When Wildflower Mixes Go Wild

LORRAINE BROOKS, B.S. ENVIRONMENTAL HORTICULTURE

There is nothing more lovely than wildflowers in your garden. As lovely as they are, wildflowers may also cause harm to natural areas. Because the flowers can naturalize, it is assumed that they are native. However, sometimes they are non-native and invasive. Invasive plants compete with native plants for water, nutrients, space and light. They may also eliminate important habitat and food sources for native animals. Some wildflowers are also listed as noxious weeds which Washington State law (17.10 RCW) defines as "any plant which, when established, is highly destructive, competitive, or difficult to control by cultural or chemical practices."

In a research study done in 2001, the content of nineteen different wildflower seed mixes were tested to determine if they contained invasive species or noxious weeds. A variety of mixes were selected including butterfly, songbird, drought tolerant and partial shade mixes. Several of the mixes originated in the Pacific Northwest. Six of them did not list their contents. The seeds from all 19 mixes were grown in a controlled greenhouse environment and the flowers identified as they emerged.

From the wildflower mixes that were tested, eighty-four species were identified. Nineteen of these are listed as invasive and four are listed as noxious somewhere in North America (see table on page 5). All 19 mixes contained at least one invasive plant and eight mixes contained noxious weeds. Yellow toadflax (Linaria vulgaris) is a Class C noxious weed in Washington State. King County considers it a priority weed for which control is mandatory. This invader was found in four locally produced mixes, of which only one listed it on their label.

Bachelor’s button (Centaurea cyanus) was the most frequently observed wildflower, showing up in 15 of the 19 mixes. Although it is not listed as a noxious weed, the Washington State Noxious Weed Control Board lists bachelor’s button on their Education List. This plant is known to invade native grasslands and prairies.

So can you have a garden of wildflowers? Although there may be mixes available that do not contain invasive plants, it may be better to avoid wildflower mixes altogether. Only four of the mixes in the study listed all of the seeds they contained. (continued on page 5)
SPECIAL EVENTS

Celebrating Wildflowers at Woodland Park Zoo

Bring the family to Woodland Park Zoo on Saturday June 1 where the Rare Plant Care and Conservation Program at CUH will host a celebration of Washington’s native wildflowers. Activities for kids and grown-ups start at the Butterflies & Blooms Exhibit. Don’t miss out on the wildflower safari! Learn about native plant conservation and ongoing efforts to preserve Washington’s rare wildflowers. For more information, phone 206-616-0780.

Wildflower Walks
Saturday May 11: Ebey’s Bluff and Perigo’s Lagoon, Whidbey Island
Saturday June 8: Boulder River Wilderness, near Darrington

Experience the springtime splendor of Washington’s native wildflowers. Hikes led by Botanist Clay Antieu will explore two diverse ecosystems. Transportation and lunch are provided. For additional details, see page 9.

Out of the Ashes
NHS Auction and Party to Benefit the Miller Library

Save the date — Sunday, May 5, 5:30 p.m. to 8:30 p.m.— for the event of the season, as NHS hosts the Ultimate Garden Party and Auction to benefit the Miller Library. Food, drink, and coveted auction items such as garden art, planted pots, and rare plants will fill the courtyard at CUH, as gardeners gather to enjoy this fine party while helping the Miller Library rebuild, replace and renew after the fire last May. Call the NHS office at 206-527-1794 to receive an invitation.

Chinese Garden Tour
Thursday, April 25 and Friday, April 26

The Center for Urban Horticulture is pleased to present an overnight tour to the Seattle and Portland Chinese gardens. Guide will be Jan Whitner, garden writer and instructor on Chinese garden history. See additional information on page 8.
Know Your Compost

Ever since WSU detected the herbicide clopyralid in local compost, organic industry folks and the gardening public have been uncertain regarding the implications for organic practices in western Washington.

Clopyralid is the active ingredient in herbicides used on golf courses, lawns, pastures, and crops such as sugar beets, corn and mint. Sold under trade names such as Confront, Millennium, and Grazon, it is thought to be relatively safe for humans and other mammals. The herbicide is particularly effective because only one or two applications are required per year. Unfortunately, this means that the compound degrades more slowly than other herbicides during composting.

Contaminated compost can be traced to grass clippings, straw and hay from sites that used the herbicide to control weeds. Plants that are most easily damaged by clopyralid are among the most commonly grown garden plants. They include potatoes, tomatoes, peppers, peas, beans and sunflowers, among others. Susceptible plants may exhibit symptoms of toxicity at less than ten parts per billion. Symptoms include stunted leaves, curled tips and reduced bud and fruit production.

Although Western Washington composters have fared better than their Eastern Washington counterparts, the potential for clopyralid contamination is still of concern. This is particularly true for manure where the source of hay and straw is difficult to trace.

