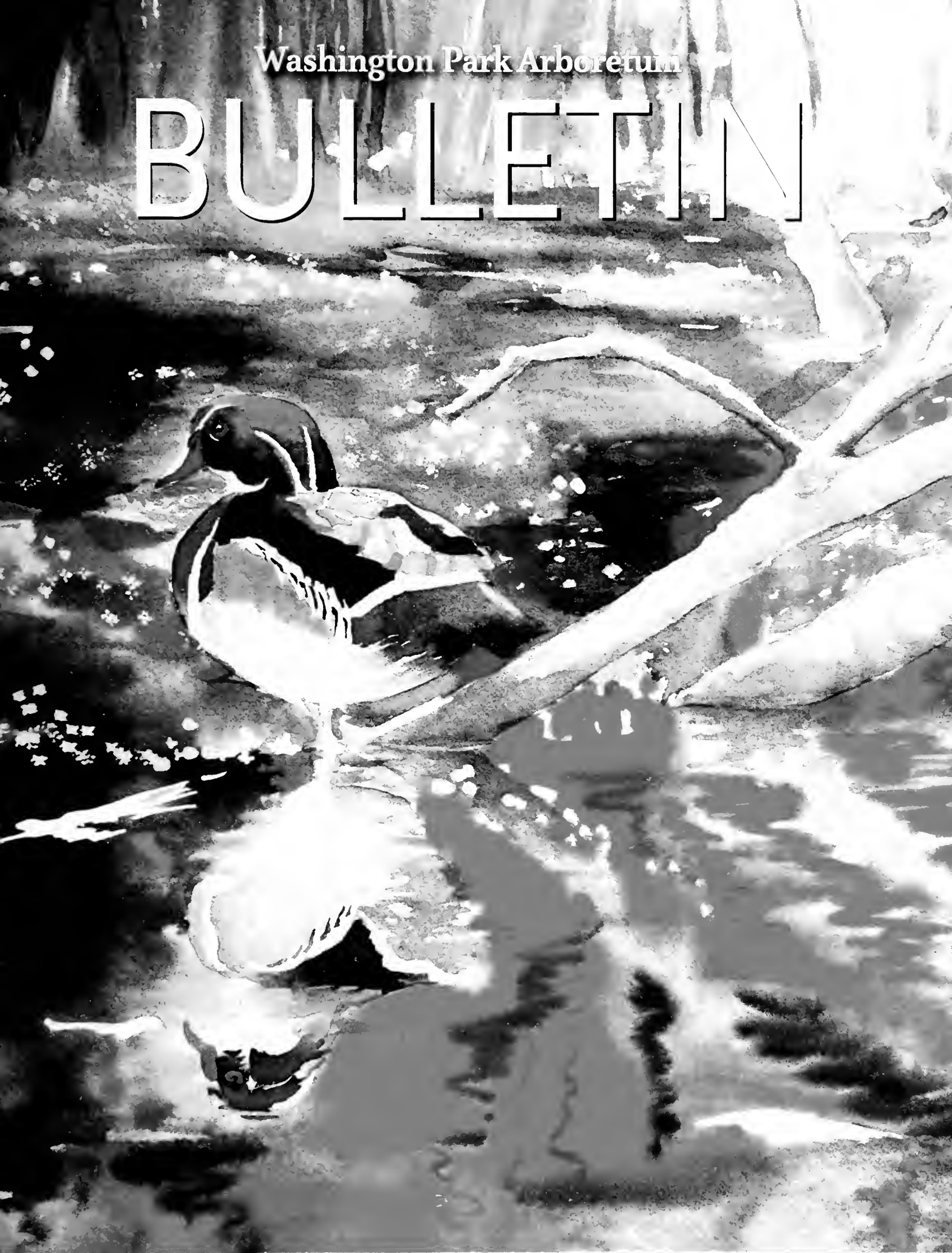
Washington Park Arboretum

BULLETIN



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Washington Park Arboretum

The Arboretum is a 230-acre dynamic garden of trees and shrubs, displaying internationally renowned collections of oaks, conifers, camellias, Japanese and other maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington Botanic Gardens and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

Arboretum Foundation

The Arboretum Foundation's mission is to create and strengthen an engaged community of donors, volunteers and advocates who will promote, protect and enhance the Washington Park Arboretum for current and future generations.

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Gift shop hours: 10 am–4 am daily,
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Graham Visitors Center

Open 9 am–5 pm daily.
Open on these holidays: Presidents Day, Memorial Day, Fourth of July, Labor Day.
The Arboretum is accessible by Metro Transit buses #11, #43 and #48. For more information: www.transit.metrokc.gov

University of Washington Botanic Gardens

The University of Washington manages the Arboretum's collections, horticultural programs, facilities and education programs through the University of Washington Botanic Gardens. It owns some of the land and buildings and all of the collections.

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The City of Seattle owns most of the Arboretum's land and buildings. Seattle Parks and Recreation is responsible for park functions throughout the Arboretum and manages and operates the Japanese Garden.

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Washington Park Arboretum Bulletin

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ABOVE: Hardy cyclamen (*Cyclamen coum*) and moss at the base of a Japanese stewartia (*Stewartia monadelpha*) in the Witt Winter Garden. (Photo by Niall Dunne)

ON THE COVER: "Wood Duck, Union Bay," a watercolor by Seattle-based nature artist Molly Hashimoto. Many of Molly's paintings and prints depict the flora and fauna of the Union Bay Natural Area, Seattle. Find out more on her Web site, www.mollyhashimoto.com.

Ginny's Garden

When you have a marvelous year, what do you do next? In 2013, we at the Arboretum reached an historic agreement on the SR 520 highway project, created a much-admired hobbit garden at the NW Flower & Garden Show, and celebrated the opening of a two-acre New Zealand Forest that features 10,000 wild-sourced plants and a dry creek of 700,000 pounds of Cascade granite. Wow! What a year!

But, we are already abuzz about our next big thing—something very different and every bit as exciting: Ginny's garden.

Ginny is Ginny Ruffner. When we heard that the theme of this year's Flower & Garden Show would be "Art in Bloom," we knew that we wanted to collaborate with a Seattle glass artist. But, which artist? We wanted color, flowers, fun, whimsy. One day, as I was walking into a meeting, I found myself beside an old friend in the arts community and, as we walked I posed the question. He laughed and said, "Well then, meet the woman walking next to me, Ginny Ruffner."

"The Celestial Implications of Art on Blooming" by Ginny Ruffner

But, of course! Ginny, whose iconic flower pot graces a street corner by the Sheraton Hotel. Ginny, who was already a renowned glass artist in the 80s, who nearly died in a terrible car accident in the early 90s that left her body broken and her brain damaged, whose very act of walking next to us was a testament to her spirit and force of will. Would she be interested in working with us on our garden? Well, yes, her staff had been urging her for years to do a garden at the Show.

