

THE MARIE SELBY BOTANICAL GARDENS

PLANT COLLECTIONS POLICY AND PROCEDURES

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MISSION STATEMENT

To further the understanding and appreciation of plant life, with emphasis on epiphytes, and to provide enjoyment to all who visit the Gardens.

SUMMARY

The staff of The Marie Selby Botanical Gardens, Inc., (MSBG) has acquired, and continues to acquire, extensive species collections of epiphytes and other tropical plants by means of fieldwork and through various forms of interaction with other institutions and individuals. Well-documented collections of tropical and subtropical plants are grown in the greenhouses, on the grounds, and preserved in the herbarium and spirit collection to serve as a basis for research and as a unique resource for display, propagation, conservation, and education.

Plant materials acquired by the MSBG and its staff are gathered and prepared in conformity with appropriate state, national, and international laws and regulations and are collected in a rational, scientific, and ethical manner. The MSBG contributes to a worldwide effort of plant species and native habitat preservation by studying plants *in situ* and by propagating plants from its cultivated collections.

The Plant Collections Policy (the Policy) of the MSBG and its collections shall be consistent with the Mission of the MSBG. The Plant Collections Procedures (the Procedures) provide guidelines for collecting activities, and for collections processing and management. The Plant Collections Committee (the Collections Committee) shall review the Policy and Procedures as needed.

PLANT COLLECTIONS POLICY

I. PURPOSE OF THE POLICY

The purpose of the Policy is to define the development and management of plant collections at The Marie Selby Botanical Gardens, Inc. (MSBG), to provide direction for the acquisition of collections, to define the conditions of acceptance and removal that may be placed upon materials acquired by or deleted from the MSBG collections, and to affirm that the highest ethical and legal standards will be met by the MSBG in all transactions.

II. INSTITUTIONAL STRUCTURE FOR THE POLICY

The Collections Committee shall be made up of the following staff members from the MSBG: 1) Chief Executive Officer (CEO), 2) Manager of Plant Collections, 3) Director of Horticulture, 4) Director of Center for Tropical Plant Science & Conservation, 5) Curator of Living Collection, 6) Head of Systematics, 7) the Curator of the Bromeliad Identification Center, and 8) the Plant Records Keeper. The Chairperson of the Board of Trustees shall appoint one additional member from the Board of Trustees. All members shall have one vote, and a majority of the full Collections Committee shall be required for a motion to be carried. The Collections Committee will meet at the request of the CEO or the Chairperson of the Collections Committee, the latter being appointed by the CEO.

Revisions to the Policy shall be recommended by the Collections Committee, reviewed by the Board Science Committee, and then approved by the Board of Trustees. The staff shall implement the Policy under the guidance of the Collections Committee. Revisions to the Procedures shall be recommended by staff and approved by the Collections Committee.

The Collections Committee may appoint subcommittees to further define the development, growth, and maintenance of specific taxa important to the MSBG. These subcommittees shall include appropriate representatives from the , program departments as well as appropriate members of the adjunct staff.

III. ACQUISITIONS: ACCESSIONED MATERIALS

Plant material acquired (i.e., accessioned) shall be in accordance with the selection criteria set forth in the Selection Criteria for Collections (Section III.A, below). The appropriate department director, the head, or curator may make routine acquisitions for the various collections with input from the staff. Major acquisitions and acquisitions of whole collections shall be approved by the Collections Committee. Every reasonable effort shall be made to gather detailed original locality information for all acquisitions.

All plant material will be acquired only when collected, exported, and imported in compliance with the laws and regulations of the country of origin, of the Federal Government of the United States, of the individual states of the United States, and of international treaties. Evidence of proper collection in accordance with government regulations shall be provided to the Manager of Plant Collections for the archives. MSBG's procedure governing both the receipt of all plants that are presented to MSBG, whether simply received or formally accessioned and whether obtained through the mail or presented by "walk-ins," is set forth below in the section, "Receipt and Handling of Specimens."

Small personal collections (less than 20 plants) not accessioned as part of the MSBG collection shall only be accepted with the authorization of the appropriate curator. Larger personal collections shall require the approval of the Collections Committee. A letter of understanding shall be drawn up and signed by the department director and the individual. These collections may be amassed by MSBG employees only

through compliance with applicable state and federal laws, and are subject to removal if space and resources for plants of higher priority are needed.

III.A. Selection Criteria for Collections

Priority should be given to the following criteria.

- Epiphytic plants.
- Plants of documented wild source or plants vegetatively propagated from such plants. For live plants, in the case of cultivars, a reasonable effort should be made to obtain plants from the nursery or institution that introduced the plant.
- For *ex situ* conservation purposes, plants classified as rare, threatened, endangered, or sensitive, as designated by international, federal, or state agencies or non-governmental organizations specializing in plant conservation.
- Plants of botanical, horticultural, medicinal, or genetic interest, especially those with a research or educational display potential.
- Resource availability (i.e., staff, facilities, and space) must be adequate for permanent care and maintenance of the plant(s).

III.B. Modes of Acquisition

Note: Plants arriving at the MSBG shall be delivered directly to the person responsible for the particular collection to insure adherence to the regulations set forth in the Policy.