David McDonald of Seattle Public Utilities suggests that people using compost or manure in their gardens this year ensure that the producer has tested the batch they receive. Cedar Grove has done just that ever since the contamination became an issue. Any Cedar Grove product that is certified as clopyralid-free has been shown in bioassays to contain undetectable levels of the herbicide.

So until there are more consistent rules governing this herbicide, know your compost!

For updated info on clopyralid, visit the WSU website:
http://css.wsu.edu/compost/compost.htm

Bees are Abuzz at the Arboretum Signature Bed

The Puget Sound Beekeepers Association (PSBA), together with the Washington Park Arboretum, is presenting the signature bed for this year entitled “Urban Bee Garden: Pollen and Nectar Sources for the Honeybee.” Designed by Jennifer Cochrane, the bed has a whimsical appeal with its topiary five-foot bear and four flying honeybees. Nectar and pollen-producing plants in the bed include raspberries, lavender, red flowering currant, crabapple, fuchsia and bee balm. They start blooming in March and will give people a chance to view pollinator-friendly plants that grow well in the Northwest. A plant list is available at the Graham Visitors Center along with a display of bee hives used around the world.

PSBA has provided the Arboretum with honeybee apiaries for over 30 years. The hives are visited weekly from April 15 to November 15 by members who collect the honey and sell it at the Arboretum Gift Shop. The apiaries serve to pollinate the extensive plant collections at the Arboretum. PSBA members hope that the “Urban Bee Garden” will teach people the difference between honeybees and their more aggressive and carnivorous cousins, the yellowjackets.

Visit the PSBA website at http://www.pugetsoundbees.org for more information on beekeeping in the Puget Sound area.
News from CUH

Gardeners Ask the Darndest Things!

As days lengthen and the soil warms up, the reference desk at the Miller Library heats up, too, with a wide variety of questions from gardeners intent on spring planting and garden chores.

The library reopened in December in Isaacsan Hall. Please stop in to use our reference collection, computerized resources, or to borrow books from the lending collections.

Here is a sampling of recent questions answered by our Plant Answer Line:

**QUESTION:** Since last summer I have had lots of (fruit) flies in my vermi-composting bin in the basement. Short of washing all the worms and starting over, how can I get rid of them?

**ANSWER:** *Worm Digest*, Sept. 2001, p. 19 suggests freezing or microwaving fruit and vegetable skins prior to putting them in the worm bin, thus killing any eggs or larvae that may be present. The book *Worms Eat My Garbage* by M. Appelhof, 1982, p. 63–65 also advises cooking garbage before it is placed in the compost unit. In addition, it recommends traps, which will attract large numbers of fruit flies. Or, if you get desperate, suck them up with a vacuum cleaner!

**QUESTION:** I planted *Sarcococca confusa* in a shady area three years ago and it is not doing well—slow-growing and leggy. It gets plenty of water all year; the soil drains well but does not dry out too much. What can I do to make it bush out and grow better?

**ANSWER:** According to the *Hillier Guide to Trees and Shrubs* (1995 edition, p. 566), *S. confusa* does well in alkaline soils that are somewhat dry during the summer. It might be a good idea to test the soil pH and withhold summer water.

**QUESTION:** I would like a good reference book that will give me information on choosing a tree for my lousy, structureless, construction-backfilled clay soil or information on how to create a really good hole (if possible) that will support a tree.

**ANSWER:** There is surprisingly little information about this common urban soil problem! Many resources merely advise about how to avoid the situation in the first place. However, a chapter in *Growing Greener Cities: A Tree-Planting Handbook*, by Global ReLeaf (1992) describes, as a last resort, how to construct in-earth containers for growing trees in difficult sites.

**QUESTION:** Can you recommend a comprehensive (and picture-laden), quality plant encyclopedia on CD-ROM? I will be moving frequently while studying in the UK and want to limit the number of books I carry with me.

**ANSWER:** The Library’s favorite CD-ROMs for photos are:

- Heronswood Nursery—800 Favorites, contact Heronswood Nursery, www.heronswood.com

You can also access free photos through the Library’s website at www.millerlibrary.org. Follow these links: *Web Resources-Libraries-New York Botanical Garden Library-Links-Pictures of Plants*. Voila!
CUH & CFR Faculty 2001 Research List on Web

The list of CUH and College of Forest Resources faculty publications for 2001 features two edited books and 51 articles, chapters and reports. It is now available for viewing at the Forest Resources Library home page at http://www.lib.washington.edu/Forest/.

Sustainable Community Landscapes

Hardworking students under the guidance of Dr. Linda Chalker-Scott restored two urban sites and worked on a total of seven landscape restoration projects this past fall. Neglected areas at NOVA High School and a property near Matthews Beach termed “the triangle” by local residents were attacked with gusto. The students drew up the restoration plans, cleared the site, installed native trees, shrubs and grasses and trained local community members in maintaining the sites. At the Matthews Beach property, the group’s effort resulted in increased plant diversity to provide a more functional wetland. For a description and photos of these projects, see http://www.cfr.washington.edu/research.mulch/.

