



*College of the Environment
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WHAT IS AN ARBORETUM AND BOTANICAL GARDEN?

In the interest of sharing the University's understanding of the elements and uses of an arboretum/botanic garden, I've excerpted some information from a book chapter written by Donald A. Rakow, Ph.D., Cornell Plantations ([Public Garden Management](#) by Donald Rakow and Sharon Lee; John Wiley & Sons, February 2011)

Essential Criteria for a Public Garden

In its essence, a public garden is a mission-based institution that maintains collections of plants for the purposes of education, research, and/or public display. It must have a professional staff and a system for maintaining plant records. Further, it must be open to the public and provide accommodations for access to all people. There must be a mission statement driving the organization's efforts and the plants must be actively curated, that is, cared for as objects that are part of the collection of a living museum. **The mission statement should be the basis for all decisions and planning by the garden. (The UW Botanic Gardens' mission statement is currently under review thanks to a donation from the Arboretum Foundation.)**

Plant collections are fundamentally distinct from purely ornamental displays. Collections can either be grouped taxonomically (i.e., by family association), geographically (all plants from one region of the world), functionally (groundcovers), or by plant needs (shade plants; dry soil plants). One of the greatest challenges for public garden managers is how to merge the method by which collections are organized with the aesthetic goals of the garden.

The degree to which a particular public garden is involved with education, research, or ornamental display will vary depending on the garden's mission. Whether for primary, secondary, collegiate, or adult audiences, educational programs at public gardens focus on increasing appreciation of plants and their value to society. Programs generally include classes, workshops, tours, outreach, exhibits, visitor information, and special events. Research at public gardens has traditionally focused on nomenclatural or plant systematics issues. But increasingly, many gardens today emphasize plant conservation and biodiversity research.

An essential component of plant curation for all public gardens is the accessioning and de-accessioning of individual plants. Each plant added to the collection is given a unique identifying number, and records are kept of each plant that is removed from the

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collections, along with the reasons for its removal. Whoever has the responsibility for managing plant records and whether records are kept electronically or in a notebook, it is essential that every public garden maintain a record of every plant that has the potential to be a long-term addition to the collections.

Professional Staff

While public garden staff members recognize the aesthetics of how plants are combined in collections, they also value how those plants are managed and are used to further the garden's educational or research mission. The active management of plant collections therefore requires staff with specialized curatorial training, including a thorough knowledge of plant taxonomy and plant nomenclature. Typically, such individuals have backgrounds in horticulture, botany, or plant taxonomy, and are adept in the computer programs that many public gardens now use to curate their collections.

Types of Public Gardens

Botanical gardens contain a wide array of both herbaceous and woody plant collections, varied educational offerings for all ages, and research programs focused on plant improvement, conservation, ecology, or basic science. If there is one characteristic that unites all botanical gardens, it is that they have botanically diverse, rather than simply aesthetic, collections of plants.

Arboreta, as contrasted with botanical gardens, focus on the study and display of woody plants, primarily trees and shrubs. They, too, typically offer educational programs for children, school students, and adults. Their collections may be organized systematically, with each plant family assigned to its own area, or functionally, with plants located where their needs can best be met.

Municipalities

Most municipalities involved in the creation of public gardens have done so by partnering with independent friends groups. The **University of Washington Botanic Gardens** is jointly administered by the University and the City of Seattle, and supported by the Arboretum Foundation. While such multi-administrative arrangements offer the public gardens the benefit of tapping into the resources of each of the partners, they can also create significant challenges.

Colleges and other Academic Institutions

In recent decades, one of the fastest growing segments in public horticulture is that of the college or university-affiliated garden. One of the oldest arboreta in the country is the **Arnold Arboretum of Harvard University**, Cambridge, Massachusetts, and this was the garden used as a model for the Washington Park Arboretum when it was initially constructed.

Established in 1872, Arnold Arboretum has maintained a complete record system, with a standardized accession number assigned to every plant on the grounds for use in tracking its name and origin. It is this detailed record system, along with the systematic organization of the collection on the grounds, which facilitates their use for research by staff and other scientists. Currently, the living collections are used for research on a

diverse range of subjects that include molecular systematic, plant physiology and morphology, vegetative propagation of woody plants, and evaluation and selection of new cultivars of woody plants with ornamental merit.

The **U.C. Berkeley Botanical Garden** was established in 1890 to create as complete a collection of the native flora of California as possible. It has formed the nucleus of both collections development and use. Until the 1960s, the garden was used almost exclusively to support university research and teaching. Although a strong public outreach component has been in play since that time, worldwide research in plant biology continues to be an integral portion of their mission.

College and university gardens have also traditionally functioned as living classrooms to enhance undergraduate or graduate instruction.

Many colleges and universities also carry an outreach mandate as part of their institutional mission. Gardens can help to fulfill that outreach role by providing tours, classes, workshops, or other continuing educational activities to the audience beyond the campus. Alternately, staff from the garden can literally reach out to school groups or community organizations as part of their extension efforts.

Serving as Living Museums

Because botanical gardens and arboreta are living museums, they contribute to the college or university's network of museums, which might also include art, history, anthropology, or local culture. Beyond whatever research or pedagogical roles they play, these museums also add to the prestige of the institution and play a role in attracting not only great students, but also top faculty, major grant funding, and local, state or alumni support.

Summary

The basic criteria presented above are universal to all public gardens: they have a mission statement; they are professionally managed and have accessioned collections; they feature some form of research and/or education programs; and they are open and accessible to the public.