Plants that meet one or more of the selection criteria for collections may be acquired in one of seven ways:

1. Field Collections. Field collectors shall comply with all relevant local, national, and international laws. In foreign countries, the first full set of collections shall be provided to a recognized institution in the country of origin and the second set to the MSBG. When ample material is available from the original population, duplicate collections are encouraged for 1) sending to botanical specialists as gifts in return for their identification, 2) exchanging with other institutions, 3) providing another reserve of valuable documented collections or genetic diversity should the MSBG collections become damaged or destroyed, and 4) in the case of live collections, providing a herbarium voucher.
2. Gifts. The MSBG encourages all gifts of collections to be accompanied by sufficient endowment funds for long-term maintenance. The donor may place no restrictions on gifts of plants. Gifts incorporated as permanent collections shall be evaluated with the other living collections; the MSBG has the right to deaccession and dispose of gifts. Gifts in exchange for identification may be accepted, and serve as an important way of building the MSBG collections.

No member of the MSBG staff shall, in his or her official capacity, give appraisals for the purpose of establishing the tax-deductible value of gifts or purchases in behalf of the MSBG and offered to the MSBG. Where appropriate, the MSBG may assist owners in finding qualified professionals who can provide appraisals.

3. Exchange. Exchanges with other gardens and institutions shall be made with the approval of the appropriate department director or curator. CITES-listed specimens acquired through the Gardens Certificate of Scientific Exchange are to be used strictly for scientific or educational purposes. They may not be sold or distributed to individuals and will be identified by the following text on their labels and in the database: "Scientific Specimen – not for public distribution or sale."

4. Purchases. Large purchases shall be made only with the approval of the Collections Committee. The appropriate department director or curator may make small purchases. Copies of receipts must be delivered to the Plant Records Keeper for the archives.
5. Loans. Loans are temporary holdings of collections from other institutions or individuals. Their purpose is to provide to the MSBG display, educational, or research and conservation materials otherwise not available. A loan period shall be agreed upon in writing between the loaning institution/individual and the MSBG. The appropriate curator will be responsible for requesting and accepting loans.
6. Identification Center Submissions. The Identification (ID) Centers may accept material for identification. Specimens received in this fashion may be accessioned into either the living or preserved collections, discarded, or returned to the collector by the appropriate ID center head, if they do not meet the Selection Criteria for Plant Collections.
7. Special Agreements with Conservation Agencies or Organizations. These agreements include the cultivation and maintenance of special plants designated by conservation agencies or organizations as important for maintenance of genetic diversity. These collections often have restrictions on distribution of propagules outside of the institution. All agreements to grow such plants must be approved by the Collections Committee.

III.C. Collections of the MSBG

1. The Greenhouse Research and Display Collection shall be maintained under the supervision of the Curator of Living Collections with assistance from appropriate staff. Plant record information shall be maintained under the supervision of the Manager of Plant Collections. Accessioned plants may be used for display unless marked with “Research Only” tags. The possibility of loss due to theft or adverse growing conditions shall be considered when using accessioned plants for display and appropriate security measures shall be undertaken.
2. The Grounds Collection shall be maintained under the supervision of the Grounds Supervisor, with assistance from appropriate staff. Emphasis is on display and education, though the Grounds Collection also serves to maintain specimens of research or conservation importance. Plants with detailed provenance should be given priority for accession whenever possible.
3. The Herbarium Collection and its records shall be maintained under the supervision of the Curator of the Herbarium with assistance from appropriate staff. Unmounted duplicate collections may be used as gifts in return for their identification, or when identified, as exchange with other institutions.
4. The Spirit Collection and its records shall be maintained under the supervision of the Manager of Plant Collections in consultation with the staff of the Orchid and Bromeliad Identification Centers.

IV. ACCESSIONING

The Manager of Plant Collections shall be responsible for overall management of the plant records system, in consultation with the Curator of Living Collections, Director of Horticulture, Curator of the Herbarium, and Plant Records Keeper. The plant records system shall include both accession and deaccession records and detailed information on hard copy, and where possible, electronic form, of all incoming and outgoing plant transactions. Non-accessioned plants may include annuals, some ephemeral research and display plants, plants for education purposes, sale plants, and plants received on loan.

V. DEACCESSIONING

The Collections Committee shall approve major deaccessions. The appropriate department director, the head, or curator shall approve minor deaccessions. Deaccession information, including the reason for deaccession, shall be recorded on the appropriate form and shall be maintained on the database.

Reasons for deaccessioning include the following.

- The accession has died or is irretrievably lost.
- The accession has deteriorated.
- A more desirable accession could replace the current accession.
- Active research on the accession(s) has been discontinued.
- Data on the identification or “authenticity” of the accession are irretrievably lost.
- The accession is an unnecessary duplicate.

VI. DISTRIBUTION OF PLANT MATERIALS

All plant materials at the MSBG are the property of the MSBG, and hence are to be treated as any other MSBG asset. No plants or parts thereof will be released from the collection, whether permanently or on loan for exhibition, whether accessioned or deaccessioned, without authorization from either the CEO or the appropriate Department Director or Curator.

Distribution of deaccessioned plant specimens, duplicate preserved specimens, genets of live specimens, or accessioned and preserved specimens may take place by the methods listed below, provided that they do not have previous distribution restrictions (such as COSE-related CITES collections). Records of distributed materials, including at a minimum, botanical name, the MSBG accession number, and name and address of the individual or institution receiving the specimens, shall be delivered to the Plant Records Keeper for the Living Collection and to the Curator of the Herbarium for the Preserved Collection. All such records shall be maintained on hard copy and in electronic form for the permanent files. See the Addendum for further regulations regarding the Preserved Collection.