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Therefore, it is probably safest to plant individual species of flowers that you enjoy. There are many alternative flowers that have similar characteristics as the invaders, but do not reseed as profusely.

For information on invasive plants and noxious weeds in King County, call 206-296-0290 or visit their website at: http://dnr.metrokc.gov/ubl/lands/weeds/index.htm. Additional information can be found at: http://www.wa.gov/agr/weedboard/index.html; http://plants.usda.gov/index.html; and http://invader.dbs.umt.edu/noxiousweeds/noxlist.asp.

This research was directed by Dr. Sarah Reichard, Assistant Professor of Conservation Biology.

Invasive Plants Found in Wildflower Seed Mixes

| Annual coreopsis, *Coropsis tinctoria* | Crimson clover, *Trifolium incarnatum* |
| Baby blue eyes, *Nemophila menziesii* | Dame’s rocket, *Hesperis matronalis* |
| Baby’s breath, *Gypsophila elegans* | Fireweed, *Chamerion angustifolium* |
| Bachelor’s button, *Centaurea cyanus* | Forget-me-not, *Myosotis sylvatica* |
| Black-eyed Susan, *Rudbeckia hirta* | Poor man’s weathersglass, *Anagallis arvensis* |
| Blue flax, *Linum perenne* | Redroot pigweed, *Amaranthus retroflexus* |
| California poppy, *Eschscholzia californica* | Sweet alyssum, *Lobularia maritima* |
| Common yarrow, *Achillea millefolium* | Wild lupine, *Lupinus perennis* |
| Cosmos, *Cosmos bipinnatus* | Yellow toadflax, *Linaria vulgaris* |
| Cow cockle, *Vaccaria hispanica* |

*also classified as noxious weeds
For more information on Arboretum Foundation events, please call the events hotline at 206-726-1954 or visit the website at: www.arboretumfoundation.org

Early Bloomers Plant Sale
Saturday, April 13
10 a.m. to 2 p.m.

The Arboretum Foundation kicks off Seattle’s plant sale season with Early Bloomers, featuring hundreds of favorite and unusual plants, at the Washington Park Arboretum’s Graham Visitors Center, 2300 Arboretum Drive East, in Seattle. Admission and parking are free. For information, call 206-726-1954.

Interested in Volunteering?
Help is needed for special events, the Foundation office, education programs, and special projects around the Arboretum. Call Elaine Anderson at 206-325-4510.

FLORAbundance Spring Plant Sale
Saturday, April 27, 10 a.m. to 5 p.m.
Sunday, April 28, 10 a.m. to 3 p.m.

Dozens of specialty nurseries and vendors will offer one of the Northwest’s best plant selections at the Arboretum Foundation’s 53rd annual spring plant sale. Available plants include hardy and tender perennials, annuals, trees, shrubs, vines, herbs, grasses and vegetable starts. The sale will be located at the former Sand Point Naval Air Station, 7400 Sand Point Way NE, Building #30. For a list of participating vendors and nurseries, go to www.arboretumfoundation.org after April 1.

Northwest Horticultural Society

For further information on the events listed, call the NHS office at 206-527-1794. Events are held at CUH.

Every Inch a Garden: Gardening in Small Spaces
Lucy Hardiman
April 10, 7 p.m.

Portland-based garden designer Lucy Hardiman will inspire us with ideas and methods for making the most of an urban-sized garden.

Integrating Herbs in the Garden
Suzanne Edney
June 12, 7 p.m.

Suzanne Edney designs residential gardens for do-it-yourselfers. Learn how she integrates herbs into an overall landscape plan, and enjoy new ideas for combining herbs with other plants.

Deciduous Divas: Small Shrubs & Trees for Spectacular Flowers, Foliage or Fruit
Roger Gossler
May 15, 7 p.m.

Roger Gossler, co-owner of renowned Gossler Farms Nursery in Eugene, will share the deciduous shrubs and trees that will tempt even the most sophisticated gardener.
**Arboretum positions:**

**Tuesdays in the Garden:** Become a regular Tuesday gardener every week from 12:30 to 3:30 p.m. Tasks vary with the season. Enjoy and help Arboretum staff tend the wonderful plants in the Arboretum! Call Chris Pfeiffer at 206-328-4182.

**Volunteer Groups needed:** Community service groups are a vital source of support in caring for Arboretum plant collections and managing invasive weeds. We have many areas needing attention for removal of English ivy, best done before May. Many hands make light work. Work parties can be scheduled throughout the year. Please phone Chris Pfeiffer at 206-328-4182.

**WPA Information Desk:** Greet visitors, share your enthusiasm, answer questions, and interact with staff and other volunteers in the stimulating environment at the Arboretum. Shift times are either half or whole days, once a week. Call the Building Manager at 206-543-8800.

