



CHICAGO BOTANIC GARDEN

An Overview of the Chicago Botanic Garden and Collections

Arboretum Wespelaar
January 28, 2018



CHICAGO BOTANIC GARDEN

The Garden's Mission Is Upheld by Four Program Areas

Horticulture and
Gardens

Visitor
Experience

Education and
Community
Programs

Science
Academic
Programs
Living
Collections

Financial Sustainability and Risk Management

Staff, Volunteers, Boards

Information Systems

Key Facts

- Opened in 1972
- Reside on Cook County Forest Preserves land
- 385 acres
- More than 1.1 million visitors
- 50,000 member households
- \$35 million budget
- “Keep Growing” Strategic Plan 2010-2020
 - \$125 million capital and endowment goal

More Key Facts

- 250 full time staff
- 250 seasonal staff
- 11,000 taxa
- 22,166 active accessions
- 2.56 million plants





CHICAGO BOTANIC GARDEN

*One of the treasures of the
Forest Preserves of Cook County*





































































A close-up photograph of two white lotus flowers in bloom. The flowers have numerous bright yellow stamens protruding from their centers. They are attached to thick, green, cylindrical stems. The background is dark and out of focus, showing some green lotus leaves. The word "Collections" is written in white, sans-serif font across the middle of the image.

Collections

Major collections

- **Acer*
- **Baptisia*
- **Aesculus*
- **Geranium*
- **Ginkgo*
- **Magnolia*
- **Malus*
- **Rosa*
- **Salix*
- **Spiraea*

Selected Genera

• Genera	Taxa	Accessions	• Genera	Taxa	Accessions
• Acer	164	341	• Picea	125	298
• Aesculus	34	68	• Pinus	116	288
• Aloe	44	55	• Quercus	99	294
• Amelanchier	37	83	• Rosa	347	1,133
• Baptisia	51	144	• Salix	141	249
• Geranium	159	289	• Spiraea	96	172
• Ginkgo	44	68	• Thuja	79	237
• Magnolia	75	118			
• Malus	128	284			
• Narcissus	218	421			

Acer



Acer rubrum 'October Glory'



Acer saccharum 'Fairview'



Acer x freemanii 'Marmo'

Aesculus



Aesculus hippocastanum 'Baumannii'



Aesculus x *carnea*



Aesculus x *hemiacantha*

Baptisia



Baptisia 'Blue Towers'

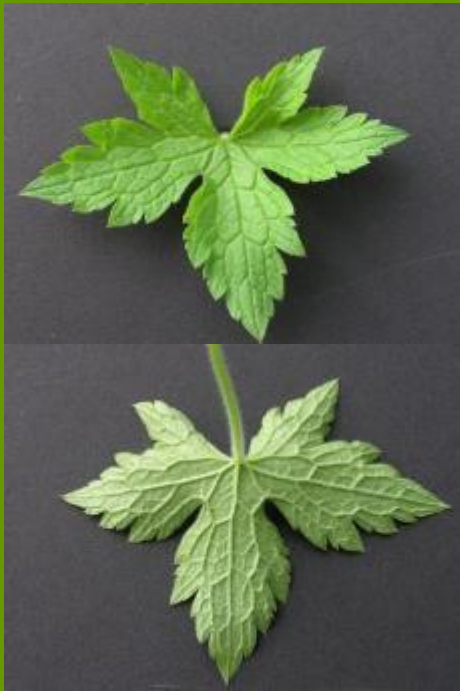


Baptisia 'Brownie Points'



Baptisia sphaerocarpa

Geranium



Geranium x oxonianum 'Old Rose'



Geranium 'Blue Blood'



Geranium macrorrhizum 'Ingwersen's Variety'

Ginkgo



Ginkgo biloba 'Fairmount'



Ginkgo biloba



Ginkgo biloba

Magnolia



Magnolia acuminata 'Yellow Lanterns'



