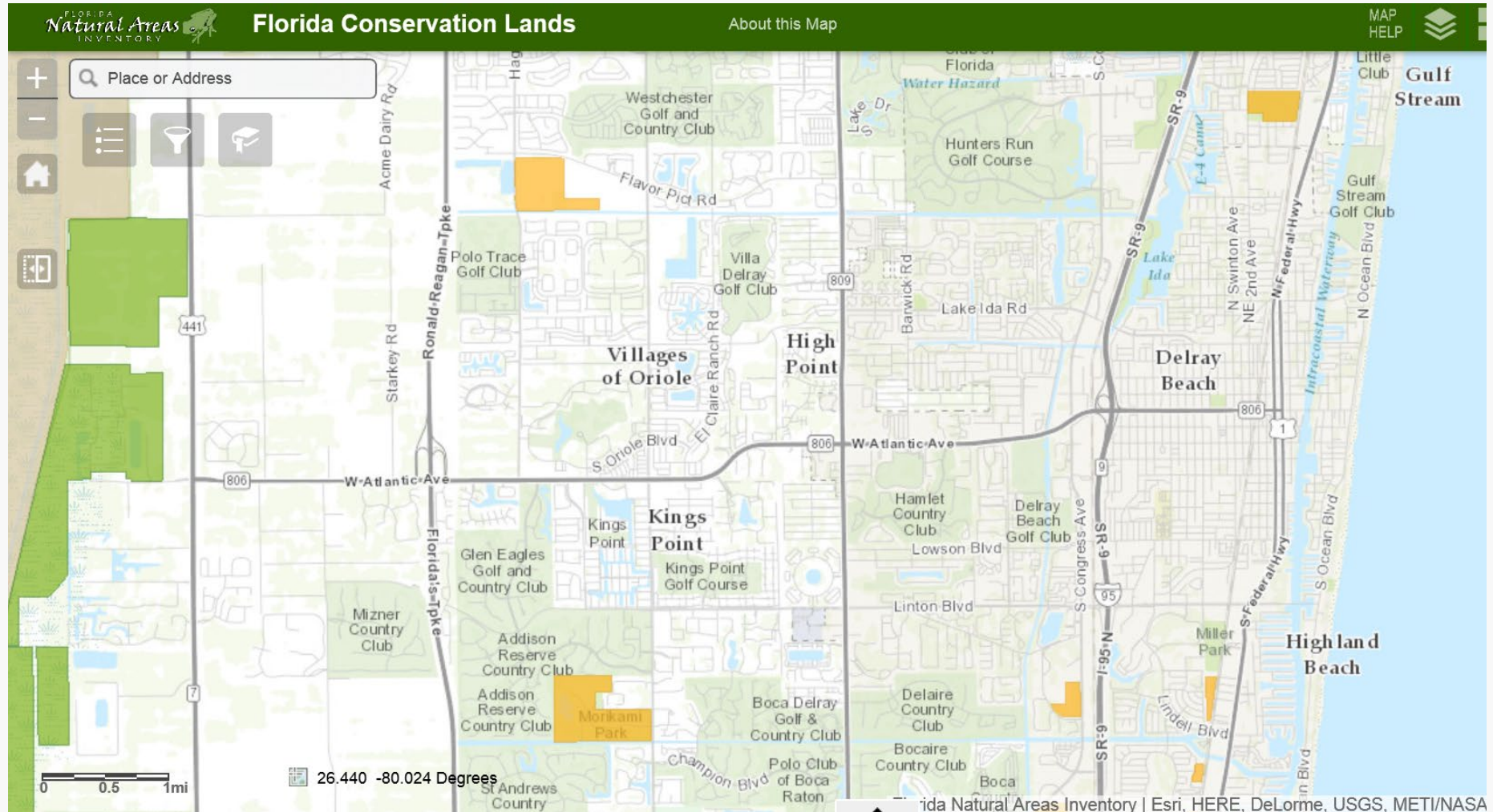
	Half Protected: More than 50% of the total ecoregion area is already protected.
	Nature Could Reach Half: Less than 50% of the total ecoregion area is protected but the amount of remaining unprotected natural habitat could bring protection to over 50% if new conservation areas are added to the system.
	Nature Could Recover: The amount of protected and unprotected natural habitat remaining is less than 50% but more than 20%. Ecoregions in this category would require restoration to reach Half Protected.
	Nature Imperiled: The amount of protected and unprotected natural habitat remaining is less than or equal to 20%. Achieving half protected is not possible in the short term and efforts should focus on conserving remaining, native habitat fragments.



>50% of region in conservation; CBD 2020 Protected Areas Target = 17%.



Our Local Reality



Conservation areas in and around Delray Beach.



[IRC Home](#)

[Inicio PR & Cita/
PR Home & Citation](#)

[Guía Verde/
Green Guide](#)

[Agro Guía Verde/
Agro Green Guide](#)

[Info-Botánica/
Info-Botany](#)

[Online Resources](#)

[Lista de Plantas por Especie o Familia](#)

[Plantas por Área de Conservación](#) · [Plantas por Elevación](#)

[Búsqueda Rápida](#) · [Búsqueda Avanzada](#) · [Búsqueda de Sinónimos](#)

[List of Plants by Species or Family](#)

[Plants by Conservation Area](#) · [Plants by Elevation](#)

[Quick Search](#) · [Advanced Search](#) · [Search Synonyms](#)

Priva portoricensis

Puerto Rico velvetburr

Assessments of 2330 Native Species

About 10% presumed or possibly extirpated, including 14 endemics

An additional 25% critically imperiled

Global Biodiversity Targets Encourage Shortcuts

← → ↻ 🏠 🔒 https://www.cbd.int/gspc/targets.shtml ☆ ☆ 🗑️ 👤 ...

