



PROHORT

Vol. 11, No. 2

Spring 1993

ProHort seminars are conducted cooperatively by Urban Horticulture, University of Washington, and the Cooperative Extension Service, Washington State University; Edmonds Community College and South Seattle Community College also assist cooperatively.

PROHORT SEMINARS

Class size limited, please pre-register.

Parking is pre-paid for all ProHort Seminars conducted at CUH. As you check-in for the program, be sure to ask for your pre-paid parking sticker.

COLOR UPDATE

Monday, May 3, 9 a.m. to 12:30 p.m.
Center for Urban Horticulture
Fee: \$19

I. Peggy Campbell, Horticulturist and Public Relations Manager at Molbak's, shares slides and observations on the last few years' trials of new annuals at her nursery's Test Garden. She will also preview some of the new annuals that will be made available in the next few years, as discovered during a recent trip to major California growers.

II. Bill Hielscher, Owner and Manager of Morning Glory Farms, shares slides and information on some of the best and newest perennials available. In particular, Bill will highlight plants for long and late season bloom.

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LANDSCAPE WEED MANAGEMENT

Thursday, June 10, 9 a.m. to Noon
Center for Urban Horticulture
Fee: \$17

This Seminar earns 3 hours WSDA Pesticide Recertification Credit

Kassim Al-Khatib discusses frequently encountered landscape weeds, their life cycles and identification (you may bring samples for ID). He will then discuss cultural and chemical management strategies, including the newest products and restrictions. Kassim is Extension Weed Specialist and Assistant Weeds Scientist at the WSU- Northwest Research Unit in Mt. Vernon, WA.

SPECIALTY NURSERY TOUR

Tuesday, June 29, 8 a.m. to 3 p.m.
Depart from Center for Urban Horticulture
Fee: \$17; does not include lunch, includes transportation

Join us for this tour of two unique Vashon Island nurseries. First, visit Puget Garden Resources, where following a tour by Owner/Manager Pete Ray, you will be given time on your own to discover unique specimens or ask Pete more questions.

This nursery features many unique ornamental grasses, low-water use natives and exotics, and unusual perennials.

Next, we visit Colvos Creek Nursery, where Owner/Manager Mike Lee will give a tour of his operation. There will also be time on your own to look, learn, or ask more questions. Mike's nursery features an unusual assortment of hard-to-find plants.

OTHER EDUCATIONAL OPPORTUNITIES

PROFESSIONAL TURFGRASS MANAGERS FIELD DAY, June 8, WSU- Farm 5 Research Center, Puyallup. Topics include: nitrate management, crane flies, water use management, lysometer use. For information, call (206) 840-4535.

URBAN FORESTRY WORKSHOP, April 20 & 21, Puyallup, sponsored by WSU Cooperative Extension. For information, contact Arno Bergstrom at (206) 591-7180.

RUSSIAN URBAN FORESTRY PARKS AND GARDENS TOUR, August 2-16, Moscow/St. Petersburg regions. For info, contact Dave Baumgartner, Extension Forester, Washington State University at (509) 335-2964.

SOUTH SEATTLE COMMUNITY COLLEGE SPRING COURSES:

Garden Center Management, Spring Plant ID (Deciduous), Herbaceous Plant ID, Spring Maintenance Operations, Insect ID & Control, Plant Diseases, Turfgrass Culture. Short Courses: Annuals, Perennials and Bulbs, Shade Gardening; Water Gardens. To register, call 764-5336.

EDMONDS COMMUNITY COLLEGE SPRING COURSES:

Spring Plant ID, Plant Diseases, Greenhouse Studies, Annuals, Bulbs & Ferns, Advanced Plant ID, Tools & Equipment, Turf. Call 771-1679.

PLANT POT RECYCLING DAY SET

The Association for Women in Landscaping and the Washington State Nursery and Landscape Association are teaming up again to sponsor a plant pot recycling day. The pot drop is set for **JUNE 12, 10 a.m. to 2 p.m.** Drop-off sites are: Center for Urban Horticulture, Sky Nursery, Magnolia Garden Center, Five Corners Nursery, Hayes Nursery, Wileywood, West Seattle Nursery. For more info, call Susanne Foster at (206) 232-9185.

PROHORT BOOKSHELF

By Valerie Easton

New books at the Miller Library of interest to landscape professionals.

Library hours: 9 a.m. to 8 p.m.
Monday: 9 a.m. to 5 p.m. Tuesday through Friday.

