UBC Botanical Garden
Plant Collections Policy

Contents

Purpose of this Plant Collections Policy

UBC Botanical Garden's mission is to assemble, curate and maintain a documented collection of temperate plants for the purposes of research, education, public display and conservation.
The purpose of this policy is to ensure:

- the Collections support the mission and intent of UBC Botanical Garden
- the sustainable development of the Collections; and
- appropriate decision making and procedures.

Background

UBC Botanical Garden is the oldest continuously operated botanical garden in Canada. Established in 1916 the Garden holds a unique position among botanical gardens in Canada due to its location in the Pacific Northwest on the edge of Georgia Straight: the climate here has allowed for the cultivation of a wide variety of cool- to warm-temperate plants and Arctic-Alpine plants. The number of labeled plants in the collection in 2013 is approximately 50,000, representing some 8,000 living accessions and 5,000 different taxa.

UBC Botanical Garden comprises three geographically separate sites on the University of British Columbia's Point Grey (Vancouver) campus. These include the Botanical Garden, Nitobe Memorial Garden and the Botanical Garden Nursery. The Botanical Garden consists of a number of named garden areas and includes a large area of undeveloped second-growth forest. The combined area of UBC Botanical Garden's holdings is approximately 21 hectares.

Guiding principles

Canada is signatory to the *Convention on Biological Diversity* (CBD): UBC Botanical Garden is signatory to the *International Agenda for Botanic Gardens in Conservation*.

The objective of the Collections is to support UBC Botanical Garden's mission. To achieve this, collections are developed and maintained according to best practices, on the basis of the following principles.

UBC Botanical Garden will:
(1) maintain a balanced and representative collection of global vascular plant diversity, subject to the limitations of site, space, soil and climate.
(2) give priority to plants of known wild origin, recorded provenance and (in the case of cultivated plants) known pedigree, and to maintain their documentation to a high standard by means of record keeping.
(3) serve the current scientific needs of researchers at UBC following guidance and advice from the Garden's Associate Director of Research and faculty in the Faculty of Science, and acting, as appropriate, on direct requests from other UBC Faculty members.

(4) grow educationally useful plants to serve the need for live material for UBC undergraduate and postgraduate courses and the needs of our non-curriculum education programs.
(5) maintain collections of rare and endangered plants for conservation and education.
(6) without compromising principles 1-5, to include in the collections plants of such aesthetic appeal that they refresh the human spirit.

UBC Botanical Garden includes:

- North American Gardens, including:
    - Native Rainforest Garden
    - Pacific Slope
    - Garry Oak Meadow and Woodland Garden
    - Carolinian Forest Garden
- David C. Lam Asian Garden
- E. H. Lohbrunner Alpine Garden
- Nitobe Memorial Garden
- Harold and Francis Holt Physic Garden
- Winter Garden
- Food Garden
- Entrance Courtyard
- Arbour
- Contemporary Garden
- Dwarf Pinetum
- Herbaceous Borders
- Roseline Sturdy Amphitheatre
- Service Yard Berm
- Cherry Collection

Plant Acquisitions

The objective is to acquire:

- plants that describe a balanced and representative collection of global vascular plant diversity
- threatened or endangered plants of educational value
- uncommon species, hybrids or cultivars that add to the botanical diversity and interest of the collections
- native plants of British Columbia
- ethnobotanically important plants

In general:

- new acquisitions support the mission of UBC Botanical Garden
- acquiring plants of known provenance takes precedence over that of other acquisitions. Documented wild-origin and known-pedigree cultivated plants are necessary for plant research and the benchmark of UBC Botanical Garden's Collections.

- accessions of unknown provenance or pedigree will be acquired for areas where the value of the plants can be justified on the basis of other criteria, such as superior display qualities or historical or educational value

In addition, all acquisitions will:

- be assessed for invasive potential (and removed if deemed invasive)
- require minimal resources and inputs to maintain them in an optimum condition

Curators and horticulturists acting in a curatorial role are responsible, following consultation with the Associate Director, Horticulture and Collections, for ordering plants, seeds and other propagules for their garden areas. Acquisitions, including gifts (solicited or otherwise), must be justifiable in terms of the Botanical Garden Mission and current policies.

Records Management

Database

The Botanical Garden currently uses a proprietary DOS-based database system (BGAS), together with Bauble Botanical Collections Database to help manage data and reports. Data is maintained by the Accessions Technician with input from curatorial and horticultural staff. Partial data residing in Bauble is occasionally exported to Canadensys under a public domain license.

