



**Center for Urban Horticulture  
University of Washington**

Vol. 6, No. 3

**Cooperative Extension  
Washington State University**

Summer 1988

## **LANDSCAPE MAINTENANCE SEMINARS**

*... for the landscape  
professional*

Cooperating: Center for Urban Horticulture, University of Washington; Cooperative Extension Service, Washington State University; Edmonds Community College; South Seattle Community College.

### **Landscape Power Equipment**

Date : Monday, July 25  
Time : 9 a.m. to 12 noon  
Location : Center for Urban  
Horticulture  
Instructor : Chuck Nolan

Proper equipment can save you time and money. It can also help you do a nicer job. Learn what's new in landscape power equipment—mowers, aerifiers, edgers, line trimmers, blowers, etc. Emphasis will be placed on the efficiencies of different types of equipment. You will be provided with the facts—pro and con—to choose the appropriate equipment for your specific needs. Several pieces of equipment will be displayed and demonstrated.

Chuck Nolan has spent most of his life in the landscape industry, first as a tree trimmer, later as a golf course superintendent, and for the past several years, as a representative of Northwest Mowers Inc.

**PRO HORT Editorial Staff:**  
Dr. John A. Wott  
George J. Pinyuh  
Van M. Bobbitt, editor

### **Plant Parasitic Nematodes**

Date : Tuesday, August 23  
Time : 9 a.m. to 12 noon  
Location : Center for Urban  
Horticulture  
Instructor : Dr. Fred McElroy

Nematodes can weaken plants, cause dwarfing, and transmit plant viruses. Discover what nematodes are, how they are spread, which landscape plants they can affect, and what control strategies are available.

Dr. McElroy, owner of Peninsu-Lab in Kingston, Washington, offers diagnostic services to the forestry, agricultural, and horticultural industries. He completed his undergraduate work at Washington State University and received a Ph.D. in plant pathology/nematology from the University of California at Riverside.

*This seminar qualifies for three hours of WSDA pesticide license recertification credit.*

### **Managing Soil Compaction/Efficient Irrigation**

Date : Thursday, September 8  
Time : 9 a.m. to 12 noon  
Location : Center for Urban  
Horticulture  
Instructor : Dennis R. Pittenger

Understand how soil compaction occurs and possible solutions for it. Find out when and how to amend soils. Practical approaches for determining water needs and irrigation schedules of landscape plants will also be discussed.

Dennis Pittenger is the urban horticulture specialist with the University of California Cooperative Extension. He provides technical support for county extension advisors and members of the landscape industry. His main interests are landscape irrigation and soil management, species selection, and tree management.

### **Parking**

Free parking will be available for those attending Pro Hort seminars. Please park in parking lot if space is available.

## **OTHER EDUCATIONAL RESOURCES**

**Turf Management Seminar in Bellingham.** Update your knowledge of herbicides, fungicides, insecticides, and growth regulators available to turf managers. Review fertilizer formulations and the importance of proper timing of application. James Chapman, manager of the commercial turf department at the Chas. H. Lilly Company, will present a seminar on turf management chemicals and fertilizers on Saturday, August 13, 9 a.m. to 12 noon, at Bellingham Vocational Technical Institute. This program qualifies for two hours of WSDA pesticide license recertification credit. The registration fee is \$12.50 before August 5 and \$15 after. For details, call Van Bobbitt, Center for Urban Horticulture, 545-8033.

**An Inside View of How Plants Grow: Practical Plant Physiology.** August 26-28 at the Center for Urban Horticulture. In this seminar, Dr. Barbara Smit, assistant professor at the Center for Urban Horticulture, will show you how plants really work—how they photosynthesize, how they use nutrients, how they react to stress. A \$75 registration fee, which must be received by July 25, includes instructional materials, refreshments, Friday evening reception, and Saturday lunch. Registration forms may be obtained at the Center for Urban Horticulture. This is part of the American Rose Society's national seminar series which is designed to provide advanced training to rosarians and other horticulturists.

**International Society of Arboriculture's Annual Conference.** August 14-17, Vancouver, B.C. This outstanding educational program will include speakers such as Dr. Alex Shigo and Dr. Richard Harris, author of *Arboriculture—Care of Trees, Shrubs, and Vines in the Landscape*. The registration fee, which must be received before July 15, is \$190. To request a registration packet, call (217) 328-2032.

**Edmonds Community College Horticulture Courses—Summer 1988.** Integrated Pest Management, Monday and Wednesday evenings, July 11-27; Advanced Plant ID, Tuesday and Thursday evenings, June 28-August 18; Summer Propagation, Thursday afternoons, June 30-July 28. 771-1679.

**Lake Washington Voc Tech Horticulture Course—Summer 1988.** Landscape Irrigation: The Basic Nuts and Bolts, Tuesday evenings, June 28-August 16. 828-5627.