**Saplings Guide Training April 1-5:**

Training is just around the corner and we are eager to fill each volunteer position. Saplings guides are asked to commit to one program a week for twelve weeks in the spring. New guides must attend at least one training session from 9 a.m. to noon the first week of April. All levels of experience are welcome. If you have any questions or would like to sign-up for training, please phone 206-543-8801.

**Union Bay Campus positions:**

**Union Bay Reception Desk:** Interact with visitors, faculty, staff, and students while helping out with phone calls and answering general questions. Several shifts are available. Call Ray Larson at 206-616-9113 for more information.

**Rare Care Monitors:** We are looking for volunteers to help coordinate activities for children at our Celebrating Wildflowers event. We also need volunteers to collect seed for long-term storage in the Miller seed vault. If interested, phone Program Coordinator Laura Zybas at 206-616-0780 or e-mail her at lzybas@u.washington.edu.

**Gardening at Union Bay Campus:** Join a hands-on crew the 2nd Thursday of each month between 10 a.m. and 2 p.m. for gardening-related activities on CUH grounds. No experience necessary, just bring gloves and small hand tools and dress for the weather. Part training, part idea exchange, part gardening......enjoy it all with other plant and CUH-appreciative folks. Call Peg Pearson at 206-524-5564.

**Seattle Youth Garden Works:** Enthusiastic adults needed to work with youth crews at garden sites in the University District and South Park. Have fun planting, maintaining and harvesting crops while providing positive role models for homeless and at-risk youth. We are also looking for larger groups of volunteers to participate in work crews on service days. For more information, contact Rebecca at 206-525-1213, ext. 3133 or e-mail volunteers@youthgardenworks.com.
Botanical Illustration - Watercolor

DATES & TIMES: 9-part series: April 10, 17, 24, May 1, 8, 15, 22, 29 & June 5, 7 to 9 p.m.
INSTRUCTOR: Louise Smith, Botanical Illustrator
LOCATION: Douglas Classroom, CUH
FEE: $180; pre-registration required

Intended as a follow-up to the Botanical Drawing class, or as a stand-alone course, Louise Smith will take you step-by-step through the basics of watercolor wash and dry brush techniques. Students should bring drawing paper, pencil and eraser to the first class where a more complete materials list will be provided. Students will have the opportunity to purchase those items from the instructor (around $45) or independently (approximately $80-$100).

Power Equipment Maintenance for the Home Gardener

DATE & TIME: Tuesday, April 23, 7 to 9 p.m.
INSTRUCTOR: John Asplund, owner of the Sharp Shop
LOCATION: Douglas Classroom, CUH
FEE: $30 general public; $27 Arboretum Foundation Members; pre-registration required

Learn from an equipment expert. John Asplund, owner of The Sharp Shop, will show you how to maintain your power mower, weedeater, chainsaw and blower in order to reduce your headaches and extend their lives.

Brown Bag Talk on Chinese Gardens: History & Theory

DATE & TIME: Monday April 15, noon to 1:30 p.m.
INSTRUCTOR: Tess Canfield, Landscape Architect
LOCATION: NHS Hall, CUH
FEE: Free; bring your own lunch

This brown bag talk by Harvard Instructor and former chair of the Atlanta Urban Design Commission, Tess Canfield, is open to anyone wanting to understand the theory behind Chinese Gardens.

Tour of Chinese Gardens

DATE & TIME: Thursday April 25 & Friday April 26
TOUR GUIDE: Jan Whitner, author of Stonescaping & NW Garden Style
LOCATION: Tour leaves from CUH at 8:30 a.m.
FEE: $260

Visit the Seattle Chinese Garden and the Portland Classical Chinese Garden on this overnight tour. Jan Whitner, Northwest garden writer, designer, and instructor on Chinese garden history, will guide us as we learn about gardens from the province of Sichuan and the famous garden town of Suzhou. Fee includes transportation, lunches, entrance fee, lodging at Portland's Mallory Hotel, and an evening lecture by Jan Whitner titled "Bones of Dragons and Roots of the Earth: Stone & Water in Chinese Gardens." Please phone 206-685-8033 to receive a detailed itinerary.
Spring Flowering Trees and Shrubs

DATE & TIME: Saturday May 4, 9:30 a.m. to 12:30 p.m.
INSTRUCTOR: Scott Conner, Consultant, Conner Enterprises
LOCATION: Graham Visitors Center, WPA
FEE: $25 general public; $22 Arboretum Foundation Members; pre-registration required

Learn about trees and shrubs that are particularly beautiful during the spring season. Horticulturist Scott Conner will introduce students to the beautiful trees and shrubs that grace our spring gardens. This is an Arboretum Plant Study Tour. Please dress warmly.

