



University of Washington Botanic Gardens
Plant Conservation Policy
January 1, 2009

Mission: *Sustaining managed to natural ecosystems and the human spirit through plant research, display and education.*

Conservation of wild plant species intrinsically guides our mission and activities here at the University of Washington Botanic Garden (UWBG). Although it is recognized that plant species are best conserved *in situ*, in their native settings, it is evident that botanic gardens provide the means for conserving biodiversity outside the natural range. As a sanctuary, an *ex situ* collection such as UWBG conserves plant species and from areas potentially threatened by biological invasions, habitat destruction and, as a consequence of human induced global climate change, shifting climatic zones. “*Ex situ* collections have a key role to play in securing the conservation of wild plant species as natural resources, as an insurance policy for the future, as a basis for restoration and re-introduction programs and as support for the adaptation of livelihoods to climate change and shifting climatic zones (*Gran Canaria Declaration on Climate Change and Plant Conservation*, 2006).” *Ex situ* plant conservation therefore sustains natural systems in parts or recreated as whole communities. Yet *ex situ* conservation is not the only mode of plant conservation at UWBG. Recognition of the importance of *in situ* plant conservation is exemplified at UWBG by the Washington Rare Plant Care and Conservation organization (Rare Care), founded at UWBG in 1999. Washington State focused exclusively on conservation of native rare plant species. Furthermore, *in situ* conservation is a key focus of many UWBG graduate and undergraduate research projects. The University of Washington Restoration Ecology Network (UWREN), whose mission is the integration of students, faculty and community interests in ecological conservation and restoration is an important program at UWBG. UWBG plant conservation programs present an educational opportunity increasing public awareness about the values of biodiversity and other biological conservation issues thereby broadening provincial experiences, further sustaining the human spirit. As a member garden of the Botanic Gardens Conservation International (BCGI) and the Center for Plant Conservation (CPC), UWBG respects and honors plant conservation and supports the conservation of plants in this botanic garden. “In the long run, there can be no more important effort than conserving plant diversity. Plants are the ultimate source of renewable chemical energy and materials. They provide food, medicine and many other necessities; they are the basis of a sustainable society,” U.S. Botanic Gardens Executive Director Holly Shimizu.

Objectives: (adopted in part from North American Botanic Garden Strategy for Plant Conservation)

1. Understanding and documenting plant diversity:

Catalogue collections and contribute to respective national flora projects, in an effort to complete a North American flora.

2. Conserving plant diversity:

Support *in situ* conservation regionally and abroad, increase *ex situ* conservation efforts, and take a role in invasive species management and education.

3. Promoting public education and awareness about plant diversity: Research, display, and education.

Inspire visitors, local community members, partners, staff, and volunteers to take appropriate action to protect plant diversity.

4. Building capacity for conservation of plant diversity:

Integrate a conservation ethic and environmental awareness into all operations, providing leadership and innovative research to the public regarding genetic diversity, taxonomy, ecology and conservation biology of plants and plant communities.

Strategies:

1. Understanding and documenting plant diversity:

- Provide an annually updated plant list for the three collections at the UWBG: the Washington Park Arboretum (WPA), the Otis Douglas Hyde Herbarium and the Miller Seed Vault.
- Assess the species richness, relative abundance and composition of local and regional flora.
- Revisit all known populations of rare plant species in Washington State to update information on rare plant occurrences.

2. Conserving plant diversity:

- Conduct research on the ecology and population biology of imperiled and rare plant species and on management strategies to protect wild populations.
- Perform physical inventory in the collections of International Union for Conservation of Nature (IUCN) listed plants.
- Maintain an *ex situ* collection of seeds of rare native Washington plant species in the Miller Seed Vault and develop propagation protocols for these species.
- Increase *ex situ* conservation by curating at least 75% of the regional threatened, endangered, and culturally important plant species plant species in the Washington Park Arboretum's taxonomic, ecological and geographic collections as well as the non-accessioned UWBG plant matrix.
- Facilitate restoration of native ecosystems locally, regionally and internationally. Primarily focus on ecological restoration and re-vegetation projects in the Union Bay Natural Area (UBNA) and Washington Park Arboretum, as well as through statewide efforts by the UWBG's Restoration Ecology Network.
- Coordinate with state agencies and other stakeholders to develop methods of risk assessment and early detection of invasive plants before they impact native systems. Use the Hyde Herbarium to identify and report new invaders.
- Collaborate with international communities in *ex situ* conservation efforts through seed banking and tissue culture, and duplicate collections for non-regional taxa; coordinating primarily with institutions from similar climate regimes focusing on acquisition of threatened plant species, in accordance with CITES guidelines.

