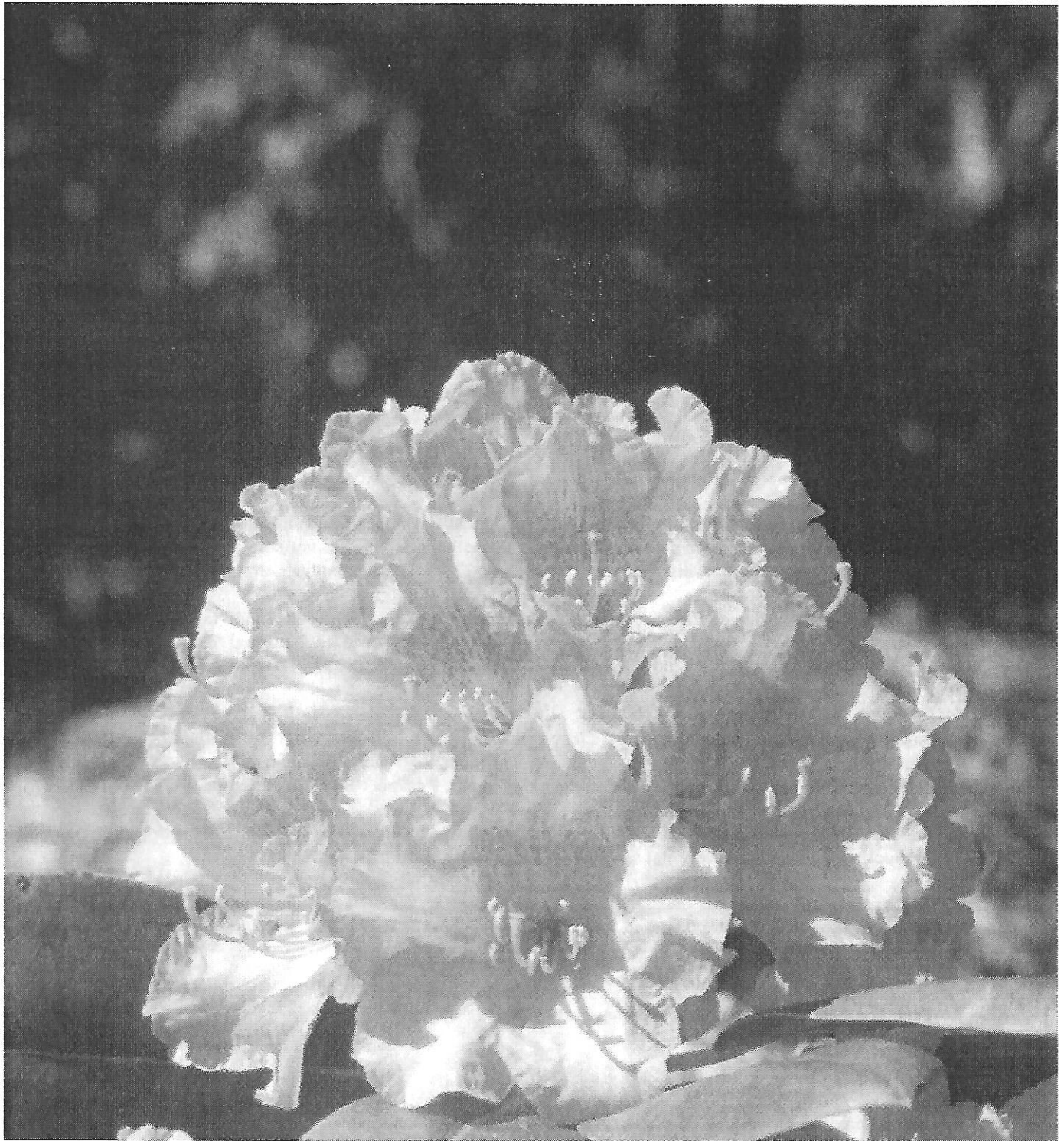


# AtlanticRhodo

[www.AtlanticRhodo.org](http://www.AtlanticRhodo.org)

Volume 26: Number 3

October 2002



# Rhododendron Society of Canada - Atlantic Region

## Positions of Responsibility 2002 - 2003

<b>President</b>	Sheila Stevenson	479-3740	<b>Director</b>	Sandy Brown	683-2615
<b>Vice-President</b>	Anitra Laycock	852-2502	<b>Newsletter</b>	Mary Helleiner	429-0213
<b>R.S.C. (National) Rep.</b>	Ken Shannik	422-2413	<b>Website</b>	Tom Waters	429-3912
<b>Secretary</b>	Penny Gael	826-2440	<b>Library</b>	Shirley McIntyre	835-3673
<b>Treasurer</b>	Dexter Kaulbach	453-0380	<b>Seed Exchange</b>	Sharon Bryson	863-6307
<b>Membership</b>	Betty MacDonald	852-2779	<b>Tissue Culture Sale</b>	Audrey Fralic	683-2711
<b>Past President</b>	Ken Shannik	422-2413	<b>May - Advance Plant Sale</b>	Ken Shannik	422-2413
<b>Director - Program</b>	Jenny Sandison	624-9013	<b>May- Public Plant Sale</b>	Duff & Donna Evers	835-2586
<b>Director - Communications</b>	Christine Curry	656-2513			



