Lagerstroemia indica ‘Muskogee’, a crape myrtle, is known for its late summer blossoms. Find it and L. ‘Natchez’ blooming in Washington Park Arboretum during September. Photo by Joy Spurr
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In the Washington Park Arboretum
Summer into Fall

Many trees and shrubs flowered three to four weeks late this year, making for an interesting combination of bloom. Whatever the weather, we pursue WPA’s daily goals relating to collections/research, education, conservation, and display.

Collections/Research
In late May, Registrar & Collections Manager Randall Hitchin and four volunteers visited Portland’s Berry Botanic Garden. They were interested in learning more about seed collecting and storing, and gathered ideas that could be used for the Index Seminum—the international seed exchange program among institutional gardens. In addition to learning about Berry’s seed banking facility, they returned with good ideas for WPA’s seed exchange program, including progressive ways to sort, store, select, and harvest seed.

Heronswood Nursery (Daniel Hinkley and Robert Jones) recently donated over 60 taxa; about 25% are new species to WPA. The two new genera are *Dichroa febrifuga* and *Disporopsis arisanensis*. Ninety-five percent of this seed was grown from very well-documented wild collections. This will enhance the Arboretum’s value as a reference and research collection.

Education
The number of classes held in WPA by the University of Washington and other area institutions continues to increase, especially in springtime. WPA grounds staff have taught sections in the Landscape Management class of Professor Linda Chalker-Scott. Horticulturist Christina Pfeiffer, Plant Technician Dean Powell, Gardener Lead David Zuckerman, and Arborist Lou Stubecki conducted field sessions in urban plant protection for College of Forestry professors. Propagator Barbara Selemon assisted me in teaching my plant propagation class.

We have also seen classes here from Boise State University, Lake Washington Technical College, South Seattle Community College, and Edmonds Community College.

WPA was featured in the cover story of the January issue of the *Public Garden*. In it, I wrote about the role of history in the process of long-term planning for the Arboretum’s future.

Over 1500 students from Seattle and surrounding areas participated in our spring Saplings program, for K–5. This number will likely end up this fall as 4000, with the start of the Seattle Schools’ Plant Growth and Development curriculum, which will deal with the life cycle of a plant as well as with wetland ecology.

Conservation
Community volunteer groups continue to help battle the invasive English ivy that threatens our native and exotic collections. We welcomed back 60 members of the Northwest Girlchoir, who always sing as they weed. Less vocal but much needed were Earthwork Northwest, Seattle WorksDay, Temple Beth Am, and Americorps.

Renovation is almost done in Rhododendron Glen on the 1940s rockwork by Ken Kelly. Workers cleared overhanging and invasive plants, reset original stonework, and added new stonework to create pools as the stream descends. The new pools allow sediment to be easily accessed and removed before reaching the ponds.

Seattle Garden Club’s recent major donation will greatly increase the diversity of ground covers at WPA, while stabilizing the slopes to guard against sediment run-off. Hundreds of new ground-cover plants have been added to Rhododendron Glen, Woodland Garden, and the Rhododendron Hybridizers’ Garden.

Display
Two little-known magnolia relatives have just been added to the Magnolia collections. *Manglietia insignia* and five species of *Michelia* are now on display. On the east side of the GVC, several new vines, including *Akebia quinata*, *Akebia quinata* ‘Rosa’, *Actividia*, and *Holboellia* sp. aff. *latifolia*, were recently planted.

Summer has finally begun. We welcome the increasing crowds of visitors who’ll arrive this season to enjoy the pleasant solitude found here.

John A. Wott, Director
Washington Park Arboretum

Washington Park Arboretum Bulletin
Message from The Arboretum Foundation
The Lazy Days of Summer

Old songs remind us of the slow and dreamy times that July and August used to be. The weeks between the Independence Day and Labor Day holidays—Seattle's short season of sun—provided long-awaited summer vacations and allowed a little lull in the pace of work and life.

Not quite so today. While vacations and weekend get-aways remain on the summer calendar, there seems to be an ever-growing list of activities and opportunities that fills the offices, greenhouses, and maintenance buildings of the Washington Park Arboretum (WPA) with workers and the fruits of their labors, all through the warm season.

To what can all this summer activity be attributed? It's safe to say that the interest, commitment, and support of Arboretum Foundation volunteers, members, and donors provide much of the impetus and the means for accomplishing the many tasks on the season's to-do list.

Thanks to the generosity of Foundation Annual Fund donors, work is underway on two important projects in the Arboretum: restoration of the internationally known Brian O. Mulligan Sorbus Collection as well as a seasonal gardening program that battles stubborn weeds and ivies that invade nearly every acre of this magnificent park. Weeds, we have been known to say, don't take summer vacations.

Pacific Northwest Gardens: A Home Gardener's Competition is the annual contest sponsored by the Seattle Times and produced by Foundation volunteers. Every summer it adds excitement and a friendly competitive spirit to the Puget Sound gardening scene. Judges are evaluating (and enjoying) this year's outstanding gardens through the end of July.

Volunteers are already cultivating the fall bulb sale, always an important fund raiser and a kick-off for the fall season. In and around the Arboretum greenhouses, volunteers teach and learn propagation, study plants, and prepare donated plants for sale to the public. Participation in these volunteer-driven horticultural activities continues to grow.

Another volunteer group, the Arboretum Foundation Board of Directors, recently welcomed new members and is gearing up for a busy year of planning and fund raising in the months ahead. Board members, new and returning ones alike, will be involved in everything from the Spring Plant Sale to the Northwest Flower & Garden Show, in addition to their work as advocates for the Arboretum.