**South Seattle Community College Horticulture Courses—Summer 1988.** Plant Materials for the Northwest, Tuesdays, 5-9 p.m., June 21-August 9; Plant Propagation Workshop, Wednesdays, 9 a.m.-3 p.m., June 22-August 10. 764-5336.

## ARTICLES

### Is Chemical Defruiting Practical in the Landscape?

Dr. James R. Clark  
Center for Urban Horticulture  
University of Washington

In the past few weeks, the question of defruiting landscape trees has arisen a number of times. The inquiry usually centers upon a method to reduce or eliminate the production of unwanted fruit. The situations usually involve a litter problem, i.e., staining a paved surface, accumulating in hard-to-clean areas, serving as a weed source. In the absence of fruitless cultivars of many woody plants, the questioner wants to know of methods to solve the problem.

One possible approach is the use of chemical materials to either prevent fruit production or to induce premature fruit drop. This technique is utilized in the apply industry, where crops are routinely thinned, chemically and by hand. Harris discussed several chemical alternatives and possible approaches in *Arboriculture—Care of Trees, Shrubs, and Vines in the Landscape*. However, to my knowledge, the actual use of

such techniques in the landscape has been limited.

Several reasons may explain this. First, there is a general concern about pesticide use in the landscape by clients. Second, the demand is small—it is a speciality market. Third, the information base about chemical defruiting is relatively limited.

Regarding the available information on chemical defruiting, the following facts seem important:

1. The 1987 *Pacific Northwest Weed Control Handbook* recommends the use of Ethrel or Florel for defruiting. The active ingredient in both chemicals is ethephon.

2. The Florel label reads: ". . . will reduce or eliminate undesirable fruit from apple trees, crabapple trees, carob trees, and olive trees." I spoke with the Washington State Department of Agriculture about this label, and the initial reaction of Mary Toohey was that an applicator could not use Florel on any tree species but the four mentioned.

3. Atrimec is another plant growth regulator labeled for the "suppression of flower and fruit formation." It is labeled for use on olive (*Olea* sp.), and glossy privet (*Ligustrum lucidum*), multiflora rose (*Rosa multiflora*), and Japanese holly (*Ilex crenata*). Thanks to Duncan Murphy of AAA Spraying in Seattle for providing this information.

4. Sevin has also been suggested as a possible chemical defruiting material. It has been used as a thinning agent in commercial apple orchards. However, it is not labeled for defruiting of landscape trees and shrubs. When used in the control of tent caterpillars, reduced fruiting has been observed.

If there are any other personal experiences with these or other chemicals for use in defruiting I would be very interested in learning about them.

I think there is great potential for using these materials to solve the problem of unwanted fruit. But for now, it appears that the use of chemical defruiting methods will be limited to a small number of plant species due to the label restrictions of the chemicals available.

### Plant Palette: *Itea ilicifolia*

Timothy Hohn  
Center for Urban Horticulture  
University of Washington

Some plants seem to be relegated to the shadows of horticultural awareness, shade loving or not, with an unexplainable lack of curiosity. *Itea ilicifolia*, though first intro-

duced to British gardeners in 1895, still resides in relative obscurity there and is virtually unknown in North America. Pitiful neglect!

Described as a glossy, dark green shrub covered with thin, pendulous inflorescences of white flowers growing on cliffs along the Yangtse River in Hupeh Province, China, Dr. E. H. Wilson goes on to recommend *Itea ilicifolia*, occasionally known as the holly-leaved sweetspire, in the *Aristocrats of the Garden*, published in 1926. Not so much an unknown plant, but an ungrown one.

We have a single specimen of this particular evergreen *Itea* in the Arboretum, although we also have others of its deciduous American relative, *Itea virginica*. There are 20 known species of sweetspire with most of them inhabiting the subtropical and tropical regions of Asia. They belong to the family Grossulariaceae along with *Ribes*, *Escalonia*, and others. Superficial inspection may justify the common name "holly-leaved," although it appears quite different from other known members of the genus and the family. The simple, evergreen leaves are alternate, ovate, 2-4" long, and do have marginal spines similar to holly, but the leaves are not nearly so stiff. The flowers appear in July on pendulous racemes up to 12" long! Each inflorescence has the appearance of a drooping pipe cleaner as they dangle from the ends of the branches. The flowers are not pure white, but tinged with a slight, cooling touch of green. The fruit is of negligible ornamental value.

The specimen in the Arboretum was planted in 1952 and is now approximately 6-8' in height. The stems emerge from a central crown and arch outward giving the shrub a spread nearly equal to its height. While hardiness ratings vary in the literature from USDA zone 7 to no less than zone 9, our plant has suffered only defoliation during our occasional severe winters. It appears unfettered by pest or disease problems. This specimen produces a showy display of flowers in the shade of big-leaf maple and Douglas fir.