The appropriate Curator must confirm that a plant intended for distribution is not in violation of an existing Agreement with another institution or organization. Specimens with restricted distribution shall be clearly marked as “Science Collection – not for public distribution or sale” on their labels and within the database. Specimens may be distributed as gifts or exchange solely to other scientific or educational institution, and their shipment shall include a note indicating that the specimens may not be sold or used for any other commercial purposes. The Plant Records Keeper shall maintain such Agreements for the Living Collection and the Curator of the Herbarium for the preserved collection. Distribution of plants across political boundaries shall be conducted in compliance with international law and treaties, particularly in regard to agriculture inspection permits and the Convention on the International Trade of Endangered Species (CITES).

1. Gifts for Identification or for research purposes. To assure that the MSBG collections are accurately identified, duplicate specimens of the preserved collection or genets of the living collection may be sent to botanical specialists as a gift in return for their identification or for their use in research projects.
2. Exchange. To safeguard the MSBG plant collections against loss and to increase the holdings of the collection, exchange between recognized botanical and/or scientific organizations shall be encouraged. Exchange material sent from MSBG shall consist of unnecessary duplicate collections, deaccessioned plants, or in some cases MSBG literature may be exchanged for plant specimens.
3. Sales to the Public and Member Distribution. Deaccessioned living plants, genets of accessioned living plants, or non-accessioned plants acquired for purposes of plant fairs/sales may be sold to the public or distributed to MSBG members provided that they do not have a previous distribution restriction.
4. Loans. Preserved collections may be loaned to recognized institutions with the approval of the appropriate curator. Loans shall be agreed upon in writing between the MSBG and the recipient institution and shall be granted for a period of one year with extensions available upon request from the Curator of the recipient institution.

VII. EVALUATION

The Director of Horticulture shall be responsible for regular evaluations of the permanent living collections in consultation with the Curator of Living Collections, Grounds Supervisor, and other appropriate staff members. The individual curators of the preserved collections have responsibility for evaluations of the preserved collection, in consultation with the staff of the Identification Centers and other appropriate staff members. Under some circumstances, outside experts may be invited to provide evaluations for groups of plants for which staff expertise is lacking.

VIII. MAINTENANCE

In all actions, the MSBG and its staff shall act as responsible conservators aiming to preserve and guard the plant collections.

The Director of Horticulture shall be responsible for maintenance of the Living Collections (i.e., Greenhouse Research and Display Collection, Grounds Collection). The Manager of Plant Collections shall be responsible for the maintenance of the Preserved Collections. The Disaster Emergency Plan (hurricane and fire) has been designed to provide priority rescue efforts to those living plants bearing red bar-code tags and the Type Specimen Collection from the Herbarium. Permanent and accurate records of all accessions and deaccessions, as well as gifts and loans shall be kept up to date and archived by the appropriate curator. A complete, regularly updated backup of the Plant Records computer database shall be kept off-site by the Head of the Information Technology Department to guard against loss of data.

The minimum standard for maintenance of the Living Collection shall be to keep the plants alive, growing, and reproducing. Priority care of the Living Collection shall be given to those plants accessioned and actively used for research, education, conservation, or display. The minimum standard for the maintenance of the Herbarium Collection shall be to keep them in a climate-controlled building, free of damaging pests, and arranged in a way to ensure their accessibility to researchers. The minimum standard for the maintenance of the Spirit Collection shall be to keep preservative fluid in the containers at all times. Priority

care of the Preserved Collection shall be given to the Type Collection and to specimens actively used for research.

IX. INVENTORY

To update plant records, names, and labels, a complete inventory of the Living Collections shall be conducted every two years and supervised by the Plant Records Keeper, with one half of the collections being inventoried every year. Information will include a list of live specimens, a list of dead and deaccessioned plants, a list of accessions not found, number of species, genera, and families maintained, and a list of plants that have been accessioned since the previous inventory. For the Preserved Collection, Curator of the Herbarium shall compile a list of the number of loans, gifts, exchanges, accessions, deaccessions, and total holdings in July of each year. A summary of all plant holdings shall be presented to the Collections Committee in July of each year.

X. ACCESS AND USE

The MSBG will provide reasonable open and equal access to its collections and collection information consistent with its stewardship responsibilities. Physical and intellectual access to the collections must be balanced against preservation and protection concerns. Visitors must request permission from the appropriate curator for access to the non-public collections prior to arrival at the MSBG. Upon arrival, visitors must sign the guest register and report to the appropriate curator or a designated employee. A guest register will be maintained for the preserved collection in the Center for Tropical Plant Science and Conservation, and for the living collection in the Greenhouse Work Area. No material may be removed without permission from the Manager of Plant Collections or the curator of the individual collection. The MSBG maintains the right to refuse access to the collections due to, but not limited to, considerations of resource limitations, security, object availability, intellectual property requirements, applicable restrictions, and preservation constraints.

