

METROPARKS TOLEDO
PLANT COLLECTION POLICY FOR TOLEDO BOTANICAL GARDEN
Approved by the Board of Park Commissioners May 10, 2019

I.) INTRODUCTION

A.) PURPOSE:

This document provides the essential components and guidelines for the development and management of the living collections at Toledo Botanical Garden (TBG.)

B.) GOVERNANCE:

- The Horticulture Staff shall implement this policy under the guidance of the Park Services Supervisor.
 - Adherence to accreditation and membership agreement criteria is the responsibility of the Park Services Supervisor or their designee.
 - Revising of this policy is the responsibility of the Horticulture Staff and the Park Services Supervisor with final approval by the Board of Park Commissioners.
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II.) LIVING COLLECTIONS PURPOSE, CLARIFICATIONS AND DESIGNATIONS

A.) PURPOSE:

The living collections of Toledo Botanical Garden will:

- Create beauty
- Conserve and preserve
- Educate and inspire
- Demonstrate horticulture principles, techniques and plant diversity
- Support research in plant science and germplasm preservation

B.) DEFINITIONS:

Toledo Botanical Garden's living collections are classified as at least one of the following: Formal Plant Collection, Display Collection, Specimen, Trial Garden, or Natural Area. Temporary seasonal displays of non-hardy annual plants are not accessioned and are not considered part of the collections.

1.) Formal Plant Collection:

A group of woody or herbaceous plants that Toledo Botanical Garden has deemed a collection to be developed, maintained, refined, and protected to exhibit a diversity of plants which represents the botanical and horticultural characteristic of specified genera, their species, and the species cultivars which, as a whole, constitutes a reputable reference collection.

Categories of a Formal Plant Collection include:

a.) Accredited Collection (or other designated honors):

A group of woody or herbaceous plants that TBG is recognized for by other institutions or affiliations that meet specific criteria and standards relating to

their designation. This designation may be used for publicity and media coverage to declare the exceptional quality of a collection and its significance to horticulture. Current accreditations and nationally recognized honors include:

- Hosta Collection, a Nationally Accredited Plant Collection™ of the American Public Garden Association's Plant Collections Network, since 2004.
- Hosta Collection, a National Display Garden of the American Hosta Society, since 2002.
- The Daylily Walk, a Display Garden of the American Hemerocallis Society, since 2001.
- The Daylily Walk, a Historic Daylily Display Garden of the American Hemerocallis Society, since 2007.

b.) Major Collection:

A group of woody or herbaceous plants that is not accredited or recognized with designated honors, yet TBG is known for and represents the breadth and depth of the different species of a particular genus and, but not necessarily, the cultivars of the species. Major Collections at TBG include *Rhododendron*, *Rosa*, *Iris* and *Peaonia*. This category may also represent plants from a variety of genera that share cultural or other notable characteristics such as ornamental grasses, succulents, ferns, wildflowers, etc.

c.) Minor Collection:

A group of woody or herbaceous plants that represents only a few significant species, or cultivars of a single species, within a particular genus. Minor Collections at TBG include *Malus*, *Fagus*, *Acer*, *Quercus*, *Picea*, *Pinus*, *Viburnum*, *Hydrangea*, *Cornus*, *Magnolia*, and *Sedum*.

2.) Display Area:

A group of woody or herbaceous plants that are strategically designed with elements that may include line, form, color, texture, balance, scale, sequence, etc. Display Areas are utilized to move visitors from place to place, beautify the grounds, create vistas, provide seasonal interest, and create an emotional response. They are integrated into entrances, building perimeters, pathways, street views, parking areas, or may stand alone. Non-hardy annual plants including some vegetables, herbs or tropical plants, may be installed temporarily within Display Areas to seasonally enhance the overall look but are not accessioned and so are not considered part of the collections, allowing annual plants to be changed regularly.

3.) Specimen:

A single plant, usually woody but may be herbaceous, that showcases and preserves the outstanding characteristics of a genus, species and /or cultivar. They are planted and maintained because the maturity, form, historical significance, or other characteristics are deemed to be outstanding for educational, aesthetic, research, and enjoyment. Generally a specimen stands alone, or it may be located

geographically within a collection of a different category but is not considered part of that same collection.

