INDUMENTUM

VANCOUVER Rhododendron SOCIETY

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General Meeting:

September 20th - 7:30 P.M. at the Vandusen Botanic Garden in the Floral Hall.

Lecture Program:

Douglas Justice, associate director and curator of collections at the UBC Botanic Garden and Centre for Plant Research, Lecturing on - "Unusual Trees at the UBC Botanic Garden"

Douglas Justice certainly needs no introduction to VRS members, a phrase often used at the beginning of introductions. But Douglas is everybody's hero at the Vancouver Rhododendron Society—being the tall, good looking, good natured, and the extremely knowledgeable plantsman that he is. Moreover, we have the good fortune to have him make monthly presentations telling us about plants from the UBC Botanic Garden according to their seasons. Photo right Douglas walks among giant rhodos in the David Lam Asian garden at UBC.

Those of you who have joined the VRS within the last couple of years may not be aware of what Douglas does when not attending VRS meetings, but older members will surely remember, in detail, the biographical sketch I wrote of him in the fall of 2003 when he was last the primary speaker at a VRS meeting: that he is 'Associate Director and Curator of Collections at the UBC Botanic Garden. His primary responsibilities are the day to day operations of the garden and the living plant collections, which comprise some 8000 taxa from around the temperate world. This means that he is responsible for the development, verification, documentation and interpretation of the Botanical Garden plant collections. Moreover, he directs plant breeding, clonal selection and plant development for the Garden itself and for its now renowned Plant Introduction Scheme..

See "**Douglas is also a liaison"** on Page 2

Douglas is also a liaison for the BC nursery and landscape industry, the BC Horticulture Articulation Committee, the H.M. Eddie Plant Development Foundation, and the UBC Faculty of Agricultural Sciences Horticulture Curriculum Committee. Photo left Douglas inspects a Wollemi pine at the Faculty of Land and Food Systems at the University of British Columbia, photo courtesy of the University of British Columbia. Read more at this link http://www.landfood.ubc.ca/aboutus/reachout/issue-08/jurassic_pine.htm . And he teaches (very successfully evidently), and works as a consultant in various horticultural areas. He is the author of numerous articles, particularly on maples and rhododendrons, but on other botanical subjects as well.'

In his youth Douglas worked as an apprentice, first in Stanley Park under the venerable Alleyne Cook's direction, then at Windsor Great Park, England', under the direction of the late distinguished horticulturist John Bond. His more formal training, so far, involves a Bachelor's degree in Horticulture and a Master's in Botany from UBC. Before moving to UBC, Douglas worked as a horticulture instructor at Kwantlen University College. In addition to being an active member of the Vancouver Rhododendron Society, he is 'a founding member and past President of the Native Plant Society of BC and a founding member and a North American Vice President of the North American branch of the Maple Society'. More important, he is a former member of the VRS Executive and Editor of the Indumentum, to which he gave its name.

In discussing Douglas's topic for his lecture the evening of September 20th, the original idea was a follow-up on his 2003 lecture on Asiatic maples, but this was then expanded to other ornamental trees, hence 'Unusual Asian Trees at UBC Botanic Garden'. Since you all know Douglas Justice, I know none of you will want to miss this talk.

Joe Ronsley

Message from the VRS President

Welcome back everyone. With the publication of this Indumentum, or the first Executive Meeting taking place at the home of **Don Haslem,** whichever comes first, the 2007-2008 season of the Vancouver Rhododendron Society begins.

We hope, and expect, to have a wonderful year. While the Programme Directors have been a little slow in putting together the programme this year—there is still one TBA—the final result of programme planning appears to be excellent, beginning with our own **Douglas Justice** as speaker in September. He will be followed in October by the new Director of VanDusen Botanical Garden, **Chris Woods**, our host in the Floral Hall as it were. The entire programme can be seen elsewhere in this Indumentum. Douglas Justice, or his surrogate, will also be at all the meetings introducing us to all kinds of plants. Rhododendrons alone do not make a garden.

There are a couple other features of our monthly meetings that give them a special interest and vitality. **Sean Rafferty** will be arranging for our growers to offer plants for sale as usual. These plants for the most part are not generally available, and their availability to VRS members is one of the distinct benefits of membership.

