



# PROHORT

Vol. 12, No. 2

Spring 1994

## TREES VERSUS SIDEWALKS

**Tuesday, June 14,** 9 a.m. to 2:30 p.m.  
Center for Urban Horticulture, **Seattle**

**OR**

**Wednesday, June 15,** 9 a.m. to 2:30 p.m.  
Spokane Co. Agriculture Center  
222 N. Havana, **Spokane**

\$27 at either site, includes UW-CUH parking fees, coffee breaks, and lunch. Specify date and location when registering for this program.

*This seminar earns 4.0 CEU's under the International Society of Arboriculture Certification Program.*

### RATIONALE:

Urban foresters, city officials, arborists, landscape professionals, Public Works personnel and homeowners are attempting to cope with the problems that result from the conflict between tree roots and sidewalks. Safety and liability issues, tree health, esthetic concerns, and cost of replacement and/or repair of both trees and sidewalks are all concerns.

### PRESENTATIONS:

**Dr. Alan Wagar, Research Professor of Urban Forestry,** UW Center for Urban Horticulture, briefly reviews tree root growth and development, and discusses research findings and practical and economic concerns regarding root barriers and other root protection strategies. Examples of products available and demonstrations of product use will be shared.

Based on his own research findings, **Dr. Philip Barker, Research Horticulturist, Urban Forestry Research,** USDA Forest Service Pacific Southwest Research Station, Berkeley, California, will discuss the possible benefits of root barriers. He will also address the natural follow-up question to this discussion—if barriers, what kind?

**Gordon Mann, Public Works Superintendent,** Redwood City, California, has been successfully managing his city's Sidewalk Repair Program for a decade. He will discuss the trees versus sidewalks management strategies (including barriers) that have been utilized in his community. He will share successes, failures, and concerns.

## RESIDENTIAL LANDSCAPE FIELD DIAGNOSIS

**Tuesday, June 21,** 8:30 a.m. to Noon  
Center for Urban Horticulture, University Area Home Sites  
\$17, includes UW-CUH parking fees and coffee breaks

*This seminar earns 3.0 hours WSDA Pesticide Recertification Credit.*

This seminar is appropriate for those professionals interested in gaining more experience and confidence in field diagnosis of insect and disease pest problems in a residential landscape setting.

### PRESENTATIONS:

Learn to recognize insect and disease pests of ornamentals and their damage. **Dr. Robert Gara, UW Professor of Forest Entomology,** discusses life cycles, target plants, damage symptoms and principles of field recognition for insect pests of common ornamental species. **Dr. Robert Edmonds, UW Professor of Forest Pathology and Soil Microbiology,** discusses life cycles, target plants, and symptoms of damage of frequently encountered disease organisms of common ornamental plants.

### FIELD WORK:

Refine your insect and disease recognition and diagnosis skills as we move into the field for practice. University area homeowners will provide site and management histories, as well as concerns or expectations. Participants will work under the guidance of instructors to diagnosis problems at these home sites. Discussions of management strategies will be provided.

Seminar registration includes parking fees at CUH. As you check in for the program, ask for your pre-paid parking permit.

ProHort Seminars are planned cooperatively by the UW Center for Urban Horticulture and the WSU Cooperative Extension—King County. South Seattle Community College and Edmonds Community College also assist cooperatively.

## OTHER EDUCATIONAL OPPORTUNITIES

**South Seattle Community College Spring Courses:** Garden Center Management; Spring Plant ID; Herbaceous Plant ID; Spring Maintenance; Insect ID; Plant Diseases; Turf Grass Culture; Tree Selection; Landscape Design; Landscape Construction. For information, call 764-5336.

**Edmonds Community College Spring Courses:** Spring Plant ID; Plant Diseases; Greenhouse Studies; Container Gardening; Turf, Annuals, Bulbs & Ferns; Rock Plants; Landscape Materials; Landscape Appreciation; Landscape Design II. For information, call 640-1679.

**Lake Washington Technical College Spring Courses:** Rhododendron Culture & Care; Arboriculture; Irrigation Design & Management; Lawns & Alternative Ground Covers; Spring Plant ID; Composting; Botany for Interiorscapes; Ornamental Landscape Plants; Pruning & Renovation. Call 828-5600 for information.