Even with all the activity in and beyond WPA, there remain enough free hours on the season's calendar for all to enjoy a "lazy day" or two in this wonderful public garden of woody plants. Drop by with your out-of-town guests, or just take a renewing walk through the Arboretum's groves and gardens. You'll be reminded why so many volunteers give so much to this Northwest treasure.

Deborah Andrews,
Executive Director
The Arboretum Foundation
The Cutting Edge
The Pat Calvert Greenhouse offers 14 tips on taking cuttings.
TEXT BY ANN O’MERA & PHOTO BY JOY SPURR

Below are general guidelines for taking cuttings and rooting woody plants. People who want to try their first cuttings for fun or because they find a plant in their neighbor’s garden they want to have can refer to the steps below.

Guidelines for Taking Cuttings

1. Get permission.
2. Use the current year’s growth for your cuttings. Compare several branches to find where the new growth is less woody and softer looking. If you find new shoots coming from the base of a plant, they make ideal cuttings.
3. Avoid taking material that has flowered because this growth is more mature and less likely to root. Often, if you look, you will find some branches that have not flowered. If flowering branches present the only opportunity to take cuttings from the plant, use them anyway.
4. Look for healthy, normal growth and strong stems. You can use branch tips, or take side shoots gently peeled off the main stem. Leave on the little foot that is on the end of side shoots taken this way.
5. Make cuttings about 4 to 6 inches in length.
6. If you must hold the cuttings for any length of time, wrap them in wet newspaper and put them in a plastic bag. Cuttings are very sensitive to drying out. Newspaper insulates them from heat and keeps them moist without getting soggy. Don’t put plastic bags in the sun, or your cuttings will cook before they get home.
7. Wash your cuttings in water with a little soap added to clean off any hiding pests. Add a tablespoon of bleach to prevent disease that might be imported on the leaves.
8. Use any good potting soil as the cutting medium. You may want to add pumice or perlite to give your cuttings a lighter mix.
9. Keep the cuttings moist but not soggy. The pots should be earthy smelling but not moldy. You will learn to judge how wet to keep your cuttings by trial and error.
10. Cover the pots or flats with plastic to keep in the moist air. Use wire or sticks to make a tent that will keep the plastic off the leaves.
11. Keep the pots or flats out of direct sun in a protected area. The cover can be removed as cuttings develop roots.
12. The best way to tell if the cuttings are rooting is to watch for new growth or roots coming out of the bottom of the pot. Don’t tug upwards on the cutting to test for rooting so that you can avoid pulling off delicate new roots.
13. Feed cuttings with a dilute liquid fertilizer.
14. Let the cuttings get a good root system before you transplant them.

Ann O’Mera, Board Member of the Arboretum Foundation, is the contact person for the Pat Calvert Greenhouse.
Join a greenhouse study group.
Learn as you volunteer for the Arboretum Foundation’s Pat Calvert Greenhouse, located near the Graham Visitors Center.

“Plant Propagation & Production Greenhouse”
Contact Ann O’Mera
206.547.2863:

Tuesday
10 a.m. –12 noon
or
First Saturdays from April–September
10 a.m.–2 p.m.

Order cuttings from the Pat Calvert Greenhouse.
If you see a woody plant you like on the Arboretum grounds, the Pat Calvert Greenhouse will start it for you. First, take down the information (name and numbers) on the plant tag, leaving the tag in place. Call the Arboretum Foundation office at 206.325.4510, and leave a message for the greenhouse.

Impatient? The greenhouse is also open for customers on Tuesdays from 10 a.m. to noon. Through September, the greenhouse is open on the first Saturday of each month. Find a choice selection of greenhouse starts in front of the Graham Visitors Center each day, for purchase in the Gift Shop.
Summer can be very interesting in the Arboretum—especially this one, which seems to be hiding late spring behind its cloak.

Volunteers at the reception desk at Graham Visitors Center will tell you what’s in season, what’s lagging, and where to find it. Ask for the seasonal plant list.

Have someone help you locate plants that you want to see by marking them on an Arboretum map.

**Photos**

**TOP:**
*Mutisia spinosa*, from Chile and Argentina, is appropriate for the Northwest climate.

**RIGHT:**
*Disanthus cercidifolius* leaves in September.

**OPPOSITE PAGE, TOP:**
Berries of Rocky Mountain juniper (*Juniperus scopulorum*) appear by August.

**OPPOSITE PAGE, BOTTOM:**
It’s worth a trip to the New Zealand Garden in July to see *Lomatia myricoides* flowers.
On this cusp between two millennia, we as garden makers have both the future to look forward to and the past to draw upon for inspiration. I’ve done two recent garden projects for clients who requested a sense of antiquity in their gardens. For one garden, the owner remarked that she would like a ruin. The second garden, just newly planted this spring, is for a client who grew up playing around a medieval castle in Germany and wanted a similar spirit of age in her garden.

The question is how to bring antiquity to a new garden, other than waiting a century or so for it to get really old. Among the ways I have found most essential, three are: the use of classical elements of design, such as crossing paths and focal points; the use of stone, water, and architectural fragments; and lush planting to give an established look.

(continued, page 10)
OPPOSITE PAGE:
The terrace walls incorporate pieces from Seattle’s demolished Music Hall Theater.

TOP:
Cross axes meet in circular paving surrounding an urn.
Note the classic form of Taxus baccata ‘Fastigiata’ (Irish yew).