4.) Trial Garden:

A group of plants used for evaluation over short or long term periods in our climate or to support scientific research with other botanic institutions, universities, research facilities, or plant producers to further preservation, propagation, cultivation, or disease and insect resistance or treatment. This has primarily been done at TBG by USDA's Agricultural Research Service (ARS), The Ohio State University Extension, and the American Rose Society. Trial Garden plants are typically not accessioned unless they are moved from a designated Trial Garden and transplanted into a Formal Plant Collection, Display Collection, Natural Area, or planted as a Specimen. Good record keeping must be conducted for all Trial Garden plants, not only for the original evaluation and research support, but also if the plants should qualify in the future to become permanent and accessioned.

5.) Natural Area:

A group of woody and herbaceous plants known to grow as part of an ecological community in this geographical area. Although documentation of areas less maintained can be challenging, all reasonable efforts should be made to document as much data as possible for more accurate plant records, especially for any new woody or mass plantings being added to these areas. These areas may include national, regional, or local natives that are developed and maintained for conservation.

III.) COLLECTION DEVELOPMENT

A.) ACQUISITIONS:

Proposed collections or additions to an existing collection will:

- 1.) Reflect the Mission Statement and development plans created and approved by the Metroparks Executive Director and Board of Park Commissioners.
- 2.) Fit one or more of the definitions and purposes of living collections.
- 3.) Have authenticity verified and original provenance information ascertained including if acquired as seed, cutting, division, a cultivated plant, original stock, or wild collected.
- 4.) Conform with any state, federal, or international laws such as APHIS regulations, and will be collected in an ethical manner.
- 5.) Establish the survival success of collections in the same climatic zone and be researched carefully to avoid redundancy but may serve as a replicate collection when possible.
- 6.) Be evaluated following the criteria set forth in the Collection Development Appraisal (see attached.)
- 7.) Major acquisitions will be presented to the Chief of Operations and requires approval.

- 8.) Minor additions to existing collections may be done at the discretion of the Horticulture Staff responsible for the care of that area with approval from the Park Services Supervisor.
- 9.) Volunteers or Horticultural Associate Organizations/Plant Societies may assist with the acquisition of plant material following all policies and procedures with prior approval and supervision of the Park Services Supervisor and Horticulture Staff.
- 10.) Only quality plants free of pests and diseases will be acquired.
- 11.) Plants of known insect and disease susceptibility will be avoided, but monitored if necessary.
- 12.) Plants listed as invasive by ODNR, USDA, and the Ohio Invasive Plants Council are not acquired.
- 13.) Vulnerable acquisitions may mature in the TBG greenhouse before being planted in a permanent location.

B.) DOCUMENTATION: PLANT RECORDS, LABELS, TAGS & MAPPING

- 1.) All acquired trees, shrubs, and perennials that remain in an area year round are accessioned, recorded, tagged, and mapped.
- 2.) The Lead Horticulturist is responsible for accurate record keeping of all accessioned plants following departmental procedures (see the Plant Records Procedure Manual details.)
- 3.) Information for new acquisitions are documented on a Plant Accession Form for verification and processing, and submitted to the Lead Horticulturist within 6 months of the installation date.
- 4.) Minimum components of a plant record include: Accession Number; Family/Genus/Species/Cultivar/Variety; Source/Origin/Provenance; Location Zone & Description; Quantity; Acquired By/Dates Received & Installed; Latest Inventory Date; affiliated Accreditations/Designations or Memorials/Dedications.
- 5.) Taxonomy will follow nomenclature standards set by the International Code of Nomenclature of Cultivated Plants (ICNCP) and the International Code of Nomenclature for algae, fungi, and plants (ICN).
- 6.) Additional paperwork such as nursery tags or forms will be submitted for verification when present.
- 7.) Plant records are stored in database format with fields that facilitate the transfer of collection information to other botanic institutions, arboreta, universities, and research facilities.
- 8.) The Plant Records Database is backed-up and stored to prevent loss in case of disaster.
- 9.) All accessioned plants receive an accession tag with the accession number, botanical name, and location zone code for tracking.
- 10.) Most accessioned plants receive a plant identification label for visitors with the common and botanical names for identification. Plant labels may be unnecessary in natural or restricted areas as well as when other labeled plants of the same taxa exist nearby or there are already too many labels in a concentrated area.
- 11.) Some plants may be dedicated with a plaque in memory/honor of an individual or group as coordinated by the Metroparks Philanthropy Department. All

dedicated plants, new or existing, should be handled following any guidelines set by the Philanthropy Department and the Park Services Supervisor.