Preparing Your Body for Gardening

DATE & TIME: Tuesday May 7, 7 to 9 p.m.
INSTRUCTOR: Bart Simons, Physical Therapist
LOCATION: NHS Hall, CUH
FEE: $25 general public; $22 Arboretum Foundation members; pre-registration required

Bart Simons, owner of Greenlake Sports Physical Therapy, will demonstrate how to prevent and manage the common complaints gardeners get, from back and shoulder pain to carpal tunnel syndrome. Basic anatomy will be discussed to understand why pain and injuries occur, and handouts will be provided. Wear comfortable clothes and bring a towel or pad for light floor exercises.

Wildflower Hike: Ebey’s Bluff & Perego’s Lagoon

DATE & TIME: Saturday May 11, all day
INSTRUCTOR: Clay Antieau, Botanist
LOCATION: Leaves CUH at 7:45 a.m.
FEE: $75; pre-registration required; includes transportation and lunch

This guided hike will take you to the heart of the Olympic rainshadow, where it rains as little as 12 inches in some years—nearly desert conditions! The three-mile, moderately strenuous loop around Ebey’s Bluff and Perego’s Lagoon holds dramatic surprises, including Western Washington’s only native cactus and one of the world’s most endangered plants. Topics will include plant identification, ecology and impact of weeds, species extinctions, ecological restoration, and fun!

Creating a Bee Pollinator’s Garden

DATE & TIME: Thursday June 6, 7 to 8:30 p.m.
INSTRUCTOR: Sarah Cooke, Botanist & Environmental Consultant
LOCATION: Graham Visitors Center, WPA
FEE: $25 general public; $22 Arboretum Foundation Members; pre-registration required

Gardens thrive when pollinators are abundant. Learn how to attract beneficial bees to your garden and learn about the herbs, native trees, and shrubs that act as sources of nectar and pollen. The class will include a tour of the Arboretum Signature Bed. Named the “Urban Bee Garden: Pollen and Nectar Sources for the Honeybee,” it was created and is cared for by the Puget Sound Beekeepers Association.

Wildflower Hike: Boulder River Wilderness

DATE & TIME: Saturday June 8, all day
INSTRUCTOR: Clay Antieau, Botanist
LOCATION: Leaves CUH at 7:45 a.m.
FEE: $75; pre-registration required; includes transportation and lunch

Join Botanist Clay Antieau on a guided hike in the Boulder River Wilderness. This four-mile easy hike into the Cascade Mountains threads through a world of ancient green. Awesome forests along this path are among the last traces of low elevation old growth forest in the Puget Sound region. Be ready to explore an abundance of spring wildflowers, big trees, and waterfalls!
affiliated
gardening
programs

The following classes are offered by Seattle Public Utilities, WSU Cooperative Extension, and King County Master Gardeners together with the Center for Urban Horticulture.

Drip Irrigation

**DATE & TIME:** Tuesday May 14, 7 to 8:30 p.m. & Saturday May 18, 9 a.m. to noon or 1 to 4 p.m.

**INSTRUCTOR:** Howard Stenn, Stenn Design

**LOCATION:** Douglas Classroom, CUH & Bradner Gardens Park

**FEE:** $25; pre-registration required

This two-part class will teach you how to install and maintain a drip irrigation system. In the first session, you’ll learn about the various drip systems available, how they are assembled, where to buy them, and what to avoid. In the second session, you’ll be guided step-by-step through different drip system assemblies. Fee includes the Tuesday evening talk at CUH and either the Saturday morning or afternoon workshop at Bradner Gardens Park.

Growing Healthy Soil

**DATE & TIME:** Tuesday May 21, 7 to 8:30 p.m.

**INSTRUCTOR:** David McDonald, Seattle Public Utilities

**LOCATION:** Douglas Classroom, CUH

**FEE:** $10; pre-registration required

Healthy soil is needed for a healthy lawn and garden. In this class you’ll learn about the essential roles that soils play, how to diagnose soil problems, simple methods to improve the vitality of your soil and the use of compost, mulch and other amendments. The class will be fun and informative with lots of practical tips.

Six Steps to Natural Lawn Care

**DATE & TIME:** Thursday May 23, 7 to 8:30 p.m.

**INSTRUCTOR:** David McDonald, Seattle Public Utilities

**LOCATION:** Douglas Classroom, CUH

**FEE:** $10; pre-registration required

Learn how you can have a healthy lawn that’s easy to care for and easy on the environment. This course will cover soil improvement, over-seeding and aeration, mowing, watering, weed management and fertilizing. There will also be a demonstration of mulching lawn mowers and other natural lawn-care equipment.

Growing Tomatoes in Puget Sound Country

**DATE & TIME:** Tuesday April 16, 7 to 8:30 p.m.

**INSTRUCTOR:** Wally Prestbo, Master Gardener

**LOCATION:** Douglas Classroom, CUH

**FEE:** $10; pre-registration required

Yes, it IS possible to grow big, red, juicy tomatoes in our maritime climate. Taught by tomato expert Wally Prestbo, this class will teach you how to select the best varieties, start seeds, choose a location with lots of heat, build a tomato trellis, and prevent and control tomato diseases. Four days after the class is the Master Gardener Plant Sale, offering tomatoes grown by Wally and other Master Gardeners.

