

MONTGOMERY BOTANICAL CENTER

PLANT COLLECTIONS POLICY

VERSION 2.1

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MONTGOMERY BOTANICAL CENTER'S MISSION

The mission of the Montgomery Botanical Center, a non-profit institution, is to advance science, education, conservation and horticultural knowledge of tropical plants, emphasizing palms and cycads, and to exemplify excellent botanical garden design. Through this mission, the Montgomery Botanical Center endeavors to make the Montgomery name known and respected throughout the world in the field of plant science.

The Montgomery Botanical Center carries out its mission by collecting seeds from wild populations of tropical plants around the world, particularly seeds of palms and cycads. Montgomery germinates these seeds in its nursery and grows the resulting plants in population-based, documented, scientific collections in its extensive garden pursuant to excellent botanical garden design. Montgomery fosters, and participates in, scientific research by collecting and maintaining scientific data on its collections, by making its collections and scientific data available to scientists for research purposes, and by disseminating this research and data through scientific publications. Montgomery cooperates with many botanical institutions and countries around the world by making its plant collections, knowledge and expertise available to their scientists, educators, and students. Montgomery explains its mission and operations to the general public through workshops, lectures, publications and tours of the plant collections in its garden.

Montgomery Botanical Center's wild-collected, population-based, documented tropical plant collections are extraordinary in their scientific, educational and conservation value; and its botanical garden that contains those collections is extraordinary in its design and beauty.

PLANT COLLECTIONS POLICY

Purpose

This Policy is to guide the development and management of the living collections at Montgomery Botanical Center (MBC). This Policy provides direction for the acquisition of collections, conditions for acceptance and removal of living material, and ethical standards.

Policy Implementation and Review

Adherence to this Policy is the responsibility of the Collections Committee, which is composed of the Executive Director, Collections Manager, and Biologists. MBC Staff implement the Policy under the guidance of the Collections Committee.

The Policy is authored by the Collections Committee and approved by the Board of Directors. Periodic review of this Policy will be the responsibility of the Collections Committee.

Collections Overview

MBC's *living collections* consist of plants with special scientific and/or conservation interest, historical interest (e.g. original plantings of Robert Montgomery), or landscape/ornamental value that are considered worthy of being accessioned in the MBC database because they contribute significantly to the mission of MBC. The following plants are not part of the living collections: (1) certain exclusively functional plants such as turf plants, screening plants (e.g. vines on fences), etc. (2) plants of unmaintained areas (e.g. native hammock areas, lowland mangrove/brazilian pepper area, certain border/screening areas) (3) volunteer weeds (herbaceous and woody) among the collections.

The collections are organized as follows:

1. Grounds Collection. The Grounds Collection is composed of palm, cycad, and other vascular plant collections. Emphasis is on plants of research, education, and conservation importance, although the Grounds Collection also includes specimens primarily for display and landscaping purposes. Plants with precise provenance data are given priority, although all wild collected plants and plants of special interest are valued. The Grounds Collection is maintained by the Palm, Cycad, and Dicot/Conifer Curators under the supervision of the Property Manager. Records associated with the Collections are maintained by the Collections Development (CD) Department under the supervision of the Collections Manager.
2. Nursery Collection. The MBC Nursery staff germinates seeds, and grows seedlings and plants acquired through expeditions, donations, propagation, and purchase. Plants are cultivated in the Nursery until they are large enough and healthy enough to be planted out into the Grounds Collection. Thus, the nursery collection should be limited to plants with a reasonable chance of growing on the property or that will be distributed to an institution at which they have a good chance of survival. Emphasis is on plants with research, education, and conservation importance. The personal orchid collection of the late Nell Montgomery, which is of historical significance for MBC, encompasses the only plants permanently housed in the Nursery. The Nursery Collection is maintained by the Nursery Curator under the supervision of the Property Manager. Records associated with the Nursery are maintained by the CD Department under the supervision of the Collections Manager.
3. MBC/FNGLA SeedBank. MBC, in association with the Miami-Dade Chapter of the Florida Nursery, Growers & Landscape Association (FNGLA), operates the largest seedbank of its kind in the world. The MBC/FNGLA SeedBank distributes seed produced from MBC's collections to encourage conservation through cultivation. Seeds are also donated to research institutions, universities, botanical gardens, botanical specialists and plant societies worldwide. The SeedBank operates under the supervision of the SeedBank Coordinator. Records associated with the MBC/FNGLA SeedBank are maintained by the SeedBank Coordinator and the CD Department, under the supervision of the Collections Manager.
4. Pollen Bank. MBC maintains a frozen Pollen Bank under the supervision of the SeedBank Coordinator. The primary goal of the Pollen Bank is to ensure that viable pollen is available on site for the purpose of producing artificially propagated, documented seeds for the MBC/FNGLA SeedBank, research institutions, botanical specialists, curators, and/or collectors interested in producing artificially propagated seeds. Records associated with the Pollen Bank are maintained