LEFT:
The Bacchus fountain is cast concrete stained to look like bronze. Iris pseudacorus ‘Variegata’ is in the foreground.
Classical elements of design come to us from many cultures and historical periods. Among these is the cruciform shape, the cross, which can be as simple as two paths intersecting at right angles. European garden design uses this formal element frequently. The Persians used it to represent the four rivers of paradise.

When you place a circle in the middle of the intersection, it adds a spot to place an urn or pool. The circle is also a great shape for a terrace, serving to provide a calm center for the garden. Another classical element is the focal point at the end of an axis, a long line through the garden with a fountain, sculpture, or striking plant as the terminus.

Stone is a key material for creating timelessness. It appeals to our atavistic memory. Stone paths and stone walls take us back to the time before computers, before plastic, before concrete. In both gardens, I worked with a mason, Mike Knapp, who has an amazing ability to create walls that look as if they were centuries old. We chose stone that was not uniform but irregular, almost as if it were the backing for a more finely crafted wall that crumbled to reveal the underlayment. Where planting holes are built into the wall, the plant-filled niches suggest great age.

The style of stonework also can place the time period. Gothic, pointed arches refer to the Middle Ages and round arches to Rome. The Greeks, earlier still, used only columns, before the arch was invented, such as in the Parthenon.

Architectural fragments incorporated into the garden add layers of history. Pieces of the façade of the Music Hall Theater, which once drew crowds in downtown Seattle, were placed in both gardens. This 1930s Spanish Baroque Revival theater was torn down in 1990, and the pieces were preserved by the demolition contractor, McFarland Wrecking, and are still available. In one garden they are used in the paving; in the other, pieces are reassembled into a fountain. In addition, we incorporated reproductions of Greek columns and capitals in the walls. Though newly made, they lend a sense of history.

Throughout time, water in the form of fountains and pools has been the center of gardens. A simple wall fountain with a Bacchus face spouting into a pool recalls ages past. Water features come in many forms: The form that serves our look best is classical geometry of round or square instead of free form.

Lush planting creates a sense of past, as in, “It must have taken a long time for this jungle to grow.” My credo is to build strong structure and loose planting. A wildly planted garden is held together by the crisp design of paths, terraces, and boundaries. In a new garden, perennial plants establish quickly to create interest until the trees and shrubs grow in.

Plants can be chosen for their historical reference. An upright conifer reminds me of the cypress of Rome, be it a yew, Taxus baccata ‘Fastigiata’; a spearmint juniper, Juniperus scopulorum ‘Spearmint’; or the Italian cypress itself, Cupressus sempervirens. Other Mediterranean plants, such as Acanthus mollis, Cistus, and lavender (Lavandula species and cultivars), evoke history as well.

So haul out your archaeology books along with your planting bibles, and create your garden of the next century with an eye to the past.

Phil Wood is a garden designer and former Board Member of the Arboretum Foundation. He is currently on the Foundation’s Senior Advisory Board. Reach Phil at: philwood@northwestlink.com

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Washington Park Arboretum Bulletin
What in the Arboretum?  
Trees with a Formal Look  
TEXT BY BARBARA SELEMON  
PHOTOS BY JOY SPURR

A visit to the Washington Park Arboretum allows you to search out plants that impart a sense of antiquity, due to their strong architectural manner of growth. A visit to Conifer Meadow, the large area bordering Lake Washington Boulevard East to the south and found on foot by crossing the Lynn Street footbridge from the Graham Visitors Center and turning north (right), will bring one to three specimens of Cupressus sempervirens (44-5W &44-6W). The best of these three fastigiate plants is accession 647-58 on an Arboretum map, planted in the foreground of Cupressus lawsoniana ‘Haggerston Gray’. Walk back towards the footbridge, and follow the service road south into the Pinetum. Located just to the west of the service road and directly across from the newly planted Pinus siberica is a noteworthy specimen of Chamaecyparis lawsoniana ‘Kilmacurragh’ (860-52 in 36-4W), a bright green narrow tower with foliage all the way to the ground. Across from this Lawson cedar cultivar, stroll upwards over the crest of the hill. Here view several junipers of the fastigiate nature. The most full-foliaged and narrowest specimen is Juniperus phoenicea (1192-56 in 35-4W), a native of the Mediterranean.

Irrefutably the most spirited trees in the Arboretum are the two Camperdown elms, Ulmus glabra ‘Camperdownii’ (602-39 in 34-4E). These domed trees grace both sides of the service road on the east side of the Winter Garden. In all four seasons, one can walk inside and underneath their umbrella-like limbs and become enshrouded by a sense of antiquity.

Barbara Selemon is Plant Propagator for Center for Urban Horticulture/Washington Park Arboretum, 206.543.8616. Reach her by e-mail at: selemon@u.washington.edu

LEFT:
The upright form of Chamaecyparis lawsoniana ‘Bruinii’ is classic against a mid-summer sky.

ABOVE:
Visitors report that Ulmus glabra ‘Camperdownii’, Camperdown elm, is one of the most popular and fascinating trees in the Arboretum.
Washington Park Arboretum Bulletin

The Past is Here

WPAs known worldwide for its outstanding collections of exotic woody plants. But the campus of this 230-acre living museum has always been a place for visitors to come and view native trees, shrubs, and perennials, which thrive within WPA's two landform zones: (1) the forested ridge and (2) the valley bottom, lakeside, and marsh.

