



# The Rhodomentum

## Nanaimo Rhododendron Society Newsletter

February 2020



### President's Message

It was with profound shock that I learned that one of our founding members and our webmaster, Craig Clarke, unexpectedly passed away. It was hard to grasp, as he was still so full of life at our Christmas Dinner and Auction party. Craig's generosity to NRS had no limits, and he will be missed by both the club and by each of us.

Craig and Dick Beamish met while at university and it was Craig who invited Dick to join him at Nanaimo's Fisheries Department - as Dick will tell us all about it at our next meeting.

While thinking of Craig and his love of gardening, we should not forget that February is the time to set the Orchard Bee houses outside, and release some of the cocoons when the Pieris start blooming. Also, it is now time to spray the fruit trees with dormant oil/lime sulphur, as well as spread lime around alkaline-loving plants like lilacs, clematis and peonies. It is also time to prune dormant trees, shrubs and conifers, as well as treat hydrangeas with aluminum sulphate (for blue shade) or lime (for pink shade). Rhododendrons are pruned **after** they finish blooming.

Happy gardening,

Rosina

### OUR EXECUTIVE

President	Rosina Schmidt	751-3386
Vice President	Chris Southwick	390-3415
Past President	Allen McRae	758-7589
Secretary	Jan Moles	758-2574
Treasurer	Liz Higgins	390-9340
Directors	Bryan Jubinville	956-6178
	Art Lightburn	468-7516
	Susan Lightburn	468-7516
	Gayle McRae	758 7589
	Don Noakes	778 441-4783
	Ron Sutton	905 331 5527

### COMMITTEES:

Advertising	Allen McRae
Library	Ann Beamish / Sandra Dorman
Newsletter	June Bouchard / John Deniseger
Membership	Krystyna Sosulski
Program	Committee
Raffle	Ann Davey & Val Harvey
Social	Deborah Francis
Bargain Table	Reinhold Gorgosolich/Don Noakes
Website	Craig Clarke
Bus Tour	David & Joyce Mitchell
Sunshine	Ann Beamish
Propagation Group	Ron Sutton

Nanaimo Rhododendron Society  
Box 241, #101-5170 Dunster Road  
Nanaimo, BC V9T 6M4

Website: [nanaimorhodos.ca](http://nanaimorhodos.ca)

email: [rhodomentum@nanaimorhodos.ca](mailto:rhodomentum@nanaimorhodos.ca)

Next meeting: Thursday, Feb. 13th, at 7:30,  
Beban Park Social Center  
Sean Rafferty on "Some Favourite Himalayan Plants"

## Twigs and Stems

### Calendar of Upcoming Events:



**Milner Gardens and Woodland:** Spring Sunday openings,  
February 2<sup>nd</sup> to March 29<sup>th</sup>

<https://www2.viu.ca/milnergardens/events.asp>

**Mount Arrowsmith Rhododendron Society:**

Qualicum Beach Civic Center, Wednesday February 12th; 7:30 pm.  
"Pruning" by Horticultural Expert Rose Prufer.

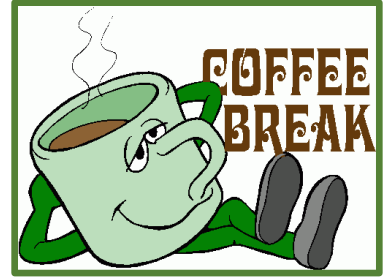
**North Island Rhododendron Society:** United Church in Comox,  
7:30 pm, Tuesday February 11<sup>th</sup> – *Movie Night: "The Gardener"*.

**Nanaimo Horticultural Society:** First United Fellowship Church,  
595 Townsite Rd; Sat. Feb. 9<sup>th</sup> at 1:00pm.: "Keep Calm, Plant On" by  
Cathy Claxton.

**Nanoose Garden Club:** Nanoose Library Center and Event Hall,  
Thursday, February 6th: Bianca van der Stoel – "Therapeutic  
Gardening".

