

# The Promise (and some perils) of Ecological Restoration

Florida Native Plant Society  
May 18, 2018



George D. Gann  
[www.regionalconservation.org](http://www.regionalconservation.org)  
[www.ser.org](http://www.ser.org)



# Introduction



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 regional extinctions of rare plants, animals and ecosystems**. All conservation is ultimately local.



**Ecological Restoration:** The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.



#### SER AWARDS FUNDING TO BRAZILIAN RESTORATION PROGRAM

SER and the Sociedade Brasileira de Restauração Ecológica, awarded

#### Restoration Resource Center a primer on the new global restoration database

May 24, 2018  
1:00PM ET

#### MAY WEBINAR

Join SER's Levi Wickwire for a tour of the RRC, including an overview of its history as well as a tutorial of how to

30 YEARS	OVER 2,700 MEMBERS
SETTING GLOBAL STANDARDS	FIVE BOLD STEPS

#### 30TH BIRTHDAY

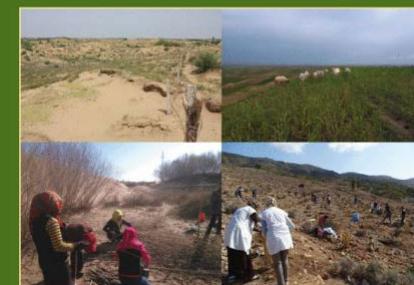
For the past 30 years, SER has harnessed the knowledge and dedication of practitioners and scientists to restore our

# Restoration Ecology

THE JOURNAL OF THE  
SOCIETY FOR ECOLOGICAL RESTORATION

SPECIAL ISSUE INVOLVING SOCIETY IN  
RESTORATION AND CONSERVATION

GUEST EDITORS: JAC. A.A. SWART, JORIEN ZEVENBERG AND PETER HO



SER advances the science, practice and policy of ecological restoration to sustain biodiversity, improve resilience in a changing climate, and re-establish an ecologically healthy relationship between nature and culture. All conservation is also global.

# Collaborate, Collaborate, Collaborate!

The header features the Florida Native Plant Society logo on the left, which includes a circular emblem with a sunburst design and the text "FLORIDA NATIVE PLANT SOCIETY" and "serena eugenii". To the right of the logo is the main title "Florida Native Plant Society" in a large, bold, green serif font. Below the title is a navigation bar with links: "Who We Are", "What We Do", "Native Plants", "Resources", "Events", "Chapters", and "Join / Support". On the far right are two red buttons: "Donate" and "Join or Renew". The background of the header is a light beige color.

The image shows a screenshot of the Tropical Audubon Society's website. At the top left is the organization's logo, which is a stylized green bird in flight. To the right of the logo, the text "Tropical Audubon Society" is displayed in a large, serif font, with "South Florida's Voice of Conservation" in a smaller, sans-serif font below it. The main navigation menu is located above the content area, featuring links for "Home", "Birds", "Conservation", "Programs", "Our Story", "Media Coverage", "Get Involved", and "Archives". To the right of the menu is a search bar with a magnifying glass icon. Below the header is a large, vibrant photograph of several pink flamingos with their wings spread, standing in water. Overlaid on this image is the text "Birds & Birding" in a white, sans-serif font. To the right of the image, there is a sidebar with sections titled "Support Our Mission" and "Upcoming Events". The "Support Our Mission" section contains text about keeping the voice of conservation clear and strong, along with links to "Join", "Give", and "Volunteer". The "Upcoming Events" section lists four events with dates and descriptions: "Apr 29 Members Migration: Potluck Picnic & Silent Auction @ TAS", "May 05 Key Largo Hammocks State Botanical Site: Birds, Butterflies and Native Plants", "May 05 Guided Tours of Historic Doc Thomas House", and "May 05 Bird & Wildlife Weekend at Fairchild".

**Growing, showing and promoting Florida native plants for sustainable landscapes.**

**Members & Members  
Associations**  
[Join or Renew](#)

**Plant Database**

**Photo Galleries**

**Events**

**Links**

**Search**

**Log In**

**Forgot Password**

**Logout**

**REAL Florida Professionals**

- Wholesale Growers
- Landscape Professionals
- Environmental Professionals
- Nursery and Landscape Professionals
- Commercial Services
- Retail Nurseries

[JOIN PROFESSIONAL EDUCATION TODAY!](#)

[INDUSTRY TRADE SHOW: NativePlantShow.com](#)

**Know Your Native: Navigating the *Hamelia* Menus**

[Learn More](#)

**FEATURED NATIVE PLANT:**  
*Hamelia patens*  
Asteraceae / Hamelia Indumenta

In Florida, out of state plants often perform poorly. Ask your grower about planted orange and red flowers like *Hamelia*. These flowers are recognizable as loved by butterflies and birds. *Hamelia* grows well in warm, sunny locations with little water. It has large, funnel-shaped flowers, with blossoms that are typically bright orange, and another which blossoms are exquisitely fragrant. *Hamelia* is a great choice for adding a little extra color variance from yellow-orange to red-orange. It's also a great choice for adding more water variance from yellow-orange to red-orange. It's also a great choice for adding more water variance from yellow-orange to red-orange.

**Find a specific plant**  
Enter the first few letters of the common or botanical name, then select a plant from the list.

**Looking for...**

**Or enter a plant feature**

**or select plant type**

**Find a nursery or grower**



NatureServe

A Network Connecting Science with Conservation

Actionable Knowledge to Sustain Biodiversity

Providing Solutions for Conservation and Natural Resource Management

MacArthur Award for Creating Effective Institutions

Subscribe to our emails

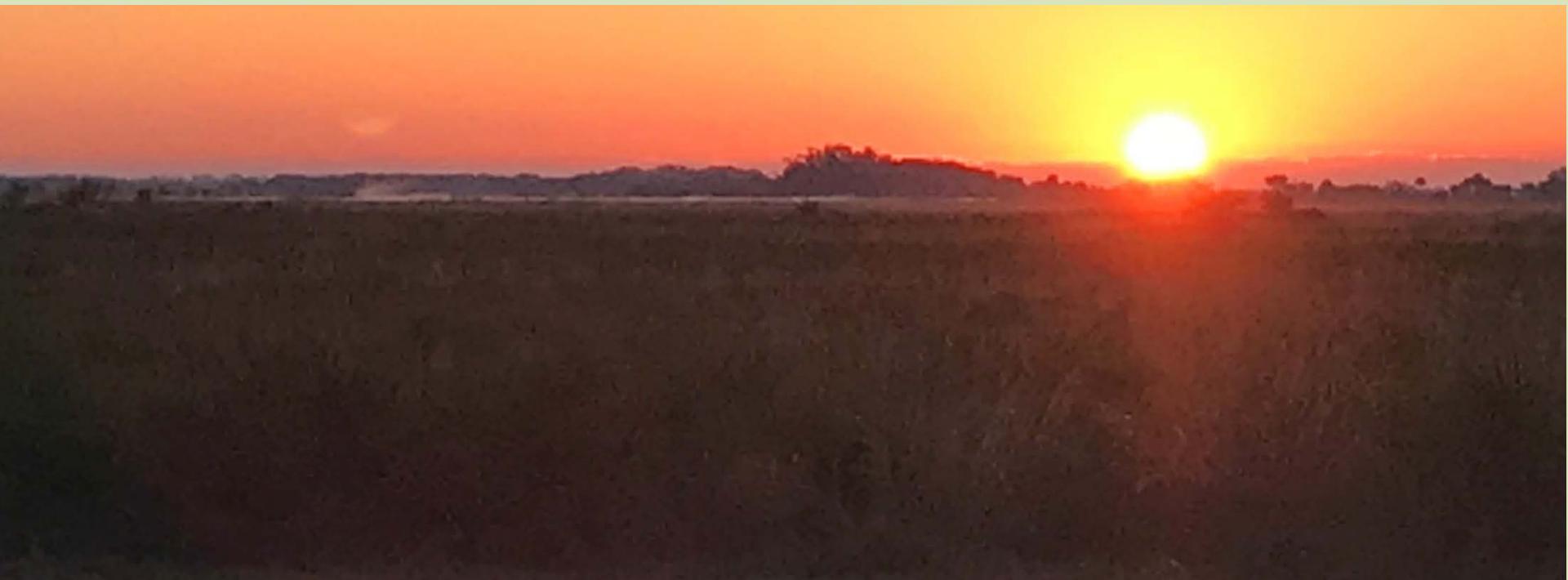
An advertisement for Florida's Native Wildflowers. It features a yellow Volkswagen Beetle driving from right to left through a vast field of yellow wildflowers. A person wearing a white cap and sunglasses is visible in the driver's seat. The background shows a road and some buildings under a clear sky. On the left side of the image, there is a white rectangular box containing text. At the top of the page, there is a purple banner with the Florida Wildflower Foundation logo and the text "Florida's Native Wildflowers". In the top right corner, there is a small graphic of a flower with the text "Help save the bees. Buy a license plate and plant the garden!".

The screenshot shows the official website for the Convention on Biological Diversity (CBD). The header features the CBD logo (a stylized green tree) and the text "Convention on Biological Diversity". Below the header, there's a banner for the "25th Anniversary of the CBD" with a photo of a smiling woman. The main navigation menu includes links for "The Convention", "Cartagena Protocol", "Nagoya Protocol", "Programmes", "Information", and "Secretariat". A search bar is located in the top right corner. The main content area has a green sidebar titled "Executive Secretary" featuring a photo of Cristiana Paes de Paiva. The main content area displays several images related to biodiversity and environmental issues, such as a forest scene, people in a field, and a group of children. A large blue banner at the bottom left marks the "25th Anniversary of the CBD" with the text "Celebrating 25 Years of Action for Biodiversity" and "10-20 May 2010, the International Day for Biological Diversity". The footer contains links for "Strategic Plan", "CBD", "Bio Diversity", "Policy", "Environmental Law and Governance", and "InforMEA". There are also links for "20 April 2010", "Message from the Executive Secretary of the Convention on Biological Diversity Dr. Cristiana Paes de Paiva on the Occasion of Earth Day", and "2010: The Year of Biodiversity".

The screenshot shows the homepage of the Delray Beach Chamber of Commerce. At the top left is the chamber's logo and contact information: "Delray Beach Chamber of Commerce", "120 NE 1st Street", "Delray Beach, FL 33441", and "Phone: 561-478-0245". The top right features social media icons for Facebook, Twitter, and YouTube. Below the header is a navigation bar with links for "HOME", "ABOUT", "MEMBER BENEFITS", "ARTISTS ALLEY", "DELRAY BEACH", "CHAMBER", and "ECONOMIC DEVELOPMENT". The main content area features a large image of a building facade with "ARTISTS ALLEY" painted on it, along with three smaller images below showing a beach scene, a night view of a building, and the interior of a venue.