## Membership

ARS/RSC District 12 (National) Membership fees for 2003 are due on December 1 and 'Local' membership fees are due on January 1. If you have not renewed your membership please do so now. If you are not sure if you have renewed, please contact **Betty MacDonald** our **Membership Secretary**, (902) 852-2779. The current dues structures are as follows:

**1. R.S.C. - A.R.S. Membership** (which includes Atlantic membership) \$42.00 Canadian for individual membership. Please make your cheque payable to - "Rhododendron Society of Canada" and send to **National Treasurer, Mr. Robert Dickhout, R.S.C. District 12 A.R.S., 5200 Timothy Crescent, Niagara Falls, Ontario L2E 5G3. Be sure to specify Atlantic Region.**

**2. Atlantic Society only** (which includes all privileges, mailings and activities of R.S.C. Atlantic only) \$15.00 for individual or family membership. Please make your cheque payable to "R.S.C. Atlantic Region" and send to **Atlantic Membership Secretary, Betty MacDonald, 534 Prospect Bay Road, Prospect Bay, Nova Scotia, B3T1Z8.**

When renewing your membership please include your telephone number. This will be used for RSCAR purposes only (coordination of potluck suppers and other events) and will be kept strictly confidential. Thanks!

*AtlanticRhodo* is the Newsletter of the Rhododendron Society of Canada - Atlantic Region. We welcome your comments, suggestions, articles, photos and other material for publication. Send all material to the editor.

Published three times a year. February, May and October,

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Cover Photo:

Rhododendron 'Normandy' a 2003 Tissue Culture selection. [Photo Don Craig]



## Calendar of Events

All R.S.C.A.R. meetings are held on the first Tuesday of the month, from September to May, at 7:30 p.m. in the Nova Scotia Museum Auditorium, 1747 Summer St., Halifax, unless otherwise noted. Parking is available in the Museum lot. Friends, guests and anyone interested in rhododendrons, azaleas or companion plants are always welcome at R.S.C.A.R. meetings or events.

- |                                  |   |
|----------------------------------|---|
| <b>3 September</b>               | <b>Annual Meeting:</b> Peter Romkey: "Growing and Cultivating Native Plants" Peter gardens near Prospect and has been collecting and cultivating native flora for many years. |
| <b>1 October</b>                 | <b>16<sup>th</sup> Steele Lecture Part I:</b> Jack Looye "New Rhododendrons" See Special Notice in this Newsletter.   |
| <b>9 October<br/>(Wednesday)</b> | <b>16<sup>th</sup> Steele Lecture Part II:</b> John Grimshaw "Wanderings of a Bulb Lover" See Special Notice in this Newsletter.  |
| <b>6 November</b>                | <b>Meeting:</b> Philippe Levesque: "Woodland Plants" Philippe owns and runs Macrophylla, a nursery in Dundee, New Brunswick. He will speak on his favourite plants.           |
| <b>4 December</b>                | <b>18<sup>th</sup> Annual Christmas Wine &amp; Cheese:</b> Members slides. See Notice in this Newsletter.   |
| <b>7 January</b>                 | <b>Meeting:</b> Speaker TBA.  |
| <b>4 February</b>                | <b>Meeting:</b> Speaker TBA.  |

**Please Note:** Some members, who have environmental sensitivities, are asking their fellow members please to use no perfumes, scented soaps, etc., on the days or evenings of RSCAR events, in order to minimize the risk of allergic reactions.



A very warm welcome to our new and returning R.S.C. Atlantic Region members who have joined since the May 2002 Newsletter:

Joanne Linzey

Halifax, NS

## Tom Waters Reminisces...

On 8 June this year, at the annual RSCAR Potluck Supper, I was recognized by the Society for my 20 years as Newsletter Editor. It was quite an unexpected honour! I was presented with a gift of the Kingdon Ward *Tsangpo Gorges* volume, and kind words of thanks were expressed. After thanking the members present, I told them that those 20 years, in retrospect, seem to have gone by very quickly. When I began editing the Newsletter, the original small group was expanding and a more formal structure was developing. Jill Robinson had earlier begun the Newsletter as a one or two page communication. With the help of John Weagle, I redesigned the Newsletter and made it larger with regular sections and a formal layout. We began to solicit articles based on the experiences of local gardeners and we slowly added illustrations, chiefly simple line drawings. Later, photographs began to be inserted.

As the years went on, the Newsletter evolved through several changes in appearance; we are currently in the fifth incarnation, I believe. Always the object was to improve the content and layout. In version three, in the late 1980's, we began to have the entire format produced on a Mac computer. Then came version four, in the early 1990's, when Sterling Levy began to assist me by preparing the entire Newsletter on his Windows computer. Soon after that we began using the Internet (with attached files) to speed the exchange of submissions and exchange of drafts. Also in the late 1980's we began reprinting notable articles from other rhododendron and related horticultural societies' newsletters, by reciprocal agreements. The latest version, officially begun this year, featured a redesign, a name change and enhanced quality of pictures. We renamed our Newsletter simply *AtlanticRhodo* to complement our Society website, which made its first appearance in 1998.

It has been very gratifying to produce a good quality Newsletter for RSCAR. That job is now in the capable hands of Mary Helleiner, who begins as Editor with the October 2002 issue. The help of John Weagle and Ken Shannik has been very important to me in the years that I prepared the Newsletter. And, of course, as I have often said, Sterling Levy has been invaluable in the production of the Newsletter in recent years--his keen eye, enthusiasm and innovative ideas have had a big impact on the Newsletter you receive three times per year. Also, many members of the Society have been very forthcoming in submitting excellent original articles and artwork. All of these, often unseen, participants deserve warmest thanks from their fellow RSCAR members for making *AtlanticRhodo* such a great success over the years.