Gardening & Nature Study with Kids

**DATE & TIME:** Thursday May 16, 7 to 8:30 p.m.

**INSTRUCTOR:** Emily Bishon, Master Gardener

**LOCATION:** Douglas Classroom, CUH

**FEE:** $10; pre-registration required

This is a workshop to inspire and inform you about fun and successful ways of gardening, exploring nature, and creating garden crafts with children. Learn how to add outdoor learning to your children's current activities. This is a class for parents, teachers, and daycare providers of children preschool through elementary grades.
Culinary Herbs with a Pinch of History

**DATE & TIME:**
Thursday May 30, 7 to 8:30 p.m.

**INSTRUCTOR:**
Joan Helbacka, Master Gardener Program Coordinator

**LOCATION:**
Douglas Classroom, CUH

**FEE:**
$10; pre-registration required

Baths, royalty, love and rosemary—what they have in common will be revealed in this course taught by Joan Helbacka. The history, culinary uses, and cultural needs of a dozen of our most commonly grown herbs will be covered. Living examples of the herbs to be discussed will be displayed for students to see and enjoy.

**WETLAND WONDERS (Grades K-3)**
Take a safari to Foster and Marsh Islands along the Waterfront Trail. Go on a wetland scavenger hunt, collect aquatic insects and play games. Pack comes with binoculars!

**Arboretum Explorer Packs**
Great for teachers, scouts, camps, daycare and other youth groups. Lead your own group on an exploration of this unique living museum. Explorer Packs are filled with fun activities, games, maps and equipment for investigating. Explorer Packs are available year-round from 10 a.m. to 3 p.m. with a required two-week pre-registration. A two-hour rental fee is $15. Explorer Packs are designed for 15 kids working individually or for 30 kids working in pairs.

**Tree-ective**
Come sleuthing in the Arboretum and learn amazing facts about trees. This pack includes hand lenses, magnifiers, field guides, games and even “tree cookies!”

**Marsh Madness**
Investigate the amazing critters and plants that make the wetland their home. This pack includes dip nets, aquaria, field guides, scavenger hunts and more.

**NEW! Signs of Spring (April–June)**
This spring, learn about seed mysteries, seed dispersal, pollinators, parts of a flower and more. Play the seed send-off game or the flower mix-up game.

**Self-Guided Family Packs**
Investigate the wonders of the Arboretum using our self-guided pack program. Arboretum packs come with easy-to-follow activities, maps, field guides, games and more. Family Packs are designed for groups of five or fewer. They are available year-round from 10 a.m. to 3 p.m. at the Graham Visitors Center Front Desk. $5 fee for two-hour rental. FREE to Arboretum Foundation Members and Arboretum Guides.

**FAMILY TREE PACK (Grades K-3)**
Investigate the wonders of a living museum. Focus on leaves, buds, flowers, fruit and bark. Learn about pollination by doing it yourself!

**Self-Guided Learning Opportunities**
Use the Arboretum as your outdoor classroom. This 230-acre urban forest offers a wealth of study materials and experimental opportunities. Education Department staff will assist you to plan your visit by offering information on specific subject areas and plant collections free of charge. We request that all self-guided tours first check in by calling 206-543-8801 so that we can help to suit your group’s needs.
Saplings School Programs
Explore the Arboretum with trained guides! School tours are Monday through Friday, 10 to 11:30 a.m. The cost is $2.50 per child (chaperones are free). Two adult chaperones per 15 children are required. Scholarships are available. All of Saplings' curricula are aligned with the state's Essential Academic Learning Requirements. Please remember to book your reservations at least three weeks in advance.

Grades K–2: Discover Plants
Younger students gain exposure to the wonderful world of plants by using characteristics to categorize living things. Students will compare and contrast similarities between plants and people as they learn what each needs to grow and be healthy.

Grades K–3: Wetland Ecology Walk: Focus on Habitats
Explore the flora and fauna on Foster Island as you learn about who lives in the Arboretum's unique urban wetland. Learn first-hand about various habitats around the Arboretum.

Grades 3–6: Life Cycle of a Plant: Spring Sprouts (April–June)
What is the reason for a flower? Discover the secrets of springtime as you learn about the lifecycle of plants from flower to fruit. Perpetuate the cycle by planting seeds of your own to take home.

Grades 4–8: Wetland Ecology Walk: Focus on Ecosystems
Investigate the complex world of a wetland ecosystem. Foster Island provides a unique opportunity for students to study an urban wetland up close and discover the importance and functions of wetlands.

Grades 3–8: Native Plants and People
What is a native plant? Students will learn to identify several northwest native plants. Discover the historical importance of native plants to the Coast Salish people. Students will learn how native plants were used in daily life through discussion, by using hands-on artifacts and role-playing activities.