**Qualicum Beach Garden Club:** QB Civic Center, Tuesday,  
February 11th, 7:30pm.

**Seedy Saturdays – coming soon!**



*Thank you to the  
following people for  
bringing goodies to the  
February meeting:*

*Dorothee Kieser;*

*Val Harvey;*

*Baerbel & Burkhard  
Dressler*

.....  
**Our great propagators will  
soon transplant the rhodo  
cuttings into larger pots. They  
would appreciate any 4-6"  
pots that you might have.  
Please bring them to the  
next meeting.**

## Useful Links

Victoria Rhododendron Society: [victoriarhodo.ca/index.html](http://victoriarhodo.ca/index.html)

Cowichan Rhododendron Society: [cowichanrhodos.ca/](http://cowichanrhodos.ca/)

Mount Arrowsmith Rhododendron Society: [marsrhodos.ca/](http://marsrhodos.ca/)

North Island Rhododendron Society: [nirsrhodos.ca/ws/](http://nirsrhodos.ca/ws/)

The American Rhododendron Society: [rhododendron.org/](http://rhododendron.org/)

Linda Gilkeson's website: [lindagilkeson.ca/](http://lindagilkeson.ca/)

Rhododendron Species Botanical Garden: <https://rhodygarden.org/>

## *Our Program for February:*



### *“Some Favourite Himalayan Plants”*

by Sean Rafferty

I have always been fond of gardening and I am most fortunate to have a wife who, not only shares this interest, but is replete with wisdom in all things horticultural and a fascination with botanical nomenclature.

Brenda and I initially gardened on a small city lot in Point Grey in Vancouver which after twelve years, overflowed

with a variety of genera, including rhododendrons. When we moved to North Vancouver, the rhododendron plantings assumed more prominence. We lived on a very precipitous acre, right on Lynn Creek, with parkland surrounding us on virtually all sides. It was very nice, but almost as rainy as everyone suspects, and also fairly heavily forested. Of course, in the current era of political correctness we were prohibited from cutting any of the existing trees, so for a number of years we grew rhododendron leaves quite successfully. It was only after limbing-up and spiral-cutting a number of the larger conifers that we began to grow more blossoms.

Following our retirement, we moved many of our North Vancouver plants to a larger property in Shirley on the southwest coast of Vancouver Island, which serendipitously, appears to have a most congenial climate for the growing of rhododendron and many other genera.

About 2001, we joined the Rhododendron Species Foundation and subsequently attended Steve Hootman's Species Study Day classes which carried on for six years. We were very fortunate to have made three treks with Steve through various regions of the Sino-Himalaya and another to the Indian Himalaya. I shall show some images on the flora of these areas at your meeting on February 13, 2020.

Need a ride to one of our meetings?



Call Chris at 250-390-3415 or 250-616-2742 (cell)

or send her an email at [csouthwick@shaw.ca](mailto:csouthwick@shaw.ca)



**Nanaimo Food Share Seedy Sunday – March 1<sup>st</sup>, 2020 from 10am to 3pm**

**Location: Nanaimo District Senior Secondary School  
355 Wakesiah Avenue, Nanaimo (next to Aquatic Centre)**

For the first time NRS is having a table at the Seedy Sunday in order to promote our club and to educate the public on all things Rhododendron. Please visit us there. **If you would like to volunteer your time, please contact Allen who has kindly offered to coordinate this event.** [allengaylle@shaw.ca](mailto:allengaylle@shaw.ca),

## Remembering Craig Clarke

Our club is feeling a profound sense of loss with the passing of Craig Clarke, one of our founding members and a friend to all, on January 14<sup>th</sup>, 2020. Craig joined our club as part of the original club executive in the fall of 1992. Over the years, he played a major role in our club serving the NRS in virtually every possible capacity: President, Vice President, Director, Newsletter editor, Webmaster, and many committees. He continuously served on our executive for 27 years!! Every spring, he organized our club's orders through the



1992-3 NRS executive

Rhododendron Species Foundation. In 2002, he received the Bronze Medal in recognition of his contributions to our club. Craig's community involvement also included the Rotary Club and of course, Milner Gardens and Woodland, where he was an active member of the Milner Board and a member of the Rhododendron Species Garden Advisory Group. Together, Craig and Joyce were fixtures at our monthly meetings for 27 years! Craig will be dearly missed and our heartfelt condolences go out to

Joyce at this time.