And, so our collaboration began. Our design team came to meet her at her home and studio in a converted warehouse in old Ballard. They fell in love with her personal garden, a cozy courtyard she created in her warehouse studio. It is full of art, found objects, ferns, vines, and colorful, quirky plants in all kinds of pots. A perfect inspiration for our garden at the Show! Ginny agreed to lend us some glass pieces and to create some new ones just for our garden, and the Museum of Glass, in Tacoma, graciously offered her a five-day residency to make those new pieces.

It has been a great gift getting to know Ginny. She is so very smart and so very funny. But, best of all is her playful and generous spirit. She is beloved in our community. And her friends have flocked to help us to celebrate Ginny's art and garden at the Show and its Opening Night Party. Her friends, David and Catherine Eaton Skinner, have agreed to be our honorary co-chairs. Other friends have donated great items (like art) for our auction.

So, please join us on Tuesday, February 4, for Opening Night. You will not want to miss seeing Ginny's garden or meeting Ginny!

Cheers,

Paige Miller

Paige Miller, Executive Director,
Arboretum Foundation

Weir Science

By Niall Dunne

"... she bid me take life easy,
as the grass grows on the weirs...

These lines from Yeats's poem "Down by the Salley Gardens" resonated in my mind when I recently visited the new weir system in the Holly Collection at Washington Park Arboretum. A series of small, connected, step-wise pools planted with native wetland species, the weir is designed to slow the movement of water through the site—but its elegance and beauty would also make any passerby pause a moment to enjoy the scene.

The weir was created in the spring of 2013 by seniors in the University of Washington's (UW) School of Environmental and Forest Sciences as a capstone project for their major in Environmental Science and Resource Management. The students were guided in their

The new weir system in the Holly Collection at the Arboretum.

efforts by Kern Ewing, Jim Fridley, Lindsey Hamilton, Warren Gold and other UW faculty in the University's Restoration Ecology Network (UW-REN), as well as by UW Botanic Gardens staff members David Zuckerman and Ryan Garrison.

The weir is located at the section of the Holly Collection adjacent to the corner of Boyer Avenue East and Lake Washington Boulevard. The site is a tough one, "hydrologically" speaking. It's on a relatively steep slope; the soils are heavy; and the site receives a lot of runoff and subsurface water, which drains from the surrounding residential neighborhood. The hollies are planted on high berms to protect their roots from waterlogging. Vegetated swales in between the berms are designed to collect water running down from the berms and help it infiltrate the soil and subsoil—however, one particular swale was not doing the job it was meant to do.

"This swale, running parallel to Boyer Avenue, was vegetated with turf that was storing water, resulting in saturated soil conditions," says Justin Bettis, the student coordinator for the project. "Since a saturated turf is difficult to maintain and not very useful, my classmates and

ABOVE: The students excavating soil from one of the weir system's step pools in spring 2013. (Photo courtesy Justin Bettis)

BELOW (Left to right) UWBG gardener Ryan Garrison, with UW-REN capstone project students Isabel Uriarte, Taylor Biaggi, Tamlyn Sapp, Justin Bettis, William Durig and William Balmforth. (Photo courtesy Justin Bettis)

The step pool system ready for planting. (Photo courtesy Justin Bettis)

I figured we could restore the site into a wetland pool system, vegetated instead with Pacific Northwest native species."

The students dug out the pools, using the excavated soil and logs to construct ridges around the pools for water retention. They then planted the outer rim of each pool with a mixture of water-loving natives, including *Scirpus microcarpus* (small-fruited bulrush), *Carex amplifolia* (bigleaf sedge), *Carex obnupta* (slough sedge) and *Athyrium filix-femina* (lady fern).

"The system takes advantage of the site's natural hydrologic situation to improve storm water management and provide habitat," says Justin. "The step pools maximize the site's potential to hold water and drastically increase infiltration. We hope the pools will store enough water to keep the path below, which occasionally floods, dry through the winter. The site also was engineered and vegetated to provide cover and food for wildlife, such as amphibians. Even while working on the site, we've seen quite a few waterfowl setting up shop in the pools."

Capstone projects like this and the restoration work at Yesler Swamp (see page 18) are a win-win, improving our local environment while providing young scientists with valuable team-based field experience.

"The capstone team was amazing to work with!" says Justin. "The Arboretum staff was extremely helpful and supportive throughout the entire process. We're all proud to have designed and implemented a landscape feature that not only enhances the beauty and functionality of the site in the Arboretum but also provides important wildlife habitat. We look forward to seeing the long-term progress of our project."

Niall Dunne is the editor of the "Bulletin."

The Garden Conservancy's Activities in

The Garden Conservancy is not an old organization. It was founded 24 years ago, in 1989. In that short space of time, it has accomplished a great deal for the preservation and sharing of culturally significant American gardens. This effort has been recognized by the National Trust for Historic Preservation, which awarded the Conservancy the prestigious Trustees' Award for Organizational Excellence in 2009. In the Pacific Northwest, too, the Conservancy's efforts are helping to realize the vision that inspired its founding.

A Short History of the Conservancy

Frank Cabot, founder of the Garden Conservancy, described himself as a "horticultural enthusiast." His description was apt: Cabot was active in a number of horticultural organizations and worked in both the international and national realms of garden conservation. For instance, he was instrumental in founding the Aberglasney Restoration Trust for the purpose of rescuing and restoring a historic 16th-century garden in Carmarthenshire, Wales. He also built two extraordinary gardens: The first, Stonecrop Gardens, he created with his wife, Anne, at their home in Cold Spring, New York, starting in the late 1950s. A 12-acre hillside display garden showcasing woodland areas, naturalistic rock outcroppings, ponds and enclosed English-style flower borders, it opened to the public in 1992. The second, the world-famous "Les Quatre Vents" (The Four Winds), with its alternately grand and intimate garden spaces, he created on a family property in La Malbaie, Quebec.

In 1988, at the suggestion of garden writer Penelope Hobhouse, Cabot visited the Ruth

the Pacific Northwest

By Tanya DeMarsh-Dodson

LEFT: The Ruth Bancroft Garden in Walnut Creek, California, inspired Frank Cabot to create the Garden Conservancy. (Photo courtesy ruthbancroftgarden.org)

BELOW: A reception table at an Open Days Program, where members of the public were able to tour exceptional private gardens.

Bancroft Garden, a 3.5-acre dry garden in Walnut Creek, California, which Bancroft had spent 30 years developing. Bancroft and Cabot discussed her hopes and fears regarding the preservation of her remarkable garden, and their conversation was an important catalyst. Cabot understood the cultural and ecological importance of gardens for people. Inspired by Ruth's concern, he established the Garden Conservancy in 1989. The organization, as he intended it, would identify and preserve important gardens in danger of being lost after the death of their creators. By 1990, the Conservancy was an independent, membership-based non-profit with a board of directors and a mission: "To preserve exceptional American gardens for the education and enjoyment of the public."