PLANT COLLECTIONS PROCEDURES

1. PRESERVED COLLECTION GUIDELINES

This section provides general guidelines for preserved collection management. The preserved collections shall be stored in the Stark Botanical Research Center, 711 South Palm Ave., Sarasota, FL or its successor facility. The collections are normally accessible from 9 am until 5 pm, Monday through Friday, and are available for consultation by all qualified researchers. Researchers using the collection are requested to provide copies of published papers to the MSBG Research Library resulting from their work.

The Stark Botanical Research Center shall be monitored continuously for fire or smoke, and an intrusion alarm is active nights and weekends. If the fire alarm sounds, personnel shall leave the building immediately and call 911 for assistance. Minor emergencies shall be reported to the Manager of Plant Collections (955-7553 x12), the Head of Systematics (955-7553 x11), the Director of Center for Tropical Plant Science & Conservation (955-7553 x15), or the Director of Facilities (366-5731 x227).

No destructive sampling, i.e. dissection, of the specimens is allowed without the written approval of the Manager of Plant Collections or the curator responsible for the particular collection.

I. HERBARIUM (SEL)

Founded in 1973, the MSBG Herbarium consists of approximately 87,000 specimens largely collected in South and Central America with lesser numbers from central Florida and the Old World Tropics. Andean South America is particularly well represented, as are epiphytic taxa. The herbarium also serves as a repository for vouchers from MSBG's extensive, well-documented collection of living plants. Important collections from the following individuals are held: Calaway Dodson, Carlyle Luer, John T. Atwood, Harry E. Luther, Libby Besse, G.C.K. Dunsterville, Michael Madison, Hans Wiehler, W. John Kress.

Incoming Specimens. All incoming material into the Herbarium or specimens left out of their cabinets for more than a day shall be frozen for at least three days to prevent the introduction of pests.

Specimen Handling. All specimens must be handled with great care. Sheets should be kept flat, fully supported, and face-up. All loose parts should be placed into the fragment envelopes. The Curator of the Herbarium should be informed immediately of damaged specimens and of the presence of any insects or insect damage to the specimens. All specimens should be returned to their cases as soon as possible after use to avoid insect infestation, taking particular care to follow the proper filing sequence (a copy of the filing sequence is posted in the herbarium). All cabinet doors must be closed tightly after use.

Removal of Material. With the exception of type material, judicious, non-destructive dissection of specimens may be allowed upon request. All material removed from the specimen must be carefully returned to the fragment packet attached to the sheet. Removal of any material from type specimens, or destructive sampling or permanent fragment removal from other herbarium material is not allowed unless the Curator of the Herbarium deems the specimen has sufficient material. If such permission is granted, a label must be affixed to the sheet indicating what material has been removed, the type of study for which it is needed, and where it is stored.

Archival Materials. To maintain the Herbarium in perpetuity, specimens must be mounted with archival-quality materials (mounting paper, glue, labels, fragment packets).

Annotations. Annotations must include the investigator's name, institution, and date of annotation. They must be legibly written or typed on archival-quality paper with permanent ink. Such annotations must be attached by the investigator, preferably horizontally and as close to the original label as possible with a permanent adhesive. Ballpoint pens may not be used. No marks of any kind should be made directly on the herbarium sheets. Newly annotated specimens should be delivered to the herbarium curator so that determinations can be recorded on the database or forwarded to the collector or collecting institution.

Loans. Loans are made only to recognized institutions and not to individuals. The borrowing institution must accept full responsibility for proper care and return of the specimens. All specimens must be annotated as much as possible before the return of the loan. In addition to the determination, annotations must include the investigators name, institution, and date of annotation.

Requests for loans shall be in writing and shall state the name of the researcher wishing to examine the specimens, sufficient geographic and taxonomic information for the loan to be selected, and a description of the nature of the study. Loan requests are

made to the Curator of the Herbarium. All loans are made for a period of one year with renewals available upon request. Specimens may not be transferred to a third party without written permission from the Curator of the Herbarium. Specimens must be returned carefully packed and clearly labeled, along with a shipping invoice detailing the contents.

Requests by SEL botanists for loans from other institutions must be made through the Curator of the Herbarium. Specimens on loan to SEL will be handled following the above guidelines in lieu of more specific instructions from the loaning institution.

Filing. The arrangement within most families is in the following sequence: alphabetically by genus, then geographically by region (within color-coded folders), and finally alphabetically by species.

The geographical sequence within a genus is as follows:

- Manila Folders: All countries except those in blue or green folders:
- Blue Folders: Florida native plants
- Green Folders: Plant cultivated on the grounds of the MSBG.

Exceptions to the above sequence include:

- Bromeliaceae are filed phylogenetically following the numbering sequence established in the *Flora Neotropica* treatments by L.B. Smith and R.J. Downs (1974, 1977, 1979).
- Orchidaceae have two exceptions to the standard sequence—they have two additional color-coded geographical categories (red for Mesoamerica and purple for Andean South America), and the genera of the subtribe Pleurothallidinae are filed together alphabetically, near the middle of the Orchidaceae.
- Pteridophyte (ferns) families and genera follow the system established by Crabbe, Jermy and Mickel (1975_). A reference list is posted near that collection. Species are filed alphabetically within a genus.

II. SPIRIT COLLECTION

The MSBG Spirit Collection houses the Orchid Identification Center (OIC) and Bromeliad Identification Center (BIC) voucher collections plus the Dunsterville, Luer, Dodson, Hirtz, Escobar, Alexander, and other miscellaneous collections. The spirit collection includes many type specimens of great value.