Craig receiving his Bronze Medal from Chris



Craig presenting the Bronze Medal to Richard White in 2005



With Art at one of our year end BBQs



Photographing *R. albiflorum* in early spring on Mt Washington



On one of our club's bus tours



## Raffle plants for February:



**Rhododendron 'Aloha'** {Vulcan x *R. degronianum* ssp *yakushimanum*, Exbury form}

**Height:** 3 feet in 10 years

**Cold Hardiness:** -23°C

**Hybridized:** Phetteplace

Flower openly funnel-shaped, wavy edges, 2¾" across, deep pink fading to pale

purplish-pink. Held in dome-shaped truss of about 19 flowers. Leaves olive green with orange-yellow indumentum, leaves retained 3 years. New growth has white indumentum. Dense, rounded habit.



**Rhododendron 'Percy Wiseman'**

(*R. degronianum* ssp *yakushimanum* x *R. 'Fabia Tangerine'*)

**Hybridizer:** J. Waterer

**Height:** 3 ft in 10 years. Compact and well-branched shrub.

**Cold Hardiness:** -21°C

*R. 'Percy Wiseman'* is easy on the eyes with the creamy pinks and peaches of its changeable flowers. In late spring, 'Percy

Wiseman's' many flowers fade to creamy white with yellow throat. This plant serves well as an accent shrub standing at most 4 to 5 feet tall.

*"February is the border  
between winter and  
spring."*

*~Terri Guillemets, "Years," 2002*



## *January 9th, 2020 - General Meeting Minutes (by Jan Moles):*

The Meeting opened at 7:35 with:

**1. Presidents report – Rosina Schmidt:**

- a. Welcome back to the new year to all members, friends, guest Ann from Protection Island and our two new members Mike and Mary O'Neill.
- b. The last meeting was the Christmas Auction and Potluck - a great success - thank you to all of those who worked so hard to make it so: to Chris Southwick & June Bouchard masters of ceremony extraordinaire; to the donators of the excellent plants for auction; to David and Joyce Mitchell aka Mr. & Mrs. Claus, auctioneers par excellence; and not least thank you to all our members for the outstanding buffet table and for making the event successful and enjoyable.
- c. Thank you to Reinhold for the bargain table for 2019 and for all plant donations.
- d. Thank you to Ann Davey and Val Harvey for running the welcome table and the raffle every month.
- e. Nanaimo Seedy Sunday - Allen McRae will be organizing our table at the event:
  - i. It takes place on March 1<sup>st</sup> at NDSS high school, 10:00am to 3:00pm.
  - ii. It will be a good place to present our club to the gardening general public.
  - iii. We are looking for volunteers and ideas for what should be on the table.
- f. The Truss Show and Plant Sale this year will be on Saturday, 9<sup>th</sup> May – the day before Mother's Day. Further information later.

**2. Treasurer's Report – Liz Higgins:**

Report was made available on front desk for those who wanted to read it.

**3. Secretary's Report – Jan Moles:**

Two pieces of correspondence to report.

**4. Membership – Krystyna Sosulski**

- i. Welcome to new members - Mike and Mary O'Neill)

**5. Program – Art Lightburn:**

This month reporting specifically on plans for the Plant Sale.

WE ARE GOING TO HAVE LOTS OF PLANTS TO SELL.

Rose Rogan of 'Perennial Ridge Farms' is going to provide us with wholesale plants to sell.

Paul Wurz of 'Hidden Acres' is going to come to the sale with plants.

Ann Beamish will be calling the other vendors to confirm their status tomorrow.