Today, the Conservancy is realizing this mission in multiple ways. The core effort is through the Garden Preservation Program, which provides preservation services such as long-term collaborations, short-term consultancy and conservation easements to interested gardens. Sharing gardens is as important to the Garden Conservancy as saving them. The Conservancy's Open Days Program fosters public awareness of the importance of gardens and gives garden owner-designers an insight into what it means to have their gardens be open to the public.

The Conservancy also manages an educational program of workshops and lectures designed to create capable horticultural professionals with knowledge of preservation techniques, as well as to teach the gardening public about garden design, care, sustainability and

preservation. For example, this past October, with sponsorship from the preservation project garden Rocky Hills, the Conservancy helped organize a lecture at the public library in Chappaqua, New York, entitled "Changing Climates, Changing Gardens: Protecting Plants in the 21st Century." Through all of its programs, the Garden Conservancy promotes public policies—including funding—that enable garden preservation.

The Preservation Program

The Ruth Bancroft garden was the first of the Conservancy's Preservation Program projects. Bancroft's creation is now a thriving public garden protected by a conservation easement, a legal document that permanently restricts land use on a property for the purposes of preservation—even if ownership of that property changes.

In its early years, as the Conservancy worked to develop the Bancroft Garden—as well as the John P. Humes Japanese Stroll Gardens in Mill Neck, New York and The Fells in Newbury, New Hampshire—into public gardens, it evolved a pattern of working in partnership with the public and private spheres. Nowadays, it works with local officials, gardeners, landscape designers, historians, preservationists and like-minded groups to sustain exceptional gardens and transform them into viable public gardens.

The Conservancy also offers the horticultural, technical, management and financial information and expertise required to create and operate a public garden. Consulting services and assistance with conservation easements are available from the Conservancy at reasonable rates designed to cover the direct operating costs associated with the consultation. Through the Garden Preservation Program more than 100 gardens have been helped to survive and prosper here in North America.

Opening Gardens and Educating Gardeners

The Garden Conservancy's Open Days Program, begun in 1995 by two women on the East Coast, is the only national garden-visiting program. It gives a broad base of people across the country the opportunity to enjoy some of America's finest private gardens. At the same time, it has

ABOVE: The Chase Garden in Orting, Washington, became a public garden with help from the Conservancy. (Photo courtesy Marrion Brenner)

given hundreds of garden creators and owners the opportunity to open their gardens to the public. The program runs from early spring to fall each year, and the tours are self-guided. You can find a schedule and lists of participating gardens on the Garden Conservancy Web site, www.gardenconservancy.org.

In 1993, the Conservancy began its educational efforts with a garden history symposium, "Masters of American Garden Design." Educational programs have proliferated, and the Conservancy continues to offer its members, experienced horticulturists, landscape professionals and the general public symposia on contemporary ideas relevant to fine gardening, garden design and garden preservation. As part of this effort, the organization has published a handbook: "Taking a Garden Public: Feasibility and Startup" (second edition, 2006). The handbook offers guidance to those working to create and sustain public gardens and have been widely used. An electronic version is available for free on the Conservancy Web site.

Conservation in the Northwest

The Garden Conservancy's activities in the Pacific Northwest began within six years of its founding. In 1995, Chase Garden in Orting, Washington—a spectacular, 4.5-acre naturalistic garden perched above the Puyallup River, with a remarkable view of Mount Rainier—was named as a Preservation Project Garden, and the Garden Conservancy accepted a conservation easement from Ione and Emmott Chase for their property.

The landscape and flora of the Pacific Northwest had a profound impact on the evolution of gardening style in the post-World War II period, and the Chase's garden epitomizes this love of place. It also reflects the influence of Japanese culture and aesthetics on the region's approach to garden design and architecture. Ione and Emmott's garden is an extraordinary example of 20th century Pacific Northwest modernist style.

Beginning in the 1990s, the Conservancy worked closely with the Chases to document what they regarded as the defining characteristics of their garden so that their artistic vision for the place could be sustained. The Conservancy provided consultants to create a history of the garden based upon oral interviews with the Chases. It also founded a support group, the Friends of the Chase Garden, which currently manages public visitation and outreach and raises the funds needed to maintain the garden (see www.chasegarden.org). Conservancy staff and consultants have assisted this group with public relations, Web site development and fundraising, among other things. Since the Chases' death (Emmott in 2010; Ione in 2004), the Conservancy has continued to assist with the management of the garden and work with the Friends group to develop a viable public garden.

The Conservancy has given preservation assistance to a number of other gardens and organizations here in the Pacific Northwest, including the Abkhazi Garden in Victoria, British Columbia; the Corbin Moore/Turner Heritage Gardens in Spokane, Washington; the Elk Rock Garden in Portland, Oregon; and the Lord & Schryver Conservancy in Salem, Oregon, to name a few. In the case of the Lord and Schryver Conservancy, the Garden Conservancy has helped to develop the appropriate documentation and reports needed to support the successful rehabilitation and preservation of gardens designed by the pioneering landscape design firm of Elizabeth Lord and Edith Schryver in their home town of Salem—including Gaiety Hollow, profiled in the Summer 2013 issue of the "Bulletin." The founders of PowellsWood garden (Federal Way) and Soos Creek Botanical Garden (Auburn) in Washington also have consulted with the Conservancy in the process of taking their private gardens public. Lakewold Gardens in Federal Way received help for the recent publication of a book profiling its displays.

A Network of Special Gardens

In 2001, the Conservancy launched a unique Preservation Project Program here in our region called the Garden Conservancy Northwest

Network (GCNN). It reached out to emerging public gardens in the Pacific Northwest and organized a meeting at Lakewold Gardens for staff from various gardens and garden organizations in Washington, Oregon and British Columbia. The participants discussed the possibility of creating an association of the region's gardens and horticultural organizations advocating for garden preservation. This association held its first meeting the following year. The GCNN promotes communication, networking, resource sharing and professional workshops for the enhancement of member gardens, furthering their common goals of preserving and opening exceptional gardens for public enjoyment and education.

Today, the GCNN has 22 member organizations. It hosts general meetings and two workshops annually, and these are open to non-members as well as members of the Network. Topics for the workshops are selected by members and are designed to develop the knowledge and skills necessary to manage healthy non-profit organizations efficiently and economically. Interaction among participants from the various gardens and horticultural organizations on topics of common concern is encouraged, so working ties are nurtured and processes unique to the various organizations are shared.

Visiting Gardens in the Northwest

In 2013, in part to promote the GCNN member gardens and events, a new Web site was launched: www.gardenconservancynorthwestnetwork.org. The site is designed to inform people visiting the Pacific Northwest—as well as resident gardening enthusiasts—of the public gardens they might see and horticultural events they might attend in Oregon, Washington and British Columbia.

Garden tourists also may experience private gardens in the region through the Open Days Program, which was introduced to Washington in 1999, and to Oregon in 2002. Each year, a number of beautiful private gardens are opened to the public through the efforts of the regional representatives for the Conservancy who volunteer to organize these events. Open

ABOVE: PowellsWood in Auburn, Washington, consulted the Garden Conservancy on converting from a private to a public garden.