We want the raffle table, too, to be overflowing with an abundance of highly desirable objects. Our growers usually contribute to this, but I encourage everyone who has a plant to spare, or anything else that members may want - eggs, jam, wine, a joint of roast beef, to contribute to the raffle table as well. The more that's on the table, the more raffle tickets we sell, and the better off we are to pay the rent, in addition to the simple interest and excitement of the members that the raffle provides. And don't forget the refreshment table either; **Jacquie Clayton** and **Barbara Forsythe** are doing the work here, but it is up to members to provide. The sociability and conversation during the refreshment period are as important as any other aspect of VRS membership.

Finally, we have a rather extensive collection of books in our library, and I encourage you to browse through them at meetings (before and after, that is), and occasionally take one home to read more carefully. **Jasbir Gill** is in charge, and she will check out books for you.

And still one thing more I ask you to do; would each of you bring a gardening friend who is not a VRS member to the September meeting? None will be required to join the VRS, but certainly none will be prevented from doing so if they wish, but they may just have a good time and find our organization interesting. Let's have a great year.

Joanne Ronsley
VRS President

VANCOUVER RHODODENDRON SOCIETY
PROGRAM SCHEDULE 2007-2008

Sept 20, 2007	Douglas Justice - Associate Director and Curator for the UBC Botanic Garden 'Unusual Asian Trees at UBC Botanic Garden'
Oct 18, 2007	Chris Woods - Director of VanDusen Botanical Garden 'The Magic of the Garden'
Nov 15, 2007	Steve Hootman - Director of the Rhododendron Species Foundation 'Exploring northern Vietnam and adjacent southern Yunnan'
Jan 17, 2008	Annual General Meeting - Elect Executive & members' slides
Feb 12, 2008	Dalen Bayes - ARS Fraser South Chapter President 'Rhododendrons & Other Wild Flowers of the Arctic'
Mar 20, 2008	TBA
Apr 17, 2008	Mike Robinson Chairman of the Rhododendron, Camellia, & Magnolia Section Royal Horticulture Society 'Ancient & modern, noteworthy & new cultivars grown in the UK'
May 3-4, 2008	Show and Sale at the Park and Tilford Garden
May 15, 2008	Walk in the UBC Asian Garden led by Douglas Justice
June 8, 2008	Pot Luck supper at the home of Richard and Heather Mossakowski in Lions Bay

Architecture of the sperm cell of *Psilotum*1

In this correlated SEM (scanning electron microscope) and TEM (transmission electron microscope) investigation, we describe architectural details of the multiflagellated sperm cell of ***Psilotum nudum***. Comparisons with other pteridophytes are made to (1) assess the placement of ***Psilotum*** among pteridophyte taxa and (2) evaluate structural modifications of sperm cells during land plant evolution. The released spermatozoid of ***Psilotum*** coils 2.0 revolutions and is outlined by a parallel band of up to 190 microtubules. The elongated nucleus is highly compacted and parallels the cellular coils with numerous mitochondria and starch-laden plastids distributed along its length. Along the anterior coil is an elaborate locomotory apparatus that includes 36 flagella that are inserted into the cell by basal bodies. Subtending the basal bodies is the multilayered structure, which consists of a long narrow lamellar strip and an overlying band of microtubules. An elongated anterior mitochondrion underlies the multilayered structure.

Additional amyloplasts and mitochondria are aggregated along the anterior coil in association with the locomotory apparatus, while a fibrous band encircles the leading edge of the cell. Salient features of this cell, including details of the locomotory apparatus, structure and position of organelles, and arrangement of the spline, are shared by spermatozoids of ***Equisetum*** and ferns (including eusporangiate and leptosporangiate taxa). Thus, this study provides morphological support for the hypothesis that ***Psilotum nudum*** is a member of an assemblage that includes ferns and ***Equisetum***. However, the less streamlined architecture of ***Psilotum*** gametes and the lack of architectural features shared with any specific taxon examined to date suggest that ***Psilotum*** is an early divergent fern, with relatively remote affinities to ***Ophioglossaceae*** and ***Equisetaceae***.