Grades 3–6: Rainforests !!NEW!!
Through a role-playing activity, students will be able to identify the four layers of tropical rainforests and see who might be living there. Students will learn about the similarities and differences between temperate and tropical rainforest ecosystems. Come observe arboretum species similar to tropical species in behavior or appearance.

arboretum guided tours
Enjoy the seasonal splendor of the Arboretum. Take a walk along historical Azalea Way lined with flowering cherries, azaleas and dogwoods. Loderi Valley features large-leaved rhododendrons and Loderi hybrids sheltered by magnolias. Tours are led by trained Arboretum guides and last from 60 to 90 minutes. Topics include plants of seasonal interest, Foster Island ecology, native plants, and ethnobotany. Tours are available year-round between 10 a.m. and 3 p.m., seven days a week. Fees are $15 per group of 15. $10 for Arboretum Foundation members. Call 206-543-8801 to reserve a guide; three weeks advanced reservations required.

Weekend Walks at One
Weekend walks highlight areas of the Arboretum and collections with seasonal interest. Walks depart from the Graham Visitors Center Saturdays and Sundays at 1 p.m. Call ahead to ensure a weekend tour, 206-543-8801.
## APRIL

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<td>8</td>
<td>Orchid Society, 7 p.m., CUH</td>
<td></td>
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<tr>
<td>9</td>
<td>P.S. Mycological Society, 7:30 p.m., CUH</td>
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<tr>
<td>10</td>
<td>Botanical Illustration, part 1, 7 p.m., CUH NHS Lecture, 7 p.m., CUH</td>
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<tr>
<td>11</td>
<td>Rock Garden Society, 7:30 p.m., CUH</td>
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<tr>
<td>15</td>
<td>Chinese Gardens: History &amp; Theory, noon, CUH</td>
<td></td>
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<tr>
<td>16</td>
<td>Growing Tomatoes, 7 p.m., CUH Rose Society, 7:30 p.m., CUH</td>
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<tr>
<td>17</td>
<td>Botanical Illustration, part 2, 7 p.m., CUH</td>
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<td>22</td>
<td>Bonsai Association, 7:30 p.m., CUH</td>
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<tr>
<td>23</td>
<td>Assoc. for Women in Hort, 6:30 p.m., CUH</td>
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## MAY

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Time/Location</th>
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<tbody>
<tr>
<td>1</td>
<td>Botanical Illustration, part 4, 7 p.m., CUH</td>
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<td>2</td>
<td>WA Native Plant Soc., 7:15 p.m., CUH</td>
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<tr>
<td>4</td>
<td>Spring Flowering Trees &amp; Shrubs, 9:30 a.m., WPA</td>
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<tr>
<td>6</td>
<td>Ornithological Society, 7 p.m., CUH</td>
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<tr>
<td>7</td>
<td>Preparing Your Back for Gardening, 7 p.m., CUH</td>
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<tr>
<td>8</td>
<td>Botanical Illustration, part 5, 7 p.m., CUH NHS Lecture, 7 p.m., CUH</td>
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<td>9</td>
<td>Rock Garden Society, 7:30 p.m., CUH</td>
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<tr>
<td>10</td>
<td>Bonsai Exhibit &amp; Sale, 10 to 5 p.m., CUH</td>
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<tr>
<td>11</td>
<td>Wildflower Walk - Ebey’s Bluff, 7:45 a.m., CUH</td>
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<tr>
<td>13</td>
<td>Orchid Society, 7 p.m., CUH</td>
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<tr>
<td>14</td>
<td>Drip Irrigation, part 1, 7 p.m., CUH</td>
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<tr>
<td>15</td>
<td>Botanical Illustration, part 6, 7 p.m., CUH</td>
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<tr>
<td>16</td>
<td>Gardening &amp; Nature Study with Kids, 7 p.m., CUH Audubon Society, 6:30 p.m., CUH</td>
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<tr>
<td>18</td>
<td>Drip Irrigation, part 2, 9 a.m. or 1 p.m., Bradner Gardens Park</td>
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<tr>
<td>19</td>
<td>Cascade Cactus &amp; Succulent Society, 2 p.m., CUH</td>
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<tr>
<td>21</td>
<td>Growing Healthy Soil, 7 p.m., CUH</td>
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<tr>
<td>22</td>
<td>Botanical Illustration, part 7, 7 p.m., CUH</td>
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<tr>
<td>23</td>
<td>Natural Lawn Care, 7 p.m., CUH</td>
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<tr>
<td>30</td>
<td>Botanical Illustration, part 8, 7 p.m., CUH</td>
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<tr>
<td>31</td>
<td>Culinary Herbs with a Pinch of History, 7 p.m., CUH</td>
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<tr>
<td>32</td>
<td>Hardy Fern Foundation Sale, 1 to 4 p.m. HFF Lecture, 7 p.m., CUH</td>
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## JUNE