Remnant native communities—naturally occurring assemblages of ground covers, herbaceous perennials, low shrubs, and trees—still grow within each of these zones. Both of the two basic vegetation or community types have subdivisions or variations of the two themes. Each of these community types is associated with and primarily determined by a moisture regime—a wet community that is associated with the valley bottom land form and an upland community that corresponds with the forested ridge.

Within the lowland (wet) community, there are two variations: forests dominated by *Alnus rubra* (red alder) and forests dominated by *Fraxinus latifolia* (Oregon ash) and *Populus trachocarpa* (black cottonwood). On the forested ridge or upland sites, there are more variations, such as forests dominated by *Acer macrophyllum* (big-leaf maple), a mixed broadleaf-conifer forest, and a mixed conifer forest.

Washington Park Arboretum Bulletin
etum’s Native Tapestry

In the Future

In the future, a tapestry of native trees will weave in and out of the collection exhibits. In some cases, native trees will serve simply as overstory or background for non-native specimens. In other places, native trees will be underplanted with native shrubs and ground covers in order to simulate the various Pacific Northwest plant associations that occur in nature.

WPA’s fellow Seattle parks also find ways to use native plants in interesting ways. On the following pages, notice how Woodland Park Zoo and Bellevue Botanical Garden incorporate their native plants with an eye to the topographic and water run-off needs of their spaces.

Written by Registrar & Collections Manager Randall Hitchin with excerpts from “The Arboretum Plan,” commissioned by the Arboretum Foundation.

**TOP:** *Thuja plicata* (western red cedar, left) and *Pseudotsuga menziesii* (Douglas-fir). Photo by Joy Spurr
From the Formal to the Forest

The Woodland Park Zoo uses native plants in some of their transition landscapes.

PHOTOS & TEXT BY BARBARA DECARO

One of the most complex and difficult landscape challenges is the transition zone—the area where one type of landscape blends or changes into another. This transition may be abrupt or gradual, created or natural. Like all planting areas, transitions are determined by soil composition, sun or shade, or simply plant selection.

Many landscapes are sited on or near second-growth forest or partially forested areas. These forested areas provide unique opportunities to incorporate native plants as transition elements that go from formal, developed landscapes into and around the backdrop of native trees, shrubs, and herbaceous perennials.

(continued, page 16)
THIS CLASSROOM NEEDS YOUR SUPPORT

WASHINGTON PARK ARBORETUM
WASHINGTON PARK ARBORETUM
PRESERVING A NORTHWEST TREASURE
FOR THE 21ST CENTURY

The Washington Park Arboretum never ceases to delight us with its beauty, inspire us with landscape ideas for our own gardens, and enchant us with its tranquil walks and glorious vistas.

Indeed, this spectacular 200-acre museum of woody plants in the heart of Seattle is an invaluable educational and recreational resource with international horticultural significance. An outdoor classroom, it provides a hands-on, natural experience for present and future generations. From children of inner city schools to graduate students, landscape professionals and everyday gardeners, the Arboretum is at once a learning resource and a Pacific Northwest cultural treasure.

The Arboretum needs your support to continue to:

- Preserve and protect rare and endangered plants and precious ecosystems
- Ensure an enriching, educational environment
- Acquire new plants for regional and international study
- Instill an appreciation of the wonder of plant life for all ages
- Maintain the Arboretum as a splendid, tranquil retreat

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Your support is needed for the Arboretum to continue to be a special place of learning, relaxing and bridging the gap.

The Arboretum Foundation has funded projects to provide:

- Education and research
- Trail improvements and accessibility
- Plant replacement and renovation
- Conservation
- Visitor enhancement

Specific projects have included:

- Renovation of four garden ponds and associated plantings
- Support of large tree management programs
- Construction of the Graham Visitors Center
- Support of the Japanese Garden
- Creation of major educational interpretive signage
- Garden enhancements including the Winter Garden, Azalea Way, Rhododendron Glen and the Japanese Maple collection
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Photos

UPPER LEFT: The south entry with glacial erratics (boulders).
LOWER LEFT: Katsura with native sword fern at the Family Farm
UPPER RIGHT: Mixed exotics and native plants form a transition at the South entry.
LOWER RIGHT: The brick perimeter of the Family Farm is softened with native plantings.
Two recent renovation projects at Woodland Park Zoo illustrate the transition from typical Seattle landscapes of exotic conifers, shade trees, and evergreen shrubs into a more natural native plant landscape. Both are located in the Temperate Forest exhibit and have been recently renovated. One is at the South Gate entry and parking lot, and the other is the artificial waterfall and stream system in the Family Farm.

The exhibits in the zoo are divided into bioclimatic zones or biomes. Worldwide, these biomes are defined by three variables: average temperature range, precipitation, and the rate of evapotranspiration. The idea of each exhibit is to reflect distinct plant and animal communities, rather than biogeographic areas. Therefore, the Temperate Forest reflects all temperate deciduous and evergreen landscapes throughout the world. This includes our own temperate forest in the Pacific Northwest, and most plant species represented in the exhibit are Pacific Northwest natives.

The original temperate forest was developed as a New England-style marsh and swamp in 1977. By 1994, the area had expanded into the former Children’s Zoo. The area known as the Family Farm was renovated, and a children’s activity area, the Habitat Discovery Loop, was created. The Rotary Education Center and the South Gate were constructed the same year.

The South Gate

The new native plant landscape around the South Gate is the main transition into the Temperate Forest exhibit. The South Gate entry is the gateway from the parking lot to the zoo itself.