**6. Propagation - Ron Sutton**

Thank you to all those who have been assiduously watering our cuttings for several months now.

The propagation effort is going well. We have lost some cuttings but hope to have a very respectable success rate - thanks to all volunteers and suppliers of cuttings.

In a month or two they will be ready to be potted up, so please start bringing your 4 – 6" pots from next meeting onwards if you have any to donate.

**7. Advertising – Allen McRae:** nothing to report.

**8. Milner –** had a fantastic Christmas Light extravaganza this year (Rosina).

9. **Sunshine - Ann Beamish:** nothing to report.

10. **Tonight's Raffle – Ann Davey and Val Harvey:**

Raffle Prizes are donated by the club: R. "Fireman Jeff" - best red flower ever and R. "Rocket" - pink, and looking very strong and healthy!

11. **Tonight's program:** June Bouchard and John Deniseger on "Gardens of New Zealand's North Island".

**\*\*Next Meeting: Thursday 13<sup>th</sup> February: Sean Rafferty – "Favourite Himalayan Plants"**

## *Garden chores for February*



Here are a few ideas to keep you busy through the month of February:

- Prune trees.
- Prune shrubs.
- Add trellises and arbors.
- Order plants and seeds.
- Fill a bird feeder.
- Plant a bare-root hedge.
- Reorganize your garage (or **garden** shed).

<https://www.gardenista.com/posts/what-to-do-in-the-garden-in-february/>

\*Start to clean up perennial borders and flowerbeds.

\*Return your planters and hanging baskets to Port Kells Nurseries for refilling.

\*Cut back raspberry canes and other fruit bushes and plant new ones.

\*Plant bare root roses during mild spell.

\*Prune deciduous trees as well as buddleia (butterfly bush) and C-type clematis that bloom after June.

Don't prune spring flowering shrubs until after they have bloomed.

\*Discover the delightful fragrance of Sarcococca.

\*Sow hardy annuals such as bachelor buttons, sweet peas, and California poppies outdoors.

\*Plant peas and broad beans. Radishes can be sown under cover. Celery can be started indoors.

\*Lime lawns to counteract acidity and achieve a desirable pH balance.

<http://portkellsnurseries.com/monthly-garden-guide/>

*"On the wind in February  
Snowflakes float still,  
Half inclined to turn to rain,  
Nipping, dripping, chill."*

(Christina Georgina Rossetti, "A Year's Windfalls", 1866)



## Why do Rhodo leaves often curl up and droop in the winter???

It's winter on the west coast, our weather seems to fluctuate from fairly mild and wet, to windy and wild, to cold and snowy. At times, our rhodos look perky, while at other times, they just look cold and shrivelled. Why do they curl up and droop in the winter?



*R. sutchense*:

On the left is what it looks like when it's happy in spring (aren't we all happy in spring?); on the right is what it looks like at -5C.



There's probably a lot more to this than you think..... Here's an article from [www.indefenseofplants.com](http://www.indefenseofplants.com) which might surprise you.

### Why Do Rhododendron Leaves Droop and Curl in the Winter? - December 12, 2017

"Broad-leaved, evergreen plants living in the temperate regions of the world face quite a challenge come winter time. Freezing temperatures, lack of water, and often intense sun can exact quite a toll on living tissues. These are likely just some of the reasons why, relatively speaking, broad-leaved evergreens are a rare occurrence in temperate zones. By far the most popular group of plants in this category are the rhododendrons.

Many a rhodo lover has said that they can tell how cold it is outside by looking at rhododendron leaves. Indeed, as temperatures drop, the leaves of these evergreen shrubs frequently droop and curl up like green cigars. These leaf movements do seem to be tied to the weather but their triggers and function have been the source of a lot of debate. Certainly not all rhododendrons are cold hardy but those that are seem to benefit from reorienting their leaves. Why does this happen?