Arms, Karen. *Environmental Gardening*. Savannah, GA: Halfmoon Publishing, 1992.

Written by a biologist who encourages the gardener to see their garden as part of the larger environment, this book is much more than an organic gardening manual. Design, color, microclimates, weeds, and wildlife are all considered from the perspective of gardening in harmony with nature.

Ellefson, Connie; Stephens, Thomas and Welsh, Doug. *Xeriscape Gardening: Water Conservation for the American Landscape*. New York: Macmillan, 1992.

A discussion of xeriscape principles is followed by listings of drought tolerant plants by region, including the PNW. This is the first really attractive book on xeriscaping I've seen, with many color photos which reinforce the positive tone of the book.

Rodbell, Phillip D.: American Forestry Association. *Proceedings of the Fifth National Urban Forest Conference: Los Angeles, California, November 15-19, 1991*. Washington, D.C.: American Forestry Association, 1992.

This compilation of papers has some of the most complete and current information on urban trees. From urban biology to motivating the public, the experts discuss current research and opinion.

Bell, Brian; Cousins, Stewart. *Machinery for Horticulture*. Ipswich, UK: Farming Press, 1991.

Brooklyn Botanic Garden. *Garden Photography*. Brooklyn: Brooklyn Botanic Garden, 1989.

California Fertilizer Association. *Western Fertilizer Handbook: Horticulture Edition*. Danville, IL: Interstate Publishers, 1990.

Craul, Phillip J. *Urban Soils in Landscape Design*. New York: Wiley, 1992.

Olkowski, Helga; Olkowski, William; and Daar, Sheila. *IPM Training Manual for Landscape Gardeners*. Berkeley, CA: Bio-Integral Resource Center, 1992.

Rick, Robert P. Jr. *Nursery and Landscape Weed Control Manual*. Fresno: Thomson Publications, 1992.

Ware, George W. *Fundamentals of Pesticides: A Self-Instruction Guide*. 3rd ed. Fresno: Thomson Publications, 1991.

Ware, George W. *The Pesticide Book*. 3rd ed. Fresno: Thomson Publications, 1989.

MANAGING SPIDER MITES

Arthur L. Antonelli, Extension Entomologist, WSU Puyallup

Spider mites, like insects, belong to a large group of invertebrates called arthropods. They differ from insects and other arthropods in having eight legs as adults. Common species in the Pacific Northwest include the MacDaniel mite, citrus red mite, spruce spider mite, and the two-spotted spider mite. The latter is the most common landscape and garden mite pest.

Spider mites are among the most serious pests on both yard and house plants. As sucking pests they cause chlorosis of the leaves or needles. When populations are high, the leaves turn brown and die, frequently resulting in leaf or needle drop. Sensitivity and susceptibility to mite damage varies among plant species. The economic threshold (the population level at which serious damage occurs) varies from a few mites per leaf (e.g., pears) to as many as 25 per leaflet (e.g., raspberries). The host list for each mite species differs. The two-spotted spider mite infests a hundred or more different species of plants, while the spruce spider mite is found exclusively on conifers (one of its preferred hosts is the Alberta spruce—a favorite landscape ornamental).

Observation and research by WSU experts in both field and plant clinics have shown that a hot, dry and dusty growing season commonly leads to serious spider mite problems in landscapes. Mites become dehydrated during hot weather. Dust appears to cause further mite dehydration, which then forces them to feed more frequently. Also plants, such as azaleas, that normally do not have mite problems, have more serious problems with spider mites when drought stressed than when they are grown under optimal conditions. Problems also frequently occur when plants are grown where spider mite predator populations do not usually occur—such as in greenhouses.

Insecticide use is another cause for mite increases in the landscape. Many broad-spectrum insecticides used to control insect pests eradicate or seriously suppress effective mite predators, including predatory mites, lady beetles, and young lacewing larvae. Furthermore, most insecticides have little or no effect on spider mites. This results in a "secondary pest explosion."

Insecticides reported to contribute to this phenomenon include carbaryl (Sevin) and certain members of the pyrethroid insecticide class. Other broad-spectrum insecticides can have the same effect.

PREVENTION is one management option that is both practical and environmentally sound. Begin by maximizing the health of the plant. Plant materials should be located in appropriate places with serious attention given to soil drainage, light conditions, watering, and nutrient requirements.

Remove plants if they are "chronic pest centers". This includes insects as well as spider mites. This achieves two things, elimination of a contamination source, and relief from need for pesticide sprays.