- 12.) Accessioned plants are mapped to their accurate location.

C.) MAINTENANCE:

- 1.) The Horticulture Staff oversee the maintenance of all plants within their designated areas of responsibility.
- 2.) Basic and routine care shall be provided to all plants in a timely manner.
- 3.) Plant health and appearance are the primary considerations, as are safety and liability concerns.
- 4.) Integrated pest management will be utilized to limit the environmental impact of pest and disease problems on collection care and health.
- 5.) Samples from the ailing or dead plants may be collected and sent to a laboratory for analysis.
- 6.) Plants may be transplanted to more ideal locations if necessary for plant health or aesthetics, and will be documented on a Plant Status Form to update plant records.
- 7.) Plants found missing accession tags or plant labels are documented by the Horticulture Staff on a Label/Tag Replacement Form to be processed.
- 8.) All reasonable efforts will be committed in a timely manner to monitor and eradicate invasive plants that threaten the integrity of the collections.
- 9.) Necessary maintenance to preserve any living collection must take higher priority than non-accessioned temporary seasonal displays which only serve to enhance the way permanent plant collections are displayed.

D.) DE-ACCESSIONS & DISPOSAL:

- 1.) Plants may be de-accessioned if they are no longer relevant to the purpose of the garden, if they have deteriorated, died, disappeared, become damaged, overcrowded, aggressive or invasive, pose a safety risk, are an imminent threat of spreading disease or pest infestations, or have been replaced by a more valuable planting or taxa.
- 2.) Plants with less documentation (i.e.: prior to the inception of plant record keeping in 1983) may be replaced with plantings of more complete documentation if practical.
- 3.) Before removal, plants are evaluated by the Horticulture Staff responsible for the care of that area to determine a termination reason and removal date on a Plant Status Form for updating the plant records.
- 4.) De-accessioned plant records are stored in database format but separately from the living accessions.
- 5.) Major de-accessions will be presented to the Park Services Supervisor and requires approval.
- 6.) Minor de-accessions may be done at the discretion of the Horticulture Staff responsible for the care of that area.
- 7.) Plants that pose a disease or insect pest threat to the collections will be disposed of properly.
- 8.) If a plant is unique or rare, every effort should be made to ensure that the germplasm is preserved at other institutions before it is disposed.

IV.) COLLECTION EVALUATIONS, INVENTORIES, STANDARDS

Regular evaluations of the existing collections, displays, signage, procedures, and master plans will be conducted by the Chief of Operations, Regional Manager of Operations, Park Services Supervisor, and Horticulture Staff with recommendations for continual improvements.

Routine inventories of all collection areas are conducted by the Horticulture Staff to audit the accessions in the field against the Plant Records Database so that updates can be made as necessary for additional accuracy of the holdings. This is especially important for revealing herbaceous perennial plants that die or go missing over time with no remaining plant material to remove. Missing plant labels or accession tags will be replaced, and mapping will also be updated as necessary as a result of the inventory's findings.

Collections which fall under special guidelines (i.e.: accreditations, nationally recognized honors or affiliated memberships) are evaluated by specific criteria and standards relating to their designation. These standards may periodically change by the institutions overseeing the designations. The Horticulture Staff is responsible for such evaluation and reporting requirements.

V.) DISTRIBUTION OF COLLECTION MATERIAL & INFORMATION

Metroparks will support other botanic institutions, arboreta, universities, or research facilities to further the preservation of endangered or threatened species, the cultivation and hybridization of new cultivars, the preservation of wild collected and species germplasm, to study disease and insect control, and to share plant material and significant botanical information for scientific, educational, or conservation purposes. Metroparks will share plants, divisions, cuttings, seeds, and germplasm unless otherwise stipulated due to possibly jeopardizing plant health, poor growth, disease or insect infestation, the plant has not been verified as to its authenticity, or the feasibility of fulfilling certain requests without excessive burden to Metroparks staff and resources.

Information in the plant records may also be shared for promoting, programming, and interpretive initiatives, as well as answering inquiries made by the general public.