Documentation Standards

Collections of seeds or vegetative propagules in the wild are, whenever possible, accompanied by appropriate herbarium vouchers, digital photographs, tissue samples (for DNA extraction) and habitat notes. Vouchers are transferred to the UBC Herbarium for storage; tissue samples are transferred to the UBC Biodiversity Research Centre for storage. Propagules and all associated collections for all accessions are documented in the Garden's database.

Inventories

Inventories of the Garden's Collections are carried out on a scheduled weekly basis, the surveyed areas determined by the Accessions Technician in consultation with curatorial and horticultural staff. Information gathered through inventories is used to update the database and labeling requirements and inform decision making regarding the Collections. All areas of the Garden are visited for inventory purposes on a four-year cycle. Nursery inventories are carried out by nursery staff on a quarterly basis.

Labeling

All permanent woody plants in the Garden's Collections are accessioned and labeled. Information on labels includes:

- most current scientific binomial (trinomial, etc.), cultivar, horticultural group name
- description (e.g., seedling), and wild collection number
- family name

- common name
- geographic distribution
- indication of wild collection
- unique accession number (includes date of accessioning and propagule source)
- bed location

Where data is incomplete, ambiguous or suspect, a red label is used and the accession is flagged for subsequent verification by the Associate Director, Horticulture and Collections, botanist or consulting expert.

Decommissioning

The Associate Director, Horticulture and Collections in consultation with UBC Botanical Garden's Executive Committee may decommission a taxonomic group from the Collections.

De-accessioning

Curators and horticulturists acting in a curatorial role, in consultation with the Associate Director, Horticulture and Collections, may de-accession plants in the collection because the accession:

- has died
- is damaged and cannot be recovered
- is not sustainable
- is invasive
- is no longer deemed critical to the overall collections

Such accessions may be destroyed, sold or donated where appropriate subject to determination by the Associate Director, Horticulture and Collections.

Material Transfer

Within the letter and spirit of the *Convention on Biological Diversity* and the *International Agenda on Botanic Gardens in Conservation*, UBC Botanical Garden will:

- distribute material only to those institutions and individuals agreeing to act within the spirit and letter of the Convention and International Agenda by accepting the term described in the Material Transfer form. All plant material requests and orders, whether from indices seminum, academic institutions, individuals, societies, collections consortia or commercial enterprises, must be accompanied by a Material Transfer Form (available on UBC Botanical Garden web site) and reviewed by the Associate Director, Horticulture and Collections before being sent out.
- obtain only material that has been legally collected, and maintain transparent and accurate documentation of plants in its collections

Invasive Species

Invasive species present a wide range of environmental concerns. See Appendix B for UBC Botanical Garden's *Policy on Invasive Species* or go to Invasive Species Council of British Columbia (http://bcinvasives.ca/) for more information.

Plants warranting exceptional care

Plants of significant conservation value, or plants posing significant danger to staff or the public, may warrant exceptional care. Protection may entail:

- limiting physical access to the plant
- providing extra horticultural care or precautions, such as mulching, wrapping, fertilizing, seasonal lifting
- taking insurance cuttings, etc.

Protection may also be afforded to valuable plants by:

- deceptive labeling
- not locating valuable plants on public maps
- not including sensitive collection information together with publicly accessible descriptions.

These determinations are the purview and responsibility of the Associate Director, Horticulture and Collections in consultation with UBC Botanical Garden Executive Committee.

Appendix A: Accessioned Areas Descriptions

Arbour
The Arbour is an architectural feature and also home to a variety of ornamental climbers, primarily plants of horticultural significance, grown for their flowers or autumn foliage.

Botanical Garden Nursery
The Botanical Garden Nursery functions as the clearing house for all seed and propagules and the majority of purchased plants destined for the Botanical Garden and Nitobe Memorial Garden. Plants are accessioned prior to being transferred out of the Nursery.

Carolinian Forest Garden
The Carolinian Forest Garden is a hillside arboretum displaying floristic elements of the eastern North American hardwood forest, particularly those that have Asian and western North American relatives or other significant biological merit. Important collections include *Acer*, the woody genera of Fabaceae, *Nyssa*, Betulaceae, Magnoliaceae, Styracaceae, *Hydrangea*, *Rhododendron* and other Ericaceae, Theaceae and *Cornus*. Herbaceous taxa will be added after establishment of a closed canopy.

Cherry Collection
The Cherry Collection is currently made up of the "The Cherry Row" bordering SW Marine Drive. Together with the Peter Wharton Cherry Grove planned for the West Lawn, the two areas will comprise the Cherry Collection.

Contemporary Garden
The Contemporary Garden is a teaching and event space with limited, but attractive perimeter plantings made up of primarily horticultural plants, including small trees, herbaceous perennials and shrubs. Modern cultivars and a large component of showy, summer-blooming herbaceous perennials are emphasized.