INFORMATION ABOUT THE SECRETARIAT

ENGLISH 🗣️ Sign up for an account | Sign In

Search 🔍



BIODIVERSITY CONVENTION CARTAGENA PROTOCOL NAGOYA PROTOCOL COUNTRIES PROGRAMMES

GLOBAL STRATEGY FOR PLANT CONSERVATION

UPDATED STRATEGY 2011-2020

- > Introduction
- > Background and Consultations

PROGRAMME

- > COP Decisions
- > Global Strategy 2011-2020
 - > Vision
 - > Mission statement
 - > Objectives
 - > Rationale
 - > General principles
 - > **Targets 2011-2020**
 - > Implementation of the Strategy
 - > Technical rationales milestones and indicators
- > Guide to the GSPC

IMPLEMENTATION

- > In-Depth Review
- > Resolutions and Related Initiatives
- > Flexible Coordination Mechanism
- > National Focal Points

GLOBAL STRATEGY FOR PLANT CONSERVATION // TARGETS 2011-2020

FRIDAY // 2.4.2011



The targets 2011-2020

Objective I: Plant diversity is well understood, documented and recognized

- Target 1: An online flora of all known plants.
- Target 2: An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.
- Target 3: Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

Objective II: Plant diversity is urgently and effectively conserved

- Target 4: At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.
- Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.
- Target 6: At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.
- Target 7: At least 75 per cent of known threatened plant species conserved in situ.
- Target 8: At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes.
- Target 9: 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.
- Target 10: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

**Toward Target 2 of the Global Strategy for Plant
Conservation: An Expert Analysis of the Puerto Rican
Flora to Validate New Streamlined Methods for Assessing
Conservation Status**

Author(s): James S. Miller , Gary A. Krupnick , Hannah Stevens , Holly Porter-Morgan , Brian Boom , Pedro Acevedo-Rodríguez , James Ackerman , Duane Kolterman , Eugenio Santiago , Christian Torres , and Jeanine Velez

Source: *Annals of the Missouri Botanical Garden*, 99(2):199-205. 2013.

Published By: Missouri Botanical Garden

DOI: <http://dx.doi.org/10.3417/2011121>

Priva portoricensis
Puerto Rico velvetburr

Miller et al. (2013) assessment data sheet

PR status	US results	NY results	IUCN 2011	EOO (km ²)	Provisional Assessment	Provisional Criteria	# locations
native	NAR	NAR		>20,000	LC		
endemic	AR	AR		Unable to calculate	CR	B1ab(iii)	1
native	NAR	NAR		>20,000	LC		

NAR=not at risk; AR=at risk; LC=least concern; CR=critically endangered. B1ab(iii) = Extent of occurrence estimated to be <100 km²; Severely fragmented or known to exist at only a single location; Continuing decline, observed, inferred or projected, in any of the following: (iii) area, extent and/or quality of habitat. Under current IUCN criteria, species known only from the type would be ranked as EX (extinct). A new subcategory CR(PE) (critically endangered, possibly extinct) has been recently created.

Gann et al. (2020) online data

“Arare herb, the type specimen of which was collected in 1886 by P.E.E. Sintenis (3597 US) near Guánica. Listed as a taxon not recently collected by Axelrod (2011). There are no recent records of this at MAPR (Jeanine Vélez, email comm. 2016).”

“This was first listed as a rare species in Puerto Rico by Woodbury et al. (1975), who classified it as an endangered species endemic to Puerto Rico (species No. 124). It was listed as a Critical Element by DNER in 1988, 1999 and 2007. It was not included as a species known from three or fewer locations in Puerto Rico and the Virgin Islands by Figueroa Colon & Woodbury (1996) or by Figueroa Colon (1996). Miller et al. (2012b) gave it a provisional global rank of Critically Endangered using the IUCN Red List criteria, based on one location. However, this has not been collected since 1886.” This assessment would benefit from the new CR(PE) category, but to present this is still not Red Listed.

Some Critical Issues

Lack of comprehensiveness in local, regional and global assessments

Reluctance to list as Extinct, or even Possibly Extinct

Overuse of concepts like data deficiency

Insufficient consultation with indigenous and local knowledge holders

Overlooking cryptic species or difficult groups

Data ageing

Recovery and Restoration

United National Decade on Ecosystem Restoration 2021-2030

“There has never been a more urgent need to restore damaged ecosystems than now”





Food and Agriculture
Organization of the
United Nations

Strategy of the United Nations Decade on Ecosystem Restoration

Draft: February 6, 2020 – for comments by 30 April, 2020

Table of Contents

1. Introduction

Showcasing flagship initiatives

“There will be a range of criteria for flagship initiatives, including, for example, a **potential minimum size of 1 million hectares**, government endorsement, activities that fall within the continuum of ecosystem restoration practices developed by the Society for Ecological Restoration, frequent cross-sectoral dialogues amongst stakeholders; and potential for replication and further upscaling.”