Now I turn my attention to a reorganization of my personal time and interests and to expanding the RSCAR *AtlanticRhodo* website. There is much work to be done on the website and we have great plans for it. The basic work has been done and, again, I will be assisted by John Weagle, Ken Shannik and Sterling Levy, who have already contributed much to the project. There has been a prolonged interruption in work on the website for most of this year, for which I apologize. This delay was due to the difficulty caused by our former host organization being in a state of chronic confusion and not being able to provide reliable service. Then our domain registrar developed a new system which made making changes to our account maddeningly difficult. In short, in recent months, the website has been largely inaccessible, both to me and to visitors. I was caught between the devil of an erratic host organization and the deep blue sea of a byzantine registrar. Both have now been removed and we have transferred to a new local hosting service and a new registrar. I hope you will see continued improvements to the *AtlanticRhodo* website after I resume new work on it in October 2002. Eventually the website will be a monument to the local Society and a great resource centre for information on rhododendron culture in Atlantic Canada. ☞



# Atlantic Notes

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## 2002 RSCAR Seed Exchange

This year marks the end of Kathy Chute's capable steering of the seed exchange. The task has been taken over by Sharon Bryson. The RSCAR wishes to thank Kathy for her many years of service "dishing out" seeds to all who ordered them.

We thought this might be an appropriate time to urge members to participate in the upcoming seed exchange both by contributing seeds and being a grower. It is of mutual benefit to both contributors and growers that a reasonable amount of interest is shown. If there are some members who are capable of contributing seeds, but haven't in awhile, please check your "seed-pods".

Those members who have perhaps never ordered seeds are also encouraged to do so. There is a great deal of information available on the procedures for growing Rhododendrons & Azaleas from seed. Many of the principles apply to some of the companion plants as well. Two websites with some of this seed growing information are:

[http://www.AtlanticRhodo.org/unique/f\\_unique.html](http://www.AtlanticRhodo.org/unique/f_unique.html)  
[http://willowgarden.tripod.ca/grow\\_rhododendrons.html](http://willowgarden.tripod.ca/grow_rhododendrons.html)

The deadline for submitting seed to the Seed Exchange is December 1, 2002. Members are encouraged to submit rhododendron and companion plant seed. All seed should be fresh, cleaned and properly labeled. Please give as much information as possible regarding variety, location, parent plants, and (if not a commonly grown variety) the expected hardiness.

Send your seed to:

**Sharon Bryson  
RSCAR Seed Exchange  
RR#3 Station Main  
Antigonish, Nova Scotia  
B2G 2L1**

## 18th Annual Christmas Wine & Cheese Party

**Nova Scotia Museum of Natural History - Auditorium - Lower Level  
1747 Summer Street, Halifax**

**4 December, 2002, 7:30 p.m.**

Come out and enjoy an evening of good food, wine and conversation.

There will not be a speaker. Members are encouraged to bring in a few slides of their gardens, favourite plants, etc.

R.S.C.A.R. Will provide the wine due to Liquor License Board regulations. Members are asked to bring finger food and sweets.

### 16<sup>th</sup> Annual Steele Lectures

#### Jack Looye "New Rhododendrons"

Nova Scotia Museum of Natural History - Auditorium - Lower Level  
1747 Summer St., Halifax

Tuesday, 01 October 7:30 p.m.

Jack Looye is a District Director Alternate and a member of the RSC Niagara Region Chapter as well as the Toronto and Atlantic Chapters and the Great Lakes Chapter. He is a past president of the Great lakes Chapter. He has also served in the RSC Niagara Region Chapter Board and as a Regional Director for the RSC. He has received the Hybridizer's Award from the RSC and is a frequent panelist at the ARS Breeder's Roundtables. In a word his life is rhododendrons.

Jack has had a long involvement with rhododendrons. He and his wife Jackie run Rhodoland Nurseries in Niagara on the Lake, Ontario. From the Niagara Chapter website -- "A staggering amount of new material goes through this nursery. Jack Looye is Niagara's most active breeder of rhododendrons. Jack makes some 100 crosses each year and his goal is to develop hardy yellows, oranges and reds. He and his wife Jackie are currently evaluating 5000 hybrid seedlings. In 1995 they started their nursery on 14 acres of prime soil. They currently have seven polyhouses filled with 15,000 cultivars of hardy rhododendrons."

One person seems to have influenced Jack more so than others -- the late Weldon Delp. Weldon did a dizzying number of crosses and Jack knew them all. Delp took Jack under his wing and shared his plants with him as a trusted confidant and equal. Jack's hybridizing is based on many of Delp's crosses but he has also gone off in his own direction. Or is it directions? His talk will cover many of the new plants from his work. In the latest conversation he said he has some very good dwarf dark purples based on *Rhododendron aureum* -- dwarf compact elepidote plants. Hopefully we'll see some of them at his talk. Whatever we see I can assure you it will be riveting. Jack also has a secret passion for daylilies.