Plants in all areas, except in Trial Garden areas, may be subject to propagation for replicating or for possible resale at TBG to the public for a fundraising event. Notice will be given to the Horticulture Staff responsible for the care of that area prior to dividing or removing any plant material. Before propagating any plant, the Horticulture Staff is responsible for verifying that the plant is free of royalty obligations and not patented.

VI.) SUSTAINABILITY

Horticultural maintenance priorities are made by the Park Services Supervisor to ensure the perpetuity of TBG's living collections.

Funding necessary support to preserve any living collection must always take higher priority than funding allocation for seasonal displays.

Adequate horticultural staffing will be maintained to ensure that all collections have care based on best management and cultural practices. Volunteers & Garden Keepers may also participate in collection care after proper training and with supervision by Horticulture Staff. Guidelines for Volunteers & Garden Keepers have been established by the Metroparks Volunteer Services Department to clearly outline their responsibilities.

COLLECTION DEVELOPMENT GUIDELINES:

I.) **PURPOSE:**

To ensure that proposed collections or additions to existing collections are evaluated in the same manner with objectivity and depth of focus.

II.) **GOVERNANCE:**

The Park Services Supervisor and Horticulture Staff are responsible for researching and choosing collections for development and additions to existing collections.

III.) **CRITERIA:**

The following criteria should be followed:

A.) **Mission & Purpose:**

- 1.) Does the proposed collection reflect the Metroparks mission and plans?
- 2.) Does the collection adhere to at least one of the definitions of a living collection; i.e.: Formal Plant Collection, Display Collection, Specimen, Trial Garden, or Natural Area?

B.) **Parallel Collections:**

- 1.) Do parallel collections exist at other botanic institutions, arboreta, universities, or research facilities?
- 2.) Where is the location of the collection? Same state? Regional area?
- 3.) Could Metroparks work in conjunction with the botanic institution, arboreta, university, or research facility to obtain their plant material or acquire new plants to develop a replicate collection partnership?
- 4.) Is the known collection already so well known or well done as to diminish Metroparks efforts in establishing a collection?
- 5.) What is the focus/purpose/significance of the parallel collection?
- 6.) Is the parallel collection wild collected, cultivated plants, species only, or a mix of species and cultivars?

C.) **Site & Cultural Requirements:**

- 1.) What are the crucial cultural requirements of the collection such as soil type, nutrient level, light, and moisture?
- 2.) Does the proposed site provide the collection with the crucial cultural requirements?
- 3.) What are the potential disease and pest threats to the collection?
- 4.) How high is the susceptibility level for disease and pest problems?
- 5.) Will the proposed site's microenvironment raise the collection's susceptibility to disease and pest attacks?
- 6.) Will staff have the means and time to treat diseases and pests?
- 7.) Is the carrying capacity of the site adequate for the size of the collection plus other plants and collections already in the area?
- 8.) Is there enough room for the plants to be appropriately spaced for their mature size?

- 9.) Can the collection be relocated?
- 10.) Will the site provide an appropriate backdrop or surroundings to display the collection for maximum impact?
- 11.) Is the site free of invasive or noxious weeds?
- 12.) Is the site accessible to maintenance or spraying equipment?

D.) Financial:

- 1.) Can Metroparks afford to build a new collection, or to add to an existing collection?
- 2.) Can Metroparks provide the money necessary for equipment and other materials to promote good health such as machinery, maintenance tools, chemicals, soil amendments, irrigation, etc.?
- 3.) Are staffing levels adequate to care for the collection?
- 4.) Are funds adequate to provide long term care for chronic or life threatening diseases and pest problems?
- 5.) Are funds adequate to provide collections with specialized care such as staking, high canopy pruning, etc.?
- 6.) Are funds adequate for plant labels and other materials?
- 7.) Are staffing levels adequate to document and inventory the collection?
- 8.) Is there funding for possible relocation of a collection?

E.) Documentation, Verification, Research, & Standards:

- 1.) Can the collection be adequately mapped and signed?
- 2.) Can a new collection be easily verified?
- 3.) Can an existing collection be easily inventoried?
- 4.) Are there experts or resources available to help with the verification process?
- 5.) Are there any national or local organizations tied into the collections?
- 6.) What potential recognitions or accreditations are available?
- 7.) Can the collection meet the standards and guidelines of accreditation?
- 8.) Is there a demand for research of this type of collection?
- 9.) Is there a possibility of storing germplasm or having replicates if a plant is lost for the perpetuity of the collection?