# **My Objective is to accomplish just 3 things**

- **Explore** what is happening around the world with global restoration initiatives and current thinking about ecological restoration.
- **Review** what we know about degradation and restoration in Florida and bring the conversation back to the conference theme: **Renewal**.
- Have a **conversation** and share ideas today and morning forward.



# Restoration: a Global Perspective

## 31 Years Ago

“Particularly hazardous to Florida is the potential for a **global climate change** related to tropical deforestation and the excess burning of fossil fuels. A slight **rise in sea level** could destroy many of our native plant communities...”

“In the United States, and particularly in Florida, preservation has been the basis of the native plant movement. More recently, **restoration** as a conservation alternative has received some attention, although it is certainly not accepted by all.”

“By concentrating on **sustainable development**, rather than preservation, as a goal international conservation movements seem to be moving ahead in terms of meeting the environmental needs of the future.”

George 1985



## All About Birds

### Kirtland's Warbler Range Map

★ Overview    ID Info    Life History    Maps    Sounds  
[Range Map](#)    [Sightings Map](#)



Explore Birds of North America to learn more.

International species require international protection and management

Jack Pine Juggernauts:  
What Will Happen to  
Kirtland's Warblers After  
Delisting?

By Greg Breining; Photos by Craig Watson

June 8, 2017



*Asplenium serratum* L.

Bird's-nest fern, wild birdnest fern



Iguassu Falls, Brazil



Fakahatchee Strand, Florida

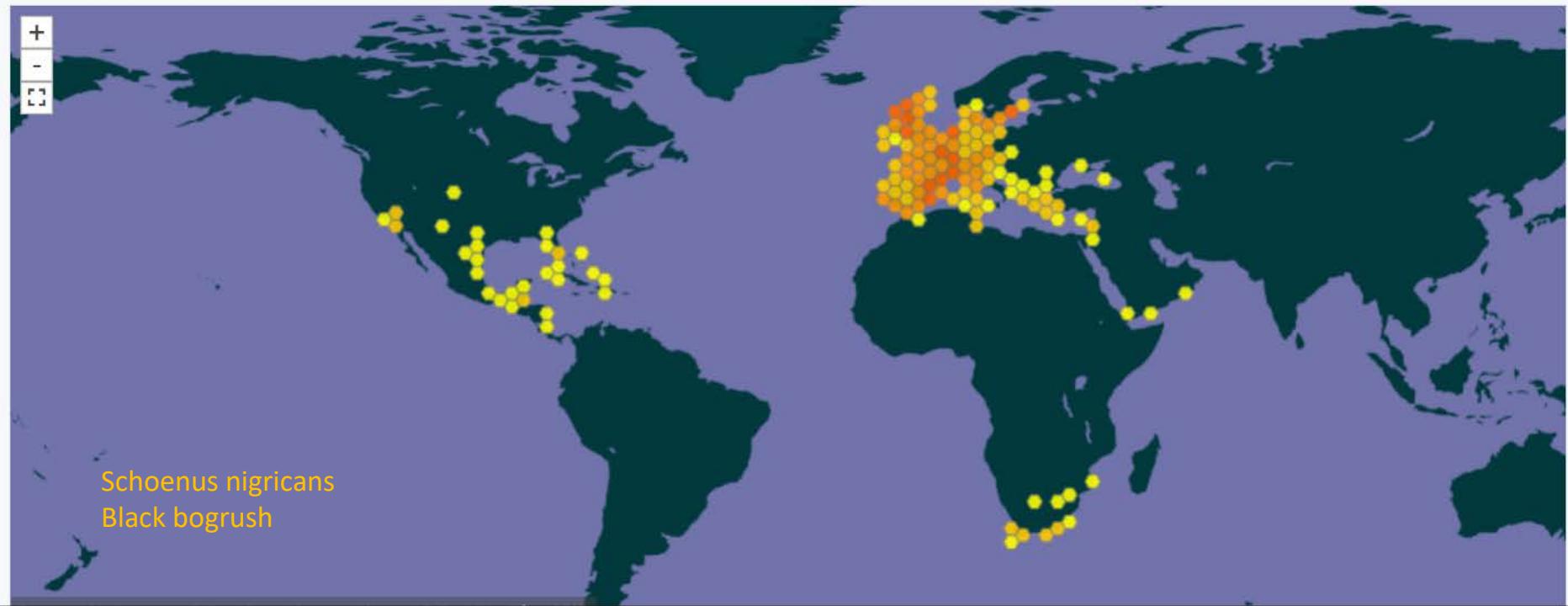


1,311 OCCURRENCE RECORDS WITH IMAGES



SEE GALLERY

22,294 GEOREFERENCED RECORDS



1,300 OCCURRENCE RECORDS WITH IMAGES

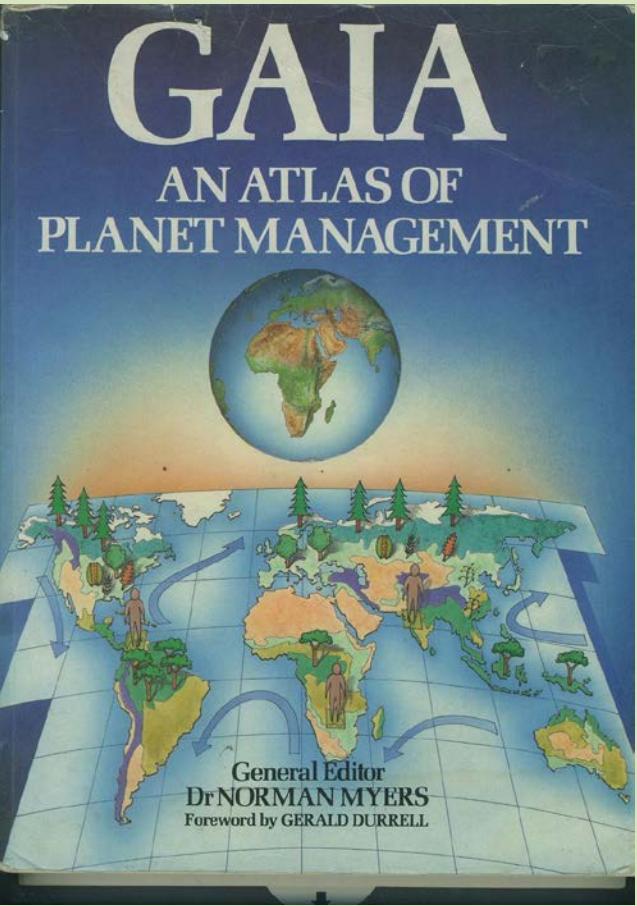


SEE GALLERY

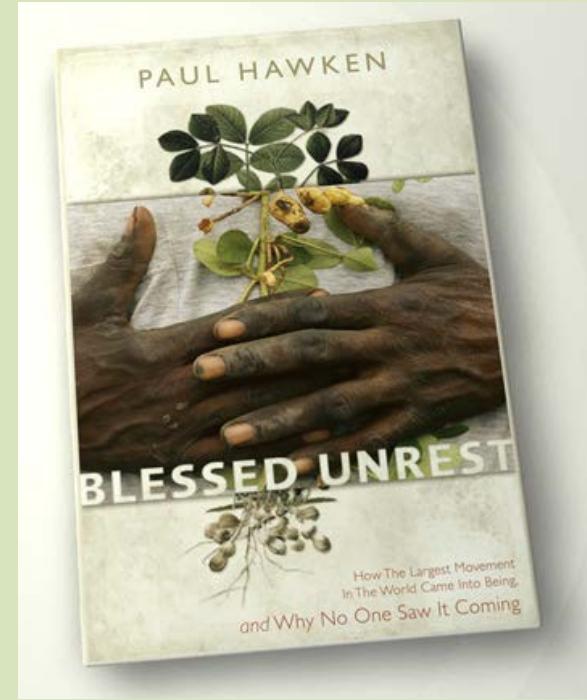
9,348 GEOREFERENCED RECORDS



## Ecological Restoration and Repair Around the World



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



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

# Restoration Resource Center

## Partnering with Nature

THE CASE FOR NATURAL REGENERATION IN FOREST AND LANDSCAPE RESTORATION

### NEW POLICY BRIEF

The potential of natural regeneration as a cost-effective, nature-based tool for restoration is often overlooked. This information brief outlines specific recommendations for policy changes to make natural regeneration an

### SER INT'L STANDARDS

SER's International Standards for the Practice of Ecological Restoration provide a framework for guiding the development and implementation of ecological restoration projects in any ecosystem, anywhere in the world.

## The business perspective in ecological restoration: issues and challenges

Jakki Mohr and Elizabeth Metcalf

### Restoration Ecology

Featured article

### FEATURED ARTICLE

From the March issue of SER's peer-reviewed journal, Restoration Ecology. Much of the practice of restoration is conducted by businesses—contractors, consultants,

## Projects



### BRAZIL: RESTORATION OF THE ATLANTIC FOREST (MATA ATLÂNTICA)

Instituto Terra is a non-profit organization founded in 1999 by Lélia Deliz Wanick Salgado and the renowned photographer Sebastião Ribeiro Salgado. It is located at the Bulcão Farm in Aimorés, Minas Gerais, and it covers an...



### INDIA: MANGROVE RESTORATION IN PALK BAY, TAMIL NADU

The MANGREEN project intends to be a model for the community-based ecological restoration of mangroves through the application of scientific knowledge along with socio-economic development. In September 2005, the project was...



### AUSTRALIA: RETURNING THE BOTANICAL RICHNESS OF THE JARRAH FOREST IN RESTORED BAUXITE MINES IN WESTERN AUSTRALIA

Alcoa World Alumina Australia operates two bauxite mines at Willowdale and Huntly in the Darling Range of southwestern Australia, 80-140 kilometers south of Perth. The mine pits range in size from one hectare to tens of...

[Read more](#)

[Read more](#)

[Read more](#)



**ERA**  
ecological restoration  
alliance of botanic gardens

# Ecological Restoration Alliance of Botanic Gardens

Home About Us ▾ Our Work ▾ Projects and sites Resources ▾ Contact us Support Us Search

## Projects and sites

 **New York Botanical Garden, The Thain Family Forest Program**  
The Thain Family Forest is a 20 ha old growth, urban forest in the heart of the New York Botanical Garden and is the largest remnant of forest that once covered much of New York City. In 2008, the garden created a comprehensive program of research, education, and ecological restoration.  
[Read more](#)

 **Morton Arboretum, The Maintenance and restoration of natural areas and woodland habitats in Northern Illinois**  
The Morton Arboretum is the site of numerous restoration projects. This includes the restoration of a 40 hectare tallgrass prairie and savanna and 280 hectares of oak woodland.  
[Read more](#)

 **Botanic Garden Meise Rescuing critically endangered species in Belgium**  
Botanic Garden Meise is restoring semi-natural grassland habitats in Southern Belgium.  
[Read more](#)

 **Chicago Botanic Garden Restoring McDonald Woods**  
Chicago Botanic Garden is restoring a remnant oak woodland within the grounds of the garden.  
[Read more](#)

 **Jardín Botánico Francisco Javier Clavijero Cloud Forest Restoration Project in Xalapa, Veracruz, Mexico**



Native plant garden & nursery of  
J. Carlos Trejo-Torres, Merida, Mexico

# Santa Maria Ecological Corridor, Parana, Brazil

Headwaters of Itaipu Hydroelectric Dam (14 GW)



*December 29, 2017*

# GRASSLAND RESTORATION IN THE WHITE CARPATHIAN MOUNTAINS

Restoration of  
Semi-natural  
(cultural)  
ecosystems



Fig. 2. Grassland restored with a regional seed mixture  
in the bufferzone of Certoryje National Nature  
Reserve. (I. Jongepierová)



Fig. 3. Brush harvesting. (I. Jongepierová)



[HOME](#)   [THE CONCEPT](#)   [KNEPP WILDLAND](#)   [ABOUT US](#)   [VISIT US](#)   [GALLERY](#)   [NEWS](#)

[READ US](#)

# KNEPP WILDLAND

*rewilding in West Sussex*

[VISIT US - CAMPING, GLAMPING AND SAFARIS](#)

**Rewilding** is based on the reintroduction of grazing animals such as **wisent** (European bison), **European elk** (known in America as moose), **tarpan** (the original wild horse), **aurochs** (the original wild ox), **European beaver** and the omnivorous **wild boar**, together with **red deer** and **roe deer**, including modern analogs of now extinct species.

# The Middle East and North Africa

The screenshot shows the SER website's homepage. At the top left is the SER 30th anniversary logo. Navigation links include SER HOME, DONATE, ABOUT, MEMBERSHIP, CHAPTERS & SECTIONS, PROFESSIONAL DEVELOPMENT, RESTORATION RESOURCES, and a LOGIN link. A banner at the top right says "30 Years of Ecological Restoration". Below the banner, the text "Latest News: Updates from SER" is displayed, followed by a "Email to a Friend" link and a "Latest News" section with a headline "Executive Director Delivers Keynote in Jordan". The date is Friday, May 11, 2018, and it was posted by Rebecca Shoer. There are social media sharing icons for Facebook, Twitter, LinkedIn, and YouTube. A photo of a group of people posing in front of a modern building is shown.



Ecosystem Services Partnership's first Middle East & North Africa (MENA) regional meeting in Dead Sea, Jordan



Dr. Sabah Saifan (left) explains the structure of a native seed and how that structure helps it succeed in nature during a visit to a community restoration project in Irbid province. A local family is funding this restoration project to help improve environmental conditions for the community.

Focus on crop wild relatives, community engagement and women, delivery of ecosystems services.

# Climate protection through soil rehabilitation

Restoring ecosystems in the Burkinabe Sahel, improving agro-pastoral productivity, fighting poverty and desertification.

This project is developed in Burkina Faso



Using termites to restore soils leading to larger restoration gains



HOME STAFF REFERENCE INFO FAQ LAUKAHI NETWORK PRESS DONATE TO PEPP



Hawaii

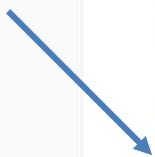
Hawaii is experiencing an **extinction crisis** where 220 plants species have fewer than 50 wild individuals remaining!

Today, PEPP protects 190, or about half, of all Threatened and Endangered plant species in the state. By focusing on efficacy, cost efficiency, and innovation, **we have been successful!**

**We have not lost a single species to extinction since our inception 15 years ago!**

We are a small team of 11 and we accomplish much with very little. For just **\$5,000**, we protect EACH of Hawaii's 220 rarest plant species each year!

Due to the current challenging fiscal climate, PEPP anticipates a 70% funding reduction in 2019. If we are unable to fill our funding gap, species WILL go extinct. We have much to lose and no time to waste.



Focusing on protecting and restoring species with fewer than 50 remaining individuals

Sign up!

# Korean Peninsula



Previous reunification efforts  
in Korean Peninsula and WTO  
restrictions led to **wetland  
mitigation and restoration**  
efforts in South Korea





Artist's rendition of the Beijing New Airport Terminal building. *Methanoia* via Zaha Hadid Architects

## What Does China's 'Ecological Civilization' Mean for Humanity's Future?

2015

### ARTICLE

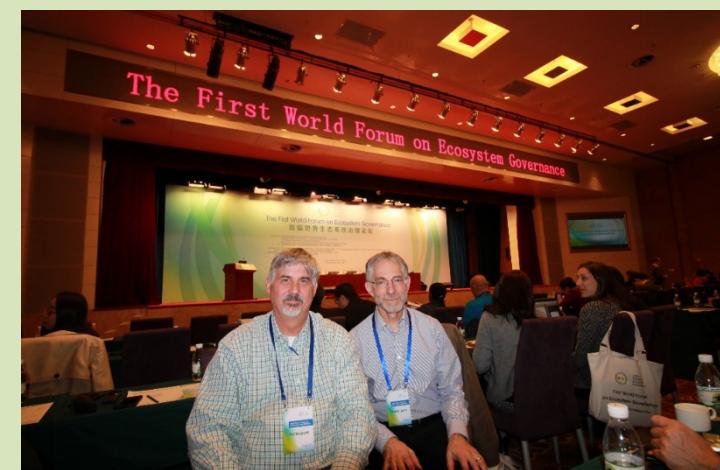
Received 29 Jan 2016 | Accepted 26 Jul 2016 | Published 6 Sep 2016

DOI: 10.1038/ncomms12717

OPEN

## Opportunities for biodiversity gains under the world's largest reforestation programme

Fangyuan Hua<sup>1</sup>, Xiaoyang Wang<sup>2,3</sup>, Xinlei Zheng<sup>4</sup>, Brendan Fisher<sup>5</sup>, Lin Wang<sup>2</sup>, Jianguo Zhu<sup>2</sup>, Ya Tang<sup>4</sup>, Douglas W. Yu<sup>2,6</sup> & David S. Wilcove<sup>1,7</sup>

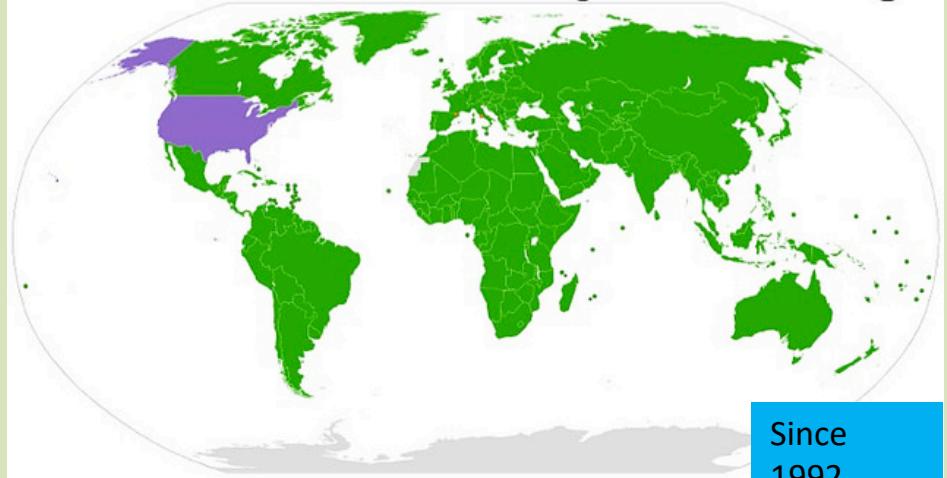


## Global “Restoration” Policy and Initiatives



Warren Harding 1921-1923

**Countries in green have ratified  
the Convention on Biological Diversity**



Since  
1992

[en.wikipedia.org/wiki/Convention\\_on\\_Biological\\_Diversity](https://en.wikipedia.org/wiki/Convention_on_Biological_Diversity)



American nationalism and isolationism is not new

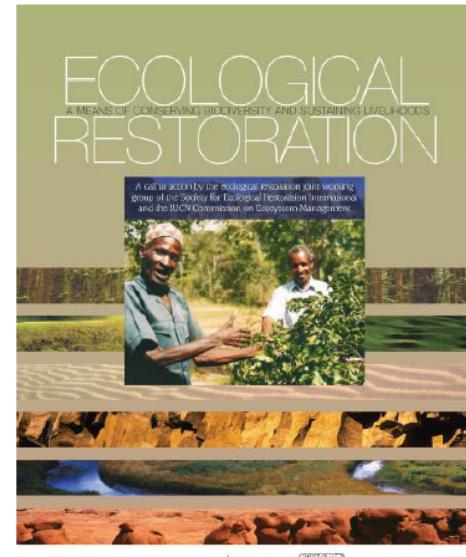
# **Ecological Restoration – a means of conserving biodiversity and sustaining livelihoods**

**A call to action by the ecological restoration joint working group of SER International and the IUCN Commission on Ecosystem Management**

**George D. Gann & David Lamb, editors**

## **Introduction**

Many of the world's ecosystems have undergone significant degradation with negative impacts on biological diversity and peoples' livelihoods. There is now a growing realisation that we will not be able to conserve the earth's biological diversity through the protection of critical areas alone. This paper explains what is meant by the term "ecological restoration" and outlines how it can provide enhanced biodiversity outcomes as well as improve human well-being in degraded landscapes. In this way ecological restoration becomes a fundamental element of ecosystem management, although until recently, its potential has not always been fully



**2006**

Convention on Biological Diversity  
SAFEGUARDING LIFE ON EARTH

25 YEARS

English | Español | Français | Русский | 中文

Sign up for an account | Sign In

Search

The Convention | Cartagena Protocol | Nagoya Protocol | Programmes | Information | Secretariat

**Strategic Plan for Biodiversity 2011-2020**

Key Elements

- Aichi Biodiversity Targets
- Technical Rationale (and Quick Guides)
- Implementation
- Indicators
- Actions
- Quick Guides for the Aichi Biodiversity Targets
- Aichi Biodiversity Targets Icons
- National Biodiversity Strategies and Action Plans (NBSAPs)

> Convention > Strategic Plan 2011-2020 > Aichi Targets

## Aichi Biodiversity Targets

**Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

**Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use

**Strategic Goal C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

**Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services

**Strategic Goal E:** Enhance implementation through participatory planning, knowledge management and capacity building

**Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society**

**Find National Targets**

Click here to view national targets, including national targets linked to the Aichi Biodiversity Targets by Parties.

**Quick Guides for the Aichi**



New Convention on Biological Diversity Aichi Targets Adopted October, 2010

**Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services**

**Target 14**

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

**Target 15**

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.



# Convention on Biological Diversity

Distr.  
GENERAL

CBD/COP/DEC/XIII/5  
10 December 2016

ORIGINAL: ENGLISH

---

## CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

Thirteenth meeting

Cancun, Mexico, 4-17 December 2016

Agenda item 10



## **DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY**

### **XIII/5. Ecosystem restoration: short-term action plan**

*The Conference of the Parties,*

*Recalling Article 8(f) and decisions XI/16 and XII/19,*

*Aware that Parties have identified ecosystem restoration needs in their national biodiversity strategies and action plans and in other national, regional and global strategies and/or plans, and that a number of ecosystem restoration activities are under way with support from various organizations and Governments, and noting that many degraded ecosystems are still in need of restoration,*

# UN-REDD PROGRAMME



SUPPORTING NATIONALLY LED  
REDD+ INITIATIVES IN  
64 DEVELOPING COUNTRIES



## About the UN-REDD Programme

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries was launched in 2008 and builds on the convening role and technical expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).

The UN-REDD Programme supports nationally led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including indigenous peoples and other forest-dependent communities, in national and international REDD+ implementation.

REDD = reduce emissions from deforestation and forest degradation. At the Climate Change Conference in Cancun, Mexico in November/December 2010, UNFCCC COP 16 formally included REDD+ into the international climate regime.



## REDD+ Social & Environmental Standards

Version 2  
10th September 2012

Standards to support the design and implementation of government-led REDD+ programs that respect the rights of Indigenous Peoples and local communities and generate significant social and environmental benefits.

[www.redd-standards.org](http://www.redd-standards.org)



REDD includes activities that **reduce emissions** from deforestation and forest degradation. REDD+ **contributes to conservation** and the **sustainable management** of forests and **enhancement of forest carbon stocks**. Both have the potential to deliver significant social and environmental benefits, but many have also highlighted **serious risks for Indigenous Peoples, local communities, and biodiversity**.

In reality, the restoration component has lagged behind, in part because the demand in the carbon markets is not strong enough.



REDD+  
Safeguards  
Brief

5

## Safeguarding Biodiversity in REDD+

Necessary but not sufficient to help slow global biodiversity loss

Josil P Murray\* and Julia PG Jones\*

\* School of Environment, Natural Resources and Geography (SENRGY), Bangor University, Wales



**2011**

## The Challenge

### A global effort

The Bonn Challenge is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.

It was launched in 2011 by the Government of Germany and IUCN, and later endorsed and extended by the New York Declaration on Forests at the 2014 UN Climate Summit.

Underlying the Bonn Challenge is the [forest landscape restoration \(FLR\) approach](#), which aims to restore ecological integrity at the same time as improving human well-being through multifunctional landscapes.

The [restoration](#) of 150 million hectares of degraded and deforested lands in biomes around the world – in line with the FLR approach – will create approximately USD 84 billion per year in net benefits that could bring direct additional income opportunities for rural communities. About 90 per cent of this value is potentially tradable, meaning that it encompasses market-related benefits. Achieving the 350 million hectare goal will generate about USD 170 billion per year in net benefits from watershed protection, improved crop yields and forest products, and could sequester up to 1.7 gigatonnes of carbon dioxide equivalent annually.

[The history of the Challenge](#)

[The GPFLR](#)

[Champions and initiatives](#)

[Learning programs on restoration](#)

**370 million acres by 2020  
865 million acres by 2030**

2 x Alaska  
By 2030 – is  
that possible?





WORLD  
RESOURCES  
INSTITUTE



# A guide to the Restoration Opportunities Assessment Methodology (ROAM)



## The Global Partnership on Forest and Landscape Restoration

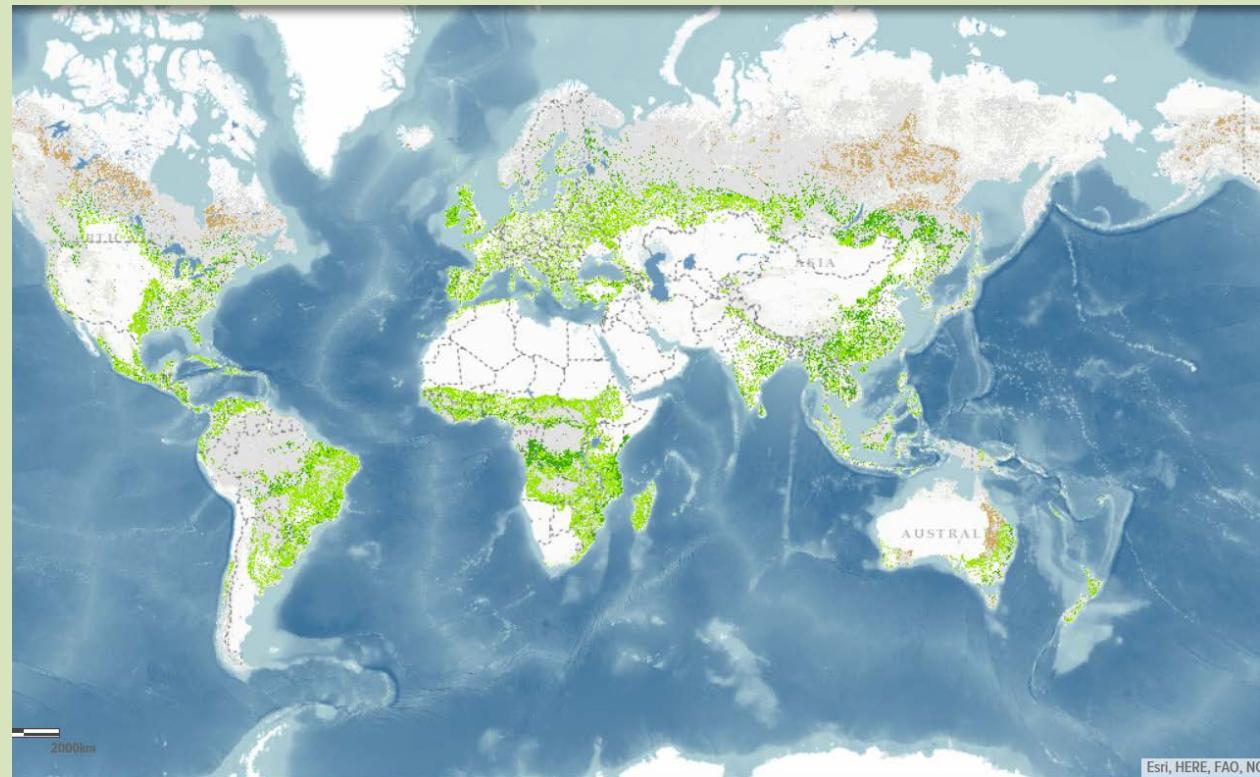
About | Approach & Methods | Topics | Resources | Events

Latest content:

Global headway for Bonn Challenge

A gender specialist's view of response

## FAO Online Forum on FLR



Esri, HERE, FAO, NC

WORLD RESOURCES INSTITUTE

Other Sites ▾

MAKING BIG IDEAS HAPPEN™

What We Do Where We Work Publications Maps & Data Blog News Events About DONATE

Enter a term

Climate Energy Food Forests Water Cities BUSINESS ECONOMICS FINANCE GOVERNANCE

Initiative 20x20

**Initiative 20x20**

Bringing 20 million hectares of degraded land in Latin America and the Caribbean into restoration by 2020.

Initiative 20x20 is a country-led effort to bring 20 million hectares of land in Latin America and the Caribbean into restoration by 2020. The initiative—launched formally at COP 21 in Paris—supports the [Bonn Challenge](#), a global commitment to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030, and the New York Declaration on Forests that seeks to restore 350 million hectares by 2030.

WHAT WE DO

- Topics
- Project Directory
- Top Outcomes
- Our Approach
- Support Our Work

**AFR100** (the African Forest Landscape Restoration Initiative) is a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030. AFR100 contributes to the Bonn Challenge, the African Resilient Landscapes Initiative (ARLI), the African Union Agenda 2063, the Sustainable Development Goals and other targets.

Follow #AFR100

**COMMITMENT TRACKER**

Image: Wikipedia

# September 2015

Welcome to the United Nations. 中文 English Français Русский Español

## SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

Home About Goals Partnerships Take Action News and Media Social Media Watch and Listen

## SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

On September 25th 2015, countries adopted a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years.

For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and people like you.

Do you want to get involved? You can start by telling everyone about them. We've also put together a [list of actions](#) that you can take in your everyday life to contribute to a sustainable future.



# United Nations Convention to Combat Desertification



Search



WHAT IS EVERGREEN AGRICULTURE?

EVERGREEN AGRICULTURE PARTNERSHIP ▾

EVERGREEN NATIONS ▾

NEWS & BLOGS

RESOURCES ▾

CONTACT US

HOME > BLOG

## New land degradation neutrality goal to accelerate global restoration efforts

2015-2030

By Dennis Garrity in Blog on November 30, 2015



The global community has set forth a new goal to tackle the scourge of land degradation and desertification. It could be real breakthrough.

The United Nations Convention to Combat Desertification (UNCCD) had a 'breakthrough moment' after two weeks of discussions and negotiations in Ankara, Turkey in October. The 195 parties to the Convention agreed to a global deal that set a new environmental target: Achieving "land degradation neutrality" by 2030, and thus maintaining the world's stock of healthy, productive land at a stable level.

Currently, 12 million hectares of land is being degraded annually via deforestation and forest degradation, the degradation and loss of agricultural land, and rampant infrastructural development. But the new deal at Ankara commits the UN's members, albeit on a voluntary basis, to restore or rehabilitate at least that much land area every year, which at least will keep things from getting worse. If that goal can be achieved by 2030, then the global community can look toward an even more ambitious target to gradually enable a major net increase in healthy land in future decades.

### RECENT POSTS

Frontiers in alley cropping: Transformative solutions for temperate agriculture

WFP tackles root causes of hunger in Uganda

Bonn Challenge delegates: Commit globally, act locally on landscape restoration

Sustainable development goals progress



New report approved in March,  
due out June, 2018

## Options for Land Restoration

- The report notes that successful **examples of land restoration are found in every ecosystem**, and that many well-tested practices and techniques, both traditional and modern, can avoid or reverse degradation.
- In **croplands**, for instance, some of these include reducing soil loss and improving soil health, the use of salt tolerant crops, conservation agriculture and integrated crop, livestock and forestry systems.
- In **rangelands** with traditional grazing, maintenance of appropriate fire regimes, and the reinstatement or development of local livestock management practices and institutions have proven effective.
- Successful responses in **wetlands** have included control over pollution sources, managing the wetlands as part of the landscape, and reflooding wetlands damaged by draining.
- In **urban areas**, urban spatial planning, **replanting with native species**, the development of '**green infrastructure**' such as parks and riverways, remediation of contaminated and sealed soils (e.g. under asphalt), wastewater treatment and river channel restoration are identified as

# THE BUSINESS OF PLANTING TREES

*A Growing Investment Opportunity*



WORLD  
RESOURCES  
INSTITUTE



SOFIA FARUQI, ANDREW WU, ERIKS BROLIS,  
ANDRÉS ANCHONDO ORTEGA, AND ALAN BATISTA

“There has never been a better time to **invest in land restoration**.”

“Restoring degraded land has the potential to become **big business**.”

“Some entrepreneurs are betting that a **huge new business opportunity** for natural carbon capture and sequestration will emerge as more governments charge a fee for emissions that drive climate change.”

Something Good or Business as Usual in Different Packaging?

# DRAWDOWN

Paul Hawken's new book *Drawdown—The Most Comprehensive Plan Ever Proposed to Reverse Global Warming* is available now.

[DRAWDOWN.ORG](http://DRAWDOWN.ORG)

Paul Hawken is Back (2017)



## Featured Solutions

### ELECTRICITY GENERATION



#### ROOFTOP SOLAR

Rooftop solar is spreading as its cost falls, driven by incentives to accelerate growth, economies of scale in manufacturing, and advances in photovoltaic technology.

RANKING BY 2050

#10

### WOMEN AND GIRLS



#### EDUCATING GIRLS

Education lays a foundation for vibrant lives for girls and women, their families, and their communities. It also avoids emissions by curbing population growth.

RANKING BY 2050

#6

### LAND USE



#### AFFORESTATION

Afforestation—creating forests where there were none before—creates a carbon sink, drawing in and holding on to carbon and distributing it into the soil.

RANKING BY 2050

#15

[BROWSE ALL SOLUTIONS](#)

Great ideas! But afforestation can be a problem.



ABOUT GRANTS PROJECTS EMPOWERING UPDATES CONTACT

## RESTORATION EVIDENCE



Photo credit: Claire Wordley

Search or browse our database of the evidence for the effectiveness of ecological restoration management actions.

Restoration Evidence is a free resource that aims to make ecological restoration more effective by providing evidence on which restoration actions work, and which don't. The searchable website contains summaries of scientific research on the effects of actions to restore habitats, in order to support decision making.

We have currently summarized the evidence for ecological restoration of forests, peatland vegetation, shrublands and heathlands, and farmland, and also restoration actions aimed at enhancing populations of birds, amphibians, bees, bats and primates.

Actions are categorized by the target habitat or species. You can either use the search box or browse by habitats or species of interest using the buttons below. The full Restoration Evidence database is available [here](#).

Browse by category:

 Amphibian Conservation 32 Actions	 Bat Conservation 14 Actions	 Bee Conservation 16 Actions	 Bird Conservation 81 Actions
 Farmland Conservation 50 Actions	 Forest Conservation 81 Actions	 Mediterranean Farmland 16 Actions	 Peatland Conservation 90 Actions
 Primate Conservation 11 Actions	 Shrubland and Heathland Conservation 88 Actions		

*Why use Restoration Evidence?*

And more are coming out of the woodwork...



## Should Some Species Be Allowed to Die Out?

As the list of endangered animals worldwide grows longer, society may soon be faced with an impossible decision: which ones to take off life support.

By JENNIFER KAHN MARCH 13, 2018

New York Times Magazine

Some suggest there are not enough resources to do what we are trying to do now – like prevent extinction – so we should concentrate on “priority” species and ecosystems.

# Novel Ecosystems

Intervening in the New Ecological World Order

Edited by Richard J. Hobbs, Eric S. Higgs and Carol M. Hall



WILEY-BLACKWELL

Emergence of Novel Ecosystems concept, but lack of agreement about what it means exactly, especially in a practical sense.

Higgs 2017, Restoration Ecology

**Table 1.** A variety of ecosystems are divided initially into two groups: self-assembled and designed. Novel ecosystems are categorized as self-assembled. Features pertaining to restoration/intervention and management characterize these ecosystems. In each case, the characterization is open to debate and counterexamples can be easily presented. For example, restored ecosystems are usually managed for ecological integrity but there are also many examples where sustained cultural practices (harvesting, burning) are prominent or project manifest distinctly cultural values (e.g. aesthetic features in the case of many urban restoration projects). Historicity refers to the significance of historical ecosystem composition and processes.

Type of Ecosystem		Restoration/ Intervention Goal	Degree of Intervention	Ongoing Management	Historicity	Management Intention
Self-assembled	Historical	Composition	None-negligible	None-low	Strong	Ecosystem-centered
	Restored	Composition first	Low	Low	Strong	Ecosystem-centered
	Hybrid	Composition and function	Low-moderate	Low-moderate	Moderate-strong	Ecosystem-centered
	Novel	Function first	Low	Low	Low-moderate	Ecosystem-centered
Designed	Reclaimed	Function	Moderate-heavy	Variable, low	Low	Human-centered
	Green infrastructure	Function	Heavy	Variable-heavy	Low, moderate	Human-centered
	Agroecological	Function	Variable, intensive	Variable, moderate	Variable, low	Human-centered

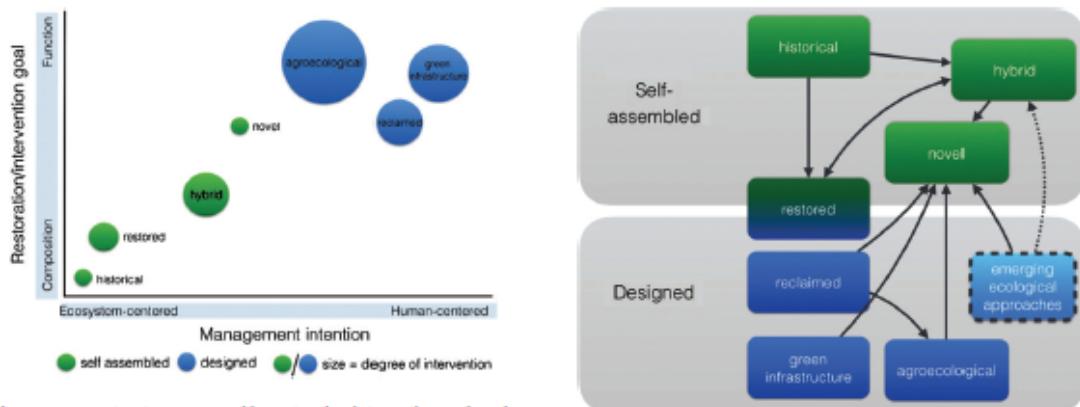


Figure 1. Ecosystem types arranged by restoration/intervention goals and management intention, and based on categorization provide in Table 1.

**Now, this is Novel!**



**So what is Ecological Restoration, Really?**

# Ecological Restoration

*is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed (SER 2004)*

(= ecosystem restoration)



Photo 3

Milltown Dam removal on the Clark Fork River in Montana, USA. The dam trapped 6.6 million cubic yards of mining-contaminated sediment in a 540 acre reservoir (photo 1). This multi-year project rerouted the river, removed the contaminated sediment (photo 1), removed the Milltown Dam (photo 2 - first breach of temporary coffer dam to drain reservoir/remove full dam) and ultimately restored the river channel (photo 3) and the natural confluence of the Clark Fork and Blackfoot Rivers.



## INTERNATIONAL STANDARDS FOR THE PRACTICE OF ECOLOGICAL RESTORATION – INCLUDING PRINCIPLES AND KEY CONCEPTS

FIRST EDITION: December 2016

Tein McDonald, George D. Gann, Justin Jonson,  
Kingsley W. Dixon



**George Gann** (Global Restoration Ambassador, Society for Ecological Restoration, USA)

**Tein McDonald** (Board member, Society for Ecological Restoration Australasia, Australia)

Global Launch, 12 December 2016  
Convention on Biological Diversity,  
COP 13 Cancun, Mexico



UN BIODIVERSITY CONFERENCE  
**COP13 -COPMOP8-COPMOP2**  
**CANCUN, MEXICO 2016**

MAINSTREAMING BIODIVERSITY FOR WELL-BEING



# Is all restoration ecological restoration?



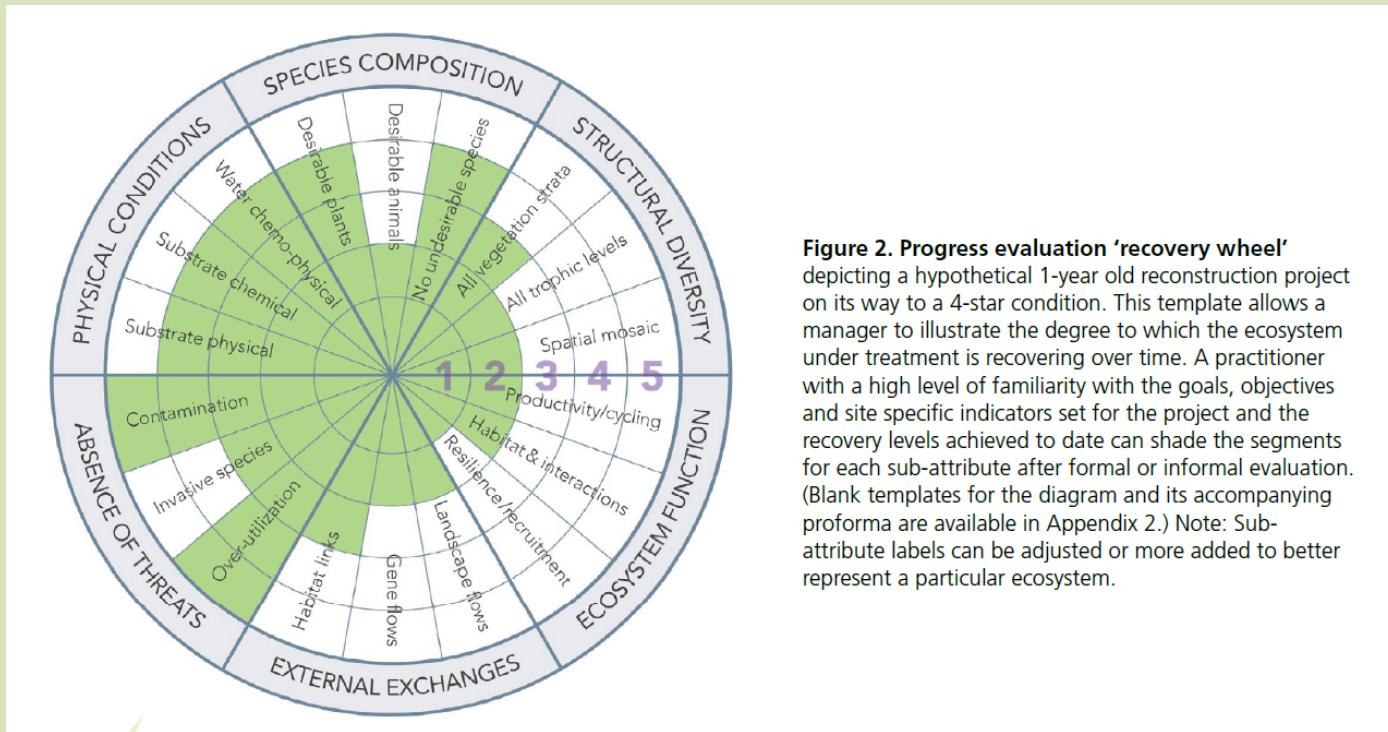
What is the minimum standard for a project to be called an ecological restoration project?

## **Section II - Six Key Concepts Underpinning Best Practice**

### **KEY CONCEPT 1.**

Ecological restoration practice is based on an  
**appropriate local native reference  
ecosystem, taking environmental change into  
account**

# Recovery Wheel



**Figure 2. Progress evaluation 'recovery wheel'**  
depicting a hypothetical 1-year old reconstruction project on its way to a 4-star condition. This template allows a manager to illustrate the degree to which the ecosystem under treatment is recovering over time. A practitioner with a high level of familiarity with the goals, objectives and site specific indicators set for the project and the recovery levels achieved to date can shade the segments for each sub-attribute after formal or informal evaluation. (Blank templates for the diagram and its accompanying proforma are available in Appendix 2.) Note: Sub-attribute labels can be adjusted or more added to better represent a particular ecosystem.

Hypothetical project on track toward 4-star recovery

## KEY CONCEPT 5.

Successful restoration draws on **all relevant knowledge**

## KEY CONCEPT 6.

Early genuine and active **engagement with all stakeholders** underpins long term restoration success.



# Full recovery may take a long time

- Look beyond individual projects, technology.
- Look for opportunities and adopt a policy of continuous improvement.



Initial restorative activities such as single-species revegetation projects can be transformed over time into diverse 4-star to 5-star restoration projects. Left, Bethany Beach, Delaware, USA, ©ER&M/Biohabitats. Right, Delray Beach, Florida, USA ©George D. Gann.

## RESTORATIVE CONTINUUM

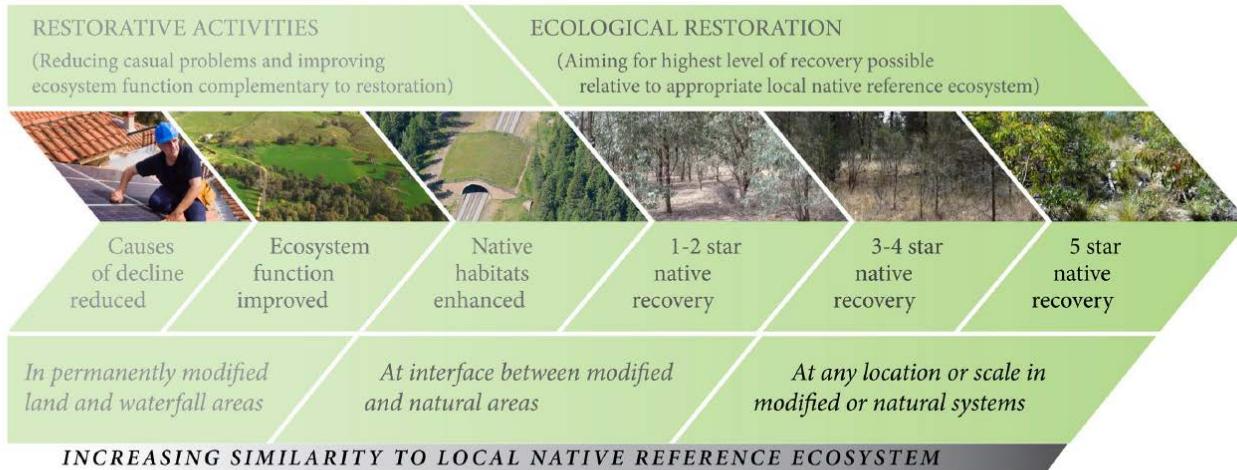


Photo credits: (from left): 1. Used under license from Shutterstock.com; 2: ©S. Triggs: Inglis Rural; 3: ©Marcel Huijser; 4 and 6: ©T. McDonald; 5: ©J. Jonson

**Figure 3. Restorative continuum.** Ecological restoration and restorative management can be seen to be aligned along a 'restorative continuum' where a broad range of activities undertaken by society to repair damage to the broader environment, complement ecological restoration and provide improved conditions for broad scale recovery.

All restorative activities matter, no matter how small. But some activities may not be restorative at all (e.g., some mitigation, afforestation of native savanna).

## STRATEGIC ISSUES ARTICLE

### On principles and standards in ecological restoration

Eric Higgs<sup>1,2</sup> , Jim Harris<sup>3</sup>, Stephen Murphy<sup>4</sup>, Keith Bowers<sup>5</sup>, Richard Hobbs<sup>6</sup>, Willis Jenkins<sup>7</sup>, Jeremy Kidwell<sup>8</sup>, Nikita Lopoukhine<sup>9</sup>, Bethany Sollereder<sup>10</sup>, Katherine Suding<sup>11</sup>, Allen Thompson<sup>12</sup>, Steven Whisenant<sup>13</sup>

The Society for Ecological Restoration (SER) has long debated how to define best practices. We argue that a principles-first approach offers more flexibility for restoration practitioners than a standards-based approach, is consistent with the developmental stage of restoration, and functions more effectively at a global level. However, the solution is not as simple as arguing that one approach to professional practice is sufficient. Principles and standards can and do operate effectively together, but only if they are coordinated in a transparent and systematic way. Effective professional guidance results when standards anchored by principles function in a way that is contextual and evolving. Without that clear relation to principles, the tendency to promote performance standards may lead to a narrowing of restoration practice and reduction in the potential to resolve very difficult and diverse ecological and environmental challenges. We offer recommendations on how the evolving project of restoration policy by SER and other agencies and organizations can remain open and flexible.

**Key words:** codes of ethics, principles, professional practice, scope of restoration, standards

#### Implications for Practice

- A flexible, open approach to restoration practice is required to address a rapid scaling up of restoration investment, climate change, human needs, scientific uncertainties, and locally appropriate innovations in practice.
- A principles-first approach exemplified in the Society for Ecological Restoration's "Code of ethics" and "Ecological restoration in protected areas" offers flexible and adaptable models for professional practice in a wider variety of settings.
- An approach to professional practice based on performance standards may limit innovation and the reach of ecological restoration.
- Principles and standards can operate effectively together, but only if carefully coordinated and, generally, principles

truly a remarkable time for the often urgent tasks of helping recover damaged, degraded, or destroyed communities, ecosystems, and landscapes.

The Society for Ecological Restoration (SER) has introduced a succession of policies to guide practice. From discussions in the 1980s and 1990s about the definition of restoration through the *SER International Primer on Ecological Restoration* (SER 2004) and subsequent guidance including the *Code of ethics* (SER 2012), the joint World Commission on Protected

Author contributions: All contributors wrote and edited the article.

<sup>1</sup>School of Environmental Studies, University of Victoria, Victoria, British Columbia, Canada V8P 5C2; and Groningen Institute for Evolutionary Life Sciences, University of Groningen, University of Groningen, Groningen 9700 AC, The Netherlands.

<sup>2</sup>Address correspondence to E. Higgs, email: ehiggs@uvic.ca

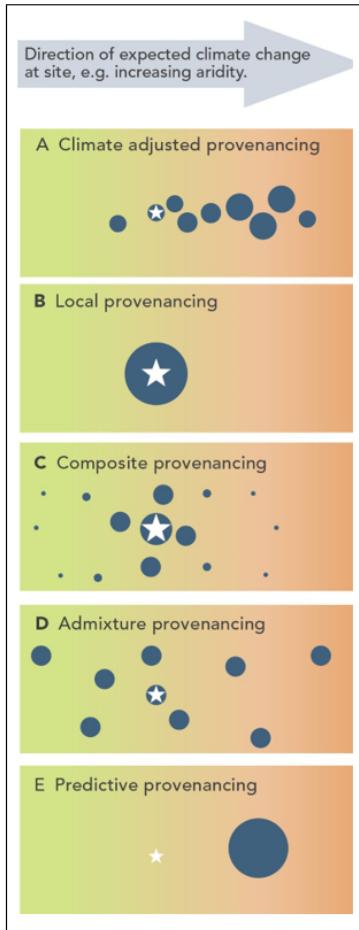
<sup>3</sup>Cranfield Institute for Resilient Futures, Cranfield University, Cranfield MK43 0AL, U.K.

<sup>4</sup>School of Environment, Resources, and Sustainability, University of Waterloo,

But not everyone is happy.

What a surprise!

# International Standards is a Living Document



**Figure 5. Provenancing strategies for revegetation,** (Reproduced here from Prober et al 2015) The star indicates the site to be revegetated, and the circles represent native populations used as germplasm sources. The size of the circles indicates the relative quantities of germplasm included from each population for use at the revegetation site. In the case of the climate-adjusted provenancing the relative quantities of the germplasm from the various populations will depend upon factors such as genetic risks, and the rate and reliability of climate change projections. For simplicity this represents the major direction of climate change in a single dimension (e.g., aridity, to combine influences of increasing temperature and decreasing rainfall), but multiple dimensions could be considered as required.

First revision due out November 2018

We are:

1. improving the **restorative continuum** with respect to the ecosystem-landscape nexus;
2. clarifying that **restoration targets** must allow for temporal change – an inherent property of all ecosystems;
3. strengthening the discussion of **cultural-social elements** including traditional cultural ecosystems and semi-natural ecosystems; and,
4. Considering **provenance issues** – note that this pertains within species ('assisted migration' is largely not accepted).



native ecosystem



All Images Videos Maps News | My saves

Also try: native ecosystems northwest llc · native ecosystems northwest

52,900,000 Results

Any time ▾

A **native** (indigenous) species is one that occurs in a particular region, **ecosystem**, and habitat without direct or indirect human actions (Kartesz and Morse 1997; Richards 1998). Species **native** to North America are generally recognized as those occurring on the continent prior to European settlement.

An Introduction to Using Native Plants in Restoration ...

[www.nps.gov/plants/restore/pubs/intronatplant/whyusenatives.htm](http://www.nps.gov/plants/restore/pubs/intronatplant/whyusenatives.htm)

Is this answer helpful?

Google

"native ecosystem"

All Images Shopping News Videos More Settings

About 39,800 results (0.39 seconds)

The 'Cloud-Native' Ecosystem – Memory Leak – Medium

<https://medium.com/memory-leak/the-cloud-native-ecosystem-f0484fb3d57f> ▾

Aug 28, 2015 - The "Cloud-Native" Ecosystem presentation is the consequence of many conversations with developers, CIOs and founders who are playing a ...

Edge Computing and the Cloud-Native Ecosystem - The New Stack

<https://thenewstack.io/edge-computing-and-the-cloud-native-ecosystem/> ▾

Apr 18, 2018 - Low latency, reduced bandwidth, reduced backhaul — these are the axioms of computing, the process of moving intensive workloads ...

Images for "native ecosystem"



→ More images for "native ecosystem"

## Some Open Questions

- What is a native plant (or animal) in the age of change?
- What is a native ecosystem?
- What is the role of people in native ecosystems, past and present?



# Florida Native Plant Society

Who We Are ▾ What We Do ▾ Native Plants ▾ Resources ▾ Events ▾ Chapters Join / Support ▾

Home > Native Plants > Native Plant Definition

### Native Plant Definition



A "Florida native plant" refers to a species occurring within the state boundaries prior to European contact, according to the best available scientific and historical documentation. Florida native plants include those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape.

#### Other Terms to Know

Naturalized —

The term "naturalized plant" refers to a non-native species that is growing on its own in nature.

It differs from "native plant" in that it may have originated as a garden escape, an agricultural escape, or an ornamental introduction.

**Ecological Restoration has become widespread and adopted by organizations at all scales across the globe along with many other related activities**

**The Promise.** Ecological Restoration can:

- protect and recover biodiversity (ecosystems, species, genes)
- increase the delivery of ecosystem services, including climate change mitigation and adaptation
- help “re-establish an ecologically healthy relationship between nature and culture”

**Some of the Perils:**

- Using restoration as an excuse for destruction
- Promising more than we can deliver
- Not planning for change (e.g., lack of adaptive management)
- Creating perverse subsidies leading to collateral damage
- Conflating Ecological Restoration with other things, some good, some bad
- Not recognizing that small contributions matter
- Getting obsessed with our own projects and losing site of the big picture
- Ignoring stakeholders and failing to build constituencies of support
- Not being creative enough, not accepting new ideas and techniques

**And What About Florida?**



Trichocentrum undulatum, 1916

## Our Issues (to name a few)

- Habitat destruction
- Collecting and poaching
- Destruction of natural hydrology
- Urbanization and fragmentation
- Coastal erosion
- Invasive species
- Fire suppression
- Loss of pollinators and dispersers
- Sea level rise
- Extreme weather
- Climate change
- Ignorance
- Apathy
- Greed

## Our Solutions (in part)

- We document the extinction of species and the destruction of ecosystems, the depletion of rare species and the degradation of habitats
- We acquire protected areas and write management plans
- We fence, collect, grow, plant, chop, burn, spray, weed, bulldoze, rip, tear, water, augment, reintroduce and garden
- We learn, study, collate, disseminate and experiment
- We develop tools and new technologies
- We educate, volunteer, advocate and protest
- We hope and plan for a better future





We Restore  
Degraded Ecosystems,  
Small and Large



National Park  
Florida

INFO ALERTS MAPS CALENDAR RESERVE

NPS.gov / Park Home / Learn About the Park / Science & Research / Research Programs / Comprehensive Everglades Restoration Plan (CERP)

## Comprehensive Everglades Restoration Plan (CERP)

The CERP was authorized by Congress in 2000 as a plan to "restore, preserve, and protect the south Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection." At a cost of more than \$10.5 billion and with a 35+ year time-line, this is the largest hydrologic restoration project ever undertaken in the United States.

## Some Things We Should Consider



Carica papaya

Humility is  
important. What  
we know today may  
not be what we  
understand  
tomorrow.

# We understand so much, but we still have basic work to do.

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

Family:	ASPLENIACEAE
Species:	<i>Asplenium cristatum</i> Lam.
Common Name:	HEMLOCK SPLEENWORT
Status:	Native, <a href="#">FAC (NWPL)</a>
Specimen:	<a href="#">View details of USF Herbarium specimens</a>

\*\* Not applicable or data not available.

**Classification**

Order	POLYPODIALES
Family	ASPLENIACEAE
Genus	<i>Asplenium</i>
Species	<i>Asplenium cristatum</i> Lam. - HEMLOCK SPLEENWORT

**Citation**

Citation	ASPLENIUM CRISTATUM Lamarck, Encycl. 2: 310. 1786.
Basionym:	**
Type:	PUERTO RICO: Without data, Ledru s.n. (lectotype: P). Lectotyphified by C. V. Morton & Lellinger, Mem. New York Bot. Gard. 15: 31. 1966.

\*\* Not applicable or data not available.

**Not listed by FNAI or FDACS.**

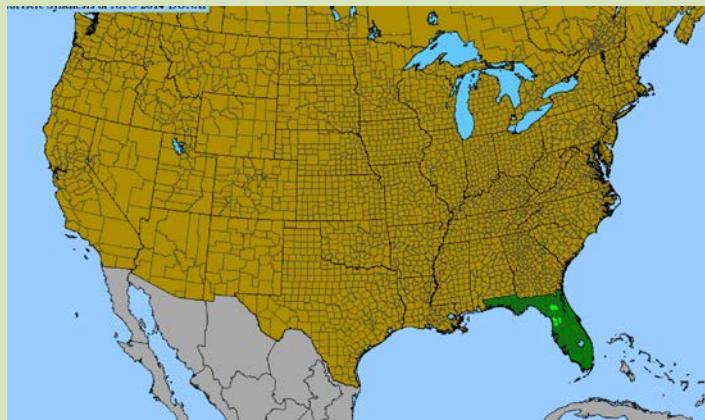
**Map** | No Photos Available

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 Distribution Map  
■ Not Vouchered  
■ Vouchered

**Species Links**

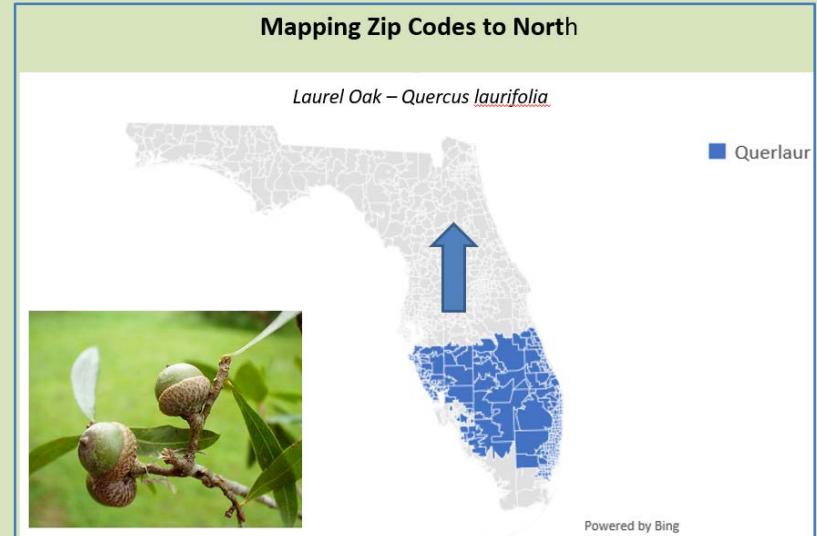
- Biota of North America Program (BONAP)
- EDD Maps
- Flora of North America
- NatureServe Explorer



# Identify Opportunities



# Use Available Tools (and make them better!)



The screenshot shows the homepage of the "Natives For Your Neighborhood" website. The header features the logo "Natives For Your Neighborhood" and the tagline "Conservation of rare plants, animals, and ecosystems". It includes links for "Donate Now", "Subscribe", "Home", "NFYN Home", "Citation", "About NFYN", "Map", and "Online Resources".

**A Resource to Help Change a Backyard Hobby for a Few into a Powerful Conservation Tool for 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 South Florida ZIP Code here:

If you would like to learn more about native plants and the importance of conserving them, or how to use this website, see the topics at right.

## How Does It Work?



- County Lists – Ecological generalist with broad ranges (95% rule)
- ZIP Code Lists – Ecological generalists + generalists within local habitats
- Habitat Lists – Generalists + habitat specialists within historical range within ZIP Code

# Be Creative and Have Fun

The Institute for Regional Conservation

Page Inbox 1 Notifications 7 Insights Publishing Tools Promotions

# The Institute for Regional Conservation @regionalconservation

**Home**

About Events Photos Jobs Videos Community Groups Reviews Posts Join My List

Promote Manage Promotions

**John Miller** Everyone did a great job! It's going to be a fantastic park eventually! Here's a pic of Ian's boat making a delivery.



Like · Reply · Message · 3d

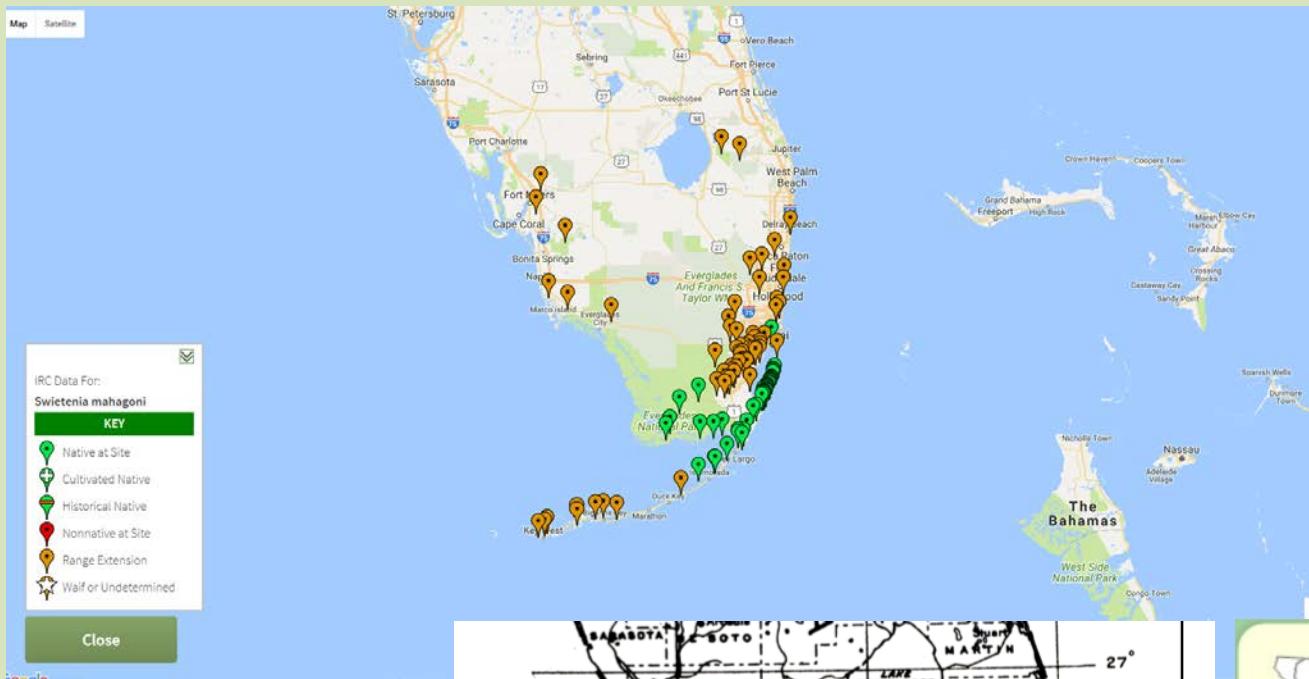
1 Reply

**Bill Bathurst** great work , sorry I missed this one

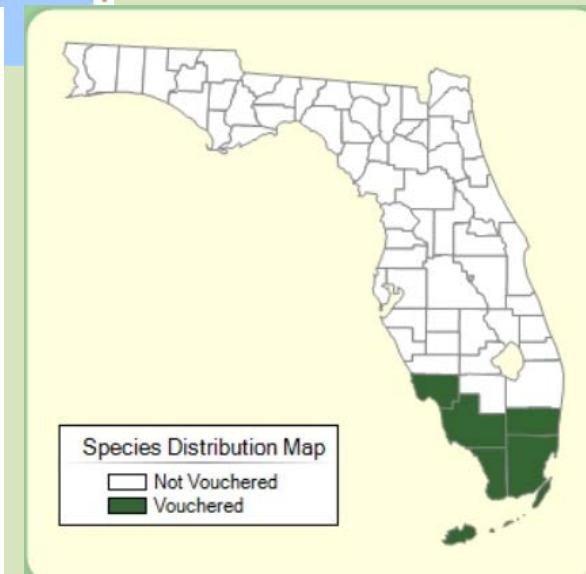
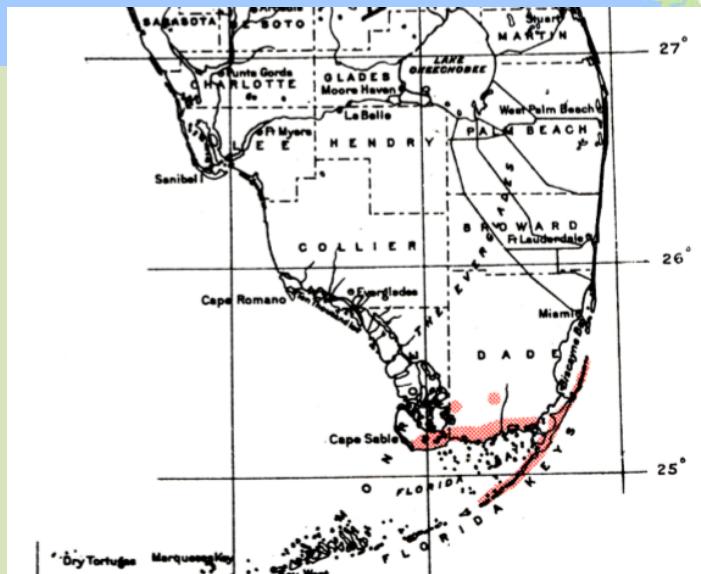
Like · Reply · Message · 3d

See All

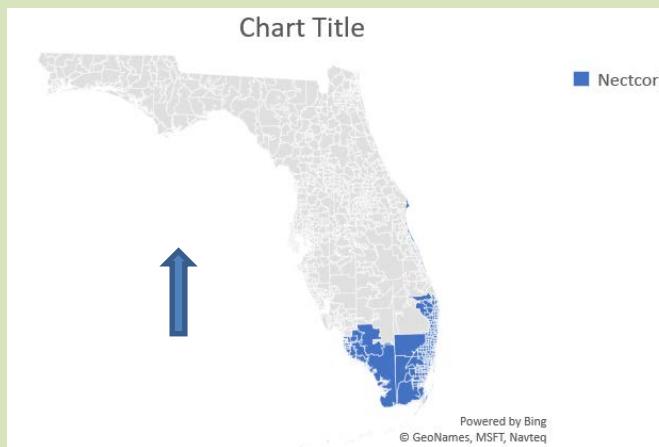
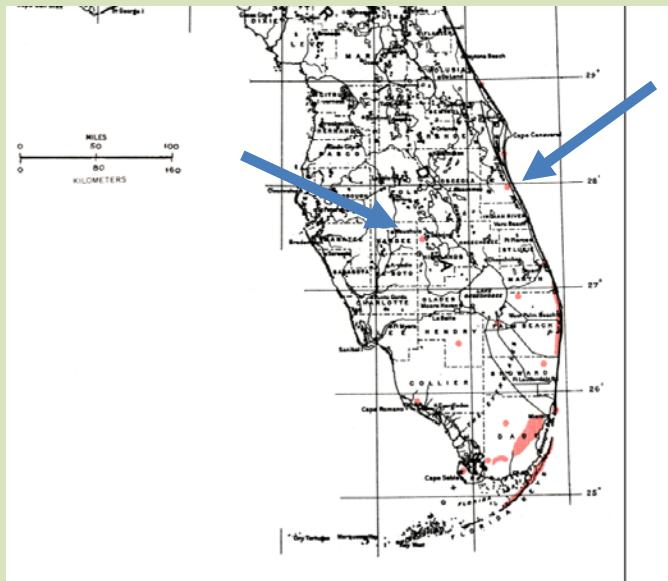
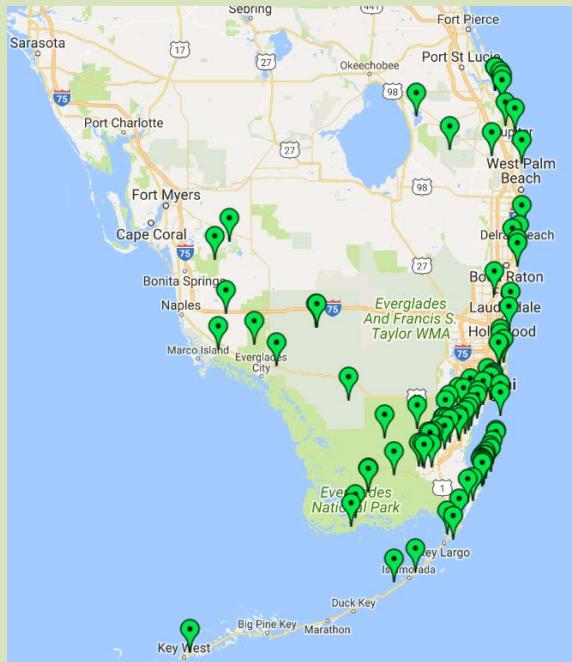
# Be Thoughtful



West Indian Mahogany  
*Swietenia mahagoni*



# Plan for Change (e.g., Climate Change and Sea Level Rise)



Lancewood – *Nectandra coriacea*

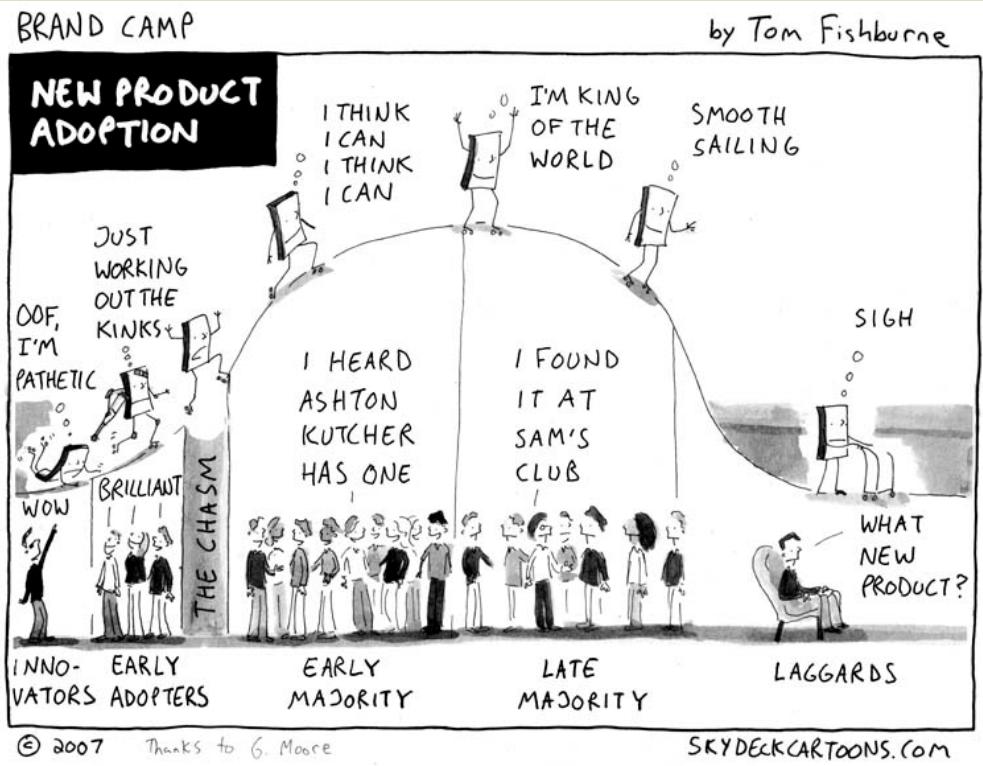
# Celebrate Success!



Delray Beach c. 1980,  
Delray Beach 2016



# Play the Long Game



Thanks!  
(and happy Endangered Species Day)