#### John Grimshaw "Wanderings of a Bulb Lover"

Nova Scotia Museum of Natural History - Auditorium - Lower Level  
1747 Summer St., Halifax

Wednesday, 09 October 7:30 p.m.

John Grimshaw has served on the Main Committee of the Alpine Garden Society, for which he has led botanical and horticultural tours to the Altai Mountains of Russia and to California. He has also trekked the Khumbu district of Nepal, Kenya, the Philippines, Socotra, mainland Yemen and the Peloponnese. He is author of the *Gardener's Atlas* (1998) and co-author of two additional publications: *Checklist of the Vascular Flora of Mt. Kilimanjaro* and *Snowdrops: A Survey of the Galanthus Cultivars in Cultivation*. His plant hunting has taken him to Tanzania, including the montane forests of Mt. Kilimanjaro, where he has collected some 2,000 herbarium specimens and identified new plant species on Kili's northern slope. In 1990 he headed the Kilimanjaro Elephant Project: a survey and census of the elephant population inhabiting Mt. Kilimanjaro, Tanzania, sponsored by Friends of Conservation.

He was employed by the University Botanic Garden, Oxford, to maintain the collections of the late Primrose Warburg at South Hayes, Yarnells Hill, Oxford, a garden rich in snowdrops and hellebores. Now he is employed by K. Sahin, Zaden B. V., Alphen aan den Rijn, The Netherlands, as botanical and horticultural advisor, with responsibility for the development of perennial seed crops. He also is responsible for development of new products for the seed trade.

In February 2001 he established the Griffin Press for the publication of horticultural literature.

Mr. Grimshaw participated in the North American Rock Garden Society's foreign speakers tour programme during the winter of 1999 and in March 2001 was a keynote speaker for the North American Rock Garden Society winter study weekend in Victoria, B.C. He gardens in Maidenhead, Berkshire, UK. ✕

## RSCAR 2003 Tissue Culture - Advance Sale

It's time to order your tissue culture plants for spring 2003. This year we again have new varieties both of rhododendrons and companion plants. The cost to you of these plants will be approximately \$5.00. We try to keep the cost as low as possible.

DO NOT SEND ANY MONEY WITH YOUR ORDER. YOU WILL BE BILLED WHEN YOUR ORDER IS PICKED UP OR SENT. (*Special shipping charges may apply*).

These plants will be available for pick-up in early April. The time and location will be announced at a later date. All members will be advised of the date and location once we receive confirmation of when the plants will arrive. In addition to your order you will be able to purchase additional plants at the time of pickup.

An order form is included with this newsletter. Please make sure your phone number is included on the form. If your order can not be picked up in Halifax please indicate this on your order form. Sorry, this sale is only available to our members in the Atlantic region.

Orders that are not picked up in Halifax on the pick-up date will be sent collect by the method indicated on the order form. Where shipping options are limited, parcels will be shipped by Canada Post at your cost (payment in advance). Please remember to make a copy of your order.

The orders will be filled on a first in first filled basis. All orders should be in to me by 16 December, 2002.

Please send your orders to :

RSCAR  
c/o Audrey Fralic,  
RR# 1  
Port Mouton, N.S. B0T 1T0  
Phone 1-902-683-2711

Remember that these plants have **NOT** been hardened off. We recommend that you give them a good watering and pot them up in 3" pots. You can use a mixture of one part commercial mix, one part peat and one part perlite. **Do not overwater.** Keep them inside under lights in a cool place until all risk of frost is past. In June , gradually place them outdoors. Do not leave them in their pots. Plant them in the ground in a coldframe or some other well protected area. We strongly suggest you use some mulch. Make sure they are kept watered.

For their first winter provide some protection. Use a coldframe, burlap or conifer boughs and make sure you use some mulch. Do not use clear plastic as it will cause burning and may even kill them.

Good luck with your plants and take notes on how they do. We would appreciate some feedback on their performance.