by the SeedBank Coordinator and the CD Department, under the supervision of the Collections Manager.

Montgomery Botanical Center's Planting Policy

Plants in MBC's collections should comply with the following core principles, as evaluated by appropriate members of the Collections Committee and Curators:

1. Plants should have scientific and/or educational value, or special historical or aesthetic value.
2. Plants should have a reasonable chance of eventually succeeding in the Grounds Collection on the property (with the exception of the permanently maintained historic orchid collection in the Nursery).
3. Plants should be considered unlikely to escape cultivation and become an invasive threat to native habitats.
4. Plants should be maintained following exemplary horticultural practices.
5. Plants should be incorporated into the collection in an aesthetically pleasing manner consistent with the overall landscape design.

Acquisition of Material

Montgomery Botanical Center staff will strive to ensure that all plant material acquired from overseas on behalf of MBC has been collected, exported, and imported in compliance with all applicable laws and regulations of the country of origin and the Federal Government of the United States,. Staff are not to accept plants known to have been illegally or unethically collected from the wild.

Seeds or plants arriving at MBC are delivered directly to the appropriate Biologist or, in the Biologist's absence, to the Collections Manager. The Biologist (or Collections Manager) must approve the acceptance and initiate the processing of all incoming material. For wild collected material arriving from overseas, documentation establishing proper collection and movement of plant material in accordance with all applicable laws and regulations (*e.g.*, collection/research permit, export permit, import permit, CITES permit(s), phytosanitary certificate, etc.) must accompany the material. Original documentation will be permanently maintained in the Montgomery Archive.

For plant material originally of wild origin received from cultivation within the US (botanical gardens, private collections, etc.), relevant documentation (especially CITES and any source country collecting/export permits, as applicable) should be sought, if available and appropriate, from the donor and deposited in the archive. MBC staff are not to accept plants known to have been illegally or unethically obtained in the country of origin.

Selection Criteria

Plant material is acquired by MBC in accordance with the following criteria (listed in order of importance):

1. True population samples of seeds (preferable) or plants of documented wild origin.
2. Non-population collections of seeds (preferable) or plants of documented wild origin.
3. For *ex-situ* conservation purposes, seeds (preferable) or plants classified as Rare, Threatened, Endangered, or Critically Endangered, as designated by international, federal, or state agencies or non-governmental organizations specializing in plant conservation.

4. Plants of botanical, horticultural, or genetic interest, especially those with research or educational display potential. Plants that provide support (*i.e.*, shade, structure, etc.) for the Palm and Cycad collections fall into this category.

Modes of Acquisition

Living material that meets one or more of the above selection criteria may be acquired in the following ways:

1. **Field collections.** Collecting expeditions are primarily the responsibility of MBC's Cycad and Palm Biologists, although contract collectors may also be utilized. Field collectors (whether they are MBC employees or contractors) must comply with all relevant local, national, and international laws and regulations with respect to the collection and movement of plant materials. Approximately half of the living material collected during an expedition is typically provided to a recognized institution in the country of origin. When ample material is available, duplicate collections are encouraged for the purpose of providing a reserve of valuable documented material should MBC's collections be damaged or destroyed. Duplicate herbarium vouchers are deposited in one or more herbaria within the country of origin and the U.S.
2. **Gifts.** MBC encourages gifts of seeds or plants, particularly those of documented wild origin. All gifts become the property of MBC; as such, donors may not place restrictions on gifts, unless such restrictions have been placed on the plants by the country of origin. The Collections Committee reserves the right to refuse, remove, donate, and/or dispose of gifts. No member of the MBC Staff may give appraisals for the purpose of establishing the tax-deductible value of gifts.
3. **Exchanges.** The exchange of living material with other gardens and institutions is encouraged but will be subject to approval by the relevant member(s) of the Collections Committee.
4. **Purchases.** Plant purchases (typically dicots to support the palm and/or cycad collections) may be made by the appropriate Biologist or Curator, with approval from the Property Manager or Collections Manager, and, if necessary and appropriate, in consultation with Sasaki Associates (MBC's landscape architectural consultant). Original receipts/invoices must be submitted to the Collections Manager for deposit in the Montgomery Archive.
5. **U.S. Fish & Wildlife Service (USFWS) Plant Rescue Center (PRC) submissions.** MBC is a registered PRC for palms and cycads. Living material imported into the U.S. in violation of CITES and confiscated by the USFWS may occasionally be offered to MBC. The decision to accept or refuse PRC material will be made by relevant member(s) of the Collections Committee. By accepting PRC material, MBC thereby agrees to adhere to all established laws, rules, and regulations concerning the disposition, maintenance, documentation, use, and ultimate fate of the material. According to the current provisions, PRC plants are property of the US Government, but seeds and progeny from them become the property of the PRC.
6. **Special agreements with conservation agencies or organizations.** Such agreements may include the cultivation of special plants designated by conservation agencies or organizations as important for the maintenance of genetic diversity. Agreements to accept such plants, and any associated contractual restrictions, must be approved by the Collections Committee.

Accessioning

Normally, living plant material that is acquired by MBC (*e.g.* through expeditions, donations, or exchanges), that substantially contributes MBC's mission and corresponds to the conditions in the

Planting Policy and Selection Criteria, is accessioned upon its arrival at MBC. Staff involved with accessioning (e.g. Nursery Curator, Database Specialist and Field Supervisor) should consult with one or more members of the Collections Committee to decide in particular cases when there is ambiguity about the desirability of accessioning a particular plant. Alternatives to accessioning include declining to accept the material or donating it to another party. Because accessioning involves a significant commitment by MBC to ongoing record keeping and because MBC's resources are limited and its mission focused, the decision to accession plant material should not be taken lightly.

The Collections Manager is responsible for the overall management of the plant records system, in collaboration with the Cycad and Palm Biologists, Field Supervisor, Field Specialist, Database Specialist, and SeedBank Coordinator. The plant records system includes electronic and hard-copy accession, planting, maintenance, phenology, distribution, removal, and map records.

Removal from the Grounds Collection

MBC continually improves the scientific usefulness and value of the plant collections. Plants in the Grounds or Nursery Collections that lack detailed provenance information may be removed with permission of relevant members of the Collections Committee and the Executive Director subject to compliance with applicable laws and regulations. Removal information, including the reason for removal and the ultimate fate of the plant (e.g., plants may be cut down and discarded or removed and donated), is recorded in the database.

Distribution of Living Material

All living plant material growing at MBC in the Grounds and Nursery—with some exceptions, such as PRC material, which belongs to the U.S. government or material contractually controlled by the government of the country of origin, or material in transit through MBC—is the property of MBC, and is therefore treated as an MBC asset. No living material (seeds, plants, pollen, or any other plant parts) of accessioned plants will be released from the property without authorization from the appropriate Biologist, Collections Manager or the Executive Director and, normally, without submission of the appropriate documentation to the Database Specialist. Distribution information—including botanical name, accession number, type of material, quantity, name and address of the individual or institutional recipient, and intended purpose—is permanently maintained electronically in the database and on hard copy in the Montgomery Archive.

The appropriate Biologist and/or the Collections Manager must confirm that living material intended for distribution is not in violation of any existing agreement(s) with another institution, organization, or government. Distribution of living material across political boundaries must be conducted in compliance with all applicable laws and regulations, particularly with regard to phytosanitary documents and the Convention on International Trade of Endangered Species (CITES). MBC is a registered CITES Scientific Institution (#US109). Accessioned living material may be exchanged internationally with other registered CITES Scientific Institutions without the need for obtaining separate CITES Export or Import permits.