In the past, it has been suggested that leaf reorientation may have something to do with reducing snow load. If the leaves were to remain horizontal, this could cause enough snow buildup to break branches. The fact that a considerable amount of ice and snow can accumulate on branches regardless of leaf position, and largely without harm, seems to suggest that this is not the case. Others have suggested that it could be a way to reduce water loss. As the leaves droop and curl, they are hypothetically



increasing the humidity around their leaves and thus reducing their chances of desiccation.

This seems pretty far-fetched for a few reasons. For starters, rhododendrons simply do not open their stomata during the colder months. By keeping them closed, there is no net transfer of water into or out of the leaves. Also, their thick, waxy cuticle keeps water within the leaves from evaporating out as well. Finally, leaf drooping and curling happens long before the ground freezes and therefore doesn't seem to be triggered by a lack of water in the environment.

The leading theories on this phenomenon seem to deal more with issues at the cellular level. The first of these has to do with the sensitive photosynthetic machinery inside the chloroplasts. Leaf drooping may actually be a response to increased light. Though we generally don't think about photosynthesis in the winter months, evergreen plants actually experience the highest light intensities of the year during this time period. Throughout the growing season, they are generally shaded by the overstory. However, once the canopy leaves fall, things change.

Because the plants are for the most part dormant, the photosystems within the chloroplasts have no way of dissipating the energy from the incoming sunlight. Experiments have shown that leaves that were forced to stay horizontal during the winter experienced permanent sun damage and photosynthesized considerably less than leaves that were allowed to droop once favorable temperatures returned. The thought is that by positioning the leaves vertically, the plants are reducing the amount of direct light hitting them throughout winter and therefore reducing the potential for light damage.

These experiments also revealed something else about the changes in leaf position when it comes to shape. As it turns out, curling made no difference in protecting the leaves from light damage. It would seem that drooping and curling are responses to two different types of environmental stress. So, why do the leaves curl?

The answer to this question is physical and one that has gained a lot of research attention in the field of cryogenics. When living tissues freeze, ice crystals build up to the point that they can rupture cell membranes. This is only exacerbated if the tissues thaw out quickly. Anyone that has ever tried to freeze and then thaw leafy vegetables knows what I am talking about.

To best preserve tissues via freezing, they must freeze quickly, which reduces the size of the ice crystals that can form, and then thaw out slowly. Researchers found that rhododendron leaves freeze completely at temperatures below -8 degrees Celsius (17.6 degrees Fahrenheit), temperatures that occur regularly throughout the range of temperate rhodo species. Again, experiments were able to demonstrate that flat leaves thaw much more rapidly than curled leaves. This is because a curled leaf exposes far less surface area to the warming sun than does a flat leaf. As such, curled leaves don't thaw out as fast and thus are able to avoid much of the damaging effects of daily freeze-thaw cycles.

Though these are all components of the rhodo leaf puzzle, there is still much work to be done. What we do know is that leaf drooping and leaf curling are two separate behaviors responding to different environmental pressures. Indeed, it appears that these two traits seem to be tied to cold hardiness in the genus *Rhododendron*. What the exact triggers are and how they produce the changes in shape and orientation, as well as the mechanics of winter survival at the cellular level, are topics that are going to require further study. Until then, I think it's safe to say that we can appreciate and, to some degree, rely on the spot forecasting abilities of these wonderful shrubs."

## The Trials and Tribulations of Lee's Scarlet - some photos from our garden - by John Deniseger



January 12<sup>th</sup>, 2020 -before the cold snap

The books and websites will tell you that it's a very early, pink blooming hybrid that's hardy to -5C and that a 10-year-old plant will be about 4 feet high. For most of us here on the west coast, it starts trying to bloom in late November to mid-December.



January 20<sup>th</sup>, 2020 – only a few days later

It seems to continually want to tempt fate through our unpredictable winters. Some of the flower buds begin to open, while others are kept in reserve for later, just in case a cold snap comes along. Anything colder than -2C turns the opened buds and flowers to brown mush. How does it respond? It always seems to have more buds ready to open for the next attempt.



January 24<sup>th</sup>, 2020 – more buds beginning to open.