OPPOSITE: Lakewold Gardens in Lakewold, Washington, part of the Garden Conservancy's Northwest Network of public gardens. (Photo courtesy lakewoldgardens.org)

Days information for the Northwest will be included on the GCNN Web site.

Frank Cabot's vision of America—as a place where gardens in all regions, reflecting our rich heritage and culture, are open to the public for enjoyment and education—is being realized in British Columbia, Washington and Oregon. This region's climate and culture have sustained a great gardening community and the evolution of many exceptional gardens. Those in the region who care about garden preservation can thank the Garden Conservancy for its preservation and educational efforts, as both have aided our communities in building great public gardens and a gardening public aware of the significance of public gardens.

Tanya DeMarsh-Dodson has gardened since she could walk, and has worked in the field of horticulture for more than 20 years—currently in the Puget Sound Basin. She has served on a Great Plant Picks Committee since 2000, maintains a garden consultation business and is the coordinator of the Garden Conservancy's Northwest Network.

My Winter Pruning List

Text and photos by Christina Pfeiffer

The short, dim days of winter can lead wishful gardeners to an easy chair, surrounded by a load of garden books and catalogs, lush with photos in promise of spring. By the end of January, when I am about at my wits' end with armchair gardening, I find in the bare stems of winter a good place to do some of the real thing. Winter pruning puts us in contact with the beauty and potential of the garden at this time of year.

The Rhythm of the Season

In the book "Month-by-Month Gardening in Oregon and Washington," Mary Robson reminds us of the importance of gardening with the "rhythm of the seasons"—of being in touch with the cycles of plant growth and dormancy that flow with the fluctuations of each year's weather pattern. In the Spring 2013 issue of the "Bulletin," I shared tips on taking advantage of the dwarfing effects of summer pruning to tame wild growth, and to subdue overly vigorous growth and undesirable water sprouts, suckers, root stock sprouts and reverted stems. This article looks at some of the advantages of dormant pruning.

Dormancy—when woody plant growth is at rest and buds are closed tight—develops over the fall and into early winter. The exact timing

The past heading cut (arrow) resulted in a very dense tangle of shoots that disrupted the natural branch pattern of this fragrant honeysuckle. Correct this by pruning at the point of attachment at the base of the plant (dotted line). New shoots that grow from the base and root system will be less crowded and will follow the natural form.

Use an old saw to remove large stems close to soil grade (arrows) when thinning out crowded multi-stemmed shrubs.

varies with the species and seasonal conditions. (Think about those plants often seen hanging onto greenish leaves late into November). Full dormancy is reached in late winter or about January through March in the Pacific Northwest. Winter pruning offers the opportunity to tap into the great stores of energy poised to fuel new spring growth.

All That Pent-up Energy

At full dormancy, stored energy and nutrient reserves in deciduous woody plants are at their peak. Early spring growth is fueled by the swift upward flow of sap rich with stored reserves and plant-growth compounds. As a result, the typical response to a dormant-season pruning cut (once spring arrives) is vigorous growth from nearby dormant buds and small shoots.

Dormant-season pruning is ideal when maintaining vigorous new growth is the goal: Prune to renovate overgrown or badly pruned shrubs, invigorate sluggish plants, or promote a good supply of younger stems that offer attractive color and better flower production.

Heavy dormant-season pruning commonly results in a corresponding heavy crop of long, leafy shoots, often at the expense of flower buds. This is desirable for renovation and renewal, but don't expect to see a nice display of blooms the first year. Moderate-to-light pruning to remove dead or errant branches can be done throughout the dormant season with reasonable results.

The Winter Advantage

In late winter, when stems are laid bare and dormant perennials are tucked safely underground, we have a clear view and good access to work on deciduous woody plants. Their natural forms, as well as any unnatural growth resulting from poorly placed pruning cuts, are clearly revealed.

Pruning with selective, well-placed cuts at this time of year offers the opportunity to maintain the natural form and size of garden shrubs, and to keep many flowering shrubs in perpetual peak-bloom performance.

The potent energy stores of this season offer a great advantage for rejuvenation of plants that have become hopelessly overgrown or severely freeze-damaged. Species known and observed to produce new growth from the roots (such as *Hydrangea, Cotoneaster, Escallonia* and *Chaenomeles*) may be cut completely flush at soil level to stimulate a new set of stems. With some follow-up thinning the next summer, you will

The lovely form of this forsythia was hidden in a dense tangle of dead and unproductive wood. it was pruned while in full bloom. The dead, weak and crowded stems were removed at soil level. No cuts were made on the remaining stems. Annual removal of a few of the oldest stems will help maintain size and good floral display.

have a fresh, new specimen on well-established roots. Slightly less-drastic renovation (with less follow-up work) can be done by removing about half of the live stems at a time over two years.

Conifers and broadleaf evergreens may also be pruned at this time of year, though moderation is the key. Most conifers and some broadleaf evergreens, such as older rock rose (*Cistus*

A Pruning Glossary

BRANCH COLLAR: The slightly swollen area where a lateral stem is attached to the main trunk. Always place pruning cuts along the outside of the branch collar.

HEADING CUT: Perpendicular cut across stems above a lateral bud or at random locations, stimulating dense lateral growth. Shearing is done with heading cuts.

STUB: Short piece of stem left behind from improperly placed thinning cuts. Stubs may either die back and become an entry point for decay or act as a short heading cut, producing dense, erratic shoots.

TIPPING: Cuts made at the outer periphery, removing a short piece off the end of a stem back to a bud or small lateral branch. Tipping often produces results similar to shearing.

THINNING CUT: Made at the point of origin, or connection point, to remove an entire stem or branch. Also referred to as a removal cut.

species), will not produce new growth from old bare stems and should never be cut back hard. Broadleaf evergreens such as laurels, hollies and some azaleas will produce new growth on old woody stems, and they can be rejuvenated with winter pruning.

The Cleanest Cuts

The lovely branching patterns of many multi-stem shrubs are undone by poorly placed cuts. Heading cuts, stubs and tipping branch ends lead to a tangle of dense stems near the cut ends that can choke the life out of smaller inner branches. Attempts to shorten strongly arched branches often lead to awkward "dog legs."

These less desirable results can be avoided by selectively removing the entire branch, with cuts made cleanly at the point of attachment, either at soil level or at a larger stem. When pruning trees and tree-like shrubs, place cuts to preserve the branch collar—the slightly swollen area where a branch meets the main trunk. Don't leave stubs!

When pruning, always try to preserve the natural architecture of the plant. If you compliment the natural growth habit, you'll achieve good results and cut down on the amount of future pruning needed: It's a way to prune so that you don't have to prune so often.

My approach to pruning shrubs, so that they produce new shoots from the roots, is to cut the old stems as cleanly to the soil level as possible. For this task, I enlist a root saw or an old decommissioned pruning saw.