Adding New Material to the Collection. A new specimen is placed in a standard bottle of appropriate size, and then topped with Copenhagen mix. The collector's name and number should be written in pencil on a slip of paper and placed in the bottle. The collection notes should be laser printed, typed, photocopied, or written in permanent ink. Bottles with new specimens are placed on the "To be filed" shelf for incorporation into the collection.

Re-determinations. Re-determinations are made by filling out the REDET slip, which is then placed in the research mailbox for either OIC or BIC.

Loans. Loans are sent out in plastic bottles. After removing the specimen from the jar, it should be placed in a plastic bottle together with the collector's notes and a label with the bottle number on it. The plastic bottle must be topped with Copenhagen mix and the lid tightly closed. Parafilm or tape should be wrapped around the lid and neck of the bottle to provide a good seal. The bottle should then be sealed in a plastic bag and securely packed in a sturdy cardboard box prior to dispatch.

Safety. Copenhagen mix contains methylated ethyl alcohol and glycerol, which can be hazardous; thus all operations should be carried out in a well-ventilated area. Surgical gloves should be worn. First aid information is found in the Material Safety Data Sheet (MSDS) notebook located in the mounting room.

Supply of Refill and Copenhagen Mixtures. The small premixed quantities of both mixtures available in the mounting room are normally sufficient for most users. Supplies to make both mixtures are stored in the mounting room.

Spirit Collection Mixtures.

COPENHAGEN MIXTURE	REFILL MIXTURE
70% industrial methylated spirit (90% methylated ethyl alcohol) 27% water (undistilled) 3% glycerol	70% industrial methylated spirit (90% methylated ethyl alcohol) 30% water (undistilled)

2. RECEIPT AND HANDLING OF SPECIMENS AT THE MARIE SELBY BOTANICAL GARDENS

This section provides handling procedures for specimens arriving at the Marie Selby Botanical Gardens (MSBG). Living or preserved specimens addressed to the Identification Centers shall be delivered promptly to those centers. All other preserved specimens shall be delivered to the Herbarium *prior to unpacking*. Living specimens addressed to the Horticulture Department shall be delivered directly to the Curator of the Living Collections or the Director of Horticulture. Specimens not clearly addressed shall be delivered to the Manager of the Collections for determination. Copies of invoices, permits, and correspondence involved with specimen transactions will be maintained on file in the appropriate department or center. A copy of all Convention on the International Trade of Endangered Species (CITES) and other permits arriving with the specimens shall be delivered to the Manager of Plant Collections for the files. **If CITES-listed plants of international origin¹ arrive without adequate permits then MSBG personnel shall promptly inquire about the receipt of such permits and, if such are not immediately forthcoming, MSBG personnel shall contact U.S. Fish and Wildlife for direction. A record should be made and kept of any such requests (e.g., date, person contacted, summary of call) for direction or instruction from U.S. Fish and Wildlife. MSBG staff should take special care with "walk-ins" who present plants to MSBG. If a CITES-listed plant of international origin is presented by a walk-in for identification or receipt by MSBG without adequate documentation, MSBG shall not accept custody and shall refuse receipt of the plant.**

I. HANDLING SPECIMENS FOR THE BROMELIAD IDENTIFICATION CENTER (BIC)

- A. Specimen received
- B. Identify specimen
- C. Identify specimen source (person/institution and country of origin)
 1. Domestic: proceed to "D"
 2. International
 - a) Non CITES-listed plants included: proceed to "D"
 - b) CITES-listed plants included
 - (1) CITES permits in order: proceed to "D"
 - (2) CITES permits inadequate or lacking: if permits not immediately provided upon inquiry, contact U.S. Fish & Wildlife for instruction.
- D. Forward identification to sender
- E. Preserve specimen (pressed or pickled) or send to curator of living collection
- F. Accession specimen into collection

II. HANDLING SPECIMENS FOR THE ORCHID IDENTIFICATION CENTER (OIC)

- A. Specimen received and assigned an OIC tracking number
- B. Identify specimen
- C. Identify specimen source (person/institution and country)
 1. Domestic: proceed to "D"
 2. International
 - a) Non CITES-listed plants included: proceed to "D"
 - b) CITES-listed plants included
 - (1) CITES permits in order: proceed to "D"
 - (2) CITES permits inadequate or lacking: if permits not immediately provided upon inquiry, contact U.S. Fish & Wildlife for instruction.
- D. Preserve specimen (pressed, pickled, or silica gel) or send to curator of living collection
- E. Forward identification to sender
- F. Accession specimen into collection
- G. File all correspondence

III. HANDLING SPECIMENS FOR THE HERBARIUM

- A. Specimens received and frozen for a minimum of three days to kill pests
- B. Open box and identify specimen source (person/institution and country)
 1. Domestic: proceed to "C"
 2. International
 - a) Non CITES-listed plants included: proceed to "C"
 - b) CITES-listed plants included
 - (1) CITES permits in order: proceed to "C"
 - (2) CITES permits inadequate or lacking: if permits not immediately provided upon inquiry, contact U.S. Fish & Wildlife for instruction.

¹ "International origin" refers to the place from where the plant was shipped or imported into the United States and not the country where the plant originally grew.

