

Fairchild Tropical Garden's Collection Policy
1993 by Charles Hubbuch and Terrence Walters
2001 revision by Charles Hubbuch
2009 revision by the Horticulture Staff

INTRODUCTION

Botanical gardens usually contain various distinct collections (e.g., plants of a geographical region, a taxonomic group or those displaying a common growth habit) that are curated by specialists in their fields. Possession of these curated scientific collections distinguishes botanical gardens from display gardens, parks and nature preserves. The purpose of the collection policy is to guide these collections so they support the mission of the garden.

The mission of Fairchild Tropical Botanic Garden is to save tropical plant diversity by exploring, explaining and conserving the world of tropical plants; fundamental to this task is inspiring a greater knowledge and love for plants and gardening so that all can enjoy the beauty and bounty of the tropical world.

PURPOSE

The Fairchild Tropical Botanic Garden collection policy is designed to guide the implementation of the institutional mission and goals through the development and maintenance of a world-class botanical collection. It supports the Garden's educational and research goals, with a high priority on plant conservation issues.

Plants in the collection are selected, identified, labeled, and recorded in a manner consistent with modern botanical standards. Research and conservation goals require accessioned plants, which are of known, documented origin. Wild species must be legally and ethically collected from natural populations. Economic, educational and decorative plants may be accessioned from cultivated sources. In every instance, collecting procedures will follow the Garden's policies on the Convention on Biological Diversity and Exotic Invasive Plants.

The ideal accession will fulfill all institutional goals of conservation, education, research and display so as to make the most efficient use of Fairchild Tropical Botanic Garden resources. Accessions that fulfill institutional goals have the highest priority in the collection. Because it is essential to present the public collection in a manner that is attractive and useful to the casual visitor, plants may be planted in the Garden purely for immediate landscape effect, color, or other display and educational purposes.

GOALS

1. To display the widest possible diversity of subtropical and tropical plant life within the design of the Phillips plan to attract Fairchild visitors.
2. To document and record accessioned plants in support of Fairchild's research and conservation programs according to accepted botanical standards.
3. To interpret and display biological relationships in the Garden's collections in support of Fairchild's education, science and conservation programs.

4. To promote the conservation of biodiversity through education and germplasm collections.
5. To help protect south Florida's natural areas by avoiding the introduction, perpetuation or distribution of invasive exotic plants.

THE POLICY

The collection policy guides a botanical garden's plant collections, insuring that collections are meaningful and relevant to the mission of the garden. A collection policy should address: 1) the purpose of a collection; 2) acquisitions; 3) plant records; 4) accessions; 5) inventory; 6) horticultural evaluation; 7) plant maintenance; 8) disposals; and 9) access to the collection for the general public, for research, and for educational programs (Jones, L. E. 1989. Collection Policy: The Basics. The Public Garden 1 [3] 8-9). Each of these issues is discussed below as part of the collection policy for the FTBG Collections.

Acquisition

All plants acquired for the collection should be subtropical or tropical in origin and support the institution's mission and goals. Plants may be obtained to serve specific conservation, education, research and distribution purposes. Staff and approved associates must follow all applicable regulations, laws, and treaties regarding the collection or transportation of plants (please refer to the policy on the Convention on Biological Diversity). Staff will not accept plants known to be obtained illegally. In addition to evaluations by Customs and U.S.D.A. officials at the port of entry, introductions will be evaluated on arrival at Fairchild for potential introduction of diseases, weeds and pests. All plant acquisitions will include records with identification and all available source data. Determination of a plant's purpose is the responsibility of the appropriate horticulture staff member.

Accessioning

Accessioning is the formal process by which a plant becomes a part of the collection, and more specifically, a permanent part of the records (Jones 1989). All plants grown by Fairchild for the purpose of planting, conservation, research, etc. are accessioned, regardless of value to the institution. After accessioning, excess material may be sold, distributed to members or discarded.

It is assumed that every plant has potential educational value. Conservation, research or display purposes are to be identified in the records. Plants designated as having conservation or research value will have adequate documentation for those purposes, detailed source data in particular.

Specific needs vary and will be determined by the horticulture staff. For example, the tropical fruit tree collection has different research goals and documentation than an endangered species collection. Whenever possible, display plants or plants with poor collection data are replaced by wild collected, properly documented plants.

Plant Records

Plant records will be maintained in a safe, systematic and organized manner, in a computer database with electronic backup that is readily accessible to the many users. A form to record new accessions is available from the plant records office. Documentation should include: the full scientific name of the plant, how and in what form the plant was obtained, how it has since been propagated, where the plant originated with the locality as precise as possible, conservation status and with supporting data such as altitude, latitude, longitude, and environmental conditions where collected.

All available collection data will be recorded in the plant records database. The purpose of each accession is identified. Notes are added regarding growth rates, phenology, pest and disease problems, causes of death, and other pertinent observations. When planted, each plant is identified by its accession number followed by a letter qualifier that will allow records to be kept for each individual. The plant records office maintains a database file, a ledger, and a map for each planted plant. Each plant in the collection is labeled with its name and accession number.

Inventory

A regular inventory of the collections supports the continuous maintenance of current records and updates the prioritized list of desirable taxa. Staff is expected to assist plant records with the continuous inventory of the plant collections by providing information regarding new plantings, plant removals, and missing labels. Regular, formal inventories of their collections are conducted by horticulture staff and volunteers.

