

**Botanic Gardens Conservation International**  
*The world's largest plant conservation network*



# Gap Analysis to Support Ex situ Collections Development

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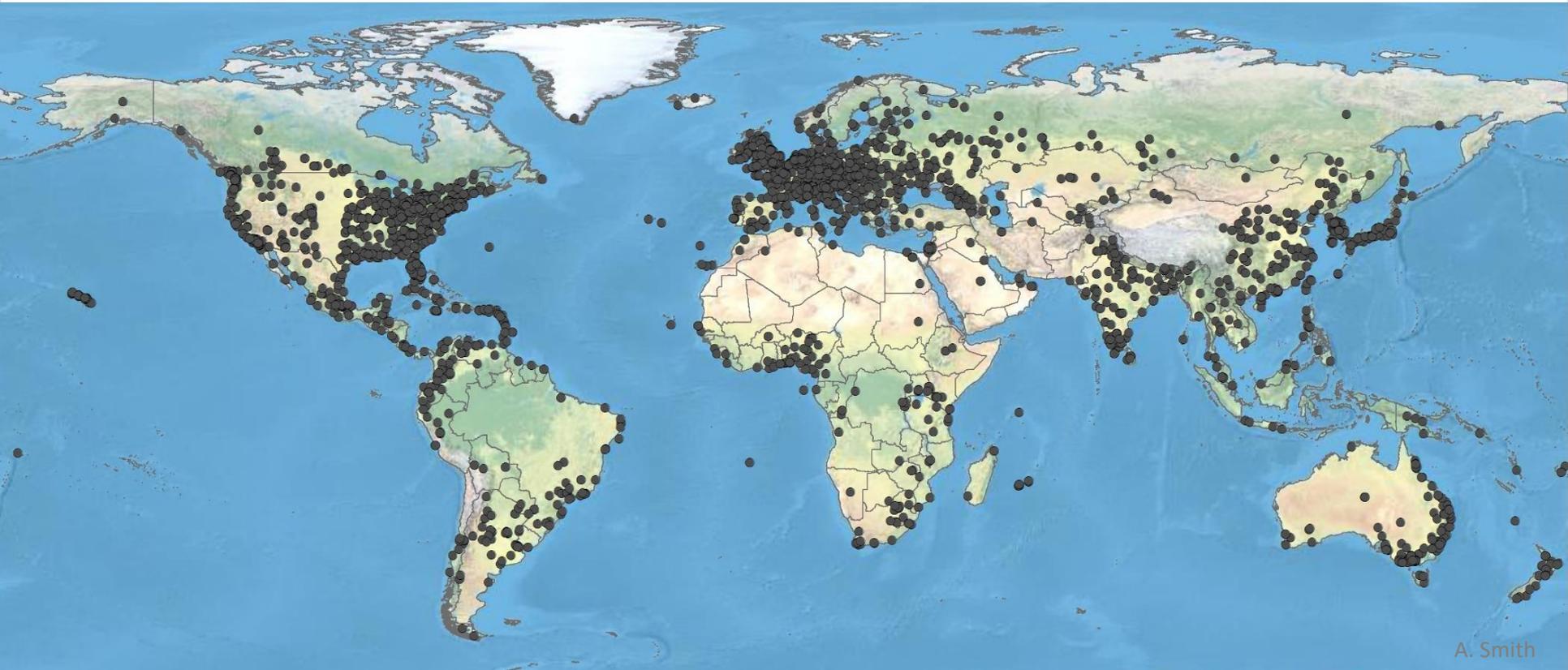


# A global network



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A. Smith



# Living Collections



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# Quarryhill Botanical Garden

Glen Ellen, CA



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# Mercer Botanic Gardens

## Humble, TX



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# Naples Botanical Garden

## Naples, FL



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# Plant Conservation Strategies

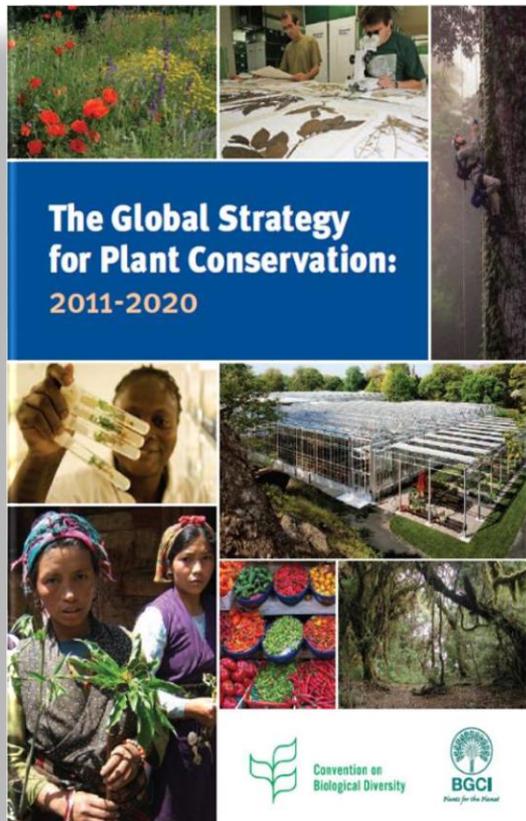


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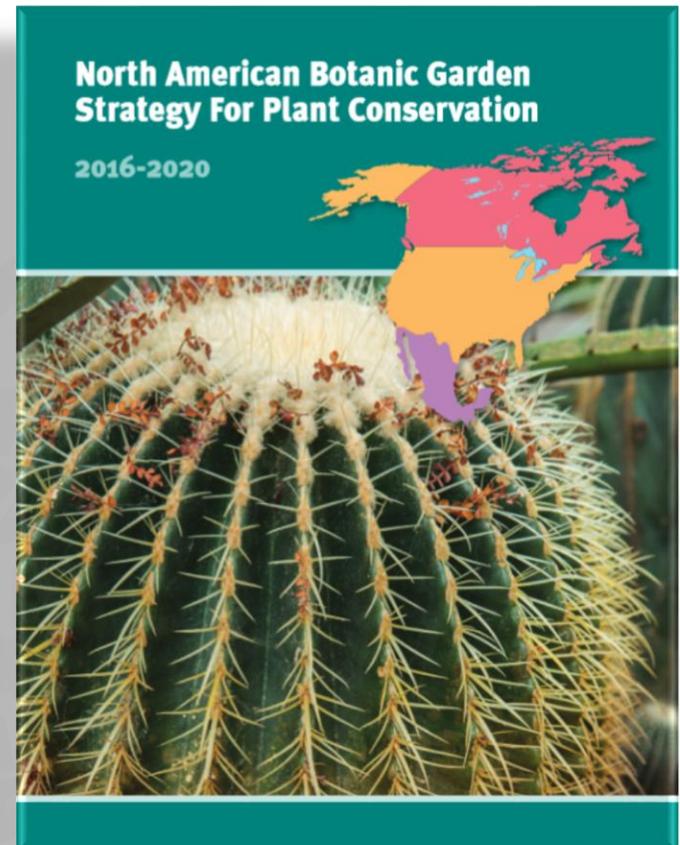
## Target 8

At least 75 percent 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.



## Sub-target B2

Botanic gardens will expand ex situ conservation efforts and partnerships.