Image above - Scanning electron micrograph of dichotomously branched, subterranean gametophyte of ***Psilotum nudum*** grown in axenic culture. Antheridia are falsely colored blue, archegonia are salmon colored, and hairs and rhizoids are brown. **Image Credit:** Karen Sue Renzaglia, Southern Illinois University, Steven Mueller, (I.M.A.G.E., SIUC). AJB Editor: Karl Niklas, Cornell University. **Researchers involved in this work:** Karen Sue Renzaglia2,5, Thomas H. Johnson2, Hilarie Dee Gates3 and Dean P. Whittier4 2Department of Plant Biology and Center for Systematic Biology, Southern Illinois University, Carbondale, Illinois 62901-6509 USA; 3Micro-Imaging and Analysis Center, Southern Illinois University, Carbondale, Illinois 62901-4402, 4Department of Biology, Vanderbilt University, Nashville, Tennessee 37235-1565 USA. Article and image courtesy of Botany.Org see more at thier website follow this link **http://www.botany.org/plantimages/**

Fruit morphology of three Magnolia species in section Rytidospermum from the southeastern U.S.: left, M. macrophylla; middle, M. tripetala; right, M. fraseri.
Image Credit: Yin-Long Qiu, University of North Carolina, AJB Editor: Karl Niklas, Cornell University. Copyright held by: Yin-Long Qiu, BSA.
Courtesy of the Botanical Society of America see more at this link http://www.botany.org/plantimages/

For a chloroplast DNA phylogenetic study of the eastern Asia-eastern North America disjunct section Rytidospermum of Magnolia (Magnoliaceae) see abstract pages at http://www.botany.org/Abstracts/82-12-1582.php

City of Surrey Wins National Recognition as Urban Forestry Leader

Tree Canada President Michael Rosen met with Surrey Mayor Dianne L. Watts and representatives from the City of Surrey to present the Green Streets Canada Certificate of Recognition for the Green Timbers Urban Forest and Salmon Habitat Restoration Program (SHaRP). Mr. Rosen also unveiled new details concerning the B.C. Coast ReLeaf program.

"Every so often, a community comes along and demonstrates leadership and enthusiasm for improving their community. Surrey's dedication to urban forestry is a model for other municipalities across the country," said Mr. Rosen.

Green Streets Canada is the only nationally based municipal forestry program designed to encourage the adoption of innovative practices and policies in municipal forest management. Initiated in 1994, the program has attracted the participation of over 350 municipalities.

The Green Timbers Urban Forest is 560 acres of parkland and contains the protected Western Trillium, the rare Rattlesnake Plantain and Coral-root Orchid. In 2006, Tree Canada committed over $30,000 toward its expansion and maintenance. In 2007, in addition to Surrey, Tree Canada is awarding Green Streets funding to Prince George, Kelowna, Langley and Langford. BC Hydro is the lead sponsor of Green Streets Canada in B.C.

During the presentation, Mr. Rosen announced details concerning the B.C. Coast ReLeaf program. Effective immediately, municipalities and residents can now apply for funding to replace trees on public lands and in individual yards by visiting www.treecanada.ca/bcreleaf. Residents will be able to apply for coupons and present them to the BC Landscape and Nursery Association's participating members who will discount a portion of the cost of the replacement trees.

Mr. Rosen also added that, "The partnership between Tree Canada, Shell Canada and B.C. Transmission Corporation will help deliver ReLeaf more effectively. Their contributions, as well as those of countless individuals across the country, represent a giant step toward restoring the natural beauty of B.C. coastal communities."

Earlier this year, Tree Canada announced Shell's $30,000 contribution to B.C. Coast ReLeaf in addition to a $10,000 donation of caliper trees to Stanley Park.

For further information, contact: Jonathan Laderoute at laderoutej@huffstrategy.com, (416) 972-7401 or;
Darryl McCarron DLMcCarron@surrey.ca,(604) 598-5785

Article courtesy of Tree Canada visit their website at this link
http://www.treecanada.ca/index_e.htm

Anyone for "E-gardening"?