- C. Update loan/gift/exchange records on database and confirm receipt with sending institution
- D. Determine specimen status
 1. Loan: proceed to “E”
 2. Gift for determination: proceed to “F”
 3. Exchange: proceed to “G”
- E. Deliver loan to appropriate taxonomist, who will identify specimens and return to Herbarium for sending to loaning institution
- F. Deliver gift to appropriate taxonomist, who will identify specimens and return to Herbarium for mounting, accessioning, and forwarding of identification to sending institution
- G. Mount and accession specimen

IV. HANDLING SPECIMENS FOR THE HORTICULTURE DEPARTMENT

- A. Specimen received
- B. Make preliminary identification
- C. Identify specimen source (person/institution and country of origin)
 1. Domestic: proceed to “D”
 2. International
 - a) Non CITES-listed plants included: proceed to “D”
 - b) CITES-listed plants included
 - (1) CITES permits in order: proceed to “D”
 - (2) CITES permits inadequate or lacking: if permits not immediately provided upon inquiry, contact U.S. Fish & Wildlife for instruction.
- D. Confirm receipt with sender
- E. Accession specimen into collection
- F. File all correspondence

3. RECEIPT AND DISTRIBUTION OF SPECIMENS USING THE CERTIFICATE OF SCIENTIFIC EXCHANGE

Appendix II and III CITES-listed specimens may be exchanged, loaned, or donated to other institutions, or received by the MSBG for scientific and educational purposes. Such shipments must comply with the following criteria:

- Exchange may only be conducted with other institutions registered by the applicable Management Authorities and be included in the Secretariat’s register of scientific institutions.
- Only permanently and accurately recorded specimens may be exchanged.
- A note must be included on the shipping invoice to indicate that the specimens are being exchanged solely for scientific and educational purposes and that neither the plants nor their offspring may be used for commercial purposes.
- The mailing box must carry a customs declaration label with the following information: the acronym “CITES,” a description of the contents (such as “herbarium specimens,” the names and addresses of the sending and receiving institutions, the signature of a responsible office of the sending registered scientific institution, and the scientific institution codes of both registered scientific institutions involved in the exchange, donation, or loan.
- Registered institutions may destroy samples during analysis, provided that a portion of the sample is maintained and permanently recorded at a registered scientific institution for future scientific reference.
- A permanent copy of the exchange must be filed in the Plant Records office.

ADDENDUM

INTRODUCTION TO SOME INTERNATIONAL AND DOMESTIC RULES AND REGULATIONS GOVERNING THE COLLECTION AND MOVEMENT OF PLANTS

This addendum lists the most common and important domestic and international rules and regulations governing the collection and movement of plants across political boundaries. The information presented here is intended to help the individual plant collector and appropriate curators determine which permits are necessary and how to obtain them. The laws and regulations in this regard are complex and subject to frequent change in content and interpretation. No claim to the accuracy and thoroughness of this information is made. *Collectors and curators should contact the agency responsible for the administration of each regulation for current policy.*

I. INTERNATIONAL RULES AND REGULATIONS

The most common permits necessary for foreign collection and importation of plants into the United States are 1) Collecting/research permit, 2) Convention on the International Trade of Endangered Species (CITES) permit, if applicable, 3) Phytosanitary permit, 4) Export permit, and 5) U.S.D.A. import permit. Additional permits may be required both in the foreign country and in the United States, depending on the region and taxa involved. The following provides additional information for collecting and conducting research in foreign countries.

1. Internationally Listed Species. No single source of information exists for species of international conservation concern. The closest is a list maintained by the International Union for the Conservation of Nature (IUCN) called the “Red List.” New editions and supplements may be obtained from IUCN Publications, IUCN, CH-1196, Gland, Switzerland. Some countries are preparing their own “Red Books,” and basing collecting restrictions on listed species. Because these restrictions frequently change, it is necessary to consult the appropriate natural resource department or ministry in each country for updates.
2. Internationally Protected Areas.
 - *World Heritage Sites.* With 730 sites already protected worldwide, the World Heritage Committee of the United Nations Education, Scientific, and Cultural Organization (UNESCO) is charged with the protection of cultural and natural sites with outstanding value against the threat of damage in a rapidly changing world. Specific inquiries may be made to UNESCO Headquarters, World Heritage Centre, 7 Place de Fontenoy, 75352 Paris 07 SP FRANCE <http://whc.unesco.org/heritage.htm>
 - *Biosphere Reserves.* As an outcome of the UNESCO program on Man and the Biosphere (MAB), biosphere reserves are terrestrial and coastal ecosystems that promote solutions to reconcile the conservation of biodiversity with the sustainable use of natural resources. They are internationally recognized, nominated by national governments and remain under the sovereign jurisdiction of the States where they are located. Biosphere reserves serve in some ways as living laboratories for testing out and demonstrating integrated management of land, water, and biodiversity. Each biosphere reserve is intended to fulfill three basic functions, which are complementary and mutually reinforcing: *conservation* of landscapes, ecosystems, species, and genetic variation; *development* that is socio-culturally and ecologically sustainable; and *logistical support* for research, monitoring, education, and information exchange related to local, national, and global issues of conservation and development. A statutory framework formally governs the worldwide network that sets the “rules of the game” and that periodically reviews the biosphere reserves. <http://www.unesco.org/mab/wnbr.htm>
3. International Agreements.
 - *Convention on the International Trade of Endangered Species (CITES):* <http://www.cites.org>. CITES uses ranked appendices (<http://www.cites.org/eng/append/index.shtml>) to weight the endangerment of certain taxa, and hence their level of protection by the signatory parties.
 - CITES Appendix I lists species that are the most endangered among CITES-listed animals and plants (see Article II, paragraph 1 of the Convention: <http://www.cites.org/eng/disc/II>). These are threatened with extinction, and CITES generally prohibits commercial international trade in specimens of these species. Trade may be allowed, however, under exceptional circumstances, e.g. for scientific research. In these cases, trade may be authorized by the granting of both an export permit (or re-export certificate) and an import permit. (See Article III of the Convention: <http://www.cites.org/eng/disc/III>).
 - Appendix II lists species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled. It also includes so-called “look-alike species”, i.e., species of which the specimens in trade look like those of the species listed for conservation reasons (see Article II, paragraph 2 of the Convention: <http://www.cites.org/eng/disc/II>). International trade in specimens of Appendix-II species may be authorized by