Happy Gardening, Audrey Fralic

# RSCAR 2003 Tissue Culture

**Rhododendrons** (All rhododendrons are elepidotes unless noted otherwise)

Variety	Hybridizer	Description
Anna H. Hall	Leach	Hardy rounded plant with excellent foliage. Leaves have light brown indumentum. Grows 5'x 5' in ten years. Yak x Catawbiense album. Zone 6.
Bluenose	Brueckner	This lepidote is an extremely floriferous plant with bright blue flowers in May. An augustinii hybrid, it grows 4 ft. x 3 ft. in ten years. Hardy to -20 degrees C.
Catalina	Leach	Distinctive flowers are a strong bright pure pink with a lighter center. Grows to 5'x5'. Zone 6
Chionodes	Waterer	Tolerant of sun and cold, this compact hybrid grows beautifully when planted in locations often considered to be too exposed. It forms a broad dense cushion measuring 5-6 ft. after ten years. A ponticum hybrid its white dome shaped trusses are bright and numerous. Hardy to -20 degrees C; blooms mid-late.
Checkmate	Weston Nurseries	Small lavender pink flowers on this compact PJM type rhodo. The most dwarf form of PJM available. Grows 2'x 2'. Lepidote. Hardy. Zone 6.
Cunningham Blush	Cunningham	This old hybrid is consistently a good grower and bloomer. Habit is tight and rounded. Very light pink flowers are kissed with a yellow-pink blotch on the upper lobe. Blooms mid-late; hardy to -20 degrees C. (Possibly caucasicum x ponticum var album).
Hellikki	University of Helsinki	Beautiful violet rose flowers cover this plant every year regardless of temperatures. Bud hardy to -30 degrees C. Indumentum covers new growth, which ages to dark green. Blooms mid-late and grows to about 5 ft.
Landmark	Weston Nurseries	This new lepidote has large trusses of dark pink flowers in May which appear to be nearly red from a distance. Robust grower with large leathery green leaves which turn bronze-mahogany in winter. Zone 6.
Normandy	Leach	Hardy, broad, rounded plant with dark green leaves. Bright pink flowers have darker edges and orange spotting. Blooms mid-late; grows to 3 ft; hardy to -25 degrees C. (Newburyport Beauty x Newburyport Belle).
Rocket	Shammarello	Foliage is medium sized, thick and heavily veined. Frilled flowers about 2 1/2" wide, are vibrant pink, blotched scarlet and are in cone shaped trusses. Grows 5'x 5' in 10 years. (Cunningham White x red catawbiense seedling).
Trail Blazer	Wright	A fine combination of two outstanding parents (Sappho x Mrs. Furnival) this is a vigorous plant with flowers like Mrs. Furnival. Grows 5'x 5' in 10 years. Hardy to -20 degrees C. Blooms midseason.
Vivacious	Forester	Foliage is medium to large with bright red trusses. A Vineland Station hybrid. Grows 4'x 4' in 10 years. (America x Dr. Ross) Hardy to -18 degrees C.
War Dance	Hall	Bright current red flowers with black spotting and a black dorsal blotch. (Mars x Pygmalion). Grows to about 4', spreading wider. Zone 6.



# **RSCAR 2003 TISSUE CULTURE**

## **Companion Plants**

### **Variety**

### **Description**

*Cercidiphyllum japonicum* "Morioka Weeping"

"Katsura tree" is cultivated for its foliage which provides good autumn color. Grows to about 20 ft. with slender pendant branches. Zone 4.

*Kalmia latifolia* "Snowdrift"

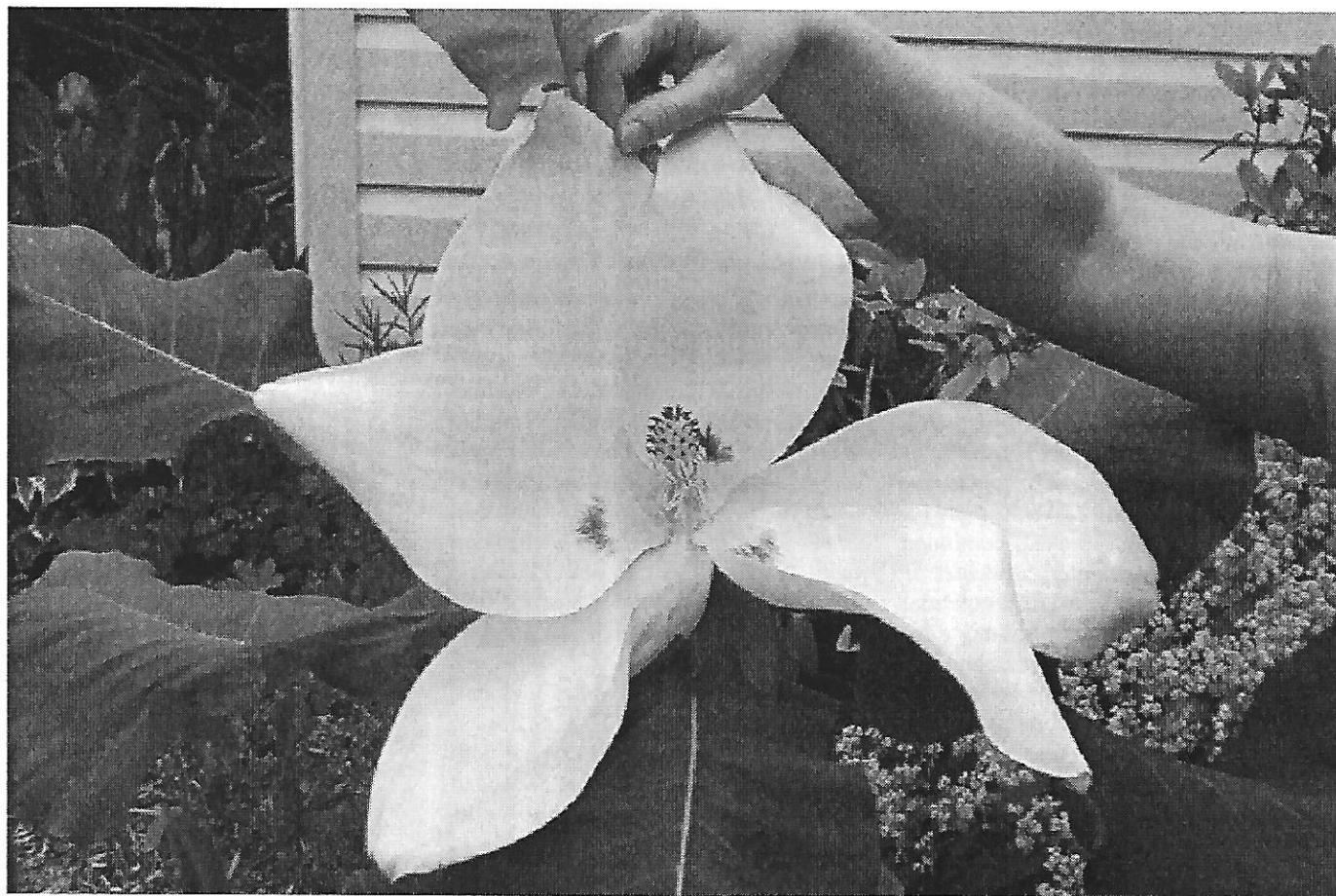
Compact dense foliage and broad leaves with bright mid-vein margin adorn this medium size mountain laurel. White flowers have faint reddish markings. Grows 4' x 4'. Zone 6.