Here's what we're hoping for by mid-February (Susan Lightburn photo)



Sometimes we cover fragile flowers with a sheet to protect them from a light frost

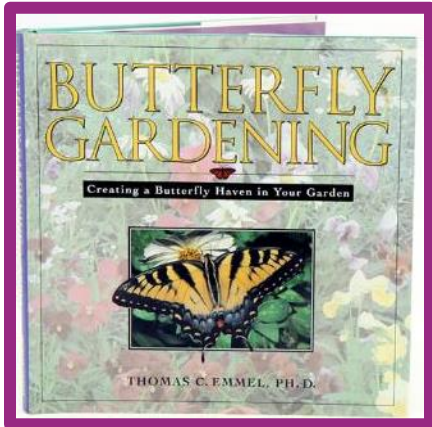
\*\*\*\*\*

*Good morrow, Benedick. Why, what's the matter,  
That you have such a February face,  
So full of frost, of storm and cloudiness?*

*~William Shakespeare, Much Ado about Nothing (Act V, Scene 4, Don Pedro)*

## From your Library – by June Bouchard

Well, in addition to looking at seed catalogs and planning changes in your garden, winter is a perfect time of the year to get some reading done! The NRS has a great library with excellent titles, not only about rhododendrons, but about a number of interesting gardening related topics as well. In this age of electronic media, I find that sometimes, there's nothing like a good old-fashioned book with a cup of hot chocolate or a glass of wine by a warm fire! Here are a couple of titles from our collection that might be of interest.



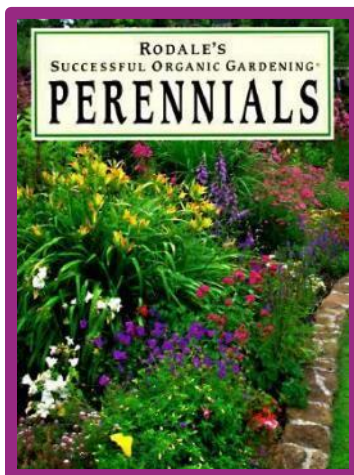
### *Butterfly Gardening: Creating a Butterfly Haven in your Garden*

by Thomas C. Emmel, Ph.D. (Cavendish Books, 1997)

Although this is not a recent title, the information found in this book is as relevant as ever, especially with growing concerns over the increasing number of endangered butterflies. This book offers beautiful, large photos and includes range, habitat, nectar sources and larval host plants for each of the butterflies featured.

“An informative, pictorial book on planning your butterfly garden, recommended plants, maintaining it, enjoying it and conservation practices. At the end is a very colorful gallery of butterflies with names, flower feeding sources and habitat. A good resource for those interested in having a garden that attracts these beauties and identifying these flying visitors.”

From [https://www.goodreads.com/book/show/2260475.Butterfly\\_Gardening](https://www.goodreads.com/book/show/2260475.Butterfly_Gardening)

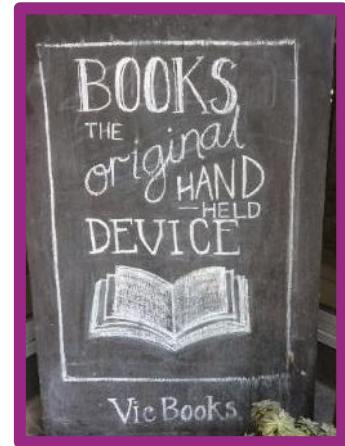


### *Rodale's Successful Organic Gardening – Perennials*. Text by Susan McClure and Plant-by-Plant Guide by C. Colston Burrell (Rodale Press, 1993)

Rodale Press has been supporting organic farming and gardening since 1947 and their books have long been a trusted resource for gardeners. This lovely book on choosing the right perennials for your garden is no exception – it covers all aspects of the process from “understanding your garden” to choosing, cultivating, maintaining and propagating perennials. The beautiful colour photographs and the various charts, graphs and diagrams all contribute to making this book a total pleasure to go through on a chilly winter evening.

