



BOTANICAL GARDEN &  
CAMPUS ARBORETUM

## Collections Policy

# BEAL BOTANICAL GARDEN COLLECTIONS POLICY

August 2024

## Beal Botanical Garden and Campus Arboretum Mission Statement

*Beal Botanical Garden and Campus Arboretum illuminates the interconnectedness of people, plants, and place through learning, research, and stewardship.*

Beal is a place of belonging. It is where people interact with plants and expand on knowledge of the plant world. We bring to light our connectedness to nature and our landscape to show we are part of a complex whole.

## Purpose of Collections Policy

The collections policy guides the development and growth of the garden's collections. It informs decision-making and adheres to the mission of Beal Botanical Garden and Campus Arboretum (Beal) and MSU. Our collections require continuous care and maintenance. The collections policy supports sustainable management to maintain quality plant health without straining the garden's resources, allowing us to be good stewards ([See Care of Collections](#)). The collections policy puts innovation central to the garden's horticultural and curatorial practice, activating a collection for research, education, and inspiration for people.

Every five years, the Collections Manager will review the policy with members of the garden team and revise as needed. This is to ensure that we are following best practices and strengthen our connection to campus. The policy review is accompanied by a collections plan for short- and long-term development. Annual review of collections policy ensures progress on plans, health of collections, and follows Beal's mission. Curatorial work is a collaborative process with horticultural and education teams. Our success from working together supports the teaching mission of the University, while also maintaining manageable and sustainable collections.

## Purpose of Collections

The collections deepen understanding and appreciation for the natural world and recognize the interconnections and relationships with people and plants. We curate collections that spark meaningful connections and hold relevance to the community. Situated along the Red Cedar River in the heart of MSU Campus, the garden is a place of respite. Its location enriches the purpose and impact of collections for people. The serene landscape enables collections to bridge the world of a humming campus with the natural world.

Collections add to the learning environment, encouraging curiosity and exploration. They are vital to the garden's role as a living laboratory, emphasizing research, learning, and conservation. Material and data are accessible for expanding knowledge. The garden staff also conducts research and shares information with the public and science community. Through our work, we preserve biodiversity, build awareness, and better our environment. Our collections goals are:

***Foster a nature-connected community.***  
***Address challenges and present solutions.***  
***Advance learning.***

## Guiding Principles

Our shared values provide direction for building a collection that serves our community and stays true to our mission. Beal commits to:

- Community**
  - Supporting learning experiences that meet the needs of all community members through teaching and research.
  - Promoting transdisciplinary collaboration to engage and enrich the community.
- Service**
  - Providing support for researchers, instructors, and learners to use collections in place and virtually.
  - Maintaining quality of data underlying the collection.
- Sustainability**
  - Educating about conservation, sustainability, and stewardship.
  - Using sustainable practice that contributes to biodiversity conservation.
  - Promoting principles of conservation and ecology, with a focus on the Great Lakes region.
- Wellbeing**
  - Creating an environment that nurtures the relationship with nature, the landscape, and self.
  - Communicating the intersection of plants and people.

## Scope of Collections

*To implement the garden's Collections Policy, the current condition of collections requires restructuring and reimagining. Alterations to collections are necessary for illustrating the intersection between people and plants. We make strategic changes to the collections to further the garden's legacy as a living laboratory, advancing knowledge and finding meaning.*

Our collections are central to teaching about the interconnectedness of people, plants, and place. Woven throughout the collections, we highlight research conducted on campus and in the garden. This feature includes conservation, stewardship, and community voice. Collections simultaneously preserve rare and natural populations and contribute to storytelling across campus and communities. Within shared space, collections also show interdisciplinary relationships. Together, these collections expand our awareness of biodiversity.

Our collections go beyond the stories of individual plants and share messages that transcend the garden space. The messages from our collections relate and connect to us so we recognize and comprehend the world we live in. Our collections are arranged into three overlapping themes to show that plants play a vital role in:

***Understanding our world.***  
***Nourishing our world.***  
***Transforming our world.***

## ***Understanding Our World***

**Systematics**: The largest collection in the garden, and prominently placed, Systematics displays the diversity of flowering plants. Plants are arranged according to taxonomic order following Cronquist's system of classification. This shows the diversity of the plant world and presents a comprehensive view of plant adaptations and morphology.