Pruning, though it can be accomplished through old cane removal and heading back in the early spring, is usually unnecessary. Plants should perform well in a moist, well-drained soil of variable pH, in either sun or shade. Plants in full sun will probably require summer irrigation and mulched or shaded root zones. Propagation by cuttings taken from midsummer to early fall, treated with 8000 ppm IBA-talc, and placed under mist in a well-drained peat:perlite mix, should show good rooting.

*Itea ilicifolia* makes a striking wall shrub with its evergreen foliage and pendulous inflorescences. One could easily consider it the summer-blooming counterpart to

*Garrya elliptica*, the silk tassel bush which is native to Oregon and California. The dark green leaves are a perfect background for showy companions, especially those with distinctly horizontal or vertical lines which contrast with the drooping pipe cleaners of the *Itea*.

*Itea ilicifolia* can be seen in the Asiatic maple section of the Washington Park Arboretum—ask for specific directions at the reception desk in the Graham Visitors Center. Please let me know if you would like propagules for establishing stock plants.

## Low Water Use Trees

George Pinyuh  
Cooperative Extension  
Washington State University

<u>Scientific name</u>	<u>Common name</u>
<i>Acer ginnala</i>	Amur maple
<i>Acer glabrum</i>	Rocky Mountain maple
<i>Acer saccharum</i> subsp. <i>grandidentatum</i>	Bigtooth maple
<i>Acer negundo</i>	Box elder
<i>Aesculus californica</i>	California buckeye
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Albizia julibrissin</i> 'Rosea'	Silk tree

<i>Aralia elata</i>	Japanese angelica tree
<i>Arbutus menziesii</i>	Madrone
<i>Arbutus unedo</i>	Strawberry tree
<i>Broussonetia papyrifera</i>	Paper mulberry
<i>Calocedrus decurrens</i>	Incense cedar
<i>Castanea mollissima</i>	Chinese chestnut
<i>Catalpa speciosa</i>	Western catalpa
<i>Cedrus atlantica</i>	Atlas cedar
<i>Cedrus deodara</i>	Deodar cedar
<i>Celtis australis</i>	European hackberry
<i>Celtis occidentalis</i>	Common hackberry
<i>Celtis reticulata</i>	Western hackberry
<i>Celtis sinensis</i>	Chinese hackberry
<i>Cercis occidentalis</i>	Western redbud
<i>Cercocarpus betuloides</i>	Birch-leaf mountain mahogany
<i>Cercocarpus ledifolius</i>	Curl-leaf mountain mahogany
<i>Chrysolepis chrysophylla</i>	Golden chinquapin
<i>Cornus nuttallii</i>	Western dogwood
<i>Cotinus obovatus</i>	American smoke tree
<i>Crataegus</i> spp.	Hawthorn species
X <i>Cupressocyparis leylandii</i>	Leyland cypress
<i>Cupressus glabra</i>	Arizona cypress
<i>Eucalyptus niphophila</i>	Snow gum
<i>Ficus carica</i>	Common fig
<i>Fraxinus oxycarpa</i> 'Raywood'	Claret ash

<i>Fraxinus pennsylvanica</i> cvs.	Green ash cultivars
<i>Ginkgo biloba</i>	Ginkgo
<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless honey locust
<i>Ilex aquifolium</i>	English holly
<i>Juglans hindsii</i>	California black walnut
<i>Juglans</i> spp.	other walnut species
<i>Juniperus</i> spp.	Juniper species
<i>Koelreuteria paniculata</i>	Golden-rain tree
<i>Laurus nobilis</i>	Mediterranean laurel
<i>Ligustrum lucidum</i>	Glossy privet
<i>Lithocarpus densiflorus</i>	Tan oak
<i>Maclura pomifera</i>	Osage orange
<i>Morus alba</i>	White mulberry
<i>Morus nigra</i>	Black mulberry
<i>Phellodendron amurense</i>	Amur cork tree
<i>Photinia serrulata</i>	Chinese photinia
<i>Pinus</i> spp.	most pines
<i>Platanus x acerifolia</i>	London plane tree
<i>Prunus laurocerasus</i>	Cherry laurel
<i>Prunus lusitanica</i>	Portuguese laurel
<i>Pseudotsuga menziesii</i>	Douglas fir
<i>Quercus chrysolepis</i>	Canyon live oak
<i>Quercus garryana</i>	Garry oak
<i>Quercus ilex</i>	Holly oak
<i>Quercus kelloggii</i>	California black oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus</i> spp.	many other oak species
<i>Robinia pseudoacacia</i>	Black locust
<i>Sambucus caerulea</i>	Blue Elderberry
<i>Sassafras albidum</i>	Sassafras
<i>Sequoiadendron giganteum</i>	Giant sequoia
<i>Sophora japonica</i>	Japanese pagoda tree
<i>Sorbus aucuparia</i>	European mountain ash
<i>Thuja plicata</i>	Western red cedar
<i>Tilia tomentosa</i>	Silver linden
<i>Ulmus parvifolia</i>	Chinese elm
<i>Umbellularia californica</i>	Oregon myrtle
<i>Zelkova serrata</i>	Japanese zelkova

For a more extensive listing of drought resistant plants for the Puget Sound area, obtain *Low Water Use Plants*, KC #125, from King County Cooperative Extension, (206) 296-3986.