David C. Lam Asian Garden
The Asian Garden is dedicated to the cultivation of temperate Asian wild plants. The collections are derived primarily from the Himalayas, Japan, Korea and especially China. The garden is unified by a background of native plants and extensive plantings of Rhododendron species. There are also significant collections of *Acer*, *Sorbus*, *Magnolia*, Styracaceae, Hydrangeaceae, Fagaceae and climbing plants.

Dwarf Pinetum
The Pinetum is a collection of primarily slow growing conifers. There are both botanical rarities and horticultural plants mixed together.

E. H. Lohbrunner Alpine Garden
The E. H. Lohbrunner Alpine Garden comprises an extensive alpine rock garden, a glasshouse, a bulb frame a trough courtyard, and European and Asian woodland plantings. Important collections include western North American alpines, southern African bulbs, hardy

cacti and other succulents, dwarf conifers, *Gentiana*, *Dianthus*, *Thymus*, *Veronica*, *Epilobium* and hardy *Arctostaphylos*, *Eucalyptus* and *Hebe*.

Entrance Courtyard

The Entrance Courtyard features permanent and temporary plantings managed to provide year-round interest and colour. There are plantings of a variety of wild and cultivated plants, including tender bedding plants overwintered with protection at the Nursery.

Food Garden

The Food Garden is a formal space where visitors are encouraged to explore our connection to food through display and demonstration. Plants are chosen on the basis of local, regional and national historical significance, human cultural importance, culinary diversity, seasonal adaptability and display. Only permanent woody and herbaceous perennial plants are accessioned.

Garry Oak Meadow and Woodland Garden

The Garry Oak Meadow and Woodland Garden is a representation of a Georgia Basin Garry oak ecosystem with floristic constituents that include trees, shrubs, bulbs, forbs, grasses, ferns and fern allies. All accessions are of known provenance, and local to the Georgia Basin region.

Herbaceous Border

The Herbaceous Borders are primarily composed of a variety of herbaceous perennials of both botanical and horticultural merit. The most significant of these plants are slated to be moved to the Contemporary Garden borders, and the area re-purposed.

Native Rain Forest Garden

The Native Rain Forest Garden (formerly the BC Native Garden) displays floristic elements of the coastal western hemlock and interior western hemlock biogeoclimatic zones. The present collection includes a variety of known-provenance and existing (i.e., naturally occurring) plants, as well as native plants of indeterminate origin.

Nitobe Memorial Garden

The plantings of Nitobe Memorial Garden include Japanese and native British Columbian (as well as Chinese, European, and eastern North American) plants in an authentic Japanese garden context.

Pacific Slope Garden

The Pacific Slope is a developing garden that displays elements of the diverse woody flora of the coastal ranges of western North America, showcasing, in particular, the range of endemic coniferous and sclerophyllous plants that characterize the region south of the Georgia Basin. Target plants for this garden feature include Pinaceae, *Sequoia*, *Torreya*, Fagaceae, and Ericaceae, all of known provenance. Herbaceous taxa will be added in the future.

Physic Garden
The plants in the Physic Garden include plants from the early European pharmacopeia. Physic gardens serve as an important link to the original Botanical Gardens, such as Chelsea, Oxford and Padua, which were built as additions to universities for the education of physicians and apothecaries.

Roseline Sturdy Amphitheatre
Plantings around the amphitheatre include trees and shrubs chosen for their horticultural appeal. The European Woodland Garden, which abuts the amphitheatre, includes European native trees and shrubs of botanical significance.

Service Yard Berm
The Service Yard Berm is planted with an assortment of woody plants. Some are rare and of botanical interest, others are horticultural plants.

Winter Garden
The Winter Garden includes a diverse collection of trees, shrubs and herbaceous plants. The original theme of winter interest has been mostly superseded by a wide variety of shrubs and herbaceous perennials that may be showy at other times of the year.

Appendix B: UBC Botanical Garden—Invasive Species Policy

Invasiveness is described as the tendency of an organism to spread quickly and undesirably or harmfully. All plants acquired by UBC Botanical Garden are assessed over time for their invasive potential. The assessment is determined by considering various criteria, including whether the species is already considered invasive somewhere else, time to reproductive maturity and reproductive rate, ability to live in diverse environments and to survive on environmentally disturbed sites, its dispersal characteristics, ability to outcompete native species, and the area of the world in which it evolved. UBC Botanical Garden does not knowingly cultivate, sell or promote invasive species. Plants in the garden suspected of having invasive potential are monitored closely for evidence of invasiveness and are destroyed if proven to be so.