Magnolia 'Suzanne'



Magnolia virginiana

Malus



Malus floribunda



Malus 'Adams'



Malus 'Hooks #15'

Narcissus



Narcissus 'C.H.S. Centennial'



Narcissus jonquilla



Narcissus 'Manon Lescaut'

Quercus



Quercus alba



Quercus shumardii



Quercus rubra

Rosa



Rosa 'Jacink' SIMPLICITY®



Rosa 'Aroyqueli' GOLD MEDAL®



Rosa 'Ausblush' HERITAGE®

Salix



Salix caprea x *muscina*



Salix daphnoides



Salix aegyptiaca

Spiraea



Spiraea japonica 'Mertyann'
DAKOTA GOLDCHARM™



Spiraea japonica 'Beaver Creek Pride'



Spiraea japonica 'Anthony Waterer'

Woody Plant Curation




Perennial Plant Curation



Plant Documentation

Geranium x cantabrigiense 'Cambridge'



CHICAGO BOTANIC GARDEN

Geranium x cantabrigiense 'Cambridge'

Accessions:
 Date Collected: 05/31/2004 by Dorothy Peck
 Sources:
 Verified by: M. Robin Farer
 Date: 06/30/2004
 Notes: Formerly identified as English Walled Garden #12

Location: 0007-English Walled Garden, south end

Chicago Botanic Garden Accession

Accession Info

Scientific Name: *Celticorum Waterlily*
 Source: DeVriesman Holland
 Total Alive: 88

Accession #: 1118-2002
 Brought By: Inlands
 Accession Received: 10/15/2002

Accession Received: 10/15/2002
 Scientific Name: *Celticorum Waterlily*
 Source: DeVriesman - Holland
 Quantity Received: 20
 Material Received: BUL Bulb
 Brought By: Inlands
 Initial Location: 100 Landscape, Sand Pool Border, NW side
 Delete Flag: ☐

Production Acct:
 Research Acct:
 Other Number:

Entered By: Admin Admin
 Entered On:
 Updated By: Admin Admin
 Updated On:

Reveries Info

REV #	Rev No (Sub Location)	Alive	Updated On	Updated By
3854	132 Landscape, Sand Pool Border, NW side	38	10/15/2002	Admin Admin
58400	850 Bulb, S side, upper walk, E to road	24	10/15/2002	Admin Admin
58795	DNA leaf samples stored long term	2	10/15/2002	Admin Admin
63534	84000 of plants	6	10/15/2002	Admin Admin

Survey Details Transfer Transfer History Remove Resurrection CO2 Edit Accession New Herbarium Close

1 - 65 of 10 (Filtered from 57,963 total entries) First Previous Next Last Show entries





BOOTH HANSEN

Chicago Botanic Garden
PROPOSED PRODUCTION FACILITY SITE PLAN

100617
11/14/2015



Smithsonian Institute – Museum Support Center
Suitland, MD

Rough Brothers, Inc.



1.10.2011

SHADE EVALUATION GARDEN
OF THE SCIENCE CAMPUS AT THE CHICAGO BOTANIC GARDEN
AERIAL VIEW: NORTH OF THE SHADE EVALUATION GARDEN



WIRTZ INTERNATIONAL

Plant Conservation Science Center



Garden Plant Conservation Science Programs



- Seed banking
- Climate envelope modeling
- Studies on carbon sequestration
- Citizen science projects
- Strategies and policies for plant conservation in a changing climate
- Training/Education

CHICAGO BOTANIC GARDEN RESEARCH SITES



Plant-based research conducted by Chicago Botanic Garden scientists has global reach.