**History**: Scattered throughout the systematics collection, select plants serve a dual purpose of teaching about the evolution of plants and the local history. Plants explain the history of Beal, MSU, and land before being established as an agricultural college.

**Plant Adaptations**: The collection highlights unique traits that help plants survive across the world in differing environments. Plant Adaptations contains an extensive collection of toxic and injurious plants but also expands on how plants have evolved under biotic and abiotic causes.

**Non-Flowering Plants**: Expanding on our understanding of plant diversity, the garden also includes a collection of gymnosperms, ferns, and fern allies. Non-flowering plants are essential for grasping the range of plant morphology and reproductive adaptations. This collection is currently dispersed in ornamental landscapes.

**Temperate Asia & Europe**: Providing global representation in a prominent way, the garden holds space for Asian and European plant species. These two regions are well represented because of their similar climates to Michigan. Collections are comprised of plant species inhabiting regions from Asian and European temperate forests. Plants are organized for a naturalistic design and optimal growing conditions. This allows garden staff to maintain a diverse collection sustainably.

**Michigan Wetland**: The garden recognizes its unique location within the floodplains of the Red Cedar River by displaying Michigan wetland plants. Emphasizing the local flora, this collection includes Michigan plants from an assortment of wetland types including swamps, marshes, bogs, and fens.

**Michigan Rare Plants**: The garden takes an active role in the conservation of plants. Rare Plants collection raises awareness of biodiversity and advocates for conservation efforts. It contains plants native to Michigan listed as Special Concern, Threatened, Endangered, and Extirpated by Michigan Department of Natural Resources. These rare plants are protected under the Endangered Species Act of the State of Michigan (Part 365 of PA 451, 1994 Michigan Natural Resources and Environmental Protection Act). The garden prioritizes plants of wild provenance for preserving rare plants. The collection is necessary for reintroduction programs and helps scientists better understand and protect these species in nature.

## ***Nourishing Our World***

**Food Plants**: Plants are an essential food source for life. Food Plants brings culturally significant plants into a single space. Plants are also arranged and maintained with sustainable agricultural techniques. The collection includes culinary herbs and spices, plants native to Michigan, and plants that are a food staple around the world.

**Medicinal Plants**: For millennia, humans have used plants for treating illnesses. The medicinal collection covers plants used in traditional and/or modern medicine. Some have strong cultural ties including plants used in pharmacological studies.

**Pollinator Garden**: Many flowering plants rely on pollinators to reproduce, and pollinators depend on these plants as a food source. The Pollinator Garden is an active research site where we learn more about this relationship. Plants are evaluated for increasing biodiversity and

attracting specialized insects. Less successful native plants are relocated and new species are tested. The collection also includes a pollinator lawn as an example of sustainable design for homeowners.

**Riverbank Restoration:** Reconciling the garden's disruption of wildlife, the Riverbank Restoration Project returns this area back to a more natural and sustainable ecosystem. This collection continues to expand native riparian plant diversity and reduces turfgrass for native design. The garden monitors changes in flora and commits to keeping the area native.

## ***Transforming Our World***

**Arts:** Plants are essential in the process of creating art. They are the basis for art mediums such as textiles, dyes, paint, paper, and instruments. Plants are also a source of inspiration, including fine art, music, architecture, and written works. The Arts collection incorporates how plants are a necessary utensil or supply for making art and a cause for artistic expression.

**Enacting Change:** Plants have a vital role in addressing societal challenges, including climate change, health, and food security. The Enacting Change collection introduces the public to innovative research that is bettering our world, where plants are a part of the solution.

**Weeds:** Globally dispersed plants have adverse effects on communities and ecosystems. The Weed collection is necessary for identifying harmful plants at home. The collection also teaches about how our world is changing and the consequences of globalization. The collection contains common weeds of Michigan and is monitored for invasiveness. Weeds all have a Michigan genotype to prevent new introductions into the environment.

**Rewilding Michigan:** Over 100 years ago, the garden landscape changed drastically from an undulating wetland with ponds to the sunken garden we know today. The change in topography and mass plantings of groundcovers on the hillside was for aesthetics; however, the changes to the landscape are irreversible. While we cannot restore the landscape to what it was before the University was established, we can still make positive changes. Rewilding Michigan covers the hillsides adjacent to the Main Library and Sleepy Hollow. In its current state, these hillsides are dominated by non-native groundcovers like *Aegopodium podagraria* (goutweed) and *Vinca minor* (common periwinkle). The garden commits to eradicating these aggressive non-native plants and rewilding our Michigan landscapes.