### Registration Form: Landscape Maintenance Seminars

___ Complete Series: Equipment, Nematodes, Compaction .....	\$31.50
___ Landscape Equipment .....	\$13.00
___ Nematodes .....	\$13.00
___ Soil Compaction/Irrigation .....	\$13.00
TOTAL: \$_____	

#### Group Rates:

Firms/institutions sending two or more employees per seminar. The rates are:  
2-5 employees. . . . \$10.50/person    6 or more employees. . . . \$ 9.50/person

To qualify for group rates: (1) firm's registration must be received at least one week in advance; (2) all registrants must be from the same firm; and (3) total registration fee must be paid with one check or purchase order.

Firms using purchase orders must make prior registration arrangements.

Make checks payable to the University of Washington; no bank cards.

Portion of fees may cover refreshments and speakers' expenses.

Receipts will not be returned by mail; they will be available at the door.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE (DAY) \_\_\_\_\_ PHONE (EVE) \_\_\_\_\_

Mail payment and registration to: Urban Horticulture Program, University of Washington, GF-15, Seattle, WA 98195

For more information please call 545-8033.

# Homeoclimatic Approach to Plant Selection

Dr. Clement Hamilton  
Center for Urban Horticulture  
University of Washington

Landscape plants are most likely to perform well in areas whose climate is most similar to their native regions. This common-sense proposition is gaining adherents once again, as man-made landscapes in the Pacific Northwest suffer the consequences of last year's severe (but not outrageously unusual) drought. It is no wonder that azaleas need more summer watering than does *Gaultheria shallon*, for instance; the latter, native to our area, "expects" summer drought, whereas an azalea from the south-east U.S. is "accustomed" to plenty of summer rainfall.

Given that general principle, which sometimes goes under the heading "homeoclimatic horticulture," we in the Puget Sound area can look to several regions in the world for predictably successful plant material. Our climate may be characterized as "cool winter-rain," that is, having a preponderance of precipitation in the winter, relative drought in the summer, and cooler tem-

peratures than truly Mediterranean-type climates. Our conditions are duplicated broadly in (a) cooler parts of the Mediterranean basin and (b) the lakes region in south-central Chile. (Other winter-rain regions, namely southern Australia and South Africa, are generally too warm to match our climate, even though several species from these regions do well in our landscapes.)

Perusal of two lists of proven drought-resistant trees, one compiled by George Pinyuh (Washington State University) and one in the *Sunset New Western Garden Book*, reveals a preponderance of species from winter-rain regions. Several examples from the cooler Mediterranean areas are *Albizia julibrissin*, *Cedrus atlantica*, *Ficus carica*, *Tilia tomentosa*, and several species of *Pinus* and *Quercus*. Winter-rain western U.S. has yielded many tough customers, such as *Aesculus californica*, *Sequoiadendron giganteum*, and yet more species of *Pinus* and *Quercus*. This is not to say that all drought-resistant trees hail from winter-rain regions—witness *Koelreuteria paniculata* from eastern Asia—but rather that these are indeed the logical places to look first for the best results.

Plants from Chile have not yet made great inroads in Pacific Northwest landscapes; that requires remedy, especially in light of

our climatic similarity with the "lakes region" between Valdivia and Puerto Montt. To that end, I and a graduate student, Ms. Sarah Reichard, recently spent two months in that area conducting taxonomic and plant materials research. We saw old favorites *Escallonia* and *Araucaria araucana* (female cones appear usually to break up on the tree before they can fall and clobber someone) as well as lesser known species such as *Drimys winteri*, *Desfontainea spinosa*, and *Eucryphia cordifolia*. Some areas—known as "ñadis"—are characterized by particularly poor drainage; this is also a problem plaguing many street tree sites. It was therefore gratifying to see that one of the most common (and variable) ñadi plants, *Embothrium coccineum*, is also one of the most successful street trees in Puerto Montt. The many species of *Nothofagus*, which North Americans have inexplicably ignored, also have tremendous potential for landscape use here.

Our work in Chile illustrates the essence of the homeoclimatic approach: locate an area with a similar climate and concentrate especially on habitats with "urban-type" stresses. This is one crucial step towards an urban landscape with ever more appropriate plants.

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