



PROHORT

Vol. 12, No. 3

Summer 1994

P94315

OREGON NURSERY TOUR

Thursday, July 21, 7:30 a.m. to 8 p.m.

Departs from Center for Urban Horticulture

\$40; fee includes transportation to and from CUH, CUH parking fee, & sack lunch; does NOT include dinner.

Pre-registration required; tour size limited.

RATIONALE: As landscape professionals you often need to recommend, specify or select trees and shrubs. Many of these are grown in Oregon. Availability and quality are always of interest. On this tour we will learn about production practices and evaluate quality and availability as horticulturists provide us guided tours of their operations.

TOUR SITES: A. McGill & Sons in Gresham grow over 600 acres of shade and flowering trees under drip irrigation and have a large tissue culture operation. J. Frank Schmidt & Son Company of Boring, growers of a large variety of trees and shrubs, also maintain a large arboretum where older specimens of their trees can be appreciated. Iseli Nursery Incorporated, also in Boring, produce a variety of trees and shrubs and have many unusual grafted specimens.

WETLAND MITIGATION TOUR & EVALUATION

Wednesday, July 27, 8:30 a.m. to 12:30 p.m.

Center for Urban Horticulture & project sites

\$45; fee includes round-trip transportation to project sites from CUH, and CUH parking fees

Pre-registration required; course size limited

PRE-TOUR PROGRAM:

Beginning in the classroom at CUH, Carla Staedter, Mark Matthies, and Sarah Cassatt of Jones & Stokes Associates Incorporated, Bellevue, will describe in detail the wetland mitigation projects to be visited during our tour. One site is a new wetland associated with a stream restoration project, and the other is a three-year old wetland mitigation site. They will review site history, characteristics, project goals, project design and installation, and other relevant information.

TOUR & POST INSTALLATION REVIEW:

At each location, our instructors will review what has occurred since project installation. We will assess how well each site functions relative to project goals, and discuss why or why not goals have been achieved. Participants will be encouraged to share suggestions, concerns or questions throughout the day. Bus transportation to and from the sites is provided.

URBAN SOILS

This seminar is jointly presented by CUH and the Washington State Nursery & Landscape Association.

Friday, September 16, 9 a.m. to 4 p.m.

Center for Urban Horticulture

\$35; fee includes lunch, breaks and CUH parking fee

TO REGISTER: Pre-registration required; contact Vicki Wilson of WSNLA at 1-(800) 672-7711 before September 12.

URBAN SOIL OVERVIEW: Clarify your understanding of urban soil composition, characteristics, development, and the problems that occur with this overview provided by Dr. Ray Maleike, Extension Horticulturist, WSU-Puyallup.

ROOTS & URBAN SOILS: Dr. Rita Hummel, Associate Professor, WSU-Puyallup, reviews plant root physiology, growth and development. She will then discuss the impacts of urban soils on these processes.

IMPACTS OF MYCORRHIZAE: The role and impacts of soil mycorrhizae in plant growth will be presented by Dr. Charles Johnson, Chair of the Horticulture & Landscape Architecture Department, WSU-Pullman.

THREE VIEWS ON THE AMELIORATION OF URBANIZED SOILS: Russ Rosenthal, State Horticulturist, Washington State Department of Transportation, will review the soil amendment and management strategies utilized by the WADOT. Fred Palmer, owner of Star Nursery, will share ideas and strategies on soil amelioration and management from his perspective as a landscaper. Jerry Clark, Seattle City Arborist, shares strategies based on his recommendations and practical experience as an urban forestry professional.

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OTHER EDUCATIONAL OPPORTUNITIES

Hot off the press--a new booklist available in the Miller Library: *Starting and Running a Horticultural Business*.

The PACIFIC NORTHWEST CHAPTER OF THE INTERNATIONAL SOCIETY OF ARBORICULTURE ANNUAL TRAINING CONFERENCE will be held October 5-7 in Victoria, B.C. A Certified Arborist exam will be given on October 4 in Victoria as well. For information on the exam or the Conference, please contact the PNW ISA office at: P. O. Box 65054, Seattle WA, 98155, phone (206) 365-3901 or fax (206) 365-3903.

The SOCIETY OF MUNICIPAL ARBORISTS 30th ANNUAL CONFERENCE & TRADE SHOW will be held in Seattle on October 2-6 at the Stouffer Madison Hotel in downtown. The theme is "Urban Forestry for the '90s". For registration information contact: Jerry Clark, Seattle City Arborist, Room 110, 600 4th Avenue, Seattle WA, 98104, phone (206) 684-7649.

The SECOND INTERNATIONAL SYMPOSIUM ON THE TAXONOMY OF CULTIVATED PLANTS will be held August 10-15 at the Center for Urban Horticulture. For the complete brochure or other information, contact Dave Stockdale or Jean Robins at the Center by phoning (206) 685-8033 or faxing (206) 685-2692.