## **Virtual Collections**

Our interpretation and relevance to the natural world are ever-changing. Recognizing this, our virtual collections expand on the importance of plants to wider communities. They are responsive to evolving issues of the community and help the garden stay current. These supporting collections cover countless themes but underline our message for *understanding, nourishing, and transforming our world*. Virtual collections also prioritize teaching and learning by providing an individualized experience to meet MSU course needs.



## **Goldner Daylilies**

Standing out as the only horticultural grouping of plants in the garden are the Goldner Daylilies. These daylily hybrids were developed by MSU alum and plant breeder, Alfred H. Goldner. There are over 50 hybrids and 26 are registered with the American Hemerocallis Society. This planting was dedicated to the Goldner Family following a generous donation to the garden, establishing the Jean and Alfred Goldner Endowment. This contribution supports quality collections, outreach, and curatorial research.

## **From Aesthetics to Collections**

Historically, the garden has also been a place of beauty and respite. Plant selections and designs were chosen for aesthetic value or function. These include annual displays, spring bulbs, and popular landscaping perennials. Trees and shrubs have many eye-catching features and have structural importance, i.e., source of shade, sound barrier, and provide privacy. We examine how these plantings support collections, our message, and the visitor experience. Considering the community and impact on our local ecosystem, we will make sustainable changes, supporting conservation that still offers a beautiful and tranquil space for visitors.

## **Advancing Knowledge and Conservation**

We uphold the academic mission of MSU by maintaining a collection to the highest standard. All plants are documented and follow the listed procedure. We prioritize and ensure data is accurate and records are up to date ([See Plant Documentation](#)). Information informs decisions in collection development. We routinely monitor the collection for recordkeeping. This information provides metrics for the quality of collection and marking improvements. The collection and data are also accessible to the public for research, conservation, and educational purposes. Individuals can request access to data and plant material by submitting a permit ([See Access and Use](#)).

The garden commits to expanding and/or enhancing collections centered on conservation. As the garden's collections expand, this must be done ethically. The garden adheres to state and federal guidelines ([See Acquisition](#)). Plants from the Great Lakes Region with wild provenance are a priority, yet non-native plant species still play a critical role in education and research. Introduced plant species are monitored, and garden staff will remain vigilant to prevent the addition of harmful plant species. These plants are assessed for weediness and invasive potential. We will follow policy to avoid negative impact on our local environment ([See Invasive Plant Policy](#)).

## **Evolving Collection**

The garden continues to grow and develop collections that serve the community. Serving the needs of all community members requires space for community voice. While staying true to the mission of Beal and the University, the garden also creates space for public input to ensure the collection remains relevant. The community has an important stake in the curatorial process as active participants, creating shared ownership of the garden ([See Curatorial Process](#)).

Shared curation opens the door for authentic collaborations and encourages cross-disciplinary connections. We pursue stories that exemplify interconnectedness and use this to activate our collections. Our focus on the Michigan region reflects the local diversity of plants and connects to cultural heritage. Culturally significant plants are invaluable in storytelling. Partnering with communities, the garden holds space to connect and relate with the local environment and each other.

## **Commitment to Future**

The garden is committed to making the world a better place through our work in conservation, education, and connecting people with nature. We take on the challenge for meaningful change and address the challenges of people and the environment, both local and global, for today and tomorrow. We acknowledge existing gaps in our work; however, we are committed to making tough choices and taking steps to better people, plants, and our place.

## Appendices

### Access and use

Beal provides access to collections for education, research, and conservation purposes. Anyone can request plant material and collections data, however, no material including seed, or any part of a plant can be collected without prior permission. Beal may deny requests based on availability of plant material or conservation restrictions. Request for use of the collections can be made by submitting a [Permit to Collect Form](#). The permit form is extensive, so we better understand how collections support our mission. This information also informs decision-making in future collection development.

### Copy of Permit to Collect

#### Research and Education Permit Application

Beal Botanical Garden and Campus Arboretum allow the use of collections and space for research, education, and engagement purposes. We are here to help. Complete this form to request access and use.