“Let the editors from Rodale Organic Gardening- the world's leading authority on organic techniques-- show you how to choose the right perennials for your site, use perennials to accent your gardens and landscapes, fight pests, and provide the best care to create beautiful flowerbeds without using chemicals.”

[https://www.goodreads.com/book/show/2340293.Rodale\\_s\\_Successful\\_Organic\\_Gardening](https://www.goodreads.com/book/show/2340293.Rodale_s_Successful_Organic_Gardening)






**The American Rhododendron Society 75th Anniversary Convention**

**American Rhododendron Society**  
75<sup>th</sup> Anniversary  
**20/20 VISION**  
Looking forward, reflecting back  
Portland-Vancouver, April 29-May 3, 2020  
[ARS75.org](http://ars75.org)

*You're invited to the celebrations!*



**World-renowned Keynote Speakers**  
Kenneth Cox • Jens Nielsen • Steve Hootman • Adriana Medeiros  
Lionel de Rothschild • Steve Krebs • Valeria Seza • & more!

**Tours to the Northwest's  
Outstanding Gardens & Nurseries**

**April 29-May 3, 2020, Hosted by ARS District 4**  
**Heathman Lodge, Vancouver, WA**

*20/20 Vision will include these international speakers and more:*

- Kenneth Cox from Glendoick in Scotland
- Lionel de Rothschild from Exbury in England
- Jens Nielsen, plant explorer from Denmark
- Steve Krebs and Juliana Medeiros from the Holden Arboretum
- Steve Hootman from the Rhododendron Species Botanical Garden

*Garden tours will include:*

<ul style="list-style-type: none"><li>• Crystal Springs Botanical Garden</li><li>• Cecil &amp; Molly Smith Garden</li><li>• Portland Japanese Garden</li><li>• Lan Su Chinese Garden</li></ul>	<ul style="list-style-type: none"><li>• Iseli Nursery</li><li>• Woodburn Nursery</li><li>• The Stewart Garden (formerly Dover Nursery)</li><li>• Sebright Gardens</li></ul>
--	---

- Around the Sound [pre-tour](#)
- Willamette Valley and Oregon Coast Excursion [post-tour](#) including members' gardens

*Plus plant sale, photo contest, poster session, special clinics, plus:*

[ars75.org](http://ars75.org)  
**Registration Now Open!**

## ARS Spring International Convention Update

- Registrations have now surpassed 200.
- Plant sale [vendors](#) are now listed at the website.
- The [Post-Tour](#) is SOLD OUT, with a wait-list being taken for a second bus. The current tally on all tours is available on the [registration page](#).
- Room availability at the Heathman Lodge is already getting tight, so please [reserve](#) a.s.a.p.
- The Winter edition of JARS is out with a full convention insert and printed registration form; otherwise online registration and print options are available at the convention [website](#).



## Fall into Gardening is Back!

In October 2018, the Nanaimo and Mount Arrowsmith Rhododendron Societies co-hosted a very successful one day fall gardening workshop in Parksville. The event was called "Fall into Gardening" and had the theme of "Navigating Garden Myths".

After a year off, "Fall into Gardening" will be back in October 2020! The NRS and MARS have added a new partner: the Vancouver Island Master Gardeners Association. This year's theme will be "Gardening from the Ground Up". The preliminary program includes Linda Chalker-Scott, Richard Hebda and Shannon Berch. It will be held on **Sunday, October 25<sup>th</sup>**, at the Parksville Community and Conference Center. Details will follow in upcoming newsletters.

\*\*\*\*\*

### Looking ahead to our upcoming programs:

Date	Speaker	Topic
March 2020	Linda Gilkeson	Life After Pesticides
April 2020	Shannon Berch	Soil Biology
May 2020	Dick Beamish	My Favourite Trusses



*Happy  
Valentine's  
Day!!!  
See you at the  
next meeting  
on February  
13<sup>th</sup>!*