the granting of an export permit or re-export certificate; no import permit is necessary. Permits or certificates should only be granted, if the relevant authorities are satisfied that certain conditions are met and, above all that trade will not be detrimental to the survival of the species in the wild. (See [Article IV](#) of the Convention: <http://www.cites.org/eng/disc/IV>).

- Appendix III is a list of species included at the request of a Party that already regulates trade in the species and that needs the cooperation of other countries to prevent unsustainable or illegal exploitation (see Article II, paragraph 3, of the Convention link). International trade in specimens of species listed in this Appendix is allowed only on presentation of the appropriate permits or certificates. (See [Article V](#) of the Convention: <http://www.cites.org/eng/disc/V>).

CITES is the leading convention regulating the international transportation of endangered species, and for botanists at the MSBG need to be familiar with it and adhere to it. A full list of registered scientific institutions can be found at http://www.cites.org/common/resources/registers/Reg_SI.pdf. Some exemptions for CITES-listed materials are allowed (e.g., seed and artificially propagated cut flowers of orchids) and can be found at <http://international.fws.gov/pdf/plantexe.pdf>.

4. Other Foreign Country Requirements and Permits.

- *Phytosanitary Certificate.* For importation of plants into the United States, the U.S. Department of Agriculture requires a valid phytosanitary certificate issued by the country of origin. A phytosanitary certificate documents the origin of the shipment and confirms inspection in the country of origin by a member of that country's national plant protection organization (see <http://www.aphis.usda.gov/ppq/permits/phytosanitary/contact.pdf>). This helps ensure that the shipment of commodities is free of injurious plant pests and diseases. The certifying country usually charges a fee for providing these certificates. Phytosanitary certificates are governed under the International Plant Protection Convention, a multilateral treaty acknowledged by the World Trade Organization as the source for international standards for phytosanitary measures affecting trade. Phytosanitary certificates are recognized as an internationally accepted form of pest risk mitigation.
- *Collecting/Research Permits.* Most, if not all, foreign countries require that a collecting permit and also a research permit be obtained prior to collecting or conducting any type of research in that country. As these vary by country, collectors must check the requirements with the proper authorities well in advance of their work. Additional collecting/research permits may be necessary for working in protected areas of the various administrative regions of the country.
- *Export Permit.* An export permit is usually required by the foreign country prior to shipment of plants to the United States. These permits often require that other permits, such as collecting/research, CITES, and phytosanitary certificate already be in hand. As these vary by country, collectors must check the requirements with the proper authorities well in advance of their work.

II. UNITED STATES RULES AND REGULATIONS

1. Federally Listed Species. The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (ESA) with comprehensive information on
 - *Laws and Policies* (<http://endangered.fws.gov/policies/index.html>)
 - *Species* (<http://endangered.fws.gov/wildlife.html>)

Recently, the U.S. Fish and Wildlife Service issued a statement outlining its permitting philosophy and objectives. The statement can be found at http://library.fws.gov/IA_Pubs/permits_legacy02.pdf and is entitled "Leaving a Lasting Legacy". This document states that the mission of the permitting system is to promote long-term conservation of animals, plants, and their habitats and to encourage joint stewardship with others.

2. Protected Areas

- *National Parks* (under the governance of the U.S. Department of the Interior). Permission is required to collect plants in U.S. National Parks. The U.S. National Park Service has created a Research Permit and Reporting System website, covering all National Park units in the United States (http://science.nature.nps.gov/servlet/Prmt_PubIndex).
- *National Forests* (under the governance of the U.S. Department of Agriculture, U.S. Forest Service). Permission is required to collect plants in national forests. Applications are evaluated on a case-by-case basis in accordance with current policy and the potential biological impact of the collecting. Researchers should contact the respective forest district or the state office for permit applications. The web page for U.S. National Forests in Florida provides an overview of the three forests in the state (Apalachicola, Ocala and Osceola) along with contact information.
 - U.S. Department of Agriculture (USDA) General Site: <http://www.fs.fed.us>
 - U.S. National Forests, Southern Region: <http://www.southernregion.fs.fed.us/florida>