CHICAGO

Monitoring the status of the region's threatened and endangered species

WISCONSIN

Conserving Pitcher's thistle (*Cirsium pitcheri*), an important and imperiled plant of Midwest dune habitats

COLORADO

Restoring native plant communities to reduce the frequency and intensity of wildfires

MEXICO – YUCATAN

Investigating fungal-mediated ecological processes

ENGLAND

Working as part of international plant and fungal conservation initiatives

MALAYSIA

Researching underutilized crop plants and their wild relatives

CHINA

Documenting the effects of pollution on the ecology and diversity of beneficial fungi symbiotic with forest trees

UNITED STATES

Alaska
Arizona
California
Colorado
Florida
Georgia

Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas

Kentucky
Maine
Michigan
Minnesota
Missouri
Montana

Nebraska
Nevada
New Jersey
New Mexico
New York
North Carolina

North Dakota
Ohio
Oklahoma
Oregon
South Carolina
South Dakota

Tennessee
Texas
Utah
Washington
West Virginia
Wisconsin
Wyoming

MEXICO
Yucatan
Quintana Roo

INTERNATIONAL

Argentina
Australia
Bangladesh
Bolivia
Brazil
Cameroon

Chile
China
Costa Rica
Ecuador
Estonia
Fiji

Germany
Guyana
India
Japan
Malaysia
Mariana Islands

Mongolia
Netherlands
Papua New Guinea
Peru
Poland

South Africa
Spain
Sweden
Thailand
United Kingdom

Conservation Land Management Intern Program

- 150 biologists from across the country
- Bureau of Land Management, National Parks Service, US Forest Service
- Collecting seed and restoring land in 12 western states
- Conducting climate envelope modeling for 400 western species, 80 rare plants, and 300 species of cactus
- 135 recent college graduates from across the country
- Place between 66-100 CLM Interns
- Continue working as a lead partner on “Seeds of Success” restoration – conservation seed banking consortium



Masters and PhD Program

- M.S. Program in its 12th year—started fall 2005
- PhD Program in the 8th year—started fall 2009
- 20 Masters and 7 PhD students currently enrolled
- 27 Masters' degrees have been awarded
- Program student awarded Northwestern Presidential Fellowship in 2012













PLANT EVALUATION PROGRAM

- The Plant Evaluation Program began in 1982 in Pullman Evaluation Garden; the current comparative trial scheme was initiated in 1987. The perennials program was greatly expanded with the opening of the Lavin Plant Evaluation Garden in 1989.
- The Program's goal is to evaluate and recommend the best garden plants for the Upper Midwest, including perennials, shrubs, and vines.
- Currently 22 comparative trials of herbaceous and woody plants are underway; e.g. *Baptisia* (false indigo), *Coreopsis* (tickseed), *Hydrangea*, *Perovskia* (Russian sage), *Rosa* (shrub roses), and *Salvia* (sage) to name a few.
- Approximately 900 taxa currently in the trials—nearly 7,000 plants actively being evaluated.
- Green roof evaluation project began in 2009 with 216 taxa and approximately 42,000 plants evaluated on the 16,000 sq. ft. green roof.
- Cooperative relationships with numerous plant introduction programs and nurseries are an invaluable source of new plants for the trials. Among the current cooperators are All-America Selections, Ball Horticultural, Blooms of Bressingham, David Austin Roses, De Vroomen Plants, Great Garden Plants, Guernsey Clematis Nursery Ltd, Intrinsic Perennial Gardens, Jelitto Perennial Seeds, Midwest Groundcovers, Monrovia Growers, North Creek Nurseries, Plants Nouveau, Proven Winners, Rijnbeek and Sons, Terra Nova Nurseries, USDA North Central Plant Introduction Station, and Walters Gardens.