#### Section 1.

1. First name:
2. Last name:
3. E-mail address:
4. MSU affiliation:
  - a. Graduate student
  - b. Undergraduate student
  - c. Faculty
  - d. Visiting faculty
  - e. Staff
  - f. Other
5. Department/Unit:
6. List any delegates.
7. Permit Request Type:
  - a. Research (*Go to Section 2a*)
  - b. Education and Engagement (*Go to Section 2b*)

#### Section 2a. Research

1. Project Title:
2. Project Description:
3. Are you requesting to collect plant material?
  - a. Yes
  - b. No



4. List plant species and/or collections you are requesting.
5. Type of material you are collecting:
  - a. Leaf or stem material
  - b. Propagules (cuttings, seeds, etc.)
  - c. Herbarium specimens
  - d. Other
6. Please describe use of space or collections. *For example, observational studies, soil or river sampling, invertebrate collecting.*

*Go to Section 3*

#### Section 2b. Education and Research

1. Please describe reason for collections use. *If applicable, provide course name or associated event.*
2. List plant species and/or collections you are requesting.
3. Type of material you are collecting:
  - a. Leaf or stem material
  - b. Propagules (cuttings, seeds, etc.)
  - c. Herbarium specimens
  - d. Other

*Go to Section 3*

#### Section 3. Logistics

1. Project Start Date:
2. Project End Date:
3. Will there be any equipment or marking flags installed on the site? Please describe.
4. Describe the potential impact (if any) on the plants or environment. *Describe the potential short-term and long-term impact on the plants used.*
5. Is there anything else you would like to tell us? *You're welcome to reach us at [wjbeal@msu.edu](mailto:wjbeal@msu.edu) for further questions or share supporting documents.*
6. Terms of Agreement. *Please read the following statements and agree to follow them.*
  - a. I agree to limit the activity and impact to the plants described in the request.
  - b. I agree to remove all research or instructional materials at the end of the project.
  - c. I agree to share a brief summary of the results of this project with [wjbeal@msu.edu](mailto:wjbeal@msu.edu) within six months of the project end date.
  - d. I agree to acknowledge Beal Botanical Garden and Campus Arboretum, Michigan State University in any publications.

## **Acquisition**

The garden collects plants for the purposes of conservation, education and engaging with the public. Plants may be wild sourced, commercial purchases, donations, or exchanges. New additions must adhere to the Collections Policy and enhance collections' goals. Plants are only accepted if staff have the means to maintain quality plant health. Beal obtains plants ethically and follows state and federal guidelines when procuring plant material.

### **Donations and Purchased Plant Material**

Beal ensures that all plant material received by donation or purchased is accompanied by documentation. All donations include how the plant was originally obtained. Beal only accepts plants that are ethically obtained. The garden does not accept donations with restrictions of use. Provenance of plant material is inquired and documented.

### **Wild Sourced**

With the garden's goal of increasing Michigan wild provenance, it is imperative that we follow the law when collecting. Collecting does not begin until permission is granted, and necessary permits are approved. We collect to support conservation and Beal does not harm plant populations by over-collecting. As a rule, we collect no more than 5% of plants in a given population and no more than 10% of seeds in a population. All plant material of wild provenance is well documented. Collectors record location, date of collecting, habitat type, plant biodiversity, and any additional notes viewed as valuable.

### **Exchange**

Beal participates in seed exchanges with other botanical gardens and educational institutions around the world. Plant material is shared to further research and academic missions. When importing plant material across state lines and out of the country Beal obtains all necessary permits and licenses for making plant requests. Beal follows USDA guidelines when importing plant material. Plants on the USDA restricted list are not imported, and all imported plant material is inspected by USDA with proper permits. Beal does not import any known weeds or invasives to the Midwest region. Beal is compliant with the Convention on Biological Diversity (CBD). Any acquired plant material that is accompanied by a CBD agreement is only shared with prior permission.

## **Care of Collection**

The garden maintains a world-class collection requiring top horticultural practices for growing healthy and beautiful collections. Beal's success in practice is essential for a learning environment, instilling meaningful connections to the natural world. Beal values sustainability and considers the garden's impact on the environment for collections care and staffing resources. The horticultural staff's ability to reasonably maintain plants with sustainable approaches impacts the evaluation of collections. Collections range from familiar, commercially sourced plants to rare and endangered plants. The garden must protect rare plants above all else. Additional care and resources are allocated for conserving plants of known wild provenance and rare plant species.