EDMONDS COMMUNITY COLLEGE SUMMER COURSES: Flower Arranging; Rhododendrons & Azaleas; Small Space Gardening; Landscape Composting; Waterwise Gardening; Greenhouse Studies; Herbs; Turf Pests; Summer Pruning; Weed Identification & Management. For information, call 640-1679.

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

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

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

ABSTRACT THINKING: Current Research Abstracts of Interest for Your Review

Compiled by Dave Stockdale

Ozone Air Pollution Increases Petroleum Spray Oil Phytotoxicity

W. A. Retzlaff, W. W. Barnett, and Williams, L. E.,
HortScience 29(2):93-94, February, 1994.

Japanese plum (*Prunus salicina* 'Casselman') trees exposed to three atmospheric ozone partial pressure treatments were sprayed with a summer application of Volck Supreme oil (1% aqueous solution) to control an outbreak of spider mites (*Tetranychus* spp.). Phytotoxic effects were observed on the foliage of trees in the plots exposed to ambient or higher atmospheric ozone partial pressures 5 days following spray application. Foliage on trees exposed to 0.044 and 0.081 $\mu\text{Pa}\cdot\text{Pa}^{-1}$ ozone partial pressures developed water spotting and more foliage abscission than trees exposed to charcoal-filtered air. Thus, ozone air-pollution stress may predispose plants to increased phytotoxicity from summer oils.

Ecological Basis for Selecting Urban Trees

G. Ware, *Journal of Arboriculture* 20(2):98-103, March, 1994.

Survivability of urban trees is closely related to their "toughness" or inherent capacity to endure stress. Stress-tolerance can usually be gauged by addressing ecological adversities of the natural environment of trees as components of ecosystems. Survival and contributions of urban trees depend upon three major considerations: selection of appropriate trees, choice and preparation of favorable planting places, and handling and follow-up care.

New Legislative Ways of Protecting Trees in Municipalities:

An Overview of the British Columbia Approach

J. A. Dunster, *Journal of Arboriculture* 20(2):109-113, March, 1994.

In 1992 the Municipal Act of British Columbia was amended, allowing municipalities to enact by-laws governing the protection, removal, and replacement of trees on public and private property. The new legislation has the potential to introduce major changes into the way new urban settlements are designed and created. So far, only a few municipalities have passed by-laws under the amended legislation, although many are actively investigating the ramifications. In this paper, the new legislation and progress to date is briefly reviewed. The problems inherent in managing the urban forests of the Lower Mainland of British Columbia are discussed, along with the need for enhanced knowledge in light of some recent court cases involving construction damage and potential negligence issues.

Urban Soil Temperatures and Their Potential Impact on Tree Growth

W, R. Graves. *Journal of Arboriculture* 20(1):24-27. January, 1994.

Urban soil temperatures vary, but appear greatest where asphalt and concrete surfaces, direct solar radiation, and underground utilities are present. The effects of temperatures typical of urban soils on the growth of several tree species has been evaluated. Honeylocust (*Gleditsia triacanthos*) is among the most heat-resistant species studied to date, with a threshold temperature at which injury occurs of around 34°C (93°F). More extreme heat causes marked growth reductions and chlorosis of terminal leaves, which appears to result from deficiencies in iron and other essential elements. Breeding and selection of tree genotypes with superior heat resistance for use at stressful urban sites appears feasible.

A Review of the Effects of Soil Compaction and Amelioration Treatments on Landscape Trees

Day, S. B., and Bassuk, N. L. *Journal of Arboriculture* 20(1):9-17. January, 1994.

Compacted soil is a frequently encountered problem on urban and community landscape sites. Numerous site amelioration methods and planting techniques have been employed to counteract the harmful effects of soil compaction on plant establishment and growth. Recent research aimed at examining the effectiveness of these techniques has given mixed results. It is evident that compaction restricts woody plant growth, but the nature and causes of the

restriction are not completely understood. This is partly a result of the difficulty in separating the effects of interrelated factors such as physical impedance to roots, soil gas exchange, and drainage. Consequently, it is difficult to prescribe with confidence techniques to improve compacted soil conditions for landscape trees. A review of our current understanding of soil compaction and its amelioration is presented here from the perspective of woody plant establishment.

Training Persons With Mental Disabilities as Greenhouse Integrated Pest Management Scouts

Eddy, R. T., and Sadof, C. S. *HortTechnology* 3(4):459-450. Oct./Dec., 1993.