Current State of Cultivar Preservation in US Public Gardens









Plant Breeding Program

- Established in 1995 to develop novel perennial hybrids for garden use in the Upper Midwest and equivalent locales.
- Developed *Echinacea* 'Arts Pride', the Orange Meadowbrite® coneflower, which was the world's first orange coneflower in the marketplace
- Introduced 12 hybrid *Baptisia* in the Prairieblues® False Lupin series including such cvs as 'Lunar Eclipse', 'Solar Flare', 'Starlite' and 'Sunny Morning'
- Initialed *Phlox* breeding in 2006 with *Phlox* 'Forever Pink' being the first introduction in 2013.
- 23 plant introductions total from 2004 to 2016 (*Aster*, *Baptisia*, *Echinacea*, *Monarda*, *Phlox*, *Tradescantia*, *Veronica*)

Orange Meadowbrite Coneflower



Chicagoland Grows®

Plant Introduction Program

- Initiated in 1986 to develop and introduce superior plants for landscape use in the Upper Midwest and equivalent locales
- A partnership of Chicago Botanic Garden, The Morton Arboretum, and the Ornamental Grower's Association of northern Illinois (OGA)
- 122 licensed nurseries in the U.S., Canada, Europe, Japan and Australia
- 60 plant introductions from 1988 to 2016, including perennials, shrubs and trees
-

Phlox 'Forever Pink'



Baptisia 'Sunny Morning'



Chicagoland Grows® woody plant Introductions

- 20 trees and shrubs introduced to date
 - 17 trees and shrubs in nursery production
 - 10 trees/shrubs in nursery trials
-
- Most of these plants from The Morton Arboretum's collections or breeding program
 - Remainder co-introduced with regional nurseries

Tree Breeding History

Dr. George Ware – Pioneer of Elm Breeding

- Recognized a resistant elm in the arboretum collections
- Head of research during DED pandemic



Ulmus 'Morton' Accolade™ elm

- Clone originated from seed received in 1924 from Arnold Arboretum, Boston MA
- Introduced through Chicagoland Grows® in 2003
- Society of municipal arborist 2012 tree of the year



'Morton' Accolade™



Ulmus 'Morton' Accolade™ Elm



2003 introduction

Ulmus hybrids

Breeding and selection program initiated, gave rise to 4 other DED resistant elms

- 'Morton Glossy' Triumph TM
- 'Morton Stalwart' Commendation TM
- 'Morton Red Tip' Danada Charm TM
- 'Morton Plainsman' Vangaurd TM



'Morton Stalwart' Commendation TM



'Morton Glossy' Triumph TM

Ulmus 'Morton Glossy' Triumph™ Elm



2005 introduction

Other Woody Plants in the Program

• *Quercus agrifolia* (Live Oak)

• *Quercus laevis* (Water Oak)

• *Quercus macrocarpa* (White Oak)

• *Quercus muhlenbergii* (White Oak)

• *Quercus prinus* (White Oak)

• *Quercus rubra* (Red Oak)

Acer saccharum 'Morton'
CRESCENDO™ Sugar
Maple (2013 introduction)



- Selected from the collections of The Morton Arboretum
- hardy to USDA Zones 5 to 7
- uniformly branched, deciduous tree with a broadly oval habit
- thick and durable foliage
- brilliant orange-red every autumn
- Excellent heat and drought tolerance
- replacement tree for native ash

Crescendo™ sugar maple



Acer x freemanii 'Marmo'

Freeman Maple



(1993 introduction)



From The Morton Arboretum

Acer miyabei 'Morton'

State Street™ maple (2001 introduction)



Historic tree from
The Morton Arboretum

Acer miyabei 'Morton' State Street™ maple



2011 recipient of the
Woody Ornamental
Plant of the Year,
Wisconsin Nursery
Association.

2011 recipient of the
Plant of Merit® (Missouri
Botanical Garden) as an
outstanding plant for the
lower Midwest.