*Leucothoe fontanesiana* "Nana"

A wonderful compact shrub with glossy, dark evergreen foliage. Use in shrub borders or combined with rhododendrons. Grows 3' x 3'. Zone 6.

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## **Magnolia macrophylla**



This seedling of *Magnolia macrophylla* x *M. macrophylla* ssp *ashei* from the 1993 Magnolia Society seed fund was started by John Weagle and grown on by Bob Pettipas. It bloomed for the first time this summer and as you can see the results are spectacular. The tree is 173 cm. (68") tall, the leaves, excluding petiole, are 52 cm. (20.5") long and 28.6 cm. (11.25") wide. The flower tepals (petals) from the center of the gynoecium axis to the tip of the tepal are 26 cm. (10.5") long and 14.6 cm. wide (5.75"). Tip to tip, the flower at its widest point is 51.4 cm. (20 1/4 "). Note tip to tip is not the diameter as they are not exactly opposite. Flower diameter is slightly larger. [Information supplied by John Weagle, Photo by Bob Pettipas]

# Rhododendrons in 3D - Dreams, Dwarfs and Delusions

By John Weagle

The first part of this article appeared in the May 2002 issue of *AtlanticRhodo*.

## Part 2

Breeding in this area of the North Atlantic presents a unique problem: we start off with a rational plan and just when it has been determined that a plant is a winner, and a contestant to proceed to the next logical step, one wintry night's fury can end it all. Therefore we often have to fly by the seat of our pants when pursuing new dwarfs. Ken Shannik and I have tried to introduce new species, inter-specific and cutting-edge hybrids from other collectors and hybridizers into the rich bank of Nova Scotian material discussed in Part One of this article. At the same time it is difficult to resist some entirely new routes. Progress has been slow but steady. Primary (inter-specific) crosses have been the backbone of rhodo breeding programmes here. Uncomplicated hybrids like Gable's 'Moonshot' ('Catalpa' x *wardii*) and Rothschild's 'Prelude' (*wardii* x *fortunei*) have helped immeasurably to produce some fine large hybrids for coastal Nova Scotia, though the great skill of Captain Richard Steele is not to be under-estimated. The simplicity and straightforwardness of his winning crosses always amaze us. The work of the late Joe Brueckner excites us too because many of his crosses involve a thoroughly hardy species combined with previously unused species or hybrids. His plants have great potential for our area and the strategy for injecting them into local dwarf hybrids will be determined when his plants are fully assessed. Visionary breeders like Berg, Doi, Starling, Harvey, P. & K. Cox, Voitek and Lehmann (and the many other Danes and Swedes quietly working away) have had the great insight to make inter-specific hybrids. In doing so not only have they produced some brilliant new plants but they've given breeders everywhere the means to create smaller rhododendrons almost as varied as those in more favoured areas.

### Lost in Action - Smirnowii

In our milder coastal gardens, *Rhododendron tsariense* can be grown by committed rhodophiles. Like *aureum*, *tsariense* has thin flower texture and we're very keen to find a better clone. Twenty years ago Walter Ostrom and I put *tsariense* on yak; he used yak FCC and I used yak 'Mist Maiden'—our results are identical. (*If 'Mist Maiden' is a smiryak, will someone kindly tell me why there is no apparent smirnowii influence in the F1 or F2?*) These two handsome plants with improved flower texture are under 40 cm. (16 inches) after 15 years and sport marvelous indumentum. While appearing structurally weak with rubbery limbs, surprisingly they have never shown damage from snow or ice loads.

### Year Round Beauty

Joe Harvey really got us thinking about the appearance of our rhododendrons year long. His thrust while living in Halifax was to produce elegant and interesting foliage coupled with good habit. (See his most interesting article "Forget the Flowers-Breed for Leaves" in *ARS Journal* Vol. 39 #3, Summer 1985). He contributed many seed lots to Atlantic Chapter's Seed Exchange in the 1980s and left some impressive new hybrids when he departed for Victoria, B.C. He is still actively pursuing these lines and is a regular ARS Seed Exchange contributor. Joe crossed *tsariense* with *smirnowii*; the little plants are cute but a bit too lusty. Still they could be an invaluable source of style and hardiness for the future. His crosses of (*adenogynum* x *tsariense*), (*insigne* x *tsariense*) and (*degronianum* 'Enamoto' x *tsariense*) are good hardy gene pools and might produce some spectacular plants when crossed with our own (*yak* x *tsariense*) F1, F2,

Glendoick's (*tsariense* x *proteoides*) or the intriguing (*principis* (*vellereum*) x *tsariense*) of Monica Johannsen, one of the "quiet" Danes, living in Jutland. Just talking about these hybrids makes the pulse rush and the mind too. Envision the super dwarf buns from an imagined mating of (*tsariense* x *proteoides*) x Barber's (*aureum* x *maximum*) F2 (see photo accompanying Part One). How tiny and tight can we go? Even smaller than Kentville's (*aureum* x *forrestii* Repens Group) F2 or those choice minute selections of *pseudochrysanthum*? Still in infancy, we have our own ('Haaga' x *tsariense*) which could be used as a parent in the colder climes of northern Nova Scotia, Prince Edward Island and New Brunswick.