Comments on the February 6 DRAFT Strategy of the United Nations Decade on Ecosystem
Restoration

Submitted April 17, 2020

Authors:

George Gann, International Policy Lead

Bethanie Walder, Executive Director

Alexis Gibson, Program Manager

Executive Summary of SER Comments

3. Implementation of the UN Decade should include and acknowledge that the **flagship value of many thousands of small restoration projects are at least equally important** as large ecosystem scale projects.

Size requirement was removed from the final Strategy language, but emphasis on large scale projects remains.

Grassroots up is encouraged, but financial and logistical challenges remain

The UN Decade aims to foster a global restoration culture in which restoration initiatives start & scale up across the planet.



Anthony Mills, C4 EcoSolutions (Pty) Ltd. 15 September 2020, UN Decade on Ecosystem Restoration: Strategy Reveal and Engagement Kickstarter



Food and Agriculture Organization of the United Nations



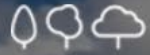
2015 Survey and Assessment of Delray Beach

101 native dune
species have been
recorded, but 7 are
possibly missing

An additional 100
species within
historical range are
missing and could be
restored in area.

Our goal is to restore
coastal diversity,
which will make the
dunes healthier and
more resilient.





TRILLION TREES

WHERE WE WORK ▾

DRIVING CHANGE

NEWS & UPDATES

ABOUT US ▾

[DONATE](#)

Protect. Restore. End deforestation.

We use cookies on this site to enhance your user experience

By clicking the Accept button, you agree to us doing so. [More info](#)

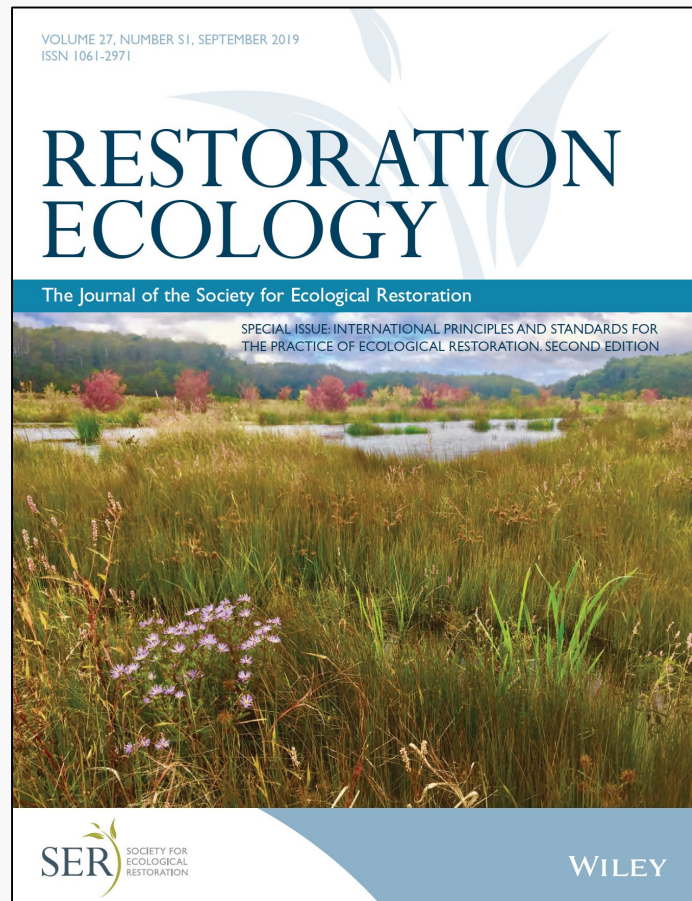
Accept

[No, thanks](#)

Tyranny of trees in grassy biomes

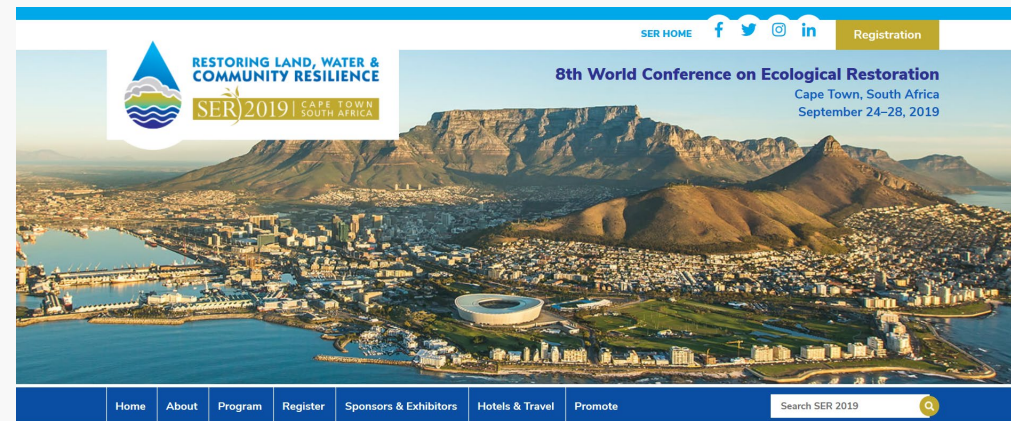
Joseph W. Veldman^{1,*}, Gerhard E. Overbeck², Daniel Negreiros³, Gregory Mahy⁴, Soizig Le Stradic⁴, G. Wilson Fernandes^{3,5}, Giselda Durigan⁶, Elise Buisson⁷, Francis E. Putz⁸, William J. Bond⁹

Science 30 Jan 2015 (Letters)
Vol. 347, Issue 6221, pp. 484-485
DOI: [10.1126/science.347.6221.484-c](https://doi.org/10.1126/science.347.6221.484-c)



www.ser.org/Standards

Updated International Principles and Standards for the Practice of Ecological Restoration (2019) published simultaneously in *Restoration Ecology* and by SER.