Horticultural and botanical evaluation

Regular horticultural and botanical evaluation of a collection provides a means to assure the collection's relevance to the mission and goals of the institution. Evaluations are performed by the appropriate horticulture staff member. Research staff and other qualified persons may join at any stage in the evaluation process. A complete evaluation includes recommendations for future acquisitions, removal of existing plants, suggestions for horticultural and botanical improvements in the collection, and a summary of the previous year's activities in the collection. Evaluations will include determination of potential invasiveness of exotic species into natural areas. Evaluations are held as an ongoing part of the Garden's planning process.

Curation of collections

The horticulture staff defines the collection's maintenance and acquisitions and supports its interpretation. Existing plantings are maintained according to guidelines developed by the Horticulture Department. Plantings, removals or other changes involving accessioned plants must be approved by the appropriate horticulturist, and the head of the Horticulture Department. The Plant Records office is notified of any changes. If the plantings are on another property, written agreements will include approval by appropriate staff at that facility.

Disposal

When an accessioned plant has been removed from the collection, it may be sold, donated, exchanged or discarded. If the plant is suspected or known to be diseased or is

suspected to be of high risk for invading south Florida's natural areas, it is destroyed in a manner appropriate to its condition.

Access to collections

Collections planted in the ground at Fairchild Tropical Botanic Garden or at other public facilities are accessible to the public during the normal operating hours of the facilities. Plants which require greater security are to be placed in areas of restricted access which are only accessible by the staff and persons approved or accompanied by staff members. Plantings at other facilities are accessible by the appropriate horticulturist and other people approved by that facility. Seeds, cuttings, excess plants and other plant material requests by the public or researchers must be approved by the appropriate horticulture staff member.

Plant records are accessible to staff and persons approved or accompanied by staff members at the discretion of the plant recorder. Due to the high value of many rare and endangered species and their source information, requests to access plant records are to be approved by appropriate staff.

RESPONSIBILITIES AND ETHICS FOR THE COLLECTOR

The conservation of wild plants and the ethics of plant collecting are growing concerns as the world experiences increasing human population and destruction of natural environments. To a growing extent, private and commercial plant collectors experience increasingly close scrutiny by concerned individuals, local governments, and international conservation organizations. It is hoped that the following guidelines will help the collector make informed decisions.

Collaboration - Develop a working relationship with an institution in the country or region in which you intend to collect. In a foreign country, plan to work and travel with local colleagues; leave duplicate specimens of propagules and vouchers in local institutions; make professional presentations; and share publications, results and credit with those colleagues and institutions.

Permits - Land-owner permission and appropriate permits from both the country of origin and the destination must be obtained and documented for all collections. C.I.T.E.S. permits from the countries of origin and destination are needed in accordance with the treaty.

Documentation - Wild collected material is a high priority in botanical collections. New accessions for living and herbarium collections should be well-documented (as described previously under plant records) and vouchered. Information should be provided by the collector to help horticulturists determine the best methods to grow the plants.

Sampling techniques - The collector should cause no more damage than normal predation in a balanced ecosystem, leaving the parent plants and population intact and healthy. Collection of propagules is generally preferred to the collection of plants due to

minimal disturbance of the wild population, ease of transportation and the reduced chance of pathogen or pest introduction. No more than 25% of the seeds should be collected from a population. Chazdon (1988) suggests that removal of 10% of the seeds should be the maximum for rare species. A collector taking herbarium vouchers or cuttings for propagation of plants, especially woody plants, should not remove more than 25% of the plant's foliage. Excessive trimming will reduce the plant's vigor and reproductive potential. When possible, several vouchers should be made and distributed to other herbaria. Be cautious of creating an exploitive market for wild plants by purchasing seeds and plants from local people.

Maximize efforts - Have collecting permits in hand when working with Customs officials. Clean plant materials thoroughly to reduce losses to pathogens and USDA inspections. Vegetative materials should be free of soil and any suspicious spots. Seeds should be clean of pulp or fibers and dry. Collectors should know in advance which plant species are restricted in their entry to the U.S., such as those protected by C.I.T.E.S. and those with a recognized potential as agricultural pests or invasive weeds. To ease travel through Customs, pack seeds in clear plastic, clearly labeled bags for easy inspection. Bag each accession of seeds separately. If bagged together and one has a problem, all may be confiscated.

Introduction of invasive species - Plant species known or suspected to be invasive in south Florida's natural areas are not to be acquired or distributed by Fairchild Tropical Botanic Garden. Key characteristics to consider with an exotic plant introduction are: invasive tendencies in environments similar to south Florida's, high rates of seed production, long seed viability, high rate of seedling survival, rapid growth, rapid spread by vegetative means and/or the plant seems likely to hybridize with native species and populations.

References for more information on responsibilities and ethics.

Fairchild Tropical Garden's Policy on the Convention on Biological Diversity.

Chazdon, R. 1988. Conservation-conscious collection: concerns and guidelines. *Principes* 32(1): 13-17.

Scientific Code of Ethics produced from the University of California Research Expedition Program. The contact person is Jean G. Colvin, University of California, Berkeley, California 94720.