## INTERNATIONAL SYMPOSIUM TO BE HOSTED BY CUH

The UW Center for Urban Horticulture will host the **SECOND INTERNATIONAL SYMPOSIUM ON THE TAXONOMY OF CULTIVATED PLANTS** on August 10-15. This symposium will include papers and posters covering all aspects of the taxonomy of cultivated plants, including the following: communication, storing, and retrieval of information about cultivated plants; cultivar description, documentation, and publication; standards for cultivar recognition; cultivated plant taxonomy above the cultivar level; cultivar registration procedures, and national and regional programs; live and herbarium reference collections; cultivated versus "natural" plant taxonomy; patents, trademarks, and other legal issues.

The fee for the entire Symposium is \$150, but special daily fees will be made available for local attendees. Room and board packages are available through University of Washington Conference Housing.

For the complete brochure, more information, or to register, contact Jean Robins or Dave Stockdale at the Center for Urban Horticulture by phoning (206) 685-8033 or faxing (206) 685-2692.

ProHort Editorial Staff:  
Dave Stockdale, Education Coordinator, UW-CUH  
George Pinyuh, WSU County Extension Agent-Horticulture

## PROHORT BOOKSHELF

Compiled by Valerie Easton, Horticultural Librarian

All books listed are available for use in the Miller Library. Library hours are Monday, 9 a.m. to 8 p.m., Tuesday through Friday, 9 a.m. to 5 p.m. Closed Monday, May 30 (Memorial Day). Phone (206) 685-8033.

Archer-Wills, Anthony. *The Water Gardener: A Complete Guide to Designing, Constructing and Planting Water Features*. 1st US ed. New York: Barron's, 1993.

Bird, Richard. *Propagation of Hardy Perennials*. London: B.T. Batsford, 1993.

Cohn, Susan. *Green at Work: Finding a Business Career That Works for the Environment*. Washington, D.C.: Island Press, 1992.

Flink, Charles A., Robert M. Searns, and Loring L. Schwarz. *Greenways: A Guide to Planning, Design and Development*. Washington, D.C.: Island Press, 1993.

Mason, John. *Commercial Hydroponics*. Kenthurst, NSW: Kangaroo Press, 1990.

Menashe, Elliott, and the Washington Department of Ecology. *Vegetation Management: A Guide for Puget Sound Property*. Olympia: Washington State Department of Ecology, 1993.

Sharp, Bill, and the Environmental Careers Organization. *The New Complete Guide to Environmental Careers*. Washington, D.C.: Island Press, 1993.

## ABSTRACT THINKING: Current Research Abstracts of Interest for Your Review

Compiled by Dave Stockdale

### Trends in Plant Material Requirements of Landscape Architects

Garber, M. P., and K. Bondari. *Journal of Environmental Horticulture* 11(3): 110-115. September, 1993.

Landscape architects influence the demand for plant material when specifying plants for landscape projects. A survey of landscape architects in Georgia identified the value of plant material specified for none plant-types: deciduous trees (>3" caliper), deciduous trees (<3" caliper), evergreen trees, coniferous shrubs, broadleaf shrubs, perennials/ground-covers, native herbaceous, bedding plants, and turf. As a plant category, trees represented the largest proportion of plant material, approximately 50% of the total value for all firms. With the exception of turf, landscape architects are

expected to specify the same or greater value of plant material over the next five years, a positive economic sign for the nursery industry. The frequency of plant substitution due to lack of availability was greatest for the five plant-types generally produced as container nursery stock in Georgia: coniferous shrubs, broadleaf shrubs, perennials/groundcovers, native herbaceous, and bedding plants. The two trends identified by landscape architects as most likely to affect the type of plants specified over the next five years are water availability and need for low maintenance landscapes.

#### Reasonable Guidelines for Street Tree Diversity

Richards, N. *Journal of Arboriculture* 19(6): 344-350. November, 1993.

Street tree diversity should relate to a community's range of conditions and objectives for the trees, and therefore is best increased by improved planting sites that can support more species. It is illogical to try to increase street tree diversity by simple numerical limits on replanting common, proven-adapted species if this encourages more use of unproven or less-adapted species. Alternative guidelines are suggested for evaluating local populations, determining whether common species are overused, and testing additional species. Diversity also must relate to scale. While few species may be appropriate for a particular local situation, promotion of species through national markets is questioned. Wide promotion of a few cultivars within species is criticized in the interests of reasonable biodiversity.