## **Curatorial Process**

The Curatorial Process is a collaboration between the community and Beal. The garden offers space so community members can contribute to collections. We encourage all to make recommendations that will enrich our storytelling and impart knowledge. By giving space for people to contribute, we build a

garden with shared ownership that is authentic. We do this because we want our garden to reflect our community, so Beal is a place of belonging.

### **A. Plant Proposal Form**

To make a request on new additions in the garden, anyone may fill out the form [here](#).

### **Copy of Plant Proposal Form**

*Is Beal Botanical Garden missing a key plant? Fill out this form to request new additions for our garden.*

1. Name:
2. E-mail address:
3. MSU affiliation (please select all that apply):
  - ☐ Student
  - ☐ Faculty
  - ☐ Staff
  - ☐ Alumni
  - ☐ Community member
  - ☐ No affiliation
4. What plant would you like to see in the Garden? Please provide scientific name and common name (*example Helianthus occidentalis, Western Sunflower*)
5. Do you intend to use requested plant for teaching and/or research?
6. If yes, please explain.
7. Why do you want this plant in the garden? What story or fact(s) do you want to share with community?

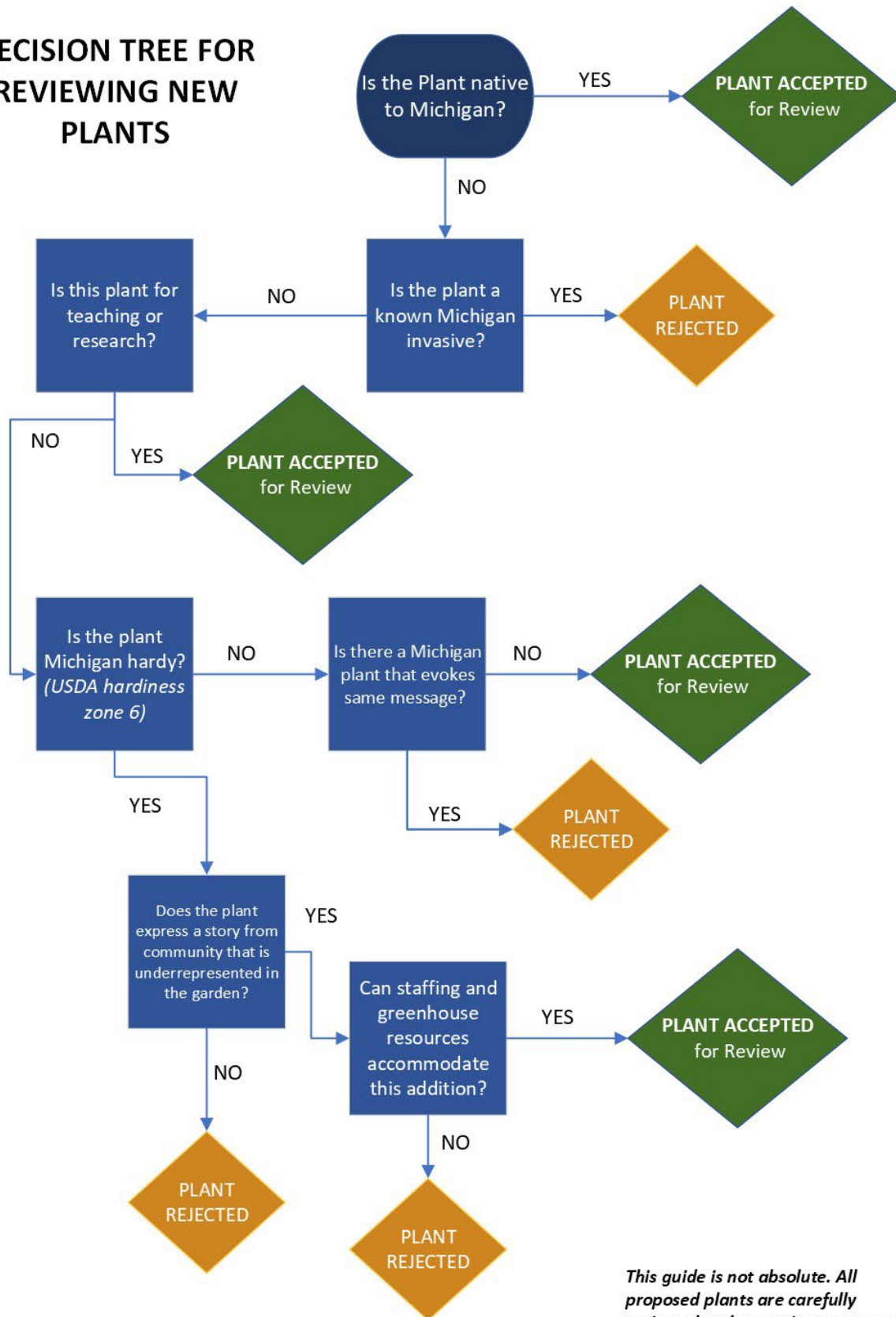
### **B. Decision Tree for New Introductions**