Platanus x acerifolia 'Morton Circle' Exclamation!™ London Planetree (2007 intro)



Hybridized at The Morton Arboretum

Syringa pekinensis 'Morton'

China Snow™ Tree Lilac



Historic tree from The Morton Arboretum (2004 introduction)

Syringa pekinensis
‘Zhang Zhiming’
BEIJING GOLD™ Tree
Lilac (2013 introduction)

- Selected by Zhang Zhiming, Beijing Botanic Garden, People’s Rep. of China
- Introduced through NACPEC and The Morton Arboretum
- Hardy to USDA Zones 4 to 7
- Primrose-yellow summer flowers
- Yellow autumn leaf color
- More upright, less coarsely branched
- Good disease and insect resistance





Aronia melanocarpa 'Morton'

Iroquois Beauty™ Chokeberry



2007 intro, The
Morton Arboretum

Aronia melanocarpa 'Morton'
Iroquois Beauty™ Chokeberry



Itea virginica 'Morton'

Scarlet Beauty™ Sweetspire



(2011 introduction)



Rhus copallina var. latifolia 'Morton'
Prairie Flame™ sumac



2004 intro, The
Morton Arboretum

Rhus copallina var. latifolia 'Morton'
Prairie Flame™ sumac



Viburnum dentatum 'Synnestvedt'

Chicago Lustre™ arrowwood



1990 introduction

Viburnum dentatum 'Morton'

Northern Burgundy™ arrowwood



1992 introduction

Viburnum dentatum 'Ralph Senior'

Autumn Jazz™ arrowwood



1992 introduction

Viburnum trilobum 'J.N. Select'
Redwing™ American cranberrybush
(2003 introduction)



Viburnum trilobum 'J.N. Select'
Redwing™ American cranberrybush
(2003 introduction)



Potential future introductions

Myrica pensylvanica 'Morton'

Silver Sprite™ Bayberry




Also have Myrica pensylvanica 'Morton Male'

Betula 'Madison'

White Satin™ Birch



Selected by Dr. Edward R. Hasselkus, University of Wisconsin, Madison

A photograph of a man, Joe Rothleutner, standing in a grassy field next to a young tree with bright orange and red autumn leaves. He is wearing a blue vest over a plaid shirt and dark pants, smiling at the camera. The background shows more trees with autumn foliage under a clear sky.

Meet Joe Rothleutner, Breeder at The Morton Arboretum

Crescendo™ sugar maple,
2013 introduction

Carpinus Hybrids at The Morton Arboretum



Corylus fargesii at The Morton Arboretum



Corylus catkins



Chicagoland Grows®

[About Us](#)[Plant Sources](#)[Trees](#)[Perennials](#)[Shrubs](#)[Grasses](#)

CHICAGOLAND GROWS®

Plant Introduction Program



Chicagoland Grows is an innovative plant introduction program developed to promote the use of new plant cultivars that are well-adapted to the growing conditions of the Upper Midwest. While regional in focus, the program's plants can be grown successfully in all zone-appropriate regions of North America, Europe, and around the world.

Chicagoland Grows is a corporate partnership among the [Chicago Botanic Garden](#); [The Morton Arboretum](#); and the [Ornamental Grower's Association of Northern Illinois \(OGA\)](#), a network of wholesale nurseries located in northeastern Illinois.

Established in 1986, Chicagoland Grows works collectively with industry professionals in the OGA and throughout North America to develop, select, evaluate, produce, and market new and recommended plant cultivars. These selected plants offer fine ornamental attributes and proven dependability to both landscape professionals and home gardeners.

Chicagoland Grows markets these proven, midwestern-hardy introductions regionally, nationally, and worldwide. Sales of the plants generate royalties that support the breeding and research efforts of the Chicago Botanic Garden and The Morton Arboretum to develop future introductions.

With the broad, complementary resources of the three partners, the program will continue to develop, evaluate, and introduce worthy landscape plants for the future.

Plant Release Bulletins

CHICAGOLAND GROWS®, INC.

Plant Introduction Program - Plant Release Bulletin #34

Beijing Gold™ (*Syringa pekinensis* 'Zhang Zhiming') Peking Tree Lilac*

A superior tree lilac with attractive primrose-yellow summer flowers, eye-catching yellow autumn leaf color, and a more upright habit, this Peking tree lilac is less coarsely branched than most tree lilacs. A selection made by Zhang Zhiming of the Beijing Botanic Garden, People's Republic of China. This selection was introduced into the United States through the North America-China Plant Exploration Consortium (NACPEC).