#### Energy Conservation Potential of Urban Tree Planting

McPherson, E. Gregory, and Rowntree, Rowan A. *Journal of Arboriculture* 19(6): 321-331. November, 1993.

Findings from monitoring and computer simulation studies indicate that trees can be a cost-effective energy conservation measure for some electric utilities. Our simulations suggest that a single 25-ft tall tree can reduce annual heating and cooling costs of a typical residence by 8 to 12 percent. Assuming annual savings of \$10 per household, a nationwide residential tree planting program could eventually save about \$1 billion each year. A study of the potential for energy-conserving shade tree plantings within residential sections of San Diego found that over percent of all houses surveyed had space available for a tree opposite their west wall. The 30-year net present value of proposed shade tree plantings for demand side management in Fresno was projected to be \$22.3 million, with an overall benefit-cost ratio of 19. The largest benefits were attributed to property value enhancement, energy savings, avoided stormwater runoff, and atmospheric carbon removal, while greatest projected costs were from pruning, planting, and program administration.

#### Effectiveness of Three Barrier Materials for Stopping Regenerating Roots of Established Trees

Wagar, J. Alan, and Barker, Philip A. *Journal of Arboriculture* 19(6): 332-338. November, 1993.

In a search for effective barriers to prevent tree root damage to sidewalks, a tough nylon fabric, copper screen, and Biobarrier were tested against regenerating roots in 9-year-old plantations of hybrid cottonwood (*Populus trichocarpa* X *deltoides*), black cottonwood (*Populus trichocarpa*), and paper birch (*Betula papyrifera*). Roots were severed flush against vertical walls 3.5 feet from trees. Barrier panels were installed against the severed roots of some wall sections and control sections were left without barriers. Three years after installation, amounts of roots coming through all three of barriers were substantially less than amounts coming through equivalent control sections. Both the nylon and copper greatly stunted roots by constricting them to the size of openings in barrier materials, approximately 1/26- and 1/16-inch, respectively. Biobarrier, designed for slow release of the herbicide trifluralin, stopped all birch roots but let a few cottonwood roots through, apparently those of the most vigorous root systems.

### PROHORT Seminar Registration

___ TREES VERSUS SIDEWALKS, SEATTLE	\$27.00
___ TREES VERSUS SIDEWALKS, SPOKANE	\$27.00
___ RESIDENTIAL LANDSCAPE FIELD DIAGNOSIS	\$17.00
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.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Day Phone Evening Phone

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 (email)

## Nursery Production Alternatives for Reduction or Elimination of Circling Tree Roots

Appleton, Bonnie Lee. *Journal of Arboriculture* 19(6): 383-388. November, 1993.

Tree roots that circle during nursery production have the potential, once planted in the landscape, to enlarge and become girdling roots that may stress or kill trees. Several nursery production alternatives have been developed to address this problem including in-ground fabric, rigid plastic, and "pot-in-pot" containers, and above-ground modified rigid plastic, "low-profile," "soil sock" and copper-treated containers. Coating the interior wall of rigid containers (above and in-ground) with the root-regulating copper compound appears to be the most effective and economically justifiable alternative.

The Center for Urban Horticulture is dedicated to teaching, research and public service in urban horticulture, urban forestry and urban ecology.

## Assessing and Influencing Attitudes towards Water-Conserving Landscapes

Lohr, Virginia I., and Bummer, Lenore H. *HortTechnology* 2(2): 253-255. April/June, 1992.

Implementing water-conserving landscapes is one action that many individuals can take to help ease the nation's water crisis, but few people seem to be exercising this option. Some horticulturists attribute this to a negative attitude towards such landscapes. Our research was designed to assess these attitudes and see if they could be improved with information. Questionnaires were administered to people in treatment or control groups. Those in the treatment group viewed a short videotape about water issues and water-conserving landscapes. Initial attitudes in both groups were neutral or positive, not negative as predicted. Viewing the videotape was associated with significantly improved attitudes. People in the treatment group described water-conserving landscapes as less hot, more colorful, and more attractive three weeks after viewing the tape than they had initially.

To reprint material from this publication, obtain permission from the editor and cite ProHort.

Center for Urban Horticulture  
College of Forest Resources  
University of Washington, GF-15  
Seattle, WA 98195

NONPROFIT ORG.  
U.S. POSTAGE  
PAID  
Seattle, Wash.  
PERMIT No. 62

### Spring 1994