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Botanic gardens  
collectively protect  
over 40% of known  
threatened species



# GardenSearch



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BGCI > GardenSearch

## Welcome to GardenSearch!



GARDEN  
SEARCH

Providing gardens with a visible web presence, even when they don't have a website, GardenSearch is the only global source for information on botanic gardens. The database includes information on over 3,423 botanical institutions worldwide.

### GardenSearch allows you to:

- Locate botanic gardens in your neighbourhood and around the world
- Identify botanic gardens with specific resources and expertise (keyword search)
- Identify botanic gardens with specific features, facilities and programmes ([Advanced Search](#))

Any botanic garden (or other institution with a documented plant collection) not already included in GardenSearch [can create and manage their own page](#).

Geographically:

Keyword:

BGCi Members only  International Agenda Registrants  ArbNet Accredited

[Search Gardens](#)

[Advanced Search](#)

## Advanced Garden Search

Use this Advanced Search to identify expertise, facilities, and resources at botanical institutions around the world. Just select one or more search criteria from the list below, and click on **Search Gardens** to identify all gardens that meet your selected criteria.

### Garden details

Country:

Institution type:

Keyword:

BGCi Members only  International Agenda Registrants  ArbNet Accredited

[Search Gardens](#)

+ [Expand ALL fields](#)

- + Public features and facilities
- + Research or conservation features and facilities
- + Plant Collections
- + Conservation Programmes
- + Conservation/Ecology Research Programmes
- + Plant Biology and Related Research Programmes
- + Education Programmes

[Search Gardens](#)



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## New England Wild Flower Society - Garden in the Woods

United States of America - Massachusetts - Framingham



Garden Information

Restoration Projects

**Institution Code:** NEWF

International Agenda Registration: Yes

BGCI Member: Yes



### About the New England Wild Flower Society - Garden in the Woods

New England Wild Flower Society's Garden in the Woods is New England's premier wildflower showcase and is accredited by the American Association of Museums. Begun in 1931, the Garden has grown through the years and now encompasses a collection of more than 1500 native species and cultivars of which 150 are rare and endangered. Located 20 miles west of Boston, from April and May's spring ephemerals to summer's blooming meadow through October's fiery foliage, the Garden displays an ever-changing tapestry of flowers and foliage.

Founded in 1900, New England Wild Flower Society is the oldest plant conservation organization in the United States. Through our leadership, the Society protects native plants and their habitats with the goal of ensuring that they will exist in vigorous populations within healthy, evolving ecosystems and of engaging a broad range of people to actively promote and protect them in the wild and in their gardens.

**Main Address:**

New England Wild Flower Society - Garden in the Woods  
180 Hemenway Road  
Framingham  
Massachusetts 01701-2699 United States of America

**Telephone:** (508) 877-7630

**Fax:** (508) 877-3658

**URL:** [www.newenglandwild.org](http://www.newenglandwild.org)

**Primary Email:** [information@newenglandwild.org](mailto:information@newenglandwild.org)

### About the Garden

Institution Type: Botanic Garden

**Status**

Status: Private: Yes

Status: Educational: Yes

Date founded: 1931

**Physical Data**

Natural Vegetation Area: Yes

Natural vegetation area: Size: 10 Hectares

Landscaped Area: Yes

Landscaped Area: Size: 8 Hectares

Total Area: 18 Hectares

Latitude: 42.3409959

Longitude: -71.4275150

Altitude: 0.00 Metres

### Features and Facilities

Herbarium: Yes

Arboretum: No

Micropropagation/ Tissue Culture Facilities: No

Seed Bank: Yes

Published Plant Catalogue: No

Computer Plant Record System: Yes

Open to public: Yes

Friends society: Yes

Retail Outlet: Shop: Yes

Retail Outlet: Plant Sales: Yes

Disabled access: Yes

Number of Visitors: 20000

Number of Volunteers: 230

### Plant Collections

Accession Number: 4807

Cultivation Taxa Num: 1569

### Conservation Programmes

Conservation Programme: Yes

Medicinal Plant Programme: Yes

Ex Situ Conservation Programme: Yes

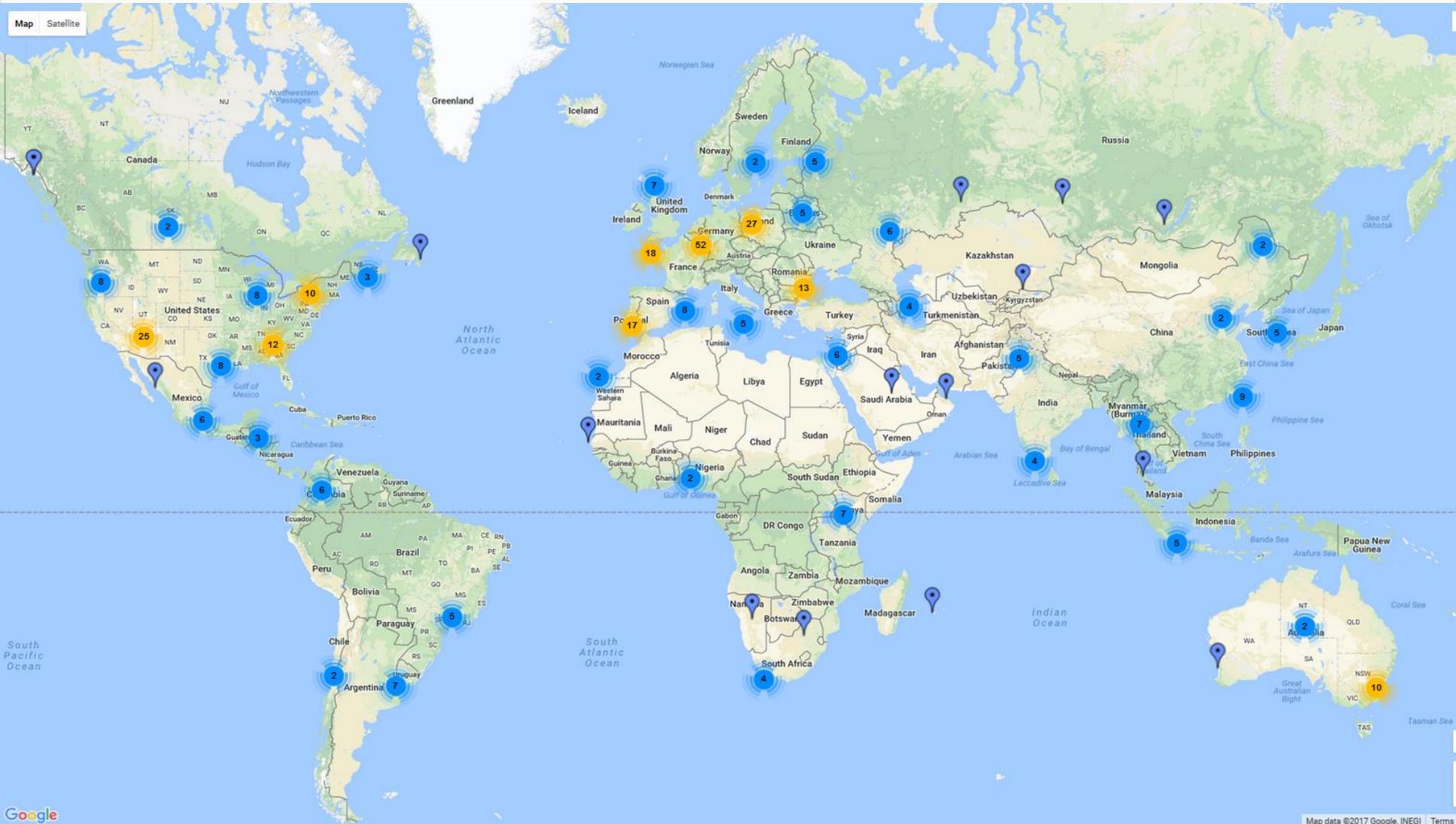
Reintroduction Programme: Yes

### Research Programmes

### Education Programmes



# Locations of gardens with seed banks



# PlantSearch



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## Welcome to PlantSearch!