Red- and Yellow-Stem Dogwoods

Brightly colored varieties of stem dogwoods are perhaps the most gratifying of plants to prune in winter, as the removal of dark old stems works wonders to reveal the vibrant colors of the younger stems. My rule of thumb is to prune the largest, oldest stems down to the root crown, keeping a well-spaced set of 1- to 3-year-old stems. Avoid heading cuts, which can lead to dense and often unsightly growth.

Red-stem dogwood before (left) and after (right) removing old brown branches at ground level with a root saw.

Multi-Stemmed Shrubs

These are among my favorite garden plants for their almost eternal promise of a fresh, new start from their roots. They include deciduous azaleas, lilacs, beautyberry (*Callicarpa*), ninebark (*Physocarpus*), *Deutzia, Viburnum, Rosa rugosa, Fothergilla*, mock orange (*Philadelphus*), *Spiraea, Weigela*, evergreen huckleberry and countless more. Look for the smaller, healthier shrub hidden beneath heavy old stems laden with lichens and moss, dead limbs and stubs, or stems misshapen by past pruning errors. Remove the worst looking of the old branches all the way back to soil level, or near the base at a point of attachment on a larger stem.

Just removing the dead and weakest stems can be enough to keep shrubs beautiful and healthy. Selective thinning will provide more light and space for strong new shoots. For routine maintenance, prune moderately. Remove no more than about a quarter of the live branches. The harder you prune at this time of year, the more new growth there will be. I like to think about removing just enough stems to allow filtered light to reach the inside of the plant. Keeping the stems far enough apart to fit a lopper head between them generally provides enough space between stems for sturdy growth and easy access for annual pruning. If managing size is a concern, remove the longest stems each year; the younger, shorter branches that remain will be well-spaced and should bloom well. Selective pruning allows you to preserve healthy, entire stems of different ages so that you avoid the risk of removing all of the flower-producing wood.

Can We Just Start Over?

Total rejuvenation can be a good option where the existing stems are so dense, or in such a tangle from errant growth or past poor pruning, that reaching individual stems is nearly impossible. This is best accomplished during the dormant

While it's not harmful, the accumulation of moss and lichens can be a symptom of overcrowded stems and slowed growth. This old azalea can be renewed by removing the mossy stems and the stems leaning toward the path.

A freeze-damaged dwarf *Escallonia* will be restored with new shoots emerging at the base of the dead stems. Cut away crowded stubs to give good space for new growth.

season. Plants that have suffered severe freeze damage can often be started over on surviving roots. Don't be tempted to leave a dense stand of short stubs, as they can impede new growth emerging from the soil. Thin them out for a well-spaced set of 1- to 2-inch-tall stubs, or remove all of them as close to soil level as possible.

A Winter Aesthetic

Winter pruning breathes new life into tired-looking shrubs and satisfies the itch to be out in the garden. The plants are immediately more beautiful to look at in their winter condition. Then when I'm back indoors, enjoying the comfort of a warm beverage and heading to that armchair of garden literature, the view of the garden is even more pleasing with the knowledge that my plants are poised and ready for spring.

Christina Pfeiffer has been teaching pruning at Edmonds Community College since 2004. She is a horticultural consultant, speaker, ISA-certified arborist and a member of the "Bulletin" Editorial Board. She is co-author, with Mary Robson, of "Month-by-Month Gardening in Washington & Oregon." You can reach her at capfeiffer@comcast.net.

Friends of Yesler Swamp

NEIGHBORS—NOW FRIENDS—
UNITE TO HELP RESTORE A WOODED URBAN WETLAND

TEXT AND PHOTOS BY JEAN COLLEY

With any luck, in early 2014 workers will descend into "Yesler Swamp" to build a permanent, all-weather boardwalk through one of the few remaining swamps in urban Seattle. The boardwalk will eventually wend through a 6.4-acre site (bounded by NE 41st Street, Surber Drive NE and Union Bay) just east of the Center for Urban Horticulture and managed by the University of Washington Botanic Gardens.

The impetus for a permanent boardwalk got started on a sunny afternoon in July 2009, although University of Washington faculty and students had proposed the idea several years earlier. Kern Ewing, UW professor of plant ecology, led a tour of the Union Bay Natural Area (aka the Montlake Fill) that day, having invited anyone who was interested to tag along. I almost didn't go, but my husband, Peter, thought we might enjoy it, so we walked the four blocks to "Ub-Na." I regularly biked the trail bisecting UBNA, but I was familiar only with the basics of this 74-acre tract.

At the conclusion of what turned out to be a tour punctuated with "Wow!" and "I didn't know that!" and "Really?!" we were all asked if we'd like to help at a *different* nearby site dubbed the

ABOVE: Beavers have constructed a huge lodge near the shore of Yesler Swamp. Occasionally, they can be spotted swimming nearby at dawn and dusk.

OPPOSITE: The Friends of Yesler Swamp board of directors, from left: Fred Hoffer, Jean Colley, Rob Edsforth, Jerry Gettel, Kern Ewing and Carol Arnold.

"East Basin" that sorely needed the community's assistance. A half dozen of us signed up, and that was the beginning of our relationship with what we quickly renamed "Yesler Swamp."

Rebuilding a Damaged Ecosystem

Yesler Swamp, a complex milieu of upland grasses that give way to dense vegetation and murky water, is not in some remote location: It's only a half mile from University Village, almost as close to Highway 520, and very close to hundreds of homes. Down at water level, it's almost 20 feet below the streets, hiding it from all but the most curious passersby.

A group of us started meeting regularly and learning what was needed to restore this area. We also were getting to know each other: Fred Hoffer, retired pediatric radiologist with a passion and seemingly unlimited energy for removing ivy and blackberries and blazing new trails; Carol Arnold, retired lawyer, master gardener and highly skilled organizer; Jerry Gettel, plant lover and retired consulting engineer who knows how to build things; Connie Sidles, master bird watcher and poetic chronicler of bird life at UBNA; Art Feinglass, theater producer who divides his time between New York City and Seattle; Allie Kerr, graphic designer and webmaster, who grew up across from Yesler Swamp; Fred Hoyt, associate director of UW Botanic Gardens; Rob Edsforth, knowledgeable and enthusiastic restoration proponent, recently awarded a master's degree in environmental horticulture and restoration ecology from UW; and Kern Ewing.

None of us realized just what lay ahead, but we all loved the site and could see why, with all the muck and water, a permanent boardwalk was needed. When we put on our mud boots and ventured down the soggy temporary trail (that at certain seasons is completely impassable), we found ourselves in the midst of a dozen or more towering black cottonwoods—hence the designation "swamp," which differs from a wetland in that it contains both woodlands and wetland. We then entered a dense thicket of willows (also lovers of wet soil), whose trunks—en masse—look like an abstract art installation. Finally, we reached the shore of Yesler Swamp, where we spied a huge beaver lodge and pilings poking out of the water—the latter a visual reminder that Seattle pioneer Henry Yesler ran a sawmill

nearby, more than a century earlier, and used Yesler Swamp as a mill pond.