The parking lot area has a very formal driveway, four large annual displays, and raised planters that also feature formal annual and, more recently, perennial displays. The parking lot perimeter has many mature trees: zelkova (Zelkova serrata), Lawson’s cypress (Chamaecyparis lawsoniana), and oaks. There are also drifts of mature shrubs. The new transition between this landscape and the Temperate Forest native plant community is accomplished by the gradual inclusion of snowberry (Symphoricarpos albus), low Oregon grape (Mahonia nervosa), kinnikinnik (Arctostaphylos uva-ursi), and beach strawberry (Fragaria chiloensis), under red oak (Quercus rubra) in newly created parking lot islands. It should prove to be a durable planting and provide year-round interest.

Along the Education Center building and leading to the gate, the transition to all native species is complete. These species are not representative plant communities, but demonstrate landscape solutions to a specific situation.

Narrow beds are defined by the tall upright trunks of various sizes of aspen (Populus tremuloides), underplanted with sword fern (Polystichum munitum), evergreen huckleberry (Vaccinium ovatum), red huckleberry (Vaccinium parviflorum), beach strawberry, and kinnikinnik in a lovely mass of foliage and fruit. Some native plants already existed on site: California wax myrtle (Myrica californica) and tree-form serviceberry (Amelanchier alnifolia); these were incorporated into the design. Both bald-hip rose (Rosa gymnocarpa) and Nootka rose (Rosa nutkana) were used with salal (Gaultheria shallon) adjacent to the formal Rose Garden, creating yet another graceful transition.

The new landscape in the large planter outside the main gate holds a grouping of aspen, evergreen huckleberry, and sword fern. This planting mimics the older landscape just inside the gate, which features similar shrubs, many older aspen, and the addition of red cedar (Thuja plicata) and western hemlock (Tsuga heterophylla).

The glacial erratics placed among the other landscape elements were found on site during construction, and play an important role in interpretation of this landscape. This boulder train brings zoo visitors into direct contact with the landscape, and helps to provide that transition and sense of immersion. The fresh green, white, and pink of aspen, roses, and thimbleberry (Rubus parviflorus) foliage, flowers, and bark with an evergreen component in the background combine to make a particularly beautiful arrangement.

The Family Farm

The Temperate Forest continues into the Family Farm. The Family Farm is a simulated farm scene, complete with cows, goats, and chickens; a vegetable garden; an orchard; “Bug World;” and a butterfly garden. This area is the site of the former Children’s Zoo, which had traditional exotic landscaping. Many of the plant specimens were retained throughout this landscape, which can be observed along the forest paths. Newer plantings reflect this planting plan: Katsura tree (Cercidiphyllum japonicum) is coupled nicely with sword fern. The butterfly garden and the orchard are sited next to the forest edge, which
is defined by a split-rail fence. Native roses spill out along the edge and over the fence in an informal swath together with European birches and ornamental cherries.

This transition is abrupt, but the density of the forest beyond creates a nice, soft feeling. Many native herbs, such as Solomon’s seal (Smilacina stellata and S. racemosa) and false lily-of-the-valley (Maianthemum dilatatum), are located along paths, as they might be observed in the wild.

The south end of the exhibit encompasses an artificial waterfall and stream system that runs the length of the exhibit. This system begins in a children’s activity center and ends in a cobble-edged pond near the Family Farm. This second renovation project consisted of repair and resurfacing of the waterfalls and stream bed, and accompanying landscape changes. Interesting choices were made to provide better native habitat features. For example, an old, declining weeping cherry at a viewpoint and a large, dead big-leaf maple (Acer macrophyllum) were selectively cut as snags, rather than removed. Plants were moved for construction, and new rock pockets and planter spaces were created, offering the addition of new species such as maidenhair fern (Adiantum pedatum).

A typical stream system creates saturated soils under, around, and near the stream edges. This creates microhabitats that result in various wetland plant communities, depending on the degree of saturation and hydrologic cycles.

It is challenging to restore a stream edge in an artificial site without this character, but experiments are planned to pipe water into selected areas and develop some small representative wetland communities. The rest of the area will be planted with species able to tolerate some drought after establishment, including fairy bells (Disporum smithii), Pacific rhododendron (Rhododendron macrophyllum), sword ferns, hardhack (Spiraea douglasii), and snowberry.

These new landscapes demonstrate that native species can help provide smooth transitions from the formal to the forest. They also demonstrate how native plants can be conserved while being used as landscape elements, in all their diversity and beauty.

Barbara DeCaro is the Landscape Supervisor at the Woodland Park Zoo.
The Yao Japanese Garden

Bellevue Botanical Garden turns a stormwater detention site into a beautiful garden.

BY LAURA ZYBAS & TOM KUYKENDALL

How do Northwest native plants, a stormwater detention site, recycled cedar timbers, and 200 tons of Columbia River basalt combine to make a Japanese garden? In the hands of Northwest landscape architect Robert Murase, these elements become a stroll garden that fuses traditional Japanese gardens and contemporary Northwest design concepts. Today the garden is a premiere example of how inspired garden design can also meet the function of stormwater detention in a public garden.

The Yao Garden is part of the Bellevue Botanical Garden and one of the newest Japanese-style gardens in the Pacific Northwest. It was built to reflect the growing friendship between the two sister cities of Bellevue, Washington, and Yao, Japan. The Yao Garden showcases examples of garden concepts from Asia to represent the growing cultural diversity of the Pacific Northwest. The City of Bellevue Parks and Community Services Department along with the Bellevue Sister Cities Association have created an experiential garden and an educational opportunity from this unique concept.