English (EN) | [En Español \(ES\)](#) | [日本語で \(JA\)](#)



The only global database of living plant, seed and tissue collections:

- Search 1,321,861 collection records, representing 533,991 taxa, at 1,087 contributing institutions
- Locate threatened, rare, medicinal and other plant species in living collections

- Connect with living collections to aid your conservation, education and research efforts

### Enter search criteria below (all fields optional)

Scientific name:     Exclude cultivar names  
 Genus Species Infraspecific Epithet

#### Conservation Status:

#### Additional Status:

IUCN Red List  Crop Wild Relative

IUCN Red List 1997   Medicinal plant species

CITES listed species

Threatened Global Trees Campaign species

[Which IUCN list should I choose?](#)

[Search Plants](#)

#	Plant Name	Name Status	IUCN Red List	IUCN Red List 1997	CITES Appendix	Invasive Species Compendium fact sheet	CWR	No. of ex situ sites worldwide	Contact ex situ sites
1	<a href="#">Abies alba</a>	-	<a href="#">Least Concern</a>	-	-	<a href="#">Look Up</a>	-	128	<a href="#">Send Request</a>
2	<a href="#">Abies amabilis</a>	-	<a href="#">Least Concern</a>	-	-	<a href="#">Look Up</a>	-	49	<a href="#">Send Request</a>
3	<a href="#">Abies balsamea</a>	<a href="#">Accepted</a>	<a href="#">Least Concern</a>	-	-	<a href="#">Look Up</a>	-	115	<a href="#">Send Request</a>
4	<a href="#">Abies balsamea var. balsamea</a>	<a href="#">Synonym</a>	<a href="#">Least Concern</a>	-	-	<a href="#">Look Up</a>	-	6	<a href="#">Send Request</a>
5	<a href="#">Abies balsamea var. phanerolepis</a>	-	-	-	-	-	-	1	<a href="#">Send Request</a>
6	<a href="#">Abies beshanzuensis</a>	<a href="#">Accepted</a>	<a href="#">Critically Endangered</a>	-	-	-	-	1	<a href="#">Send Request</a>
7	<a href="#">Abies bracteata</a>	<a href="#">Accepted</a>	<a href="#">Near Threatened</a>	Rare	-	<a href="#">Look Up</a>	-	27	<a href="#">Send Request</a>
8	<a href="#">Abies cephalonica</a>	<a href="#">Accepted</a>	<a href="#">Least Concern</a>	-	-	<a href="#">Look Up</a>	-	103	<a href="#">Send Request</a>
9	<a href="#">Abies h. cephalonica</a>	-	<a href="#">Lower Risk: Near Threatened</a>	-	-	-	-	0	<a href="#">Send Request</a>
10	<a href="#">Abies chensiensis</a>	<a href="#">Accepted</a>	<a href="#">Least Concern</a>	-	-	-	-	31	<a href="#">Send Request</a>
11	<a href="#">Abies chensiensis ssp. chensiensis</a>	<a href="#">Synonym</a>	<a href="#">Least Concern</a>	-	-	-	-	0	<a href="#">Send Request</a>
12	<a href="#">Abies chensiensis subsp. salouenensis</a>	<a href="#">Accepted</a>	-	-	-	-	-	9	<a href="#">Send Request</a>
13	<a href="#">Abies chensiensis ssp. yulongxueshanensis</a>	<a href="#">Accepted</a>	<a href="#">Least Concern</a>	-	-	-	-	0	<a href="#">Send Request</a>

# PlantSearch requests



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## Request information on plant species

**INTENDED USE:** This service is designed to facilitate communication between plant collection holders, researchers, educators, and other plant conservation professionals. Its primary use is to request or share information or plant material for research, education or conservation purposes.

To send a request about the plant you selected to all gardens that report maintaining it in their collections, please complete the form below as thoroughly as possible.

Please note that BGCI is not responsible for the accuracy of the information contained here, nor is it directly involved with or responsible for the response of individual gardens to your inquiry.

Information requested for plant: **Abies alba**

Your Name:

Email:

Job Title:

Institution:

My institution is a member of BGCI

**Please indicate the purpose for your request (check all that apply):**

- Plant tissue for DNA analysis or other research purpose
- Seeds or other living material for conservation, education, or research purposes
- Propagation or cultivation information for conservation, education, or research purposes
- Other (please provide additional details in the Comments box below)

**Comments/Additional Information:**



M. Wenzel

# Members Area



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Members Area

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[publications](#)