Section 2: Eight Principles that Underpin Ecological Restoration

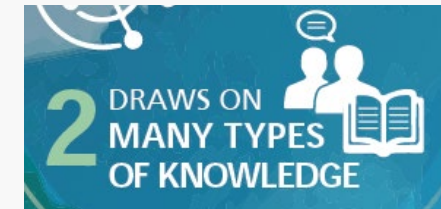




Principle 2

Ecological restoration draws on many types of knowledge

The practice of ecological restoration requires a high degree of ecological knowledge that can be drawn from *practitioner experience*, *Traditional Ecological Knowledge*, *Local Ecological Knowledge*, and *scientific discovery*.



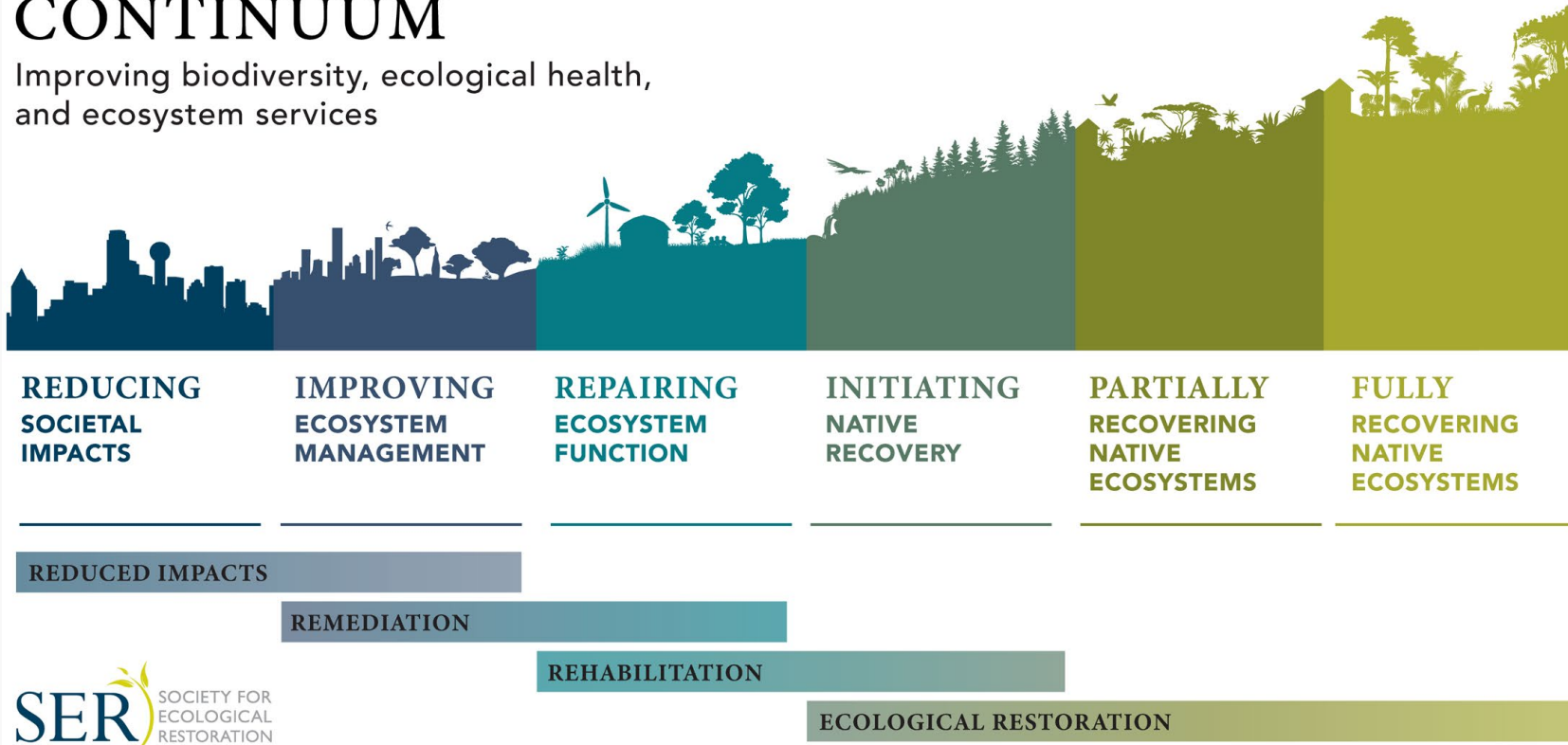


Principle 8

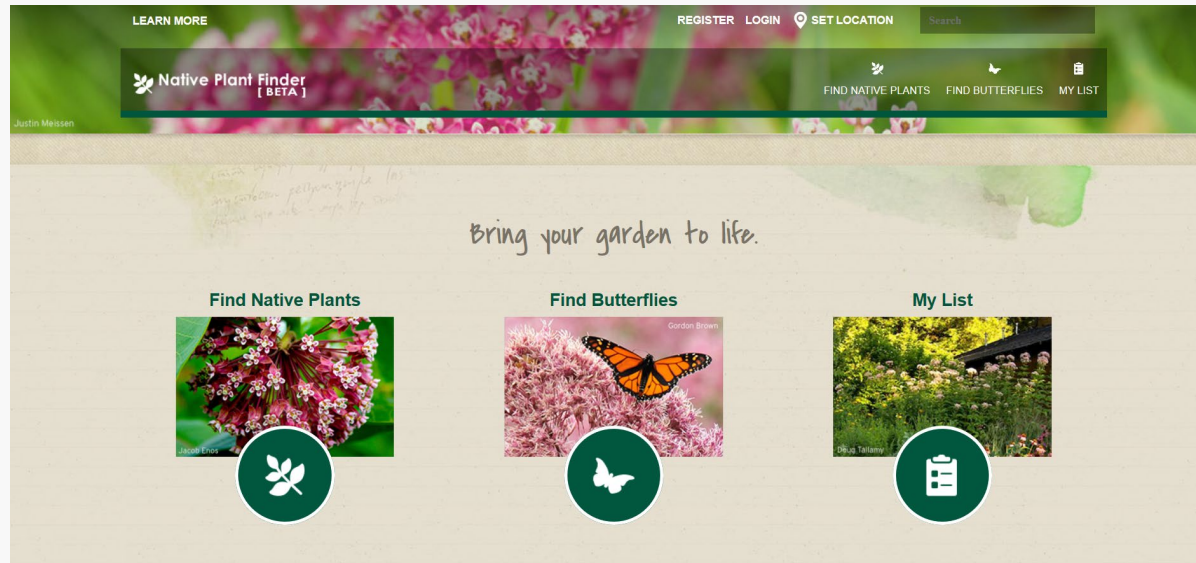
Ecological restoration is part of a continuum of restorative activities

THE RESTORATIVE CONTINUUM

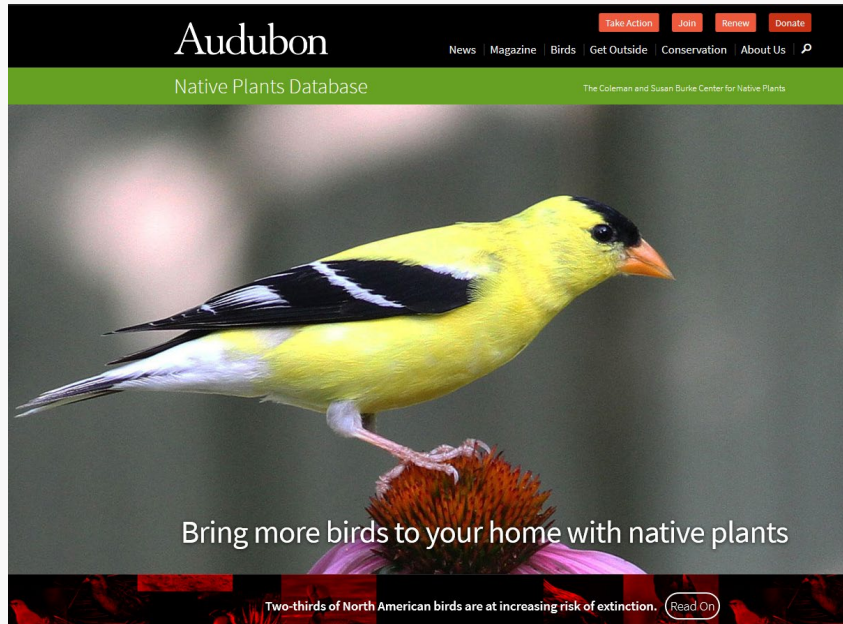
Improving biodiversity, ecological health, and ecosystem services



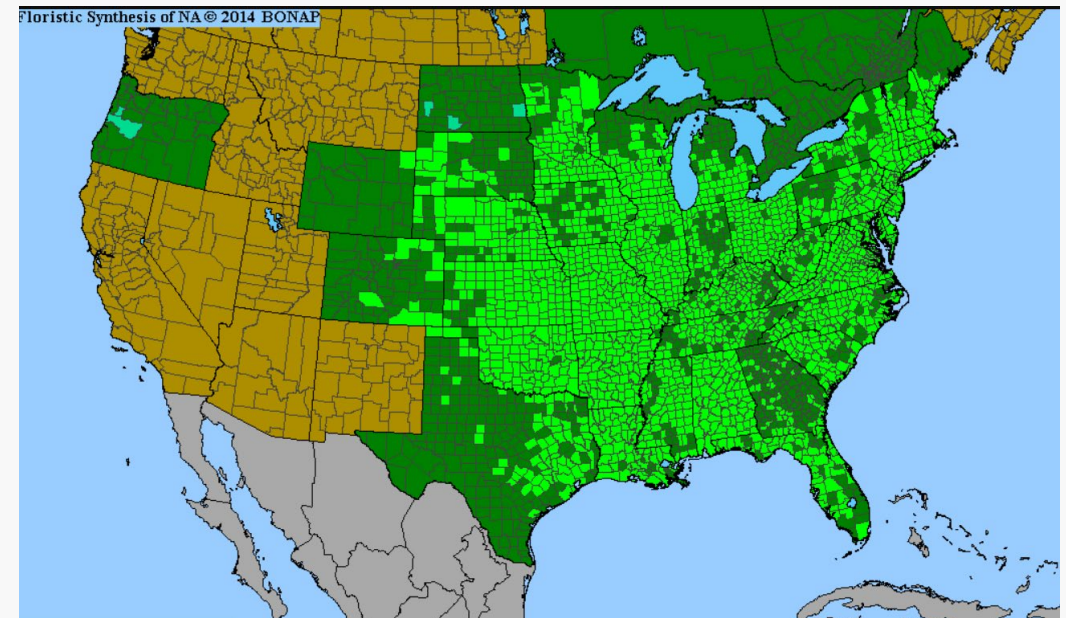
How can we better link national and local resources for native landscaping and restoration?