The original Yao Garden was established in Kelsey Creek Park in 1971, where it was subjected to the forces of nature and flooded almost annually. Although water plays an important part in the Japanese garden, flooding proved to be too much for the plants and the visitors.

In 1992, many elements of the garden were moved to the newly developing Bellevue Botanical Garden at Wilburton Hill Park. Selected trees and shrubs were successfully relocated into a half-acre tucked among the towering native western red cedar, big-leaf maple, and Douglas-fir.

Design Goals and Features

The pathway from the Shorts Visitor Center provides a sense of peaceful isolation as it traverses through a densely wooded forest into a natural wetland and enhanced native areas. The entry gate provides a dramatic contrast while making a smooth transition from the woodland setting to a Japanese-style garden that makes use of many Northwest native species.

Native plant use was a key element in the design. Mr. Murase felt that in the best gardens, indigenous plants are used to achieve the spiritual and spatial goals of the garden. The use of native plants demonstrates the universal appreciation for nature and provides habitat for wildlife. Pacific Northwest native plants used in the Yao Garden include Mahonia repens (low Oregon grape), Symphoricarpos albus (snowberry), Vaccinium ovatum, Cornus stolonifera ‘Kelsey’ (red-osier dogwood), Ararum caudatum (wild ginger), Thuja plicata (western red cedar), and Arctostaphylos uva-ursi (kinnikinnik).

Mr. Murase designed the garden in masses of greenery and ever-changing color below an all-encompassing Japanese maple canopy. The natural form of ‘Hino-Crimson’ and ‘Pearl Bradford’ azaleas line the foreground, backed by groupings of Hydrangea paniculata, Spiraea japonica ‘Shirobana’, Camellia sasanqua, Nandina domestica, and Viburnum plicatum f. tomentosum. In the shade, ground-cover masses of Galium odoratum (sweet woodruff) and Pachysandra terminalis are accentuated with ferns, Hosta species, Pieris japonica, rhododendrons, and Mahonia ‘Arthur Menzies’. Magnolia kobus and Callicarpa japonica punctuate blankets of low Oregon grape and kinnikinnik.

The Yao Garden borrows scenery by providing vistas of the surrounding conifer forest and intimate views across the wetland. The varied topography frames views throughout the site, with a sense of the Northwest and an opportunity for inward reflection.

The stone steps throughout the garden bring the visitor to different perspectives and create a natural bridge to cross the streambed, which (continued, page 21)

OPPOSITE PAGE: Dry for most of the year, the rocky streambed and detention basin will fill with torrents of water during winter storms.

Photo by Sandra Lee Reha

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The impressive gate at the entry to the garden is constructed using traditional mortise and tenon joinery. The design is a derivative of the elegant Sukiya or Teahouse type of architecture. The *Chamaecyparis lawsoniana* (Port Orford cedar) lumber was remilled from a demolished lumber mill. *Chamaecyparis lawsoniana* is the Pacific Northwest equivalent of Hinoki cypress, which would traditionally be used in Japan. Photo, courtesy of Bellevue Parks Department & Community Services

Azaleas punctuate masses of hostas and sweet woodruff under a canopy of existing Oregon ash. Photo by Sandra Lee Reha

Large basalt stones are integral to the garden’s design and act as a bridge to cross the streambed. Photo by Sandra Lee Reha
is often only slightly moist. The stream empties into the lowest part of the garden that functions as the stormwater detention basin. The detention basin itself is only full during storms, but the rocky streambed gives the illusion of movement and a suggestion of water during most of the year. The ephemeral stream changes with the seasons. Native plants, such as Petasites frigidus (coltsfoot), Darmera peltata (formerly Peltiphyllum peltatum; umbrella-plant), and Sagittaria latifolia (wapato), are blended with Iris ensata, I. sibirica, and Primula japonica.

The low canopy of Japanese maples and shrubs around the perimeter of the pond does not readily allow the visitor to see the function of the detention basin. The trees and other plants truly create a hide-and-reveal element.

Natural plant forms are emphasized within the garden, and delicate, detailed shearing is left for more formal gardens. This garden reflects that humans and nature can exist harmoniously (an important Zen theme). Naturally occurring moss will eventually replace Arctostaphylos and other sun-loving plants as maturing tree canopies envelop the garden. Larger plants will be thinned to retain the spatial separation between shrub masses.

The composition of stones in the garden provides interest, balance and harmony. The Columbia River basalt is a dynamic and powerful character in the landscape. Mr. Murase and his assistant Lorraine Sako worked closely on the selection and exact placement of the stone element.

The Yao Garden is a reminder that humans are part of the landscape, through the creative use of art, nature, and engineering. As the Garden matures and evolves, it will remain an outstanding example of garden design, while enhancing the function and aesthetic qualities of the stormwater detention site. We invite you to visit and appreciate the Yao Garden, for the garden will only be complete when it is understood.

Laura Zybas is a graduate student in Urban Horticulture at the University of Washington. Dr. John Wott is one of her advisors. Laura is also a former intern at Bellevue Botanical Garden.

Tom Kuykendall is the manager of the Bellevue Botanical Garden.

For more information call 425.452.2750.
The Japanese Garden in Washington Park Arboretum is a 3.5-acre formal garden designed and constructed under the supervision of Juki Iida.