3. Promoting public education and awareness about plant diversity: Research, display, and education.

- Organize and influence public opinion regarding plant conservation with outreach programs and workshops for the numerous amateur horticultural societies located at the Graham Visitor Center and the Center for Urban Horticulture.
- Provide guided tours and interpretative signage at the UBNA.
- Hosting large group and media events highlighting importance of conservation in public gardens.
- Collect and archive conservation information at the Elisabeth Carey Miller Library located at Miller Hall at the University of Washington, which houses one of the richest collections of plant books in the region.
- Host informational lectures and display UWBG graduate research in public common areas such as Merrill Hall or the Graham Visitor Center,

communicating the importance of plant diversity are crucial for all targets: children, policy-makers and community members.

- Include conservation information in UWBG publications such as the *Camas Quarterly* and *E-Flora*.
- Instill conservation ethic in all courses taught at UWBG and by the REN develop different programs for different target audiences not only in the environmental curricula but in broader mainstream education policy.
- Address diverse target audience through mainstream education policy such as WPA youth outreach: Saplings, and Spruce Programs.
- Support Rare Care's Celebrating Wildflowers annual Spring event.
- Provide guidance and learning opportunities to community service volunteers, such as the Native Plant and Ivy Out Programs.
- Promote external conservation campaigns, such as:
 - National Invasive Weed Awareness Week
 - Earth Day
 - Arbor Day
 - National Wildflower week
 - National Endangered Species Day
 - Plant Conservation Day
 - International day for Biological Diversity

4. Building capacity for conservation of plant diversity:

- Epitomize the philosophy "the sustainable use of plants should imbue all aspects of a garden's operation, from administration and public education to horticultural displays and retail outlets." (APGA)
- Showcase the values and beauty of native plant use in residential and commercial landscapes, without compromising rare or threatened native populations.
- Capitalize on existing scientific and educational activities to link between government officials, scientist visitors, scientist and commercial interests
- Conserve and collect ethno-botanically important plant species and plants with historic, social and economic importance.
- Foster use of *ex situ* plant materials (seeds, cutting, living specimens) by researchers working in plant taxonomy and conservation.
- Foster ecological restoration skills thereby promoting *in situ* conservation.
- Encourage certification and reward programs for employees exemplifying the conservation mission, while raising awareness of local cultural indigenous knowledge and uses of plants. This awareness may be developed through training days and accreditation and higher learning credits for employees, as well as through encouraged or requisite appropriate volunteer hours for staff.
- Dedicate financial and staffing resources focusing on *in situ* and *ex situ* conservation.
- Update conservation plan annually. Create an ad hoc, student driven, committee, overseen by a Curation committee member (other than the

representative student member), to review operations and report how successfully the UWBG is achieving the objectives and employing the strategies herein. The ad hoc committee may also suggest additions or subtractions to the conservation plan objectives and strategies, which will be adopted or rejected upon approval by the Curation committee.

Codes of Conduct

The University of Washington and UWBG have endorsed the St. Louis Codes of Conduct (<http://www.centerforplantconservation.org/invasives/>) and implemented an invasive species policy. The collection policy includes elements of the Codes. Others that are relevant and should be kept in mind by the curatorial committee include:

- Reducing pest and pathogen outbreaks by employing best management practices.
- Identification and Exclusion of invasive species in *Index Seminum* listings
- Promptly managing any new invasions detected at UWBG
- Promoting alternatives to regional invasives through new accessions
- Reporting concerns of new invasions to county and state noxious weed boards