To achieve a more sustainable garden, we limit ourselves to what plant materials we accept. Remaining transparent, we provide factors for determining what we can accept for consideration.

#### **Decision Reasoning:**

*Beal welcomes new additions that increase plant diversity, community representation, and advances educational mission, while remaining sustainable.*

## DECISION TREE FOR REVIEWING NEW PLANTS



*This guide is not absolute. All proposed plants are carefully reviewed and exceptions may occur.*

### **C. Selection Standards**

All plants acquired must meet Beal's standards for collecting and follow the listed criteria:

- The plant meets the mission of Beal.
- The plant serves the collection's purpose and goals to which it occupies.
- The plant remains healthy through sustainable practice and reasonable staffing time.
- Procurement of the plant is ethically sourced.
- Plants are prioritized based on conservation and learning potential.
  - Rare plants with known wild provenance are a priority.
    - Rarity determined by [MNFI](#), [NatureServe](#), and [IUCN](#).
  - The plant holds a unique message or story that is not readily replicated with existing plants in the collection.

### **D. Evaluation**

Routine evaluations of the garden assess the health of collections, aesthetics, and relevance to mission. The process begins with inventories of collections to verify plant status and overall performance. The Collections Manager collaborates with horticultural staff in determining the success of maintaining healthy plants. The composition of collections is examined and assessed for mission relevance, rarity, provenance, and significance. Collaborating with educational staff, researchers, and the community, we identify and expand on the conservation, education, and research value of the collections. This information identifies strengths and opportunities for development and shapes the collection plan. Decisions guided by the evaluation process support the short- and long-term growth of the garden.

#### **Deaccessioning**

From evaluations, the Collections Manager may recommend the removal of accessioned plants for the health, condition, and quality of collections. If necessary, the Director authorizes the removal of plants. Reasons for deaccessioning plants include death, poor health and cannot be improved, invasive species, unsustainable care, replacement with plant of known provenance, or does not support collection's purpose. Data linked to deaccessioned plant will be maintained in collections database system.

### **Plant Documentation**

Because detailed and comprehensive records of plant material in the garden's collections are essential to the proper use and management of these collections, the Garden is committed to maintaining a robust plant records system. All plants in the Garden's living collections will be tagged and accessioned in this system. Plant material that is not accessioned only includes plants for sale and plants included only as part of special temporary exhibits. Information tracked in the plant records system will generally include, as applicable, accession and deaccession records, inventory records, images, mapped locations, distributions, micropropagation lab records and provenance data. The Plant Documentation Manager is responsible for the management of the plant records system. Currently, the garden is considering the implementation of a new database for its plant records system, as well as updating its operating procedures for the system. Once these are finalized, this Policy will be revised to include a description

of the information tracked in the garden's plant record system and the garden's procedures for maintaining the system.

## **Invasive Plant Policy**

Invasive plants and animals are threatening our Michigan habitats. We have procured plants from all over the world for our collections. As a public garden, we are conscientious of how plants in our collection might affect the local environment. Because the garden periodically occasionally floods, and river water can easily disperse seeds and propagules downstream, we must be cautious about potential spread of plants from our collection. We are committed to removing any plants from our garden that are harmful to the natural or created landscape around us.