Since its dedication in 1960, the Garden has been well used for occasions such as classes, demonstrations, and tours (above with Past Arboretum Foundation President Elizabeth Moses and below in the teahouse). And thousands of people annually enjoy strolling through the Garden to enjoy the plants and surroundings.

Where: 1502 Lake Washington Boulevard East, near East Madison Street.
Open: daily from March through November.
Admission: $2.50 ($1.50 for ages 6 to 18 and above 65 years old).
Tea Ceremony: the third Saturday of each month at 1:30 p.m. in the teahouse. To find out more about Chado (The Way of Tea), call 206.324.1483.
General information: call 206.684.4725.

Photos by Joy Spurr
The opening page of Washington Park Arboretum’s web site greets browsers with the seasonal montage above. Reach WPA’s new web address at: http://depts.washington.edu/wpa

Visit the Arboretum’s Web Page

If you enjoy the Internet, stop by the beautiful site devoted to Washington Park Arboretum.

The Arboretum site provides general information about WPA plus basic information about its history, participating groups, and future plans, as well as The Arboretum Foundation. You’ll also find an extremely attractive view of the plantings in the gardens. Check out the “Visual Tour” and “Seasonal Highlight” sections, as well as those on taxonomic and ecogeographic collections and functional landscape.

WPA hopes to improve the navigation and user-friendliness of the site, to increase the availability of collections information, and to add a section devoted to current events and activities in the Arboretum.

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Compiled with Josey Fast, Facilities Manager for the Washington Park Arboretum.

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Before you visit
Washington Park Arboretum...

Plan your visit on the web site.
For example, at “Seasonal Highlights,” pick the month of August to find out which plants you’ll want to see that month.

Or take a “Visual Tour,” which leads you to choices such as “Witch Hazel in Winter” or “Japanese Maple.”

If you select “Plant Collections,” the choices narrow down to types. An example is “The New Zealand High Country Exhibit,” which provides an overview of the collection and lets you discover more about individual plants that grow both in New Zealand and in western Washington.

The web site refines your choices to help make the most out of your WPA visit.
Given our dry summers, over 200 acres of landscape with aging water pipes and irrigation equipment, a dozen different soil types, and an average of 300 new plants installed each year, it’s no wonder that watering is the single most important and labor-intensive task on the Arboretum’s May to September maintenance schedule.

It takes two of our six full-time grounds staff to manage the weekly visits to new plants installed over the last three years. While your garden may not be as large or your plantings as extensive, you can benefit from the basic techniques utilized at WPA.

WPA’s water wagon Cushman is stocked with a variety of hoses, sprinklers, hose Ys and quick-release couplings, and water wands. Have the right equipment together for the best use of water and time.

The task of watering new plants at the Arboretum takes creativity, organization, good scheduling, and good record keeping. Whatever the size of your new plantings, these tips can help get them off to a good start. And the next time you notice the lush green growth of the Arboretum in summer, you’ll recognize the results of our hard-working irrigation crew.

David Zuckerman is Gardener Lead for the Washington Park Arboretum.
How in the Arboretum?

Summer Pruning

BY LOU STUBECKI

One of the most commonly asked questions I get is: “When is the best time for pruning?” The two best times are in late winter to early spring (just before the leaf buds unfurl) and in summer after the leaves have fully formed.

Late winter/early spring pruning is best when you desire a vigorous response from the plant. Wounds made on trees at this time seal the fastest.

Summer pruning is best when you are trying to slow down a plant’s growth. This actually robs energy from the plant, therefore reducing vigor. It sounds mean but in many cases is necessary.

A typical vigorous plant response to pruning is to produce epicormi sprouts, commonly called suckers. The heavier the pruning, the more suckers that appear. This is a plant’s way of recovering the leaf area that it lost. By pruning in the summer, we can reduce the amount of suckering that occurs. Of course, it helps not to be so heavy-handed with our pruning. Nonetheless, we are sometimes given difficult situations to work with. Let’s look at some examples.

Trying to control the size of trees planted too close to trails, roads, or structures. Summer pruning slows this down, but the trees still want to reach their mature size. Some of these problems are solved by picking the right tree for the right spot.

Trees that already have many suckers for whatever reasons. Do not try to remove all of the suckers in one year. Thin them out instead, leaving some to help fill the voids.

Trees that typically sucker on a whim, such as magnolias, rosaceae family members, lindens, willows, and sweetgum. Magnolias are very sensitive, and should only be pruned in the summer. Deadwood can be removed anytime of year.

Keeping disease in check. In some cases, the tree is less susceptible at this time (e.g., brown rot on cherry), or the disease spores are not as prevalent and germination conditions are not optimum (e.g., nectria canker in many plants and dogwood anthracnose). Some plants, such as elms, should not be pruned in summer because the fresh wounds are attractive to the beetles that carry Dutch elm disease.

Another popular question is, “What are the exact dates to begin and stop summer pruning?” There are none. It differs for every plant. Summer pruning should occur sometime after the leaves have fully formed and well before the leaves turn color. Avoid pruning while the leaves are unfurling or during the fall.

When it comes time for the actual pruning, keep these points in mind:

Use thinning cuts to remove a branch to its point of origin (the collar: A to B in the figure).

If you have to use thinning cuts, plan far ahead and start them when the branch is small and still far from any target (trail, house, etc.). Ideally, you can pinch back the present year’s growth to a bud pointing in the direction you want. In conifers, you can cut the new shoot back anywhere along its length, but do it by July.

Finally, precut the branches so that you only remove a small stub with the final cut.