Horticulture businesses will be encouraged to hire qualified individuals with disabilities due to the enactment of the Americans with Disabilities Act of 1990. Maintaining a safe workplace is a considerable challenge due to the use and storage of restricted-use pesticides. In a vocational training program, two persons with mental disabilities were trained to be effective Integrated Pest Management scouts using systematic teaching procedures. Trainees acquired employable skills while providing a service that enabled management to reduce the use of conventional pesticides on a greenhouse poinsettia crop by up to 65%.

Utilization of Sewage Sludge Compost in Horticulture

Gouin, F. R. *HortTechnology* 3(2):161-163. Apr/Jun, 1993.

Sewage sludge is being converted to compost by many municipalities. Its use in the production, establishment, and/or maintenance of horticultural crops is dependent on soluble salt concentration, particle size, stability, dewatering procedures, storage conditions, and crop needs. Soluble salt concentration has the greatest effect on the amount of compost that can be used as a soil or potting media amendment. Because composted sewage sludge is rich in plant nutrients, it can supply many of the nutrient needs of plants, depending on the amount used and if the plants are grown in the ground or in containers. However, improper storage of composted sewage sludge can render the product useless due to the accumulation of acetic acid and alcohol that occur under anaerobic conditions.

Plant Health Care and the Public

Ball, J. *Journal of Arboriculture* 20(1):33-37. January, 1994.

Plant health care has replaced integrated pest management as the new standard of the arboricultural profession. The focus of plant health care is on the tree and its owner, not the pest. This will require a change in how

PROHORT Seminar Registration

<input type="checkbox"/> OREGON NURSERY TOUR	\$40.00
<input type="checkbox"/> WETLAND MITIGATION TOUR & EVALUATION	\$45.00
<input type="checkbox"/> URBAN SOILS	\$35.00
	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)

arborists market this new service. This paper presents some of the current homeowner attitudes regarding gardening, pest management and plant care, and how to use this information in marketing.

Soil Compaction on Heavily Used Sites

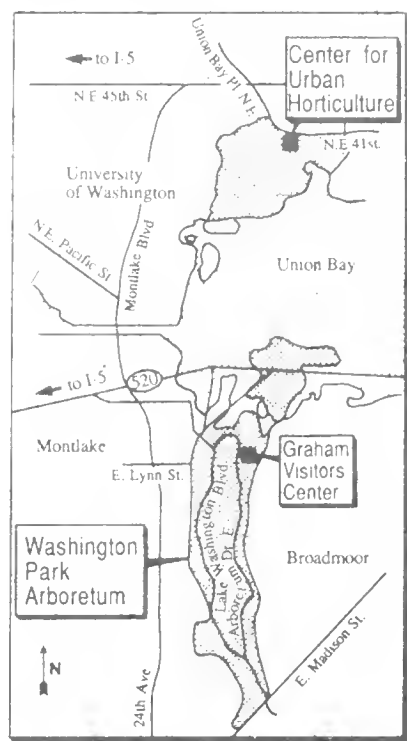
Craul, P. J. *Journal of Arboriculture* 20(2):69-74. March, 1994.

Compaction of soil is a detrimental result of heavy human use of a site. The destruction of the associated vegetation is an accompanying feature. Soil compaction causes reduced water infiltration, loss of pore space and increased soil density, decreased waterholding capacity, reduced aeration, increased mechanical impedance due to root growth with concomitant decrease in nutrient uptake, and reduction in soil microorganism activity. Amelioration of soil compaction under existing vegetative cover, especially trees, is difficult without some injury to the root systems. Some standard methods of surface soil aeration exist that can be applied to turf and some tree areas, but amelioration of compacted subsoils is very difficult in most cases. For existing tree and their root systems, radial trenching appears to be a promising technique for compaction amelioration.

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

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Summer 1994



PROHORT BOOKSHELF

by Valerie Easton, Horticultural Librarian

While most titles listed in this column are reference books, Miller Library also has a lending collection of more than 700 books, journals, and videos available for checkout. Hours are Monday, 9 a.m. to 8 p.m., Tuesday — Friday, 9 a.m. to 5 p.m. Closed July 4 and September 5. Phone: (206) 685-8033.

Hannebaum, Leroy G. *Landscape Operations: Management, Methods and Materials*. New York: Prentice-Hall, 1992.

Harker, Donald, and Sherri Evans. *Landscape-Restoration Handbook*. Boca Raton: Lewis Publishers, 1993.

Ingels, Jack E. *Ornamental Horticulture: Science, Operations and Management*. Albany, NY: Delmar, 1994.

Landscape Industry Wage and Benefit Study. Washington, DC: Associated Landscape Contractors of America, 1994.

Matheny, Nelda P., and James Clark. *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas*. 2nd ed. Savoy, IL: International Society of Arboriculture, 1994.

Simpson, Nan Booth. *Great Garden Sources of the Pacific Northwest*. Portland, OR: The Authors Communication Team, 1994.

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