### Dwarfs in Fur Coats

Now with such a wealth of material with which to work, what other avenues can be taken? Well, my own interests dovetail with Joe's: striking foliage and habit. If the flower is good so much the better. Our cool summers and soils have helped immeasurably with this pursuit and visitors from farther south are startled to see so many lepidote species and the *Taliensias* doing well here on the coast. We are lucky indeed that in the latter group *proteoides* and *prunum*, both extremely dwarf and delectable, thrive here in open breezy coastal gardens. These, the *crème de la crème* of all dwarf lepidotes, do not do well in the hot eastern USA and even here *R. prunum* can be a tad miffy, needing both sharp drainage and a watchful eye in drought until well established. Its hybrids seem much easier to please than the species itself though Ostrom's 10 year old *prunum* is a perfect specimen, though it hasn't bloomed yet. The following hybrids will surely be useful to future local breeders should they ever bud: (*proteoides* x

prunum WB93), several sibling (prunum x proteoides), (clementinae x prunum) (Cox) and (yak FCC x prunum) Greer. All are painfully slow but completely impervious to wind and snowless cold. My fantasy cross of campanulatum v. aeriginosum x prunum would give us that blue-leafed dwarf we are missing, perhaps as stunning as the Royston Form of caloxanthum. Kenneth Cox has attempted this cross with no luck though I'm certain he will try again as the allure is irresistible.

One can hardly ignore proteoides' potential after a visit to Warren Berg's garden. Warren's hybridizing efforts are indeed Olympian and a visit to his plantation was an epiphany for me—a complete reassessment of my methods and goals was in order. When Warren sends a capsule of proteoides pollen one has a duty to use it wisely; one feels that one has been passed an Olympic torch. And so I have crossed it with many species and grow every proteoides cross I can find in the ARS Seed Exchange. We have very small F1 crosses of proteoides with alutaceum Rusotinctum Group, recurvroides Hydon, taliense, roxieanum\*\*\*, pseudochrysanthum, phaeochrysum 'Green Mantel' R.11325, dignabile and chamaethomsonii. To date all are very dwarf, perky and attractive. Our tiniest is (wardii KW4109 x proteoides), followed closely by (forrestii Repens Group x proteoides). The latter is just planted, and we envision a creeping indumented stunner with waxen red bells; you have to be a bit of a dreamer in this business!

In her recent article, Shirley Anderson proposed crossing maximum with proteoides. We did this in 1995 with a good pink form of maximum. The same year we crossed proteoides with creeping brachycarpum. The maximum cross gave very glossy leaves. Both crosses should make excellent super-hardy parents for future use, should our other crosses backfire. Now, if you are thinking that we were terribly clever to do such a novel cross, consider this—ARS 85-1182, Harry Wise of Charleston, West

Virginia, contributed h.p. seed of maximum x proteoides R.147, 10 years before! All too often we are day-dreaming and not paying attention. A forgotten cross by Joe Harvey in the 1980's combined maximum (Gable's red) and proteoides. A few of the progeny have red leaves which may be of interest to both Warren Berg and Kenneth Cox who are working on just that.

Our experience with proteoides hybrids indicates that the faster they get out into fresh air and cool soil the higher the survival rate. Warm roots in pots are utter anathema to them. Once planted, their rugged constitution is astounding; the more wind, the better they look. Aureum and repens, proteoides and prunum, camtschaticum and redowskianum, lapponicum and the extremely dwarf yaks, ludlowii and lowndesii are as finicky. Are the traits we seek—shortened growth, hyper-twigginess and creeping or dwarfed habits—peculiar to site-specific species? If such sites are sunny but cool and windy, with the short growing seasons of high altitudes or northerly latitudes, then we may be well situated. Aside from the compact catawbienses on the southern balds, do the dwarfs of our favourite genus exist in warm areas? Or, by retreating to the shade to avoid incineration, has nature precluded warm-blooded Lilliputians? Breeders in such areas should get proteoides and prunum pollen on heat-tolerant species like hyperythrum and anwheiese. Your dreams of dwarfs may be realized with a little imagination.

Proteoides and prunum are but two species in the magnificent Taliensia Group. This group has some of the best foliage in the genus, good cold hardiness, a wonderful colour range and is an untapped goldmine waiting to be discovered by the hybridizers of the new millennium.