Lou Stubecki is Arborist for Washington Park Arboretum.
For Further Information
Ornament in the Garden

BY BRIAN THOMPSON

What is it that makes a particular garden memorable? Often it
comes down to one or two special features that create images you can recall long
afterwards. These mental postcards may not be of the plantings, but rather of some design high-
light, artwork, or structural element that comple-
ments or gives a focus to the floral offerings.

Visitors to Washington Park Arboretum, for
e.g., may later find it easier to describe the
Lookout Gazebo or the Japanese Garden’s
teahouse rather than the trees and shrubs they
viewed from those locations.

Several books relatively new to the Miller
Library discuss the use of what are collectively
known as garden ornaments. Whether dramatic,
classic, or humorous, gardeners both gifted and
humble have used special objects to add person-
ality that cannot always be expressed through
strictly botanical means.

To understand the importance that these
adornments to the garden have played through-
out gardening history, a good place to start is
Garden Ornament: Five Hundred Years of Na-
ture, Art, and Artifice (New York: Doubleday,
1990; available as a paperback reprint from
Thames & Hudson, 1998). Primary author
George Plumptre gives not only an excellent his-
tory lesson but has a knack for making clear the
underlying reason for using a special feature. The
superb photographs by Hugh Palmer make these
concepts especially evident and, as indicated in
the title, the gardens considered range from very
old to the most contemporary.

Alistair Morris uses a style more associated
with catalogs in his Antiques from the Garden
(Woodbridge, Suffolk, UK: Garden Art Press,
1998). This highly visual work is illustrated with
period paintings, copies of historical catalogs, and
photographs of actual antiques. Grouped by type
with a brief introduction, included are garden
structures, ornaments such as sundials and bird-
baths, furniture, and tools of the gardening trade.
This is a great source for seeing the range of ob-
jects that have been used as garden decoration
over the last two centuries.

Taking a more encyclopedia approach is
Decorating Eden: A Comprehensive Sourcebook of
Classic Garden Details (San Francisco: Chronicle
Books, 1992). Editors Elizabeth Wilkinson and
Marjorie Henderson list from A–Z almost any
element of garden design and ornamentation you
could desire. Find extensive entries on expected
subjects such as fences, fountains, and paving
materials and their patterns, as well as many un-
expected listings including grottos, temples, and
tree houses. All are well-illustrated with photo-
graphs, line drawings, or diagrams.

If you are concerned that classic statuary
might seem outlandish in your neighborhood,
you might consider the suggestions of Mary Keen
in Decorate Your Garden: Affordable Ideas and

Washington Park Arboretum Bulletin
Ornaments for Small Gardens (London: Conrad Octopus, 1993). Here find numerous very approachable uses of garden ornamentation, including the use of everyday objects or common garden structures and tools as attention grabbers. The author also focuses on ways to use specimen plants, through pruning, placement, or companions, to achieve a similar effect.

Finally, at the other end of the ostentatious scale is Pleasure Pavilions and Follies: In the Gardens of the Ancien Régime (Paris: Flatiron, 1995). Authors Bernd H. Dams and Andrew Zega give a detailed review of pre-revolutionary France, told through the garden structures that were designed, built and, in many cases, have survived from that era. As the title suggests, these buildings were more for enjoyment rather than any practical purpose, but they gave an opportunity for the aristocracy and financiers of the time to display their wealth. Opulent structures such as these are unlikely to find their way into Pacific Northwest gardens, but like all ornaments, they allow us some insight into the makers’ intent and vision for their creations.

More Reading


I would like to believe that we all approach gardening books with a love of flowers and gardens.

Countless thousands of books and magazines deal with some aspect of the garden, be it decoration, horticulture, design, furniture or other sundry interests. A select few have become indispensable guides that we thumb through constantly for inspiration and guidance. Such is not the case with Garden Junk. It is clear from the first page that the author is a passionate junker. Unfortunately, Garden Junk is simply a photo album of her purchases and those of other devotees of the sport.

Garden Junk should be considered a guide to decorating the home using objects acquired at flea markets, auctions, and garage sales. The author reveals the price of almost every one of the hundreds of items featured, where the item was purchased, and why she bought it.

She writes: “Though I yearned for a garden at Elm Glen Farm, I must admit it was a home for all that glorious garden junk that I yearned for most. A garden would legitimize my appetite for yet another romantic, slightly dilapidated retreat. I would fill it with every conceivable kind of garden tribute—from venerably rusty clippers to outrageously ornamental vases, tumbling stacks of clay pots, gardening stands, peeling yard furniture, flower paintings, baskets, floppy straw hats, garden sculpture, carts and wagons, whimsical birds, mysterious elves and an angel at my door.”

Only a handful of the 500-plus photographs showed her purchases in a garden setting, and even those instances were less than inspiring. Those who cherish chipped garden gnomes, rusty garden tools, and ratty rattan chairs more than the love of gardening, may enjoy this book.—Reviewed by Duane Dietz

Brian Thompson is librarian at the Elisabeth Miller Library at the University of Washington’s Center for Urban Horticulture.

Duane Dietz is a landscape architect practicing in Seattle and is founder and Director of the Pacific Northwest Garden History Society. Reach him at 206.523.7536.

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Richard Contreras
Vice President
Corporate Communications

Northern Life
1110 Third Avenue / P.O. Box 12530
Seattle, Washington 98111-4530
(800) 426-7050 ext. 2400 • Fax: (800) 528-9788
e-mail: richardc@nlic.com

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