Living material may be distributed by any of the following methods (listed in no particular order):

1. Gifts for research purposes. Living material may be sent to botanical specialists for their use in research projects.

2. Pollen for producing artificially propagated seeds. Pollen may be sent to botanical specialists, curators, and/or collectors for the purpose of producing artificially propagated seeds. MBC may request to receive a portion of the seeds as compensation for supplying the pollen.
3. Exchange. To safeguard MBC's plant collections against loss and to increase the holdings of the collection, exchange between recognized botanical and/or scientific institutions and organizations is encouraged. Exchange material sent from MBC may consist of duplicate original material, material poorly suited to growing in MBC's Grounds Collections, vegetative propagules, seeds, or plants propagated (naturally or artificially) at MBC. Decisions about exchange of material (both the material to be received and sent) will be made by the appropriate Biologist, Collections Manager, or Executive Director.
4. Distribution to the public. Seeds from the MBC/FNGLA SeedBank are regularly distributed to SeedBank members, with additional seeds auctioned off by the FNGLA. Excess plants from the Nursery and Grounds Collections may also be donated to the public or distributed to MBC Staff and Volunteers.

In some cases, MBC may initially distribute some or all incoming material, prior to or after accessioning, to another party or parties (e.g. gardens, universities or expert individuals) to best ensure survival and conservation of the germplasm. Such cases include the following:

1. When an abundance of seeds with high germination rate is collected in excess of MBC's needs. In this case, initial distribution of material to other gardens/collections is very desirable for conservation.
2. When valuable plant material is collected or received that is unlikely to survive under the conditions at MBC (e.g. plants that have a history of failing under South Florida weather or soil conditions, that come from montane areas, etc.). In this case, it is desirable to provide the material to another responsible party better capable of providing the appropriate growing conditions, rather than risk the probable loss of the germplasm. In the future, MBC may pursue agreements with other institutions that facilitate distribution of material according to the growing conditions for which it is best suited. Such arrangements may allow MBC to record the material that is maintained at another institution and receive acknowledgment as a co-provider in publications related to the material.

Evaluation

The overall health, maintenance, and general condition of the palm and cycad collections are evaluated three times a year by the Palm and Cycad Biologists in collaboration with the curators. Triannual collection evaluation reports are permanently maintained electronically and on hard copy in the Montgomery Archive. Outside experts may also be invited to evaluate groups of plants to provide additional perspectives and ideas on collections maintenance.

Maintenance

MBC's Curators, under the direction of the Property Manager, are responsible for the care and maintenance of the living collections. Their primary goal is to keep the plants healthy and reproducing to the best of their abilities. Priority care is given to documented plants of known wild origin as well as those actively being used for research, education, conservation, and/or display.

The Collections Manager, in collaboration with the CD Staff and with the cooperation of the Curators, is responsible for maintaining an accurate, complete, and current plant records system consisting of filed and permanently archived paper records as well as a computerized database and mapping system. An automated, complete backup of the computerized plant records database is done daily. An additional backup is stored off-site in a local bank vault and is replaced quarterly.

Inventory

A complete inventory of the Nursery and Grounds Collections is conducted annually to ensure the accuracy of plant names, records, labels, and maps. The Nursery inventory is done by the Nursery Curator and the Database Specialist using computer-generated plant lists. The Grounds inventory is conducted by the Field Supervisor and Field Specialist. Maps and associated plant lists are used in the field to verify each specimen's location, accession number, name, and provenance. Plant health/condition and phenological data are noted as well. The accuracy, physical condition, and placement of all plant labels are evaluated. Post-inventory forms are provided to the Curators for follow up. Inventory data are entered into the plant records database, updated maps are generated, and annual statistics—including but not limited to the number of living plants, accessions, taxa, genera, and families in the living collections—are produced by the CD Staff.

Access and Use

MBC is committed to providing reasonable open and equal access to its collections and associated collection information consistent with its stewardship responsibilities. Physical and intellectual access to the collections must be balanced against preservation and protection concerns. Visitors will request permission from the appropriate Biologist, Collections Manager, or Executive Director to access the collections prior to their arrival at MBC. Upon arrival, visitors will sign the guest register and report to the MBC staff. No accessioned material will be released from the property without permission from the appropriate Biologist, Collections Manager or Executive Director and, normally, without completing an MBC Material Permission Form. MBC maintains the right to refuse access to the collections and/or the associated collection information due to, but not limited to, considerations of resource limitations, security, availability, intellectual property requirements, applicable restrictions, and time constraints.