With the approaching rainy season, and given the ever increasing use of the electronic medium for all kinds of communications - shopping, paying bills, banking, writing e-mails to friend, invitations and cards, debates and discussions, polling, surfing the web, etc etc, I wonder if any of our VRS members who don't normally use the "e-medium" would like to try "e-gardening" from the indoor comfort of your living room??? What I have in mind is to give a few mini-lessons at your home, using my laptop computer, showing you how to access a limited number of web sites, such as the web sites of UBC Botanical Gardens, the ARS, the VRS, the Species Foundation, and possibly a few others. The UBC Botanical Forum, where gardeners present all kinds of problems and receive expert advice, is particularly interesting.

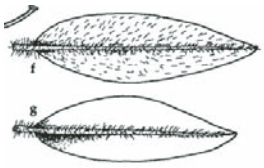
Call me for more info,
Louis Peterson 604-921-7260.

To visit the Shibui Website follow this link;
http://www.shibuibedandbreakfast.com/index.php

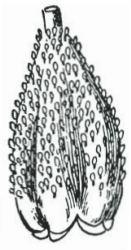
Rhododendron Species Workshops in Vancouver

The workshops will cover the basics of classification within the Genus Rhododendron. Identification of locally available members of the major groups will be presented with photographs and garden tours. There will be a strong horticultural emphasis throughout. The final workshop will include a morning seminar on garden photography by Ron Knight.

All classes will be held at the UBC Botanical Garden
Instructor: Douglas Justice
Coordinator: Ron Knight



4 Saturdays in Spring 2008:
March 1 – rhododendron anatomy; environmental needs; classification
March 22 – lepidotes and azaleas
April 5 – elepidotes
April 26 – photography; pests, diseases, and other problems



Daily schedule:
9:30 – coffee, group discussions and business
10:00 – Session 1 in the classroom
12:00 – lunch: bring your own food and drinks
12:30 – Session 2 in the garden
3:00 – head home

Registration:
Maximum class size is 25. Registration packages will be emailed to all chapter presidents in the Lower Mainland in early November. Registration priority will be given to rhododendron club members until January 31, when the workshops will be advertised to the Alpine Garden Club and UBC Friends of the Garden. Priority (and a discount) will also be given to people who register (by January 31) for all 4 sessions.

Cost:
4 workshop package registered by January 31: $120
The same 4 workshop package after January 31 is $140.
1, 2, or 3 workshops only: $35 each
Fees include handouts, morning coffee, free admission to UBC Botanical Garden, use of the garden classroom and learning materials.

For more information:
Contact Ron Knight at
Ph: 604-883-9807 or 604-929-5670
Email: rcknightf@telus.net

Membership Report

I look forward to seeing everyone so stop at the Membership Table and say hello at the monthly meetings.

We welcome all visitors and geusts at our regular monthly meetings, so bring friend along.

If you have any questions ou can contact me at:

Philip MacDougall
VRS Membership Chair
14776 90th Avenue
Surrey, BC V3R 1A4

Vancouver Chapter

Do You Have Some News or a Picture?

Letters to the INDUMENTUM, news, pictures and anything rhodo or just for interest, can be e-mailed to Todd or Shannon Major at stmajor@shaw.ca. If you wish to mail us an article or some pictures (which we will return to you) please give us a call at 604 941 7507 to obtain our mailing address. We need pictures! The larger the picture file size the better the result on screen and in print. If you don't send something, then you will have to live with what we print, so get involved!

Visit our online repository for past INDUMENTUM issues, hosted by the UBC Botanical Garden and Centre for Plant Research at this link: www.ubcbotanicalgarden.org/vrs