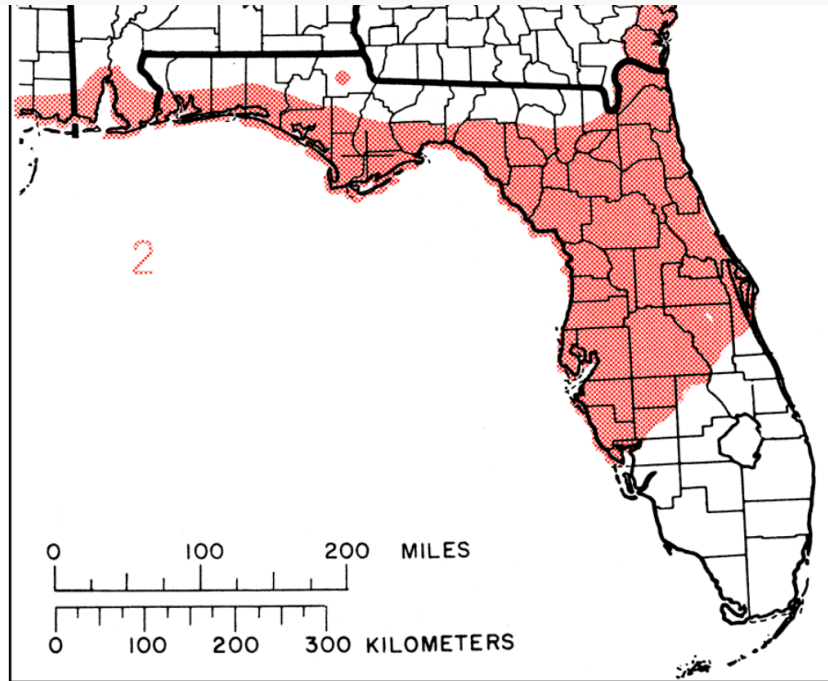
National Wildlife Federation



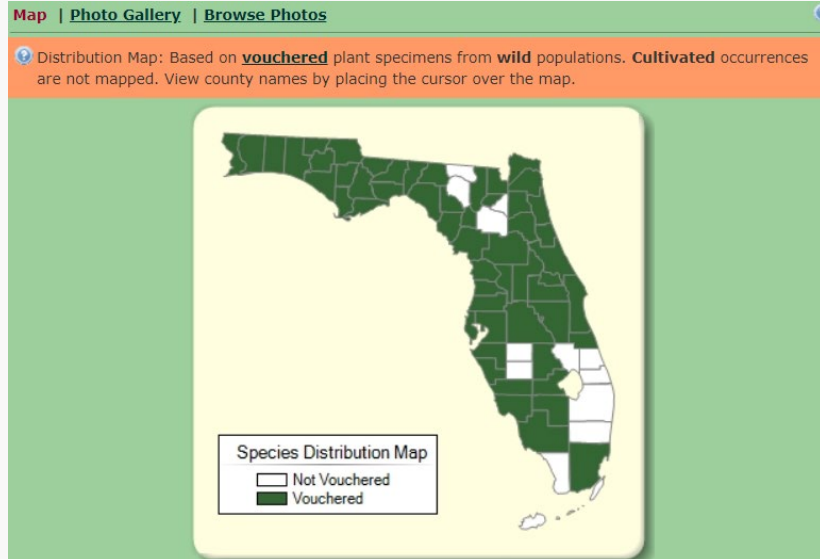
National Audubon Society



BONAP: *Juniperus virginiana*



Little 1978



Wunderlin et al. 2020

- **Filed As**
- **Cupressaceae**
- *Juniperus virginiana* var. *silicicola* (Small)
- E. Murray
- **Collector(s)**
- [N. L. Britton](#) s.n., 09 Mar 1903
- **Location**
- **United States of America.** Florida. Monroe Co. Key West.
- **Description**
- Planted in a door yard. Phenology of specimen: Flower.
- **Notes (shown on label)**
- Male cones on specimen
- **Identifiers**
- NY Barcode: 18412
- Occurrence ID: 0b26eff9-1ba5-4bef-80a4-abe5c83411fb



Natives For Your Neighborhood

Conservation of rare plants, animals, and ecosystems

Donate Now

Subscribe

Home

NFYN Home

Citation

About NFYN

Map

Online Resources

A Resource to Help Change a Hobby for a Few into a Powerful Conservation Tool of Many.

Here you can learn how to turn simple gardening into habitat restoration by using plants that are native to your specific area. This website will provide you with the information you need to do that. By planting native plants and recreating natural habitats that are unique to your area, you will make a valuable contribution to the conservation and restoration of South Florida's natural heritage!

Find out About the Unique Plants, Habitats, and Wildlife in Your Area.