Beneath the trees was a less pleasing sight: The understory was a jangle of blackberries, English ivy, reed canary grass, English holly, Canada thistle, field bindweed (morning glory) and English laurel—crowding out the native species.

Kern pointed out to us that Yesler Swamp is not near any large acreages of native vegetation. "As a consequence," he said, "it is bombarded by a seed rain from non-native plants; the climate that affects the site is urban—not rural or natural; and there are not great refuges of other native plants to replenish it with a native biota." That was kind of discouraging, but there was more: "Our surroundings are not very natural, so a lot of work is going to be required to keep Yesler Swamp looking like a real freshwater swamp."

Here are some of the things that Kern suggested we—and others—must do:

Get rid of invasives
Plant natives
Create shade (most invasive plants like sun)
Create structure (forest floor, understory, canopy)
Make habitat
Create visual interest
Increase biodiversity
Build biomass and organic material

He concluded, "If we do all of these things and are able to maintain a certain level of effort, we should be able to create an environment that

ABOVE: Valerie Chu of Seattle is among the many volunteers at Yesler Swamp.

CENTER CROSSOVER: Pilings from the old Yesler sawmill of the 1880s and 1890s provide perches for plants and birds in today's Yesler Swamp.

OPPOSITE TOP/BOTTOM: Volunteers from the community and UW students have joined ranks to restore Yesler Swamp.

supports plants, birds, mammals, fish, amphibians and other organisms, while providing ecological functions that improve our lives (water quality, hydrology, local climate). In addition, we can teach, learn and enjoy because of the presence of this ecosystem."

A Gathering of Friends

Fortunately for us, restoration was already underway—thanks to teams of UW undergraduate students who, in a series of capstone projects beginning in 2000, dug out some of the blackberries and reed canary grass, planted willows and other native species to shade out the invaders, and mapped out a rough trail.

Our part was to jump into students' efforts at restoration, and to figure out how to raise the funds to build a permanent boardwalk to replace the wood-chipped trails that were in constant danger of disappearing beneath the vegetation and the ooze.

Our little group collectively has a pretty good skill set, which we and many other volunteers who joined us began to apply to the tasks at hand. Neighbors didn't know about the site or the project, and they needed to be informed. We held regular guided "Swamp Walks" and advertised them widely. Not everybody was keen at first, but with time and effort, people have come around.

Organizationally, we became Friends of Yesler Swamp to provide us a public identity and allow us to raise money and hire experts to help. After a competitive process, we chose SBA Landscape Architects, who led the arduous and lengthy effort to obtain permits and approvals from city, state and federal environmental regulators. Charles A. Warsinske, principal with SBA, is still involved, now designing the permanent boardwalk and coordinating construction details.

Applying for grants is a time-consuming and thankless task, but Carol Arnold has kept us on track and optimistic. We've succeeded in raising

Yesler Swamp on a spring morning. The swamp, tucked in the northeast corner of Union Bay in Seattle, is close to the Center for Urban Horticulture.

more than $150,000 from City of Seattle and King County grants, our neighbors, and others supportive of the work and vision. That money will go toward building the boardwalk, which the UW has pledged to maintain over the long term. The trail will not only offer views of the swamp, the beaver lodge and the lagoon, but also protect wildlife by directing human foot traffic away from these sensitive areas.

Kern Ewing has continued as the faculty leader of the restoration, and more and more UW students dedicated to environmental restoration have adopted the site as a project. They—along with community volunteers—have

Yesler Swamp: A Recent History

Yesler Swamp is not pristine territory. In the 1880s and early 1890s, it was the site of a holding pond for lumber to be milled at Henry Yesler's nearby sawmill. In 1916, Lake Washington was lowered 8.8 feet when the Montlake Cut was excavated to link it with Lake Union. When the level of Lake Washington fell, the edges of Union Bay—including Yesler Swamp—were drained of water, leaving a fringe of cattail marsh. The last remnant of this original cattail marsh can be seen today in Yesler Swamp and in the unmanaged wildlife area to its west.

The swamp is part of the vast water system linking Lake Washington to Lake Union and the Ballard Locks. Water levels in this system fluctuate, gradually rising beginning in March and gradually falling in August. The slow flood into Yesler Swamp each spring changes its character, as portions of trail useable in winter become submerged in summer.

In the 1940s, student and faculty housing (demolished in the 1970s) was built on the present site of the Center for Urban Horticulture. The upland portion of Yesler Swamp was used for World War II "victory gardens" that can still be seen in a 1949 photograph.

Yesler Swamp marked the outflow of Yesler Creek until the 1950s, when the creek waters were diverted into a stormwater drain. But nature has its way: All sorts of plants, both good and bad, have provided habitat for numerous bird species—including ducks, coots, blue heron and bald eagles. And the swamp itself shelters beavers, fish and other creatures.

planted hundreds of native shrubs, including vine maple (*Acer circinatum*), serviceberry (*Amelanchier alnifolia*), red-twig dogwood (*Cornus sericea* ssp. *sericea*), black twinberry (*Lonicera involucrata*), western crabapple (*Malus fusca*), Indian plum (*Oemleria cerasiformis*), Pacific ninebark (*Physocarpus capitatus*), stink currant (*Ribes bracteosum*), red-flowering currant (*Ribes sanguineum*), baldhip rose (*Rosa gymnocarpa*), peafruit rose (*Rosa pisocarpa*), thimbleberry (*Rubus parviflorus*), red elderberry (*Sambucus racemosa*) and red huckleberry (*Vaccinium parvifolium*). A number of Sitka spruce (*Picea sitchensis*), western red cedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*) also have been planted.

The indefatigable Fred Hoffer continues to chop out blackberry and ivy, and to document the restoration, section by section. Fred organizes "work parties," where volunteers wrestle with long ropy strands of ivy that still cling tenaciously to some of the trees, chop back the ever-encroaching vegetation from the trail, and don heavy gloves to prevent stabs from blackberry thorns. Invasives will likely be a problem to some degree for decades, but progress is being made.

The trail system, which we hope will be completed in the next few years, will ultimately include approximately 1,330 feet of raised boardwalk and 400 feet of a crushed rock surface trail. The access point will remain at the eastern parking lot at the Center for Urban Horticulture. The trail will be built using hand-held power tools in order to minimize our impact on the environment.

Two main factors have made us persist over the past four years: We have really enjoyed working with each other, and we believe we have an eminently worthy project.

Anyone interested in learning more or joining us should visit our Web site at http://yeslerswamp.org/.

Jean Colley, an editor and writer, is a member of the board of directors of the Friends of Yesler Swamp.

What the Echium?

By [illegible]

When I was transitioning into my new post as editor of the "Bulletin" this summer, I paid a visit to Constance Bollen, the magazine's long-serving and super-talented graphic designer. Constance lives in the Ballard neighborhood of Seattle, in an adorable cottage surrounded by unusual plants, many of which she has received as gifts from local horticulturists. (Constance does graphic design for a number of regional botanical organizations, including the Northwest Horticultural Society, and so is very plugged into the Seattle gardening community.) Upon my arrival, I was shocked to find her house surrounded by 10-foot-high, snaking, flower spikes covered with small, purple-blue blossoms—not to mention countless bees.