Visit our website at WWW.RHODO.CITYMAX.COM

Todd & Shannon Major,
INDUMENTUM Editors

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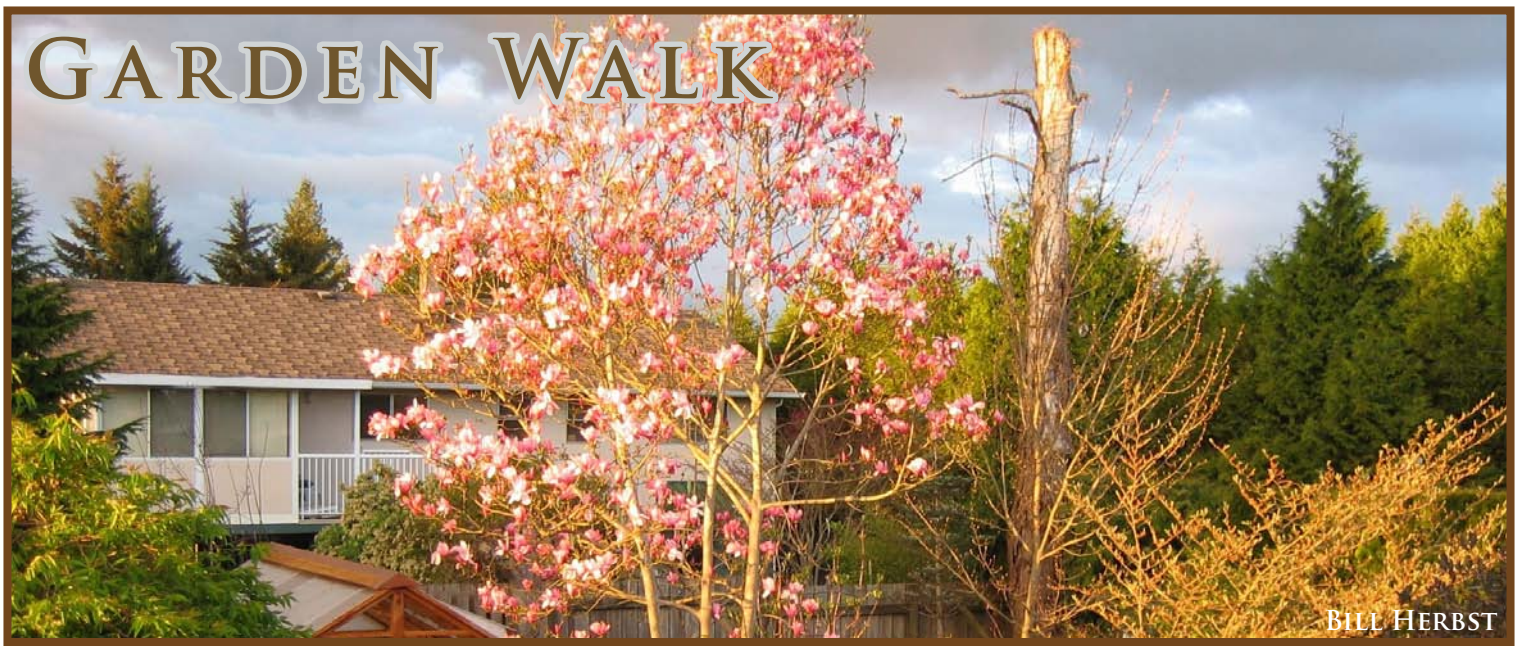
Garden Walk


Bill Herbst


Bill Herbst

Wildlife Trees in the Urban Landscape
By Bill Herbst

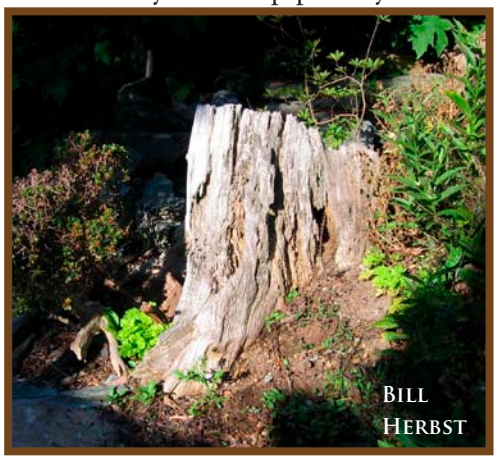
Usually called snags, standing dead and dying trees are now being referred to as "wildlife trees" in recognition of their habitat value to birds, mammals and other creatures. Many types of birds, animals, insects and fungi rely on these afterlife trees to provide food and shelter, and they are important stages within the food chain.