Choose what you would like to search:

Florida Zip Code

By County

Plant

Animal

Search By Florida Zip Code

Start by entering a 5-digit Florida ZIP Code here:

Find

[Find Native Plants!](#)

[Acknowledgements and past sponsors](#)

[Become a sponsor!](#)

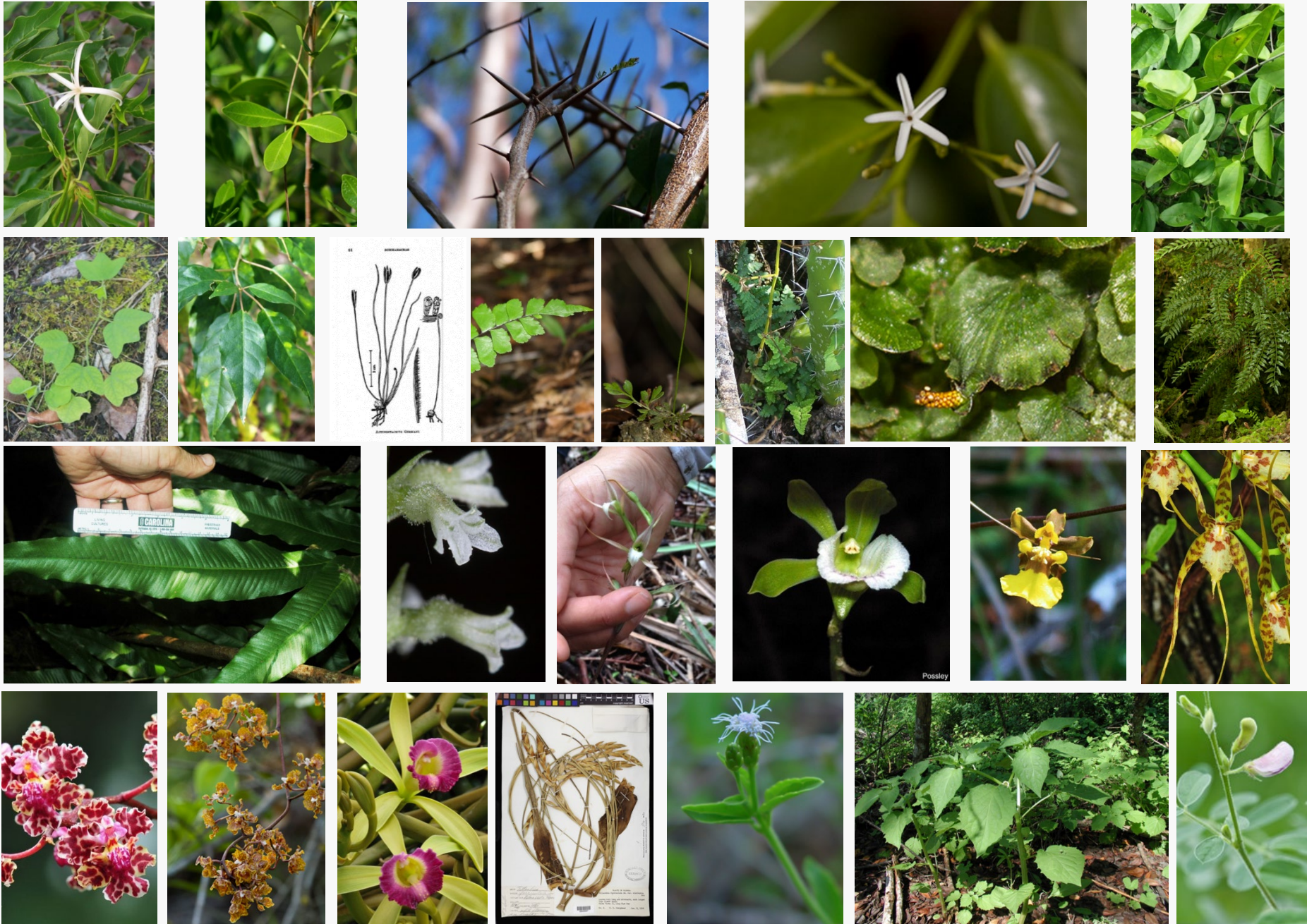
Major Sponsor:



Emergent Sponsors:



Local Biodiversity Matters!



Species of Management Concern in Everglades National Park, hardwood hammocks.



The Institute for Regional Conservation

Get Your Hands in the Sand ~ Native is NOT a Dirty Word!

by Kimberlee Duke Pompeo, FFGC District X, PAT Committee,
Vice Chairman of Barrier Islands with George D. Gann, IRC Founder



Were you told as a youth not to play in the dirt? Good chance most of us were. Yet, I don't think our parents meant for us to stop caring about mother earth. Here's how the environment sees us. It's as simple as a multiple-choice question. When asked, do you crusade for the environment? ...which do you check?

Never Rarely Sometimes Always

If you checked the last box "Always" – read no more, go straight to the end where you'll find your like-minded [donate] button for a modest contribution towards nature's shouldered burden.

If you checked either of the first three than I'm afraid you have a little required reading to do. Don't worry, though. You're not alone. We're writing as a result.

People often view nature conservation and traditional views of gardening as having to choose one way or the other. It's simply not true. It's not a contrast like *hardscapes* – the stepping stones in your garden from the *softscapes* – the feathery, green ferns that delicately sway in the wind. Gardeners know that it resides in "the variety" of methods that make a visually appealing garden. Just as there are varieties of soil and dirt to grow particular flowers and foods, natives offer intrinsic beauty in a variation of colors and textures, forms and functions with the powerful contribution towards mitigating climate change.