"What are these spectacular...uh, somewhat intimidating...plants?" I asked her. "And are they going to eat me?"

"These are my tree echiums [pronounced ECK-iums]," she replied. "I've had them for about 13 years, and they haven't attacked me yet. I originally got them as three young starts from Richard Hartlage, then director at the Miller Botanical Garden. Now, they're the sometimes-centerpieces of my garden."

A member of the borage family, tree echium (*Echium pininana*) is native to the laurel forests of La Palma, one of the Canary Islands just off the northwest coast of Africa. In its homeland (where it is a highly threatened species), it is a biennial plant, forming in its first year a low rosette of silver, hairy, lance-shaped leaves. In its second year, it bursts into growth, producing a single, towering—up to 13-foot-tall—pre-historic-looking inflorescence, densely packed with blue (or sometimes pink or pure white) funnel-shaped blossoms that are very attractive to bees.

ABOVE LEFT: The flower spike of the tree echium can grow up to 13 feet tall.

ABOVE RIGHT: Young echium plants develop a handsome rosette of large, silvery green, spear-like leaves.

After flowering, the plant dies—but not before showering the ground with seeds.

The plant is tender in these parts, and usually does best in sheltered gardens near the coast (such as in Ballard), where temperatures are moderated by proximity to the sea. What's more, it generally acts as a triennial here, not blooming until its third year of growth. Harsh winters usually kill the tree echium; this means that you need two mild winters in a row (which we just had) to get flowers.

"They might survive snow and some cold temperatures," said Constance, "but really don't do well with early or late frosts, or with repeated freezes. They look horrid when they die: like the Dementors from Harry Potter. The fronds turn down and blacken. You will want to remove them quickly! Wear gloves. They are prickly!"

The design of Constance's garden is somewhat dynamic, based on the shifting locations of her echiums each year. "After a bloom year," she said, "I'll have a billion little fuzzy babies coming up the next spring. And even after non-flowering years, lots of young plants sprout up from the persistent seed bed! They are easy to pull or hoe out. I always leave about a dozen in various places and yank the rest. Since the plants are tender, ones that appear near the house are more likely to survive."

Needless to say, Constance's echiums get a lot of attention from her neighbors and passersby. People stop on the street to gaze at the botanical marvels, and many have climbed up her steps to make inquiries. Seeds of the plant are hard to come by (one source is www.plant-world-seeds.com), but Constance has happily given away seedlings to her neighbors and friends.

When I asked her why she grows these bizzarro plants, she said "I like the tropical look of the yearlings, and if/when they make it through to bloom, we have great conversation pieces, plus loads of bees in our garden. Also, as a gardener friend once told me, "Once you have echiums, you'll always have echiums*." ~

Niall Dunne is the editor of the "Bulletin" and the communications manager at the Arboretum Foundation.

[*Note:* A much shorter relative of the tree echium, viper's bugloss (*Echium vulgare*), is also a prolific seeder and is causing problems in rangelands and non-cropland areas, especially in Eastern Washington. It is classified as a Class B noxious weed in King County and is also on state's prohibited plants list. For more information, visit http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds.aspx.]

In a Garden Library

New Books on Conifers

By Brian R. Thompson

Some pundits have declared that the book is dead. Really? Some of the best arguments to refute these claims are the incredibly sumptuous new books being published on horticulture and botany.

It is fitting that the most opulent of these new titles profile conifers, both the giants of the forests from around the world and the myriad forms found in gardens. Although none are by Pacific Northwest authors, our forests, nurseries and gardens are well regarded and represented in these pages.

An Encyclopedia from the Royal Horticultural Society (RHS)

The moment I opened this massive, two-volume set, I was immediately engaged. Page after page of high-quality photographs show the seemingly endless variety of cultivated forms of conifers. It's mesmerizing.

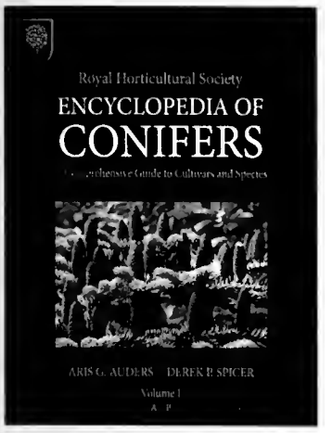
"Encyclopedia of Conifers" illustrates nearly 5,000 different cultivars, along with the species from which they are derived—often with multiple photos from different times of year or at different ages or in various horticultural presentations. The variety of cones alone could fill its own book. While these trees are popularly known as evergreens, the rich variety of blues, silvers, golds and browns found in their foliage—along with the rich reds and purples of their cones—belies that name.

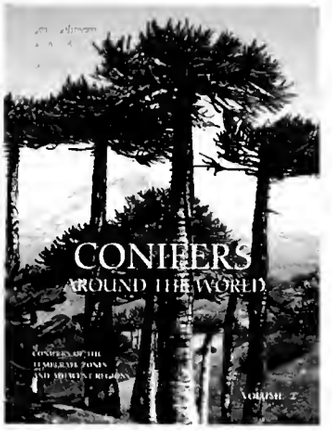
While the photographs are stunning, this is not just a picture book. The authors have notable credentials: Aris Auders maintains one of Europe's largest collections of conifer cultivars in Latvia, while Derek Spicer is the chairman of the British Conifer Society. Their goal was to create a reference work that is both comprehensive in its listing of cultivars and well-illustrated—a combination lacking in earlier publications on this subject.

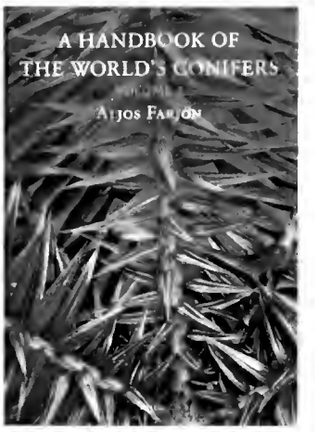
The result will be the standard for years to come. While the photographs would stand on their own, the text provides description of each species in the wild—including range, elevation, size, notable characteristics and hardiness zone (using USDA standards). For each cultivar that follows, there is a general description, plus information such as origin (if known), synonyms, misspellings of the cultivar name, and citations to

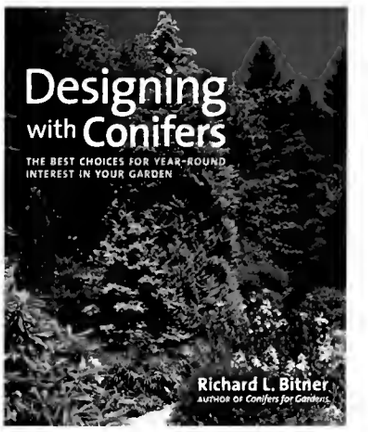
Identity Crisis for the Weeping Alaska Cedar

A passion for taxonomy seems to be a prerequisite for scholars of conifers. But when disagreements occur, we—the consumers of this information—are sometimes left in a quandary. Take the example of our native weeping Alaska cedar (to use only one of its common names). The long-standing botanical name has been *Chamaecyparis nootkatensis*, but recent revisions in classification systems have—according to almost all authorities—rendered this name obsolete, although it is likely to be the most common name in horticultural literature for a long time to come. What name has taken its place? Well, according to the books in this review, there are three possibilities: *Callitropsis nootkatensis, Cupressus nootkatensis* or *Xanthocyparis nootkatensis*. I do not have the expertise to weigh in on the merits of these different choices, but if you're interested, use the indices in the books to look up the lengthy and detailed arguments made for each.









the name that the authors found in older books, nursery catalogs and arboretum holdings, as well as on Web sites. This part of the book, too, could stand on its own.