The primary colonizers of dead trees are insects and fungi, elements which are essential for the healthy decomposition of materials, breaking down wood, leaf and litter to make available essential elements for the soil. The varieties of invertebrates that inhabit wildlife trees are staggering. These organisms provide food and contribute to the long process of decomposition by softening the wood, which makes it easy for cavity dwellers to gain access and create nesting cavities. Gardeners may be concerned that these mites, earwigs, beetles, spiders, ants and many varieties of fungi are a threat to our homes, but in fact, our homes are too hostile of an environment for them to survive.

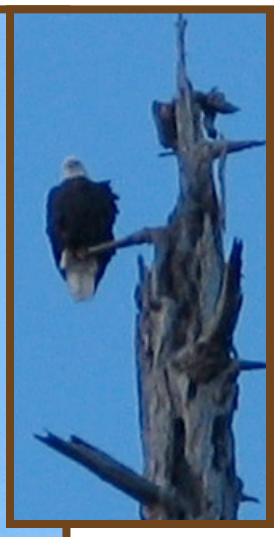
A standing dead tree can remain in place for many years. Some of the giant snags of the Pacific Northwest forests have stood for 150 years and longer, and forest companies now map snag locations for preservation in their forestry operations in recognition of their value to wildlife (Photo left wood pecker holes in a wildlife stump, also see page 9). Smaller snags may not stand as long, but most can easily stand for several decades. Often, the trees will crumble and fall apart and sometimes they will fall straight away. This should be taken into consideration when deciding how and where to retain a wildlife tree in your garden as safety should always be a top priority.

When snags eventually crumble and fall, they continue to contribute to the food cycle. They decompose, adding valuable organic matter to the soil while continuing to provide shelter for mammals, birds, amphibians, reptiles and insects. These nurse logs are nutrient-rich and become the germination ground for many species of plants. In addition, the ground around and under the log retains much more moisture than in the surrounding soil, even during drought conditions.

See **"sanitized approach to gardening"** page 9


Bill Herbst

Garden Walk



In our often **sanitized approach to gardening** where everything must look neat and tidy, the idea of retaining a dead, decaying tree is often overlooked and while the idea of promoting wildlife habitat appeals to us, we may recoil at the thought of leaving a dead, rotten tree. But, gardeners who wish to introduce viable wildlife habitat into their gardens must realize the role that dead trees play and should consider creating a wildlife tree whenever the opportunity presents itself. If there are no trees in your garden that require culling, there are numerous tactics you can use in place of standing snags. Salvaged pieces of trunks and limbs with natural cavities can be secured into existing trees and other corners of the garden to provide shelter and habitat. Stumps and logs can be placed into the garden landscape to provide interesting features that can be planted up to look like natural elements within the garden.

When creating a wildlife tree, the existing tree should ideally be located in an area where human activity is minimal and where limited damage will occur, should the tree fall. I like to leave at least 5 metres of standing trunk along with a number of limbs to provide perches for birds. The base should be girdled and tops should be cut off at angles and made jagged with a chain saw to create a realistic looking snagged top that looks like it was blown out by a windstorm instead of the many snags I see that look like they were created by Bart Simpson's barber!

At this point, you can leave the tree as it is, but there are other options you can do to help with habitat enhancement. One inch holes, drilled six inches deep, are irresistible for woodpeckers and flickers, and they will happily peck away and create cavities. I have planted vines which envelope the snag, creating additional protection for small mammals. Photo right - planted vines can look very appealing; my Boston ivy looks magnificent when it colours in the fall. However, vines do add extra weight and can hasten the tree's collapse.

As the snags age and decompose, they should be evaluated from a safety perspective. If safety is an issue, the tree can be felled and left in place, but if safety is not an issue, the tree can be left to stand and decompose naturally. Wildlife trees add a very interesting feature to the urban garden and I would encourage everyone to consider this approach to habitat enhancement.

Bill Herbst was trained at Windsor Great Park in England and is a former Director of the Vancouver Rhododendron Society. He currently works as Parks Foreman for the City of Port Coquitlam.