The Chicago Land Grows® Plant Introduction Program is a nonprofit corporation of the Chicago Botanic Garden, The Morton Arboretum, and the Ornamental Growers Association of Northern Illinois (OGA).
www.chicagolandgrows.org



CHICAGOLAND GROWS®, INC.

Plant Introduction Program - Plant Release Bulletin #36

Forever Pink Phlox

Phlox 'Forever Pink'™

Compact, carefree, and long-blooming, Phlox 'Forever Pink' is destined to be a popular garden plant. This beautiful selection is covered with vibrant purplish-pink flowers for three weeks in June, then will repeat-bloom well into October, truly living up to its name. Selected from a hybrid cross made at the Chicago Botanic Garden in 2007.



Chicago Land Grows® is a nonprofit corporation of the Chicago Botanic Garden, The Morton Arboretum, and the Ornamental Growers Association of Northern Illinois (OGA).
www.chicagolandgrows.org

CHICAGOLAND GROWS®, INC.

Plant Introduction Program - Plant Release Bulletin #35

Crescendo™ (*Acer saccharum* 'Morton') Sugar Maple*

Selected from the collections of The Morton Arboretum in Lisle, Illinois, for its excellent heat and drought tolerance, durable dark green summer foliage, outstanding orange-red fall color, and uniform, broadly oval habit. This selection of the native sugar maple makes an excellent specimen or shade tree for the residential lawn, parks, and golf courses.



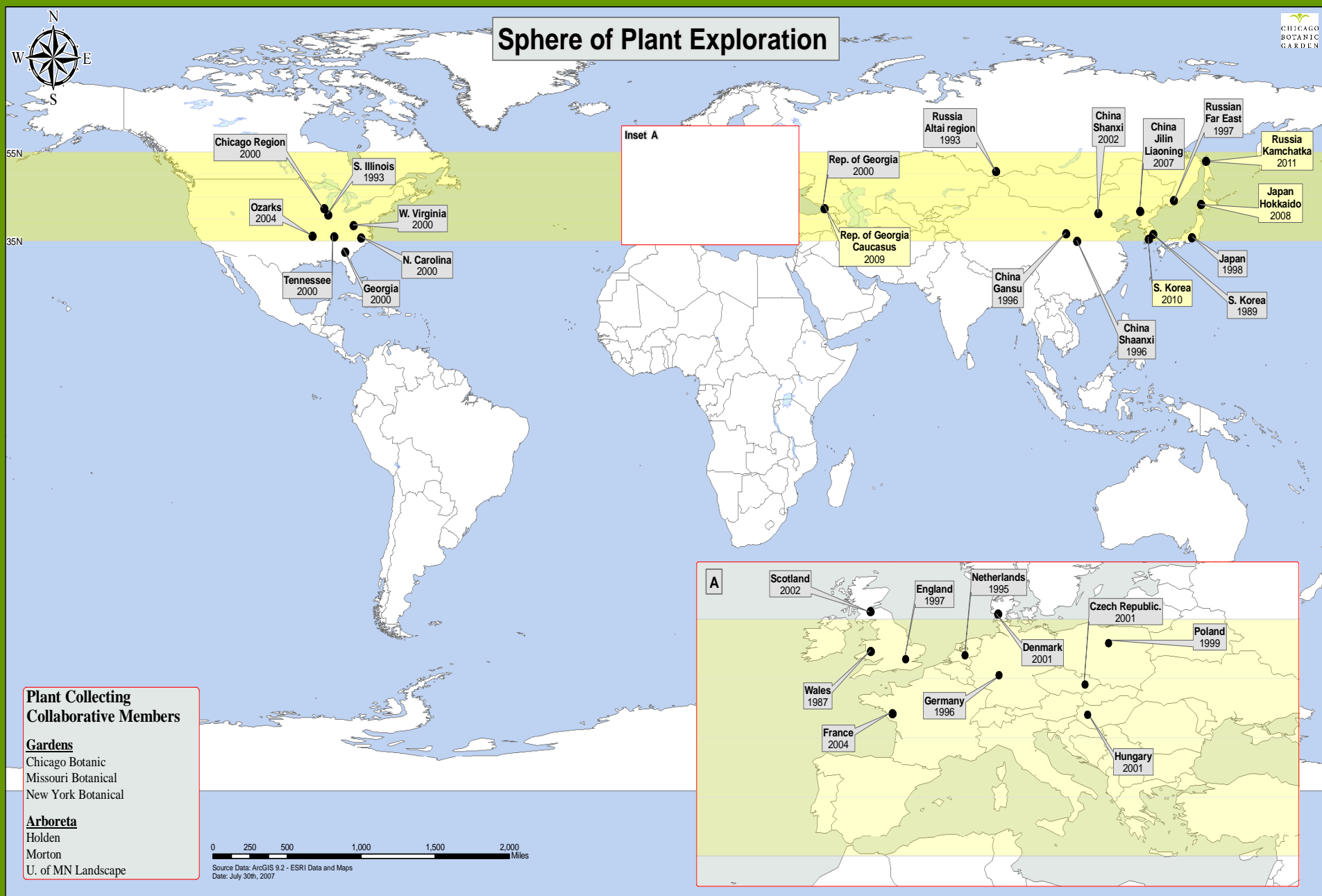
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Plant Expedition Program for the Chicago Botanic Garden