A Global Encyclopedia of Conifers in the Wild

It is a nice balance that a publication of equal stature to the RHS encyclopedia on cultivated conifers has been recently published on conifers in the wild. "Conifers Around the World" authors Zsolt Debreczy and István Rácz have been working together since 1975. The predecessor to this current title was published in 2000 in their native Hungarian; Kathy Musial of the Huntington Botanical Gardens provides valuable editing skills to this much-expanded English edition.

The result is massive (again, in two volumes), but very manageable. The authors' intention is to "...present photographs of conifers in their natural habitats in a consistent format." These larger images are breathtaking and are supplemented with close-up photos of cones, leaves and any distinguishing features. The accompanying text is concise, but unlike some botanical descriptions is very readable and reflects the authors' sensitivity to conservation, local culture and ethnobotany.

The focus is on temperate species, and the content is organized by broad geographical areas, with detailed descriptions of the geological, vegetative, climatic and human history of each. Maps are used liberally to show topography, sites of major conifer forests, floristic provinces, and the ranges of species. The extensive introduction is a joy to read, despite covering some pretty dense subjects—including taxonomy, conifer identification and morphology (lots of drawings help the reader with these), as well as the history of the earth's climate and other factors that have affected the distribution of conifers we find today.

The appendix is also fun, with various essays that didn't quite fit elsewhere and a "bark gallery," giving eye-level close-ups. The Pacific Northwest is clearly dear to these Europeans, as the two photos that accompany the preface of the book are from Washington State, including the authors' portrait standing in front of a giant Sitka spruce (*Picea sitchensis*) in Olympic National Park. On the inside of the back cover of Volume 2 is the "Sell the Land?" speech attributed to Chief Sealth; a suitable closure to this rigorous, but also passionate and personal publication.

The Publications of Aljos Farjon

Prolific author Aljos Farjon from the Royal Botanic Gardens, Kew has been a most-consistent contributor to the literature on conifers in recent years; we currently have nine books by him in the Miller Library, with another on order.

"A Handbook of the World's Conifers" was published in 2010 and is described by the author as "...not a monograph purely for taxonomists. Its content aims at a much wider audience." This is accomplished in part by discussing the ecology, conservation and uses of all species, along with the etymology of the botanical name and vernacular names in local languages. Calling this a handbook diminishes its stature; this is another set of two hefty volumes with entries more typical of an encyclopedia.

Big Books for Big Trees

The first three books in this review are all in two volumes, and they aren't tiny. Farjon's "Handbook" totals 1,111 pages. The Debreczy/Rácz volumes have larger dimensions than Farjon's, though they are just slightly shorter at 1,089 total pages. But the grand champion is the Auders/Spicer: Each volume is 13.25 x 10.75 x 2 inches and weighs nearly 10 pounds. Together, they total 1,507 pages. Be sure you have a stout coffee table before putting one of these magnificent books on display!

What sets this apart from Debreczy/Rácz is the inclusion of all tropical species (about 200, which accounts for nearly one-third of all known conifers in the world) and an emphasis on description including—despite the author's stated intentions—extensive taxonomic notes. The images and illustrations that are included are of good quality, but are comparatively few and collected on photo pages separated from the related text.

The introduction to "Handbook" is relatively brief, but that's because Farjon regards his 2008 publication, "A Natural History of Conifers," as the real introduction. This is a book to be read cover-to-cover and is a selection of essays on subjects "...sometimes communicated at the coffee table in the staff room of your institute, but that would not have been allowed through by the editor of a scientific journal." This suggests light reading, and the author does show a flair for storytelling, but he also chooses fairly meaty subjects. If you are confused by cladistics, phylogenetic relationships, and other concepts of modern taxonomy and systematics, these terms are explained in language that a lay reader can—with a bit of work—understand.

Farjon's newest book, "An Atlas of the World's Conifers," co-authored by Denis Filer, was unavailable in time for this review, but promises to be another standard on the conifer reference shelf.

Other Titles, Briefly

James Eckenwalder graduated from Reed College in Portland (so we will count him as a former Pacific Northwest resident), although he is now on the faculty at the University of Toronto. "Conifers of the World: The Complete Reference" is another ambitious effort that was years in the making—but not perhaps as comprehensive as the subtitle suggests, given the other books in this review. Still, it is an excellent reference book and—unlike the others—it is confined to a single volume.

As in Farjon's "Handbook," tropical species are given equal treatment to the temperate, and the A-to-Z presentation emphasizes descriptive text. (There are only a few photos, and those are mostly in black and white.) The introduction includes a very readable discussion of taxonomy; the author is clearly captivated by the subject but is able to make his points in terms suitable for a general audience. "My overriding motivation behind all of these considerations, however, is to share my fascination and enthusiasm for these wonderful plants," he writes. The same might be said by all of these authors.

Richard Bitner has written three books about conifers in the garden; I think the best is the most recent, "Designing with Conifers." The book is organized by notable features such as shape, color and bark, and the author uses his own photographs to illustrate a wide range of planting options. He clearly detests foundation plantings: "Why this mandatory dress code? It is time to break free of this tradition and change our practices."

Specialty situations, such as hedges and topiary are included, along with some unexpected chapters on recommended Christmas trees, dwarf cultivars for garden railways, and—the most curious—traditional plantings for German graveyards. Although the author is from the East Coast, I thought the best

section in the book was a case study he carried out on a garden near Eugene, which included a photographic dissection of the different purposes for the plants used in the landscape. Quite instructive!

Finally, for a recent conifer book by a local author, don't forget "Small Conifers for Small Gardens" by Robert Fincham. Reviewed in the Fall 2012 issue of "The Bulletin," this book highlights some 180 dwarf cultivars particularly suitable to growing in Pacific Northwest gardens. While less comprehensive than the other books on garden conifers, the descriptions are very detailed and based largely on personal experience—emphasizing again that fanciers of conifers, affectionately known as "cone heads," are ardent, dedicated enthusiasts!

Brian R. Thompson is the manager and curator of the Elisabeth C. Miller Library of the University of Washington Botanic Gardens. He is also on the editorial board of the "Bulletin."

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