BIODIVERSITY STARTER PLANT KITS

"The natural world protects us so we must conscientiously protect it back."

Kimberlee Pompeo, Barrier Island resident for 18 years, Florida Federation of Garden Clubs District X Vice Chair for the Barrier Islands

IRC has the knowledge and tools to make our dunes healthier, more beautiful, and more resilient.

As part of our **Restoring the Gold Coast** program, IRC is offering native Biodiversity Starter Plant Kits for coastal gardens in southern Palm Beach County.

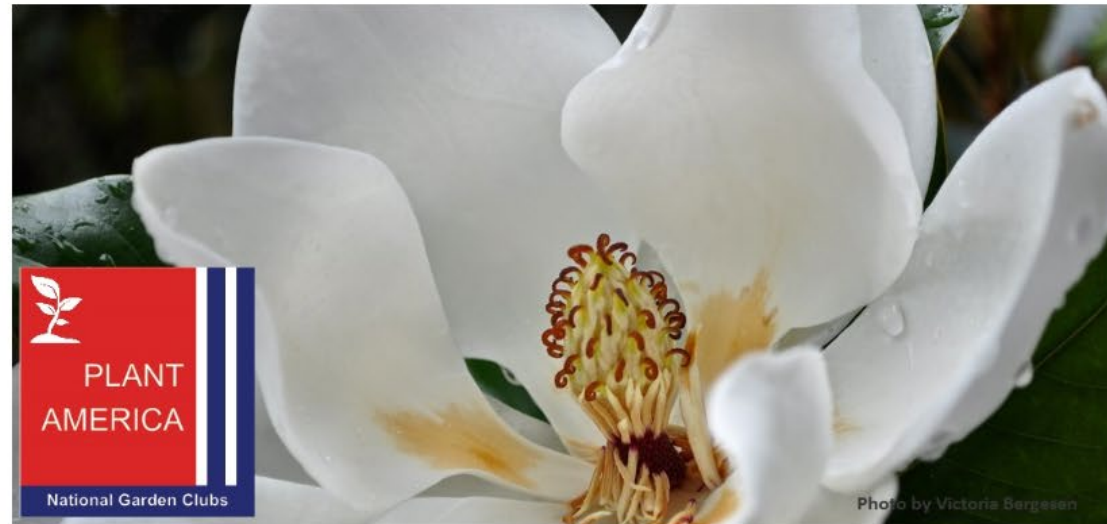
Each kit comes with hand-selected native plants perfect for enhancing your native beach dune system or coastal garden. This service helps make the restoration of native habitats on barrier islands cost effective and time efficient.



Plant America

Inspiring Gardens Across the Americas

LEARN MORE ➔



The theme for President Gay Austin's administration is **Plant America**, a singularly focused initiative on gardens and gardening.

What We Need

Transformative Change, including the political will, funding, and logistics ensuring local stakeholders, including indigenous and local knowledge holders, are included in all efforts to scale up conservation and restorative activities worldwide.

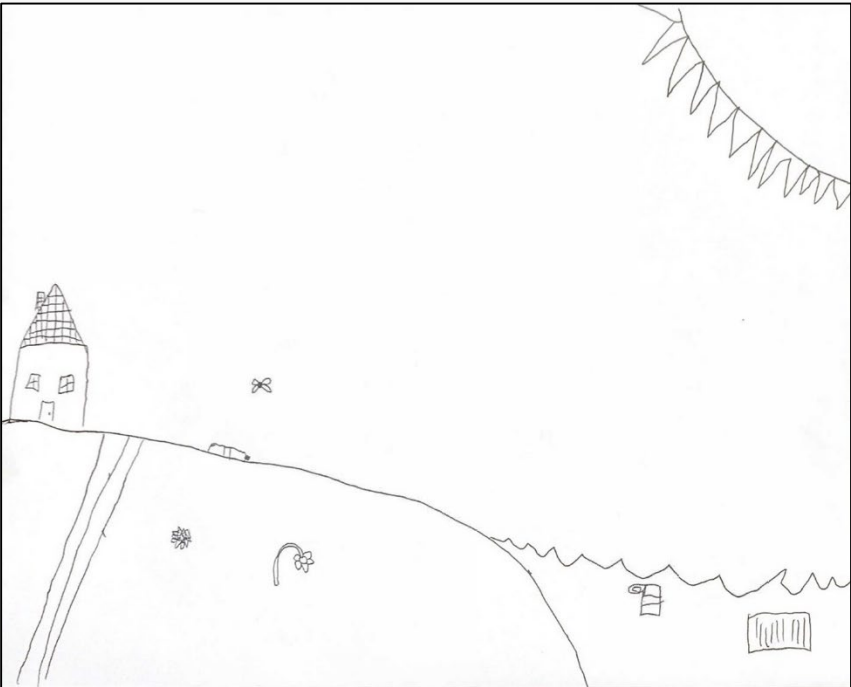
Ecosystem Governance that prioritizes local scale inputs and data.

Science-based Advocacy that integrates local knowledge and expertise.

Increased Collaboration (and fewer silos) among these restorative allies:

- Ecological restoration science and practice
- Rare plant conservation and recovery
- Pollinators
- Wildlife conservation and recovery
- Rewilding
- Invasive species control
- Fire management
- Biome-focused efforts (e.g., forests, wetlands)
- Ecosystem services, Sustainability

Degraded
Dune



Restored
Dunes



Play the Long Game