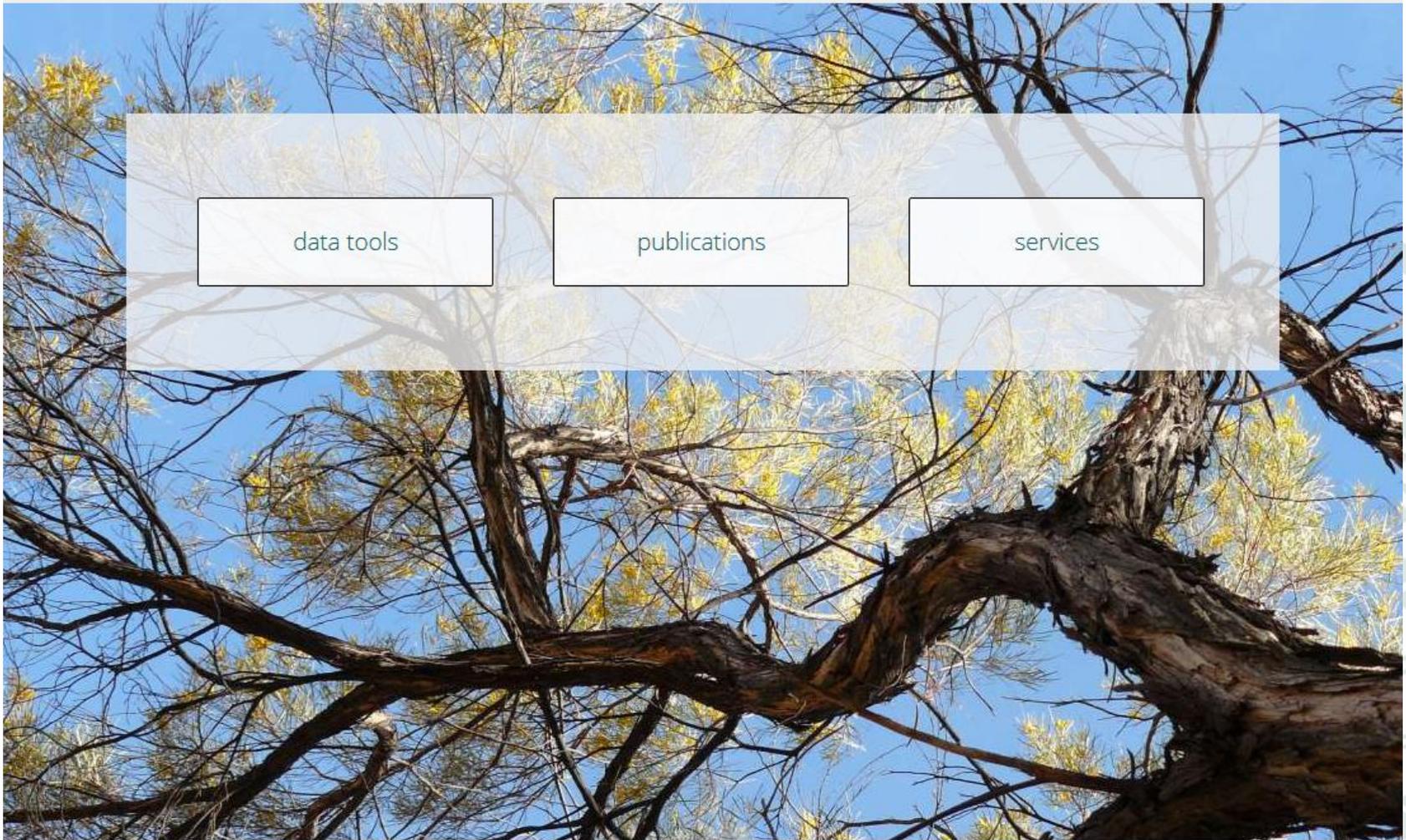
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# PlantSearch *Advanced Search*



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PlantSearch

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SEARCH

UPLOAD QUERY

1 results shown for **genus:** Quercus; **species:** tomentella

CLEAR

download as CSV

**Genus**

**Species**

**Infraspecific epithet**

**Gardens**

Quercus

tomentella

16 gardens

taxon: *Quercus tomentella*

This plant is found in 16 gardens.

7/16 gardens have shared their data to BGCI members:

- UC Davis Arboretum
- Royal Botanic Gardens, Victoria - Melbourne Gardens
- Rancho Santa Ana Botanic Garden
- University of California Botanical Garden at Berkeley
- The Sir Harold Hillier Gardens
- National Botanic Garden of Wales
- Grizedale Arboretum

# ThreatSearch



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BGCI > ThreatSearch

## Welcome to ThreatSearch!



**The most comprehensive database of conservation assessments of plants.**

- Search over 242,000 conservation assessments, representing over 150,000 taxa.
- Find out if a plant has a global or regional conservation assessment
- Find out if a plant is considered threatened

Enter search criteria below (at least one of genus, species, infraspecific epithet required)

Scientific name:      
Family                      Genus                      Species                      Infraspecific Epithet

Scope:

Scope of assessment

From Year (earliest record from 1983):

Show Threatened taxa only

Search Plants

# GlobalTreeSearch



60,065 tree  
species

[bgci.org/global\\_tree\\_search.php](http://bgci.org/global_tree_search.php)

A comprehensive list of the world's tree species and their country level distributions

BGCI > GlobalTreeSearch

## Welcome to GlobalTreeSearch!



**The most comprehensive database of tree species.**

- Search over 60,000 tree species names and their country distributions.
- Find out the geographical distribution of a tree species.
- Discover all tree species found in a country

GlobalTreeSearch is not a static database and will evolve as new information comes to light. If you spot a mistake (in taxonomy, distribution of lifeform) or have data which you think could improve the database, please get in touch with [globaltreesearch@bgci.org](mailto:globaltreesearch@bgci.org).

[More information about GlobalTreeSearch and how the data were compiled.](#)

[More information on data sources used and acknowledgements.](#)

**Data retrieved through GlobalTreeSearch is subject to the [BGCI data agreement](#).**

To search the database, enter search criteria below (at least one of genus, species, country required)

Scientific name:

Genus Species Country

# Gap Analysis

Identify the species with the greatest need of conservation action and the botanic gardens that can be mobilized to protect them



# Assessment Layers



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## **Taxon Level Analysis**

Geographic Region, Family/Genus/Species

Threat Status, Ecological Role

Cultural/Economic Value

## **Accession Level Analysis**

Passport Information (e.g. Origin)

History

## **Individual**

Prop/Acquire

Inventory

Photos

Etc.

# North American Threatened Species Ex Situ Assessment

## 7,662 Globally Threatened Species

- GX, GH, G1-G3 (NatureServe)
- NOM-059 (Mexico Red List)
- EW, CR, EN, VU (IUCN)

Top 10 Genera	Threatened taxa per genus
<i>Astragalus</i>	347
<i>Eriogonum</i>	267
<i>Penstemon</i>	196
<i>Lupinus</i>	154
<i>Erigeron</i>	121
<i>Phacelia</i>	110
<i>Draba</i>	95
<i>Cyanea</i>	94
<i>Carex</i>	89
<i>Rubus</i>	83

Based on data provided by NatureServe and ThreatSearch, October 2017

# North American threatened plant ex situ representation



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3,598 of 7,662 (47%) species  
reported ex situ

Collections Locations	Threatened Species Reported Ex situ	Seed Banks	Plant Collections	Both
North America	3399	917	1406	1076
Non-North America	1616	191	1212	213
<b>Total</b>	<b>3598</b>	<b>883</b>	<b>1517</b>	<b>1198</b>



# Top 15 Institutions



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North American Threatened Species	Institution	Country
563	University of California Botanical Garden at Berkeley	United States
491	Royal Botanic Gardens, Kew	United Kingdom
402	Millennium Seed Bank	United Kingdom
387	Rancho Santa Ana Botanic Garden - Seed Bank	United States
305	Harold L. Lyon Arboretum - Seed Conservation Lab	United States
298	Denver Botanic Gardens	United States
288	New York Botanical Garden	United States
283	National Tropical Botanical Garden	United States
281	Botanischer Garten der Ruhr-Universität Bochum	Germany
276	Botanic Garden Meise	Belgium
276	Real Jardín Botánico Juan Carlos I	Spain
264	Santa Barbara Botanic Garden	United States
250	Atlanta Botanical Garden	United States
242	Huntington Botanical Gardens	United States
236	Desert Botanical Garden	United States