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Time/Location</th>
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<tbody>
<tr>
<td>1</td>
<td>Hardy Fern Foundation Sale, 10 a.m. to 2 p.m.</td>
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<tr>
<td>3</td>
<td>Ornithological Society, 7 p.m., CUH</td>
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<tr>
<td>4</td>
<td>Rose Society, 7:30 p.m., CUH</td>
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<td>5</td>
<td>Botanical Illustration, part 9, 7 p.m., CUH</td>
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<td>6</td>
<td>Creating a Bee Pollinator’s Garden, 7 p.m., CUH</td>
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<tr>
<td>8</td>
<td>Wildflower Walk - Boulder River Wilderness, 7:45 a.m., CUH</td>
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<tr>
<td>11</td>
<td>P.S. Mycological Society, 7:30 p.m., CUH</td>
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<tr>
<td>12</td>
<td>NHS lecture, 7 p.m., CUH</td>
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<tr>
<td>13</td>
<td>Rock Garden Society, 7:30 p.m., CUH</td>
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<tr>
<td>16</td>
<td>Cascade Cactus &amp; Succulent Society, 2 p.m., CUH</td>
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<tr>
<td>22</td>
<td>Bamboo Festival, 9 a.m. to 5 p.m., CUH</td>
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</tbody>
</table>
for classes and programs

To Register: Please complete and return the registration form, along with your payment to the Center for Urban Horticulture.

Refunds: Requests for refunds on events not attended must be made in advance in writing, by phone, fax, or in person. Requests received fewer than 7 days from the first class meeting have a 25% handling fee deducted. No refunds can be made after the first class meeting. If a program is cancelled for any reason, a full refund will be made to all enrollees. Refunds may take four weeks to process.

Returned Checks: An $18 service fee will be charged for returned checks.

Special Needs: To request disability accommodation, please contact the Disability Services Office at least ten days in advance of an event: 206-543-6450 (voice); 206-543-6452 (TTY); or by e-mail at dsd@u.washington.edu.

Class Locations and Parking: Program locations are listed with each program description. The Graham Visitors Center at Washington Park Arboretum is located at 2300 Arboretum Drive East. Douglas Classroom, NHS Hall and the other meeting rooms at Union Bay are located at 3501 N.E. 41st Street. Prepaid parking is located adjacent to the buildings.
<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>FEE</th>
<th>AF MEMBERS</th>
<th># PEOPLE</th>
<th>TOTAL FEE</th>
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<tbody>
<tr>
<td><strong>HORTICULTURE PROGRAMS</strong></td>
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<tr>
<td>Botanical Illustration - Watercolor</td>
<td>$180</td>
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<tr>
<td>Chinese Gardens: History and Theory</td>
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<td>Power Equipment Maintenance for the Home Gardener</td>
<td>$30</td>
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<td>Tour of Chinese Gardens</td>
<td>$260</td>
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<td>Spring Flowering Trees and Shrubs</td>
<td>$25</td>
<td>$22</td>
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<tr>
<td>Preparing Your Body for Gardening</td>
<td>$25</td>
<td>$22</td>
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<td>Creating a Bee Pollinator's Garden</td>
<td>$25</td>
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<td>Wildflower Hike: Ebey's Bluff &amp; Perego's Lagoon</td>
<td>$75</td>
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<tr>
<td>Wildflower Hike: Boulder River Wilderness</td>
<td>$75</td>
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<tr>
<td><strong>AFFILIATED GARDENING PROGRAMS</strong></td>
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<tr>
<td>Drip Irrigation</td>
<td>$25</td>
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<td>Growing Healthy Soil</td>
<td>$10</td>
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<td>Six Steps to Natural Lawn Care</td>
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<td>Growing Tomatoes in Puget Sound Country</td>
<td>$10</td>
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<tr>
<td>Gardening and Nature Study with Kids</td>
<td>$10</td>
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<tr>
<td>Culinary Herbs with a Pinch of History</td>
<td>$10</td>
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</tbody>
</table>

**TOTAL FEE $**

**PAYMENT**

- Check (payable to University of Washington)  
- Visa  
- MasterCard  
- American Express  

**CREDIT CARD NUMBER**

**EXPIRATION DATE**

**NAME ON CARD**

**GENERAL INFORMATION**

- NAME  
- ADDRESS  
- CITY  
- STATE  
- ZIP  
- DAY PHONE  
- EVENING PHONE  
- FAX  
- EMAIL
"UW Horticulture Center is Reborn, Finally" was the headline of the February 1 editorial in the Seattle Times. The State Legislature and the University will provide $5.4 million to accomplish this, no small task in an economically depressed time. The above sketch by the Miller/Hull Partnership captures a dream for the new Merrill Hall. How the building unfolds over the next several months will result from considerable hard work by the design team and Center supporters.

TOM HINCKLEY, PhD, DIRECTOR, CENTER FOR URBAN HORTICULTURE