Goals:

- 1) Collect germplasm that contributes to diversity of the collections
- 2) Build NAPCC collections: *Quercus*, *Spiraea*, Geranium, *Baptisia* (future)
- 3) Support evaluation and breeding programs
- 4) Collect data, herbarium specimens, DNA samples, etc.
- 5) Create system of sharing information and resources with in-country partners
- 6) Support the Garden's conservation initiatives
- 7) Use expeditions as an opportunity to provide students with hands-on field skills
- 8) Seek collaborative partners and build long-term relationships for expeditions

Sphere of Plant Exploration









Red-listed *Quercus* (oak) species of the Southeast



Quercus boyntonii (boynton sand post oak)



Quercus oglethorpensis (oglethorpe oak)



Quercus georgiana (georgia oak)



Quercus arkansana (arkansas oak)











Learning

- 1,500 classes
- 120,000 individuals
- 25,000 Chicago-area students participate in field trips and classes
- Trained PreK-12 school educators in workshops and institutes
- Engaged over 90,000 children via informal and fee-based programs



Youth &
Families



Adults



Teachers &
Students

Preparing Youth for careers in science & technology



Climate change education and engagement



Science Career Continuum

A series of science enrichment and college preparation programs supporting Chicago Public School students in achieving science careers

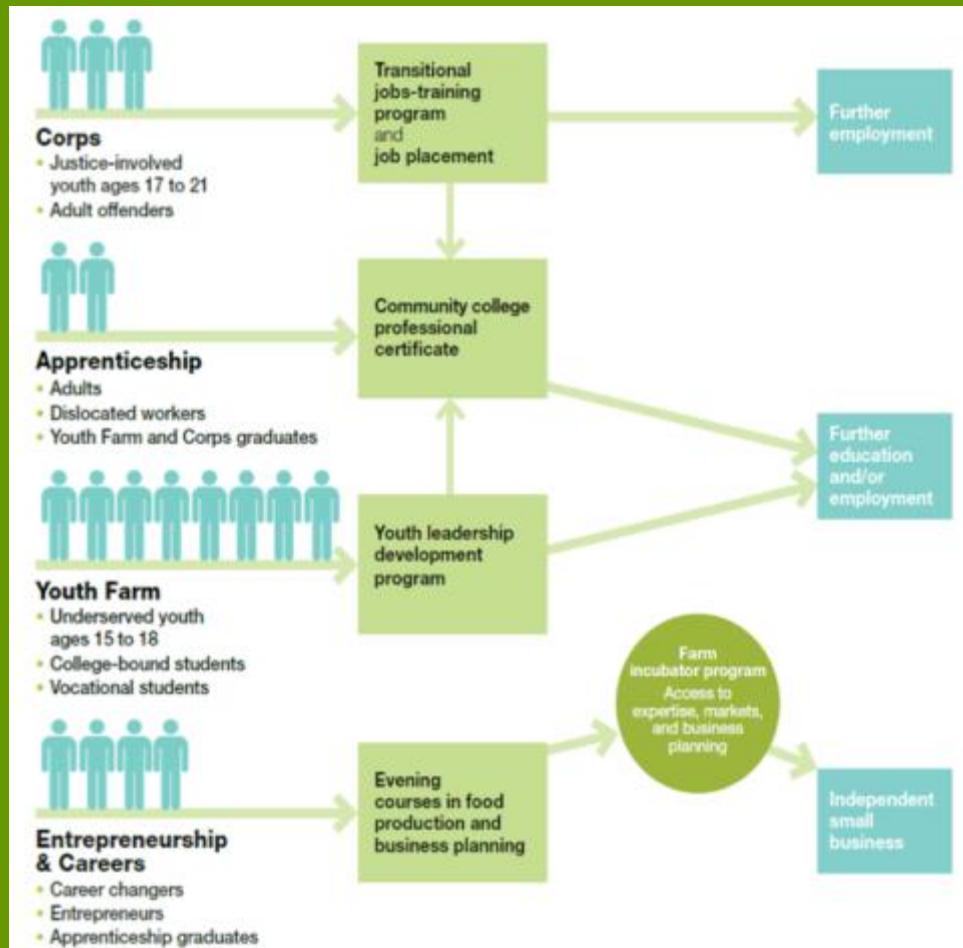


- Science First (8th-10th grade)
- College First (11th-12th grade)
- Internships (college)
 - Research
 - STEM Education
 - Recent graduate
- Graduate degree programs