### Yellow and Orange

It seems that the quest for hardy yellows has consumed the last 25 years of the 20th century in eastern North America. Aureum figures prominently in many local yellow hybrids as it

reliably transmits yellow and will dwarf almost anything. Steele's early bright yellow BPT#80-5 (aureum x 'Prelude') is a fine dwarf and one of the yellowest. It reaches only 1 meter in 30 years. A good performer here on the coast, it, like aureum itself, is unsuited to most of the warm eastern U.S. and areas where the growing season is too long, winters are too mild and early Spring warmth is followed by devastating late frosts. Foliage and buds can both get badly nipped in those scenarios. Don Craig's [( 'Bellefontaine' x 'Goldsworth's Yellow') x degonianum] x (aureum x 'Prelude') BPT#80-5 proves that BPT#80-5 has breeding potential. Steele has selfed and sibbed BPT#80-5. Bob Pettipas has put pollen of BPT#80-5 and its sibling, BPT#82-1, on 'Hong Kong'. His plants look promising as do those grown by Bill Wilgenhof. We have crossed BPT#80-5 with proteoides in the hope of an even smaller yellow. Though untested, 'Berg's Yellow' would almost certainly fail here as 'Mrs. Betty Robertson' has not been "detenderized". ARS 96-462 ( 'Berg's Yellow' x proteoides) F2's toughness in my garden indicates that hardy yellow dwarfs are quite possible using proteoides. With this in mind, we have combined Warren's ( 'Berg's Yellow' x proteoides ) F1 with BPT#80-5. That should shake up the genes a bit, with aureum and proteoides in the same hybrid. But, are we breeding for miffiness? We may work the late Basil Potter's cross 'Serendipity' (aureum x yak), my own 'Crest' x aureum, Ostrom's [(brachycarpum x aureum) x caloxanthum], Steele's brachycarpum x wardii F3's or his tightest (yak x Moonstone Group) into the progeny some day. When greater hardiness is attained we will put them on Steele's (aureum x 'Binfield') or maybe even Bill Moyles' tantalizing 'Baby Grand' (aureum x grande).

A recent landmark was a take of proteoides on Cpt. Steele's super orange hybrid (vernicosum 'Mt. Siga' x 'Queen Elizabeth II') BPT#95QER. Orange may be too much to hope for in the F1 but increased flower substance and size may not. In a



recent e-mailed time bomb Shirley Anderson casually mentions having pollen of (dichroanthum x proteoides). Visions of orange and the mind starts racing: why not put this on my [aureum x (yak x Fabia)] or on Barry Starling's striking hybrid 'Easter Chick' (aureum x dichroanthum) or in the future, on [(vernicosum 'Mt. Siga' x Queen Elizabeth II) x proteoides]. And what about Doi's [(dichroanthum v. apodectum x brachycarpum Roseum Group) x aureum]? He has just pollinated it with Ostrom's [(brachycarpum x aureum) x caloxanthum] and may have scored a direct hit on orange. Recent conversations with Carl Lehmann indicate his creations involving citriniflorum v. horaeum (see ARS Volume 49 #2, Summer 2000) might be suitable bedfellows for some of the Nova Scotian attempts at this colour. The possibilities are limitless, the quest for orange most alluring and delusions persistent.

### Tangents

Another goal has been to get the flower substance of *R. fortunei* into a proteoides cross as both proteoides and prunum have rather thin flower texture. All attempts have failed every year, including a much-needed one with a hardy Steele decorum. I fear proteoides could be incompatible with the Fortunea, though I hope someone will prove me wrong. We are required, therefore, to proceed through the back door and my two recent proteoides takes are of great importance to us. The first on a hybrid known locally as 'Barbara Hall' (which is a Steele hybrid ('Road Red'\* x 'Prelude'), 25 percent fortunei and close to the Dexter 'Parker's Pink' but hardier) and, on 'Betty Hume', a Dexter pink fortunei hybrid with rubber-like flower texture. Perhaps we will at last get flower substance and a stronger colour. Another route would be to cross Steele's pink forcats with proteoides; (fortunei x catalpa) is a cross made in heaven and, so happy in the Bayport woodland that thousands of self-sown seedlings carpet the floor beneath the now-towering 5+ meter high row of plants. A sturdy ladder will be required!

### Just for Kicks

Some bizarre crosses attract us as well. Rhododendron [(bureavii x 'Ken Janeck') x 'Sir Charles Lemon'] x proteoides] from the ARS Seed Exchange grows more slowly than a stalagmite but the prospect of stunning foliage makes it well worth the wait. One wonders what [(yak x longesquamatum) x proteoides R.151] ARS 96-#1384 and [(America' x 'Carmen') x (aureum x 'Prelude') BPT#82-1] will bring. With hand lens we admire the youngsters, while the men in white coats stand ready. Cross our (forrestii Repens Group x proteoides) with Kentville's (aureum x forrestii Repens Group) F2 and we may be locked up!

### Super-Hardy

Hybridizers in very cold climates might well consider using Dave Hinton's [(brachycarpum Tigerstedtii Group x (smirnowii x yak)) x proteoides Berg]. The seed parent 'Sandra Hinton' is an extremely hardy plant bred by Dave and has tolerated temperatures near -35°C (-31°F) at his Orono, Ontario garden. A number of recipients of this ARS seed lot have suggested that the cross did not take. I noted when they sprouted that while many seedlings showed no proteoides influence, a fair number did show its unmistakable characteristics. We await their progress and shall distribute some to colder climes for testing and hybridising. Dwarfs could be marching much farther north!

In Hokkaido, Dr. Yasayuki Doi has done much that is of great interest to us. He has combined brachycarpum Roseum Group (see the Cox & Cox *Encyclopaedia of Rhododendron Species* page 138), a very dwarf and wind-tolerant strain, with the finest species and emphatically coloured hybrids. The successful colour inheritance using this brachycarpum will astound the most jaded hybridizer and surely shatter some traditional inheritance notions! His work, of which this