### **Policies:**

- 1) Species on the Michigan Prohibited and Restricted Weeds list will not be included in the garden collection.
- 2) We will not add to the collection any plants listed on the Michigan Watch List for invasive plants ([Michigan Invasive Species](#)).
- 3) All plants in our collection will be monitored for invasiveness based on the criteria below and will be removed if they are believed to be a threat to the local environment. Species on the Michigan Watch List included in the collection will be evaluated every year.
- 4) In an effort to reduce the risk that the garden might introduce new (and potentially more invasive) genotypes of weeds already growing in Michigan, we will not import and grow accessions of Michigan weeds from outside the state.
- 5) Exceptions to the above restrictions can be considered for inclusion in the collection if living plants of the species are required to fulfill a critical education or research goal and if the horticultural staff confirms that the resources are in place to grow the plant in a way that prevents its spread.
- 6) In acknowledgment of the fact that removal of invasive species negatively impacts the garden's ability to educate the public about these species, efforts should be made to mitigate that lost opportunity by identifying alternatives to educate the public about specific invasive species and to share our findings about the invasiveness of non-listed, non-target plants with the appropriate agencies and organizations.

Plants will be declared invasive in the garden and removed if they meet any of the following criteria:

- The plant is found in three or more beds or other locations more than 15 feet from the location it was intentionally planted.
- The plant spreads by rhizome or runner into adjacent locations in the same bed or adjacent turf and requires disruptive removal more than once during the growing season. Disruptive removal refers to situations in which removing the spreading plant creates considerable damage to adjacent plants in the collection or unsightly damage to the turf.



- The plant spreads by any means so intensively within a bed that it routinely threatens the health of other adjacent plants in the collection and requires unsupportable management practices such as unsustainable levels of staff time or excessive use of chemicals.

### **Implementation:**

To oversee these policies the Director will assign the role of Invasive Plant Species Coordinator (IPSC) to a staff member. The responsibilities of this role include researching effective invasive species removal strategies (best practices) that are locally effective; oversight of removal of invasive species in the garden; working with Landscape Services to help them identify invasive species concerns and advise them on removal strategies; interfacing and collaborating with local, state and regional invasive species organizations; building productive relationships with University partners focused on invasive species research, teaching, and outreach; and outreach to the public about invasive species, both as part of garden programs and at other local and regional events. Documentation of our efforts removing invasive species should be promoted in outreach and social media to raise awareness.

Step 1: Any staff member who is concerned about the potential for invasiveness of a plant species, observes spread of a potentially invasive plant, or receives a request to review a plant species by an outside party, can recommend a review of a species to the IPSC. The IPSC should conduct or oversee a review of the species. The review should include documenting the spread of the species through direct observations and/or via reporting from the horticultural staff with regards to the criteria above.

Step 2: Once this information is compiled into a brief written review, it should be shared with the Collections Manager and a designated member of the horticultural staff. These three people will form a review panel and will make a preliminary recommendation about whether the species should be kept in the collection (unless a later request is made), whether it should be removed from the collection, or whether it should be reviewed the following year before any decision is made.

In rare cases (#5 above), a recommendation could be made to keep a species found to be invasive in the collection or import genotypes from outside the state. In those cases, the recommendation from the panel should include a set of management practices that have been agreed upon by the horticultural staff that will keep the species in check. This species should be added to a list of plants to be reviewed every year to confirm that the management practices are sufficient to keep the species from spreading.

Step 3: The written review together with the preliminary recommendation of the panel should be shared with the garden staff and everyone should have the opportunity to respond to the recommendation. The panel should consider the responses, adjust the recommendation if warranted, and make a final recommendation to the Director who will make a final decision in each case.

### **Opportunistically occurring invasive plants**

The garden can also provide habitat for invasive species that we did not intentionally plant. Plants of any species on the Michigan Prohibited and Restricted Weeds or Watch lists that are discovered growing in any area of the garden will be eradicated from the garden. Locally established invasive species, regardless of their presence on any official invasive species list, that are found growing anywhere in the garden (e.g., buckthorn, *Rhamnus cathartica* or lesser celandine, *Ficaria verna*) will be removed or controlled to the extent possible. Species that are invasive in the garden, but not on any State of Michigan lists, such as *Hedera helix* (English ivy) or *Aegopodium podagraria* (goutweed) will be removed

from the garden. For these plants it may be necessary to remove them in stages, so a removal plan should be developed by the IPSC and the horticultural staff, with input from the Director and Collection Manager. The status of these removals should be evaluated once a year.