Windy City Harvest

Four program components operating at 13 sites in the Chicago



Windy City Harvest Program Statistics

Participants

- Over 1600 participants since 2003
- 220 participants per year
- 91% Apprenticeship graduate placement
- 98% of youth farm pursue post-secondary education
- 130 community partners per year



Production, Distribution and Sales Since 2003

- 10,653 WIC boxes
- 525,795 pounds of produce distributed

Operations

- 33% year-on-year increase in earned revenues 2010 - 2015
- Projected \$511,872 in earned revenues 2016



Farm on Ogden

- Owned by Lawndale Christian Health Center
- Operated by Windy City Harvest
- Features:
 - Aquaponics (6 tanks, 6 interior beds, 5000 SF greenhouse)
 - Commercial kitchen/micro-processing center
 - Healthy corner store
 - Cold storage
 - Produce-packing station
 - Multi-purpose community space



Urban Agriculture



Green jobs training (Windy City Harvest)



Horticultural Therapy

- Direct services
- Professional training & education
- Garden design & consultation
- Research & publications
- Buehler Enabling Garden



Horticulture Therapy



Direct Services

- On and off-site programs
 - Over 3,500 individuals served
 - 200 programs
 - 23 partner organizations
- Diverse audiences and conditions (children, adults, seniors, developmental disabilities, physical challenges, stress, PTSD, Alzheimer's, ADHD, hospice, cancer etc.)
- Varied locations (Buehler Enabling Garden, VA facilities, senior centers, schools, social services organizations, healthcare facilities, supportive living communities, etc.)



Thank you!