- U.S. Forest Service and Bureau of Land Management (BLM) Permits: <http://www.fs.fed.us/recreation/permits>
3. Importation of Plants into or Exportation of Plants out of the United States.
- *Animal and Plant Health Inspection Service (APHIS).* APHIS is the federal agency charged with preventing the introduction and exportation of harmful plant pests. Phytosanitary certificates are required for the importation and exportation of certain plant materials, and must be issued by the USDA for exportation, or for importation from an official agency from the country of origin. Any documents/permits required for importation must be presented to USDA at the point of entry. See under “I. International” for further information on phytosanitary certificates.
 - APHIS General Site: <http://www.aphis.usda.gov>.
 - APHIS Information on ESA and CITES: http://www.aphis.usda.gov/ppq/permits/cites_esa/index.html
 - APHIS Phytosanitary Information: http://www.aphis.usda.gov/ppq/pim/exports/basic_information.htm
 - Foreign contacts for obtaining a phytosanitary certificate: <http://www.aphis.usda.gov/ppq/permits/phytosanitary/contact.pdf>
 - *Convention on the International Trade of Endangered Species (CITES):* <http://www.cites.org>. See above under “I. International.”

III. STATE OF FLORIDA RULES AND REGULATIONS

1. State Listed Species. Preservation of Native Flora of Florida (Rule Chapter 5B-40 of the Florida Administrative Code under authority from the Florida Statutes Chapter 581.185, 581.186 and 581.187 (Fines are defined in 581.141). This rule applies to an official list or index of endangered, threatened, and commercially exploited plant taxa in the state. The Division of Plant Industry of the Florida Department of Agriculture and Consumer Services Permitting administers this index. The plant inspection website provides details on state-issued permits and more:
- *Regulations:* <http://doacs.state.fl.us/~pi/5b-40.htm>
 - *Permits:* <http://doacs.state.fl.us/onestop/plt/plantinsp.html>
 - *Regulated Plant Index:* Open <http://doacs.state.fl.us/~pi/5b-40.htm> and then click on 5B-40.0055
2. Protected Areas.
- *Florida State Parks.* Natural and cultural materials are protected on all Florida State Park lands and cannot be removed without written permission. Collection of materials is only allowed for scientific and educational purposes under the Research/Collection Permit program. For information concerning this program, contact the Bureau of Natural and Cultural Resources at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 (<http://www.dep.state.fl.us/secretary/info/permitting.htm>).
 - *State Forests:* <http://www.floridastateforests.org/home.htm>
 - *Private Property.* Permission of the landowner is required before a researcher enters and collects plants from private property.
 - *U.S. Military Bases, Naval Air Stations, and Training Facilities:* <http://www.floridadefense.org/links.htm>
3. Aquatic Plant Importation, Transportation, Non-Nursery Cultivation, Possession, and Collection. The Bureau of Invasive Plant Management of the Bureau of Invasive Plant Management, Florida Department of Environmental Protection administers all rules that govern aquatic plant permits. A permit is required for possession, collection, transportation, cultivation, and importation of certain prohibited aquatic plants:
- *Aquatic Plant Rules:* <http://www.dep.state.fl.us/lands/invaspec/2ndlevpgs/perrules.htm>
 - *Permit Application:* <http://www.dep.state.fl.us/lands/invaspec/3rdlevpgs/52appnew.pdf>
4. Introductions or Release of Plant Pests, Noxious Weeds, Arthropods, and Biological Control Agents. Rule Chapter 5B-57 of the Department of Agriculture and Consumer Services, Division of Plant Industry under authority from the Florida Statutes, chapter 581 (sections 031, 083, 091)). It is unlawful to introduce, possess, move, or release any arthropod or noxious weed regulated by these rules except under permit issued by the Florida Department of Agriculture and Consumer Services. The list of species controlled under these rules is extensive. Contact the Division of Plant Industry for details.
- *Division of Plant Industry:* <http://doacs.state.fl.us/~pi/>
 - *Regulations and Lists:* <http://doacs.state.fl.us/~pi/5b-57.htm>
 - *Plant Inspections:* <http://doacs.state.fl.us/onestop/plt/plantinsp.html>

IV. OTHER SOURCES OF INFORMATION

1. Listserve. Various listservs (electronic forums) exist that may prove helpful to collectors, importers, and exporters of plant materials. For example, PERMIT-L is a forum to discuss state, federal, and international scientific permits issues as well as shipping, ownership, and use of cultural and natural property. The list owner is the Collections Officer, National Museum of Natural History, Smithsonian Institution, Washington, DC. (Shelton.Sally@nrmnh.si.edu). PERMIT-L is a moderated cross-disciplinary listserv that discusses the most up-to-date requirements for biological researchers to do their work legally.
2. U.S. Customs Service. With regard to the collection and movement of plants across international borders, the U.S. Customs Service is consulted for both commercial and noncommercial shipments. To speed customs clearance, the import community and the U.S. Customs Service have created the Customs Automated Commercial System (ACS: <http://www.customs.gov/imp-exp2/auto-sys/top>) that electronically receives and processes entry documentation and provides cargo disposition information. Importers may use the system to reduce clearance time from days to hours or even minutes. Persons entering into the import trade who intend to file their own entry documentation with U.S. Customs are encouraged to explore this method of transacting business. Additional information on importing can be found on the U.S. Customs Service website at www.customs.gov.