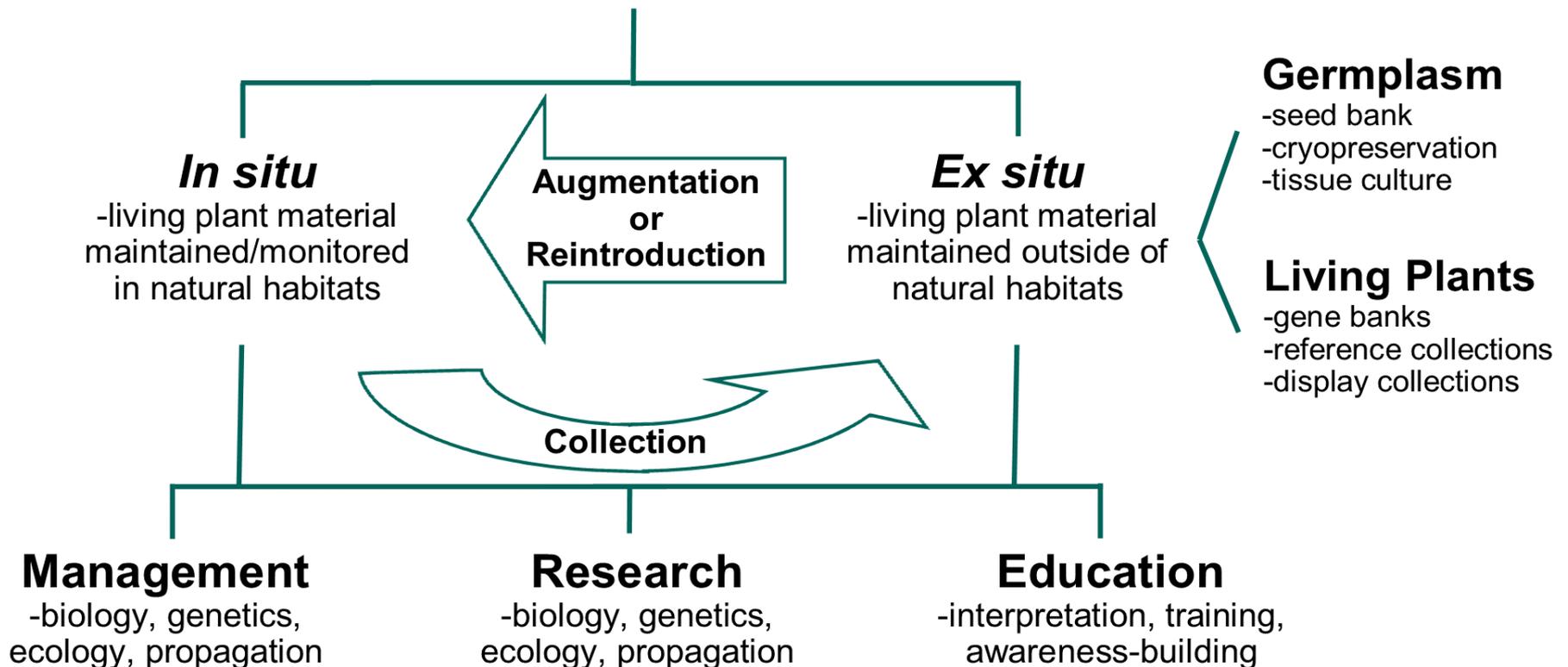
# Closing the Loop for Conservation



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## Integrated Plant Conservation



# Parameters of *Ex situ* Collections



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Conservation value/application determined by:

1. The type of plant material held
2. The protocols used to acquire plant material
3. The long-term maintenance of viable and genetically diverse plant material



*Microcycas callocoma*

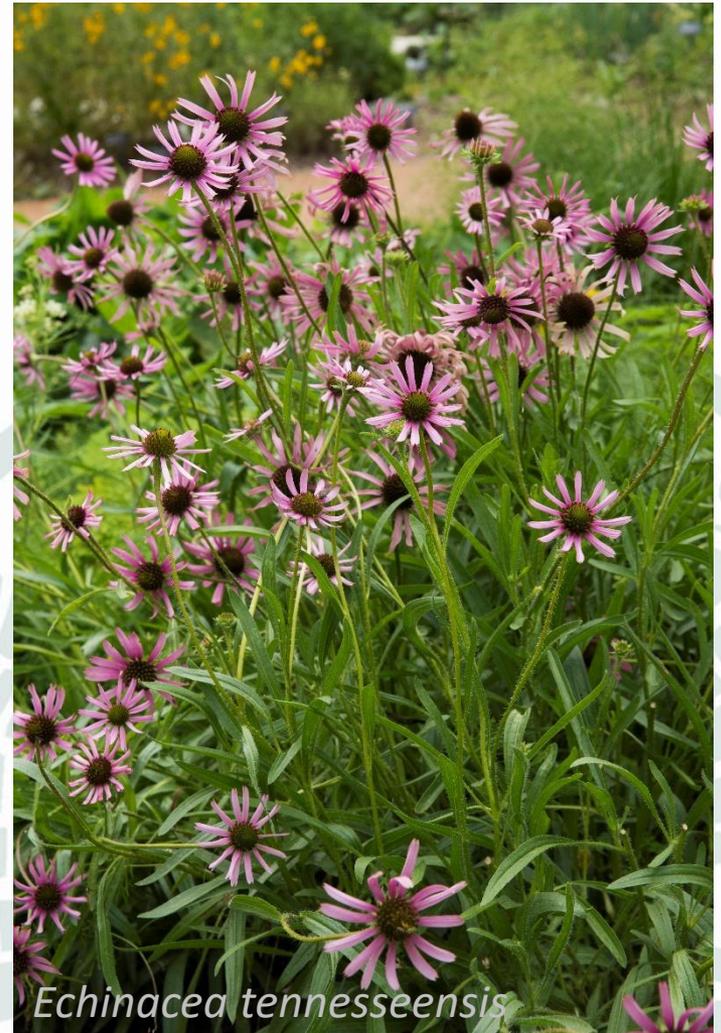
# Collections Priorities



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- Collection assessments
- Data sharing
- Under-represented species
- Most-threatened species
- Genetic diversity



*Echinacea tennesseensis*

# Ex situ Collections Data sharing



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## PlantSearch Upload Results

- Garden in the Woods, August 2017

A	B	C	D	E	F	
Genus	Species	Infraspecific Rank	Infraspecific Epithet	No. Locations	IUCN Red List	NatureSe
Ammophila	champlainensis			1		G2G3Q
Anemone	oregana	var.	oregana	1		G4T4
ANEMONE	transylvanica			1		
ANTENNARIA	virginica	var.	argillicola	1		
BAPTISIA	tinctoria	var.	crebra	1		
BRACHYTHECIUM	sp.			1		
Carex	castanea			1		G5
Ceratophyllum	echinatum			1		G4?
CLINTONIA	borealis	F	albicarpa	1		
CORYPHANTHA	vivipara	var.	kaibabensis	1		
Dodecatheon	frenchii			1		G3

# Under-represented Species



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	Threatened Species Reported by 1 Ex situ Site		
	Total Collections	Seed Banks	Plant Collections
North America	963	525	438
Non-North America	136	18	118
<b>Total</b>	<b>1100</b>	<b>544</b>	<b>556</b>



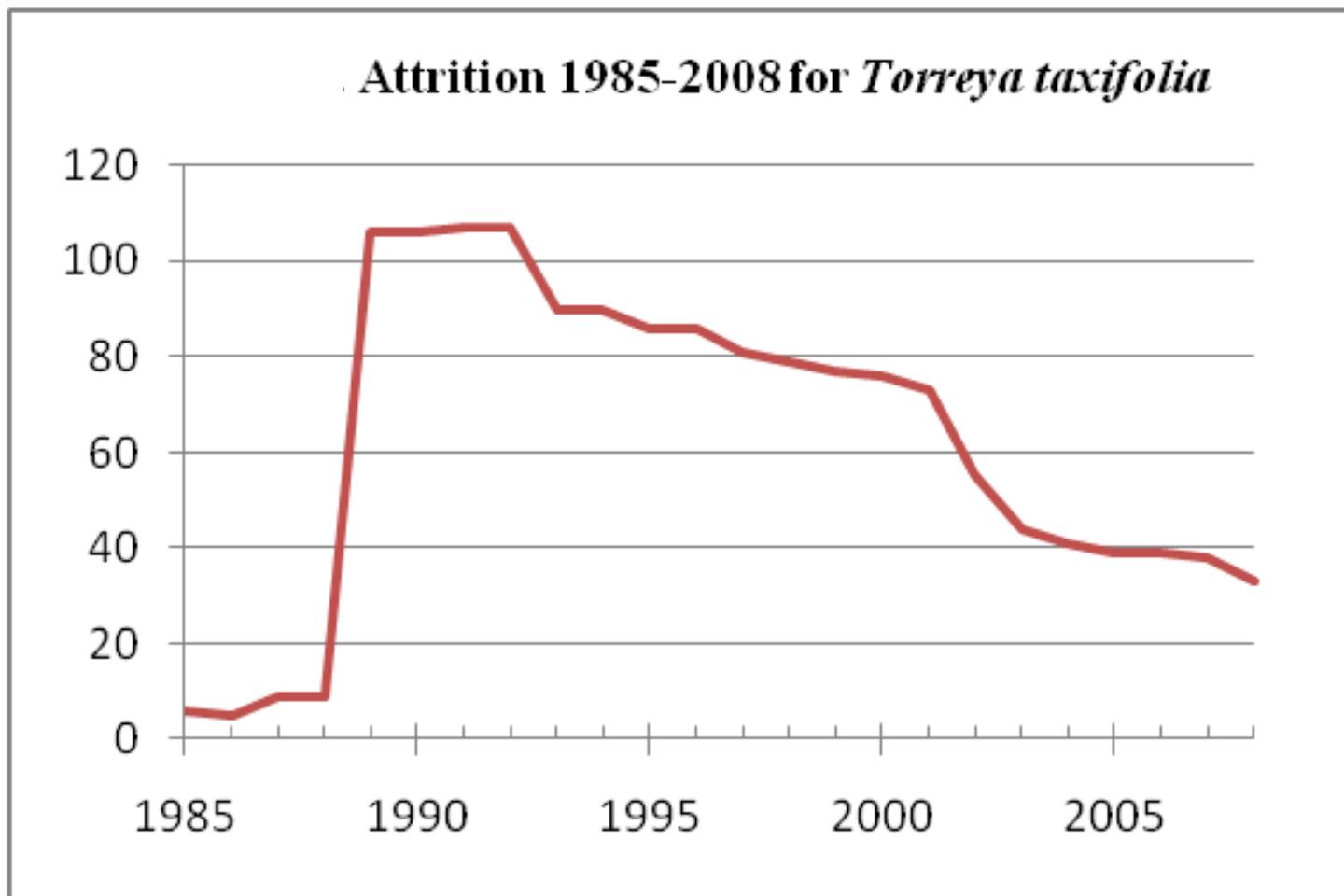
*Trollius laxus* spp. *laxus*



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Attrition 1985-2008 for *Torreya taxifolia*



# *Austrotraxus spicata*



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# Most-threatened taxa

## 99 North American species on the brink of extinction (EX/EW)

- 10 reported ex situ
- 5 reported in only one collection

TaxonName	Threat Status	Number of ex situ collections
<i>Zamia monticola</i>	CR (IUCN)	1
<i>Hibiscadelphus woodii</i>	EX (IUCN)	1
<i>Argyroxiphium virescens</i>	EX (IUCN)	1
<i>Cyanea superba</i>	EW (IUCN)	1
<i>Delissea subcordata</i>	EX (IUCN)	1

# Assess Conservation Value

USBG 2015 Conservation Collections Assessment

## CONSERVATION COLLECTIONS

To orient readers to this conservation collections assessment, we offer a brief overview of plant collection components (Figure 1). Living botanical collections are typically composed of living plant material (plants, seeds, etc.), accessions, and taxa (species, varieties, cultivars, hybrids, etc.): individual plant specimens finer scale, taxa at a coarser scale, and accessions which connect and describe plants and taxa within collection. It is helpful to consider these levels of a collection when assessing potential value and applic

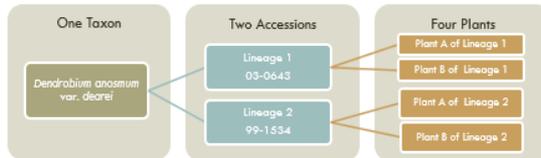


Figure 1. Example of the taxa-accessions-plants hierarchy within living plant collections. Example based on USBG plant record

This assessment is also based upon global conservation status of four main data sources (Table 1). "Threatened" taxa are flagged if they were assigned any rank considered to be of conservation concern in Table 1). Throughout this assessment, these threatened taxa are used to identify associated living plants and accessions for closer analysis. "Critically threatened" taxa are also highlighted as potential priorities for conservation activities, defined by the authors as taxa assigned CITES Appendix I, 1997 Red List EX, EX/E, or E status; 2015 IUCN Red List EX or CR status; or NatureServe G-rank GX, GH, or status.

IUCN Red List (2015)	IUCN Red List (1997)	NatureServe G-rank	CITES Appendix	
EX (Extinct)	EX (Extinct)	GX (Extinct)	I	
EW (Extinct in the Wild)	EX/E (Extinct/Endangered)	GH (Possibly Extinct)		
CR (Critically Threatened)	E/N (Endangered/Vulnerable)	G1 (Critically Impaired)		
EN (Endangered)	V (Vulnerable)	G2 (Impaired)		
VU (Vulnerable)	R (Rare)	G3 (Vulnerable)		
NT (Near Threatened)	O (Out of Danger)	G4 (Apparently Secure)		II, III
LC (Least Concern)	NT (Not Threatened)	G5 (Secure)		
DD (Data Deficient)	I (Indeterminate)	GU (Unrankable)		
NE (Not Evaluated)	K (Insufficiently Known)	GNR (Unranked)		
	Q (No Information)	GNA (Not Applicable)		

Table 1. The conservation status lists and threat ranks used to identify "threatened" taxa for this assessment (blue text indicates "threatened" status). Threat ranks based on conservation data maintained in BGCI's PlantSearch database, provided by the 2015 IUCN Red List of Threatened Species ([www.iucnredlist.org](http://www.iucnredlist.org)), the 1997 IUCN Red List of Threatened Plants (<http://portal.iucn.org/library/node/75377>), the 2015 NatureServe Conservation Status G-ranks (<http://explorer.natureserve.org/ranking.htm>) and the CITES Appendices ([www.cites.org](http://www.cites.org)).

## APPENDICES

USBG 2015 Conservation Collections Assessment

Appendix 1. Globally threatened taxa (484) in the United States Botanic Garden's living collection with associated data from PlantSearch and the United States Botanic Garden, with global threat status. Critical threat statuses and other notable characteristics in blue.

Threat ranks based on CITES Appendices, the 1997 IUCN Red List of Threatened Plants, the 2015 IUCN Red List of Threatened Plants, the 2015 NatureServe Conservation Status G-ranks provided by BGCI's PlantSearch database. Locations provided by BGCI's PlantSearch database as of September 2015. Taxonomic and plant records data provided by USBG as of July 2015.

Family	# PlantSearch Locations	CITES Appendix	1997 IUCN Red List	2015 IUCN Red List	NatureServe G-rank	# Living Accessions	# Living Plants
OLEACEAE	116		Endangered			2	2
ANALVACEAE	18		Endangered	Critically Endangered	G1	1	1
AMARANTHACEAE	3		Vulnerable	Vulnerable	G2	1	1
ARECACEAE	15		Rare			3	3
CRASSULACEAE	113		Rare			1	1
CRASSULACEAE	57		Vulnerable			2	2
ARAUCAIACEAE	23			Vulnerable		1	1
ASPARAGACEAE	76		Vulnerable			1	1
ASPARAGACEAE	67		Rare			1	1
ASPARAGACEAE	31				G3	1	1
ASPARAGACEAE	23		Vulnerable		G3	1	1
Asipina ASPARAGACEAE	142	II	Endangered			4	4
ARECACEAE	30		Vulnerable			4	4
DIDIEREACEAE	40	II	Rare			3	3
ARACEAE	11			Critically Endangered		1	1
XANTHORRHOACEAE	29	I	Endangered			1	1
XANTHORRHOACEAE	14	II	Vulnerable			1	1
XANTHORRHOACEAE	69	I	Rare			1	1
XANTHORRHOACEAE	60	I	Endangered			1	1
XANTHORRHOACEAE	38	II	Vulnerable	Critically Endangered		1	1
XANTHORRHOACEAE	22	II	Vulnerable			2	2
XANTHORRHOACEAE	26	II	Rare			1	1
XANTHORRHOACEAE	35	I	Endangered			1	1
XANTHORRHOACEAE	56	I	Endangered			2	2
XANTHORRHOACEAE	65	I	Rare			2	2
XANTHORRHOACEAE	25	II	Vulnerable			1	1
XANTHORRHOACEAE	46	I	Endangered	Critically Endangered		1	1
AJACACEAE	7		Rare			1	1
ARACEAE	66		Vulnerable			12	12
BIGNONIACEAE	7		Endangered			1	1
APOCYNACEAE	65		Rare		G3	2	2
APOCYNACEAE	8		Rare		G3	1	1
APOCYNACEAE	11		Vulnerable			1	1
ANACAMPSEROTACEAE	1	II	Rare			2	2
ORCHIDACEAE	52	II	Vulnerable	Vulnerable		2	2
ARACEAE	16		Vulnerable			2	2
ARACEAE	5			Critically Endangered		13	13
ARAUCAIACEAE	125		Vulnerable	Vulnerable		9	9
PAPAYERACEAE	4				G2	2	2
CACTACEAE	40	I	Endangered	Endangered		1	1
CACTACEAE	44	I				1	1
ARACEAE	70		Rare			1	1
ASTERACEAE	6				G3	1	1
ASTERACEAE	6		Vulnerable		G2	4	4
ARISTOLochiaceae	23			Vulnerable		1	1



Provenance is an important factor for assessing the direct conservation potential of a living collection. Wild origin accessions hold greater conservation value than accessions of garden or unknown origin for a variety of reasons, and the more specific the wild origin data is, the better. For example, population- or geographic-based relationships can be investigated with documented wild origin plant material. Overall, 17% (1,176 accessions) of USBG's living collection are composed of wild (or indirect wild) origin accessions (Table 2). This falls between collections averages of 12% (Aplin, 2014) and 25% (Licht, 2010) wild origin accessions per collection. Of USBG's collections of conservation concern, only 223 accessions are of wild origin (Table 8; Figure 2). This represents only 3% of all USBG living accessions and 21% of all USBG accessions of threatened taxa.

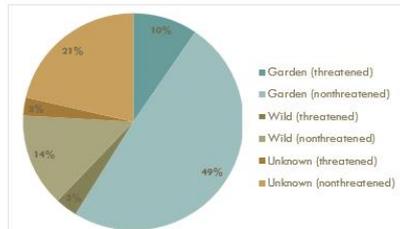


Figure 2. Provenances of living accessions of threatened and nonthreatened botanical taxa in USBG's living collection as of July 2015. "Wild" includes wild and indirect wild provenances. "Unknown" includes uncertain and unavailable provenances.

# Ex situ Genetic Diversity



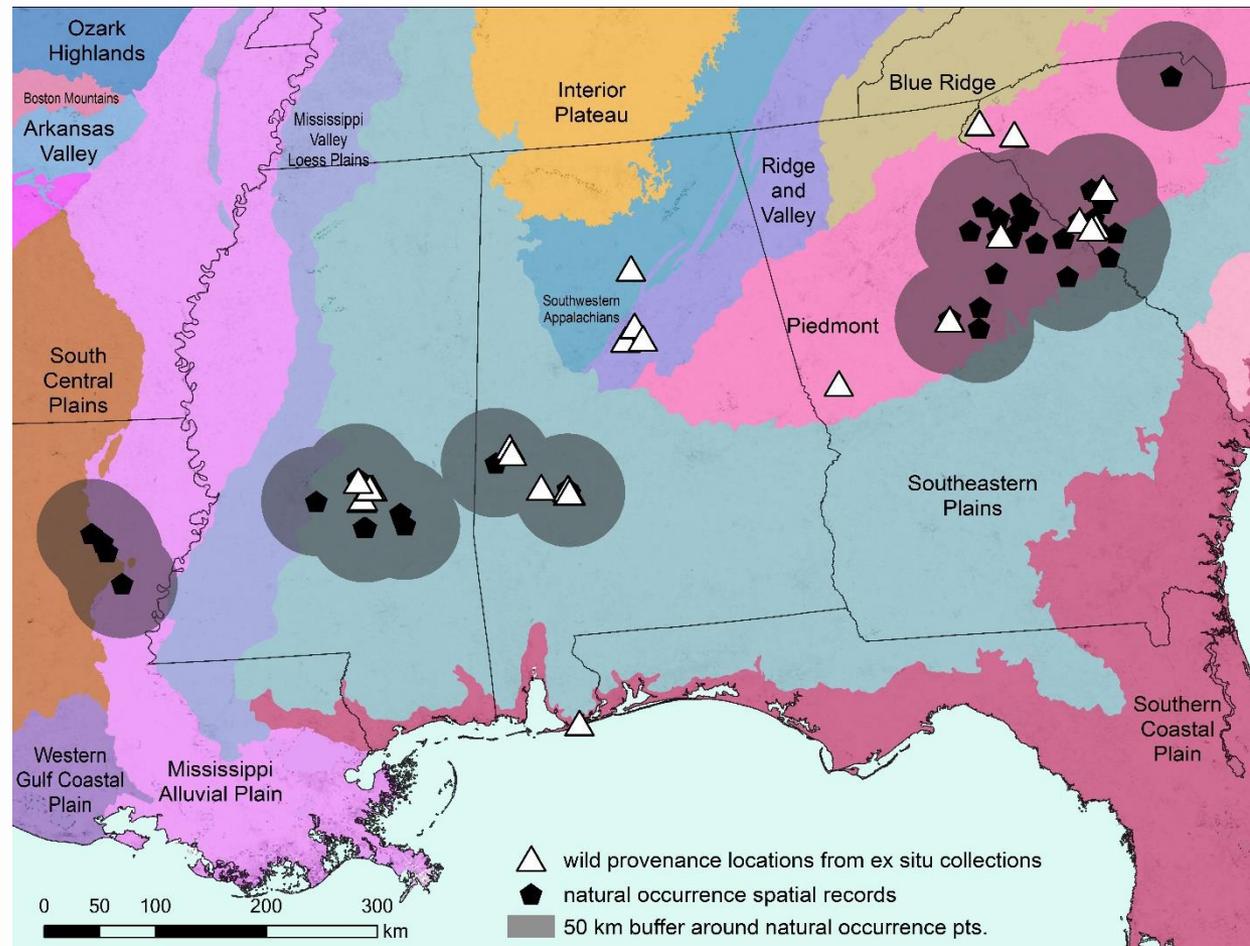
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## U.S. Oak Conservation Gap Analysis



The Morton Arboretum



# Global Orchid *Ex situ* Assessment



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## Orchids:

### 2017 Global *Ex situ* Collections Assessment

Botanic gardens collectively maintain one-third of Earth's plant diversity. Through their conservation, education, horticulture, and research activities, botanic gardens inspire millions of people each year about the importance of plants.

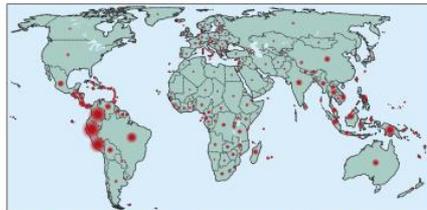
*Ophrys sphegodes*  
(Bernard DuPont)

*Angraecum conchoglossum*  
(Scott Zona)



With one in five species facing extinction due to threats such as habitat loss, climate change, and invasive species, botanic garden *ex situ* collections serve a central purpose in preventing the loss of species and essential genetic diversity.

To support the Global Strategy for Plant Conservation, botanic gardens create integrated conservation programs that utilize diverse partners and innovative techniques. As genetically diverse collections are developed, our collective global safety net against plant extinction is strengthened.



Country-level distribution of orchids around the world (map data courtesy of Michael Harrington via ArcGIS)

- 35% (272) orchid genera absent
- Highest diversity in U.S. and European collections
- 36% of threatened orchids reported by *ex situ* collections



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Institution	Country	Number of orchid species
Atlanta Botanical Garden	United States	1600+
Royal Botanic Gardens, Kew	United Kingdom	1300+
Smithsonian Gardens - Orchid Collection	United States	1050+
Marie Selby Botanical Gardens	United States	1000+
Gothenburg Botanical Garden	Sweden	900+
Jardin Botanique de Montréal	Canada	890+
Botanischer Garten der Philipps-Universität Marburg	Germany	880+
Hortus botanicus Leiden	Netherlands	870+
Glasgow Botanic Gardens	United Kingdom	750+
Huntington Botanical Gardens	United States	740+
Main Botanical Garden, Russian Academy of Sciences	Russia	610+
United States Botanic Garden	United States	600+
Wheeler Orchid Collection and Species Bank	United States	590+
Denver Botanic Gardens	United States	540+
Singapore Botanic Gardens	Singapore	500+
Botanic Garden Meise	Belgium	470+
Longwood Gardens	United States	470+
Jardin Botanique de la Ville de Lyon	France	450+
San Diego Zoo Botanical Gardens	United States	440+
Jardin des Plantes de Paris et Arboretum de Chevreloup	France	410+
University of California Botanical Garden at Berkeley	United States	390+

***Top 20 most species-diverse orchid collections recorded in PlantSearch***

*\*based on Govaerts, et al. (2016) orchid checklist and BGCI's PlantSearch database*

# Discussion

- Who has assessed their collections?
- What groups/lenses did you use?
- What actions have resulted?



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UNITED STATES  
BOTANIC GARDEN

# BGCI

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*Connecting People • Sharing Knowledge • Saving Plants*

Our Mission is to mobilise botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet

*BGCI-US headquarters at Chicago Botanic Gardens, Glencoe, Illinois  
Staff also hosted at Huntington Library & Gardens, San Marino, California*

[www.bgci.org/usa](http://www.bgci.org/usa)

# Plant Conservation and Biodiversity Benchmarking



American  
Public Gardens  
Association



BGCI  
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Welcome: Abby Meyer | Garden: Association Member Garden

Home Our Garden ▾ Compare Gardens ▾ Reports & Charts

Year: 2017 ▾

Our Garden

Compare Gardens

Reports & Charts

Click on the sections in each area below to enter garden data.

NOTE: All entries should be in US Dollars or US Measurements.

Download survey questions [here](#) | Download Getting Started Guide [here](#) | Watch Welcome Video [here](#)



## Garden Overview

✓ Profile



## Leadership & Governance

⊗ Governance  
✓ Financial  
⊗ Staffing



## Ex situ Conservation Capacity

✓ Policy and Practices  
✓ Genetic Diversity



## In situ Conservation Capacity

⊗ Policy and Practices



## Research & Plant Conservation Expertise

⊗ Research  
⊗ Expertise



## Education & Communication

✓ School-Based Participation  
✓ Non-School Participation  
✓ Educational Content  
✓ Communications

# CARE FOR THE RARE



[www.bgci.org/usa/CareForTheRare](http://www.bgci.org/usa/CareForTheRare)

## Public Gardens Care for the Rare

From Alaska to Zambia, more than 2,500 public gardens around the globe care for rare plants. **HERE'S HOW**

**Did you know?**  
More than 500 rare plants are grown here at the United States Botanic Garden.

**CONSERVATION:** protecting and caring for rare plants in their habitats

**EDUCATION:** Displaying rare plants and sharing their stories

**HORTICULTURE:** learning to cultivate and display thousands of rare plants

**SEED BANKING:** leading seed collection efforts to fight extinction

**RESEARCH:** understanding rare plants to better conserve them

**CARE FOR THE RARE**

BGCI UNITED STATES BOTANIC GARDEN

## Ashe magnolia (*Magnolia ashei*)

**About me:** I'm the rarest magnolia in North America, and make my only home in the hardwood forests of the Florida panhandle.

**Why I'm rare:** I've had trouble adjusting to logging, invasive plant species, trampling and even trash dumping that is happening in my habitat.

**My story:** Many people are helping to protect the habitat where I grow, and you can find me in more than 50 botanic gardens around the world. Some gardens are studying how to grow me and bank my seeds as a long-term insurance policy against extinction.

**How you can help:** Volunteer to help protect and conserve natural areas where you live.



PHOTO STEFAN BLOODWORTH, DUKE GARDENS

- Free interpretation resources
- Create new signs using templates
- Use any of the 100+ species signs in the Sign Library



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# CARE FOR THE RARE