Avoid known spider mite hosts (e.g., avoid using spruce to avoid spruce spider mite problems).

Maintain an isolation room or area for newly acquired plants, away from other plants in your nursery, site or collection, and observe them frequently (with a hand lens, they are difficult to see otherwise) for a period of time. Damage may not be perceptible to the unaided eye. It may be several weeks before some plants exhibit spider mite problems.

Avoid prophylactic or preventive sprays for any pest. Do not use any pesticides unless it is absolutely necessary for mites or insects. Monitor your plants and react accordingly. If an insect problem warrants chemical control in the landscape, avoid broad-spectrum materials, if possible so as not to harm mite predators (or other predators).

BIOLOGICAL CONTROL is an option under the right circumstances. You can conserve the effects of natural controls by avoiding unnecessary use of pesticides and by using selective materials when possible. Purchase and release of spider mite predators, such as predatory mites, can augment naturally occurring predator populations. There is evidence of this approach being useful in greenhouses, but little work has been done to show its effectiveness in the landscape.

CHEMICAL CONTROL is another option for mite management. Remember, mites feed on the undersides of leaves, so chemical coverage must be complete on both leaf surfaces. Insecticidal soaps are available that have successfully controlled spider mites. However,

repeated applications are necessary, and for unknown reasons, the results may sometimes be inconsistent. There are at least two synthetic conventional miticides available. Finally, do not use insecticides as "miticides". Continued applications can result in mite populations which are tolerant or resistant to the insecticide.

RECENT TREE FAILURES

by George Pinyuh, WSU Extension Agent

This past January's storm demonstrated a common horticultural problem, the inability of many smaller, recently planted trees to remain vertical under extreme wind

PROHORT Seminar Registration

<input type="checkbox"/> COLOR UPDATE	\$19
<input type="checkbox"/> LANDSCAPE WEED MANAGEMENT	\$17
<input type="checkbox"/> SPECIALTY NURSERY TOUR	\$17
TOTAL : \$_____	

Group Rates: five or more persons, less 20%. Group registrations must be accompanied by ONE check or purchase order at least one week in advance. Portion of fees may cover refreshments and speaker expense.

Make checks payable to the University of Washington; receipts available at the door. Mail payment and registration to: Center for Urban Horticulture/ProHort, University of Washington, GF-15, Seattle, WA 98195. For information, call 685-8033.

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To request disability accommodation contact the Office of the ADA Coordinator, at least ten days in advance of an event: 543-6450 (voice) 543-6452 (TDD); 685-3885 (FAX) access@u.washington.edu (E-mail)

conditions. Many trees planted within the last decade simply blew over. Entire root systems were lifted out of the ground with ease, revealing a canopy out of proportion to the roots. Ideally, a tree's root system should extend several times beyond the diameter of its top and should be able to hold it up during the fiercest gales; the top ought to be more prone to break off rather than the entire root system lifting right out of the soil.

Many of these tree failures can probably be traced back to poor planting procedures and maintenance. Planting in holes that are too small, adding unnecessary soil amendments, planting a plant with pot-bound roots, over-fertilizing and faulty or not pruning may be some of the practices we can blame for recent blowdowns.

Take for example planting. Holes dug two, three, or even more times the diameter of the rootballs, and then filled with loosened native

backfill are more likely to produce a favorable environment for the roots to begin to grow out beyond the diameter of the top of the plant. Research has shown the practice of adding large quantities of organic amendments to planting holes may actually have negative effects. Roots tend to not grow out beyond the planting hole; it having become too comfortable for them.

Problems can often be traced to the soils or media in which the plants were previously grown. When field grown plants produced in silt or clay soils are replanted in coarser textured soils, there may be problems with water movement between this new interface of soils. And of course with B & B stock, cut away or peel back the burlap to ensure outer root contact with the native backfill. Container plants are grown in very coarse textured, well aerated artificial media and should be treated in much the same way as burlapped stock. Straighten circling roots so they can begin to grow into

the backfill, or cut some of them to prevent continued growth in a circle

Many of the blowover situations might have been avoided if some occasional pruning had been carried out on the plants. Thinning, by removing entire branches from the trunk, can open up a heavily foliated conifer and allow wind to blow through it, not into it.

An overly large top-to-root ratio can often result from routine, annual fertilizer application. Unless trees are planted in extremely infertile soil, they probably will not need constant fertilizing. After the first few years, trees should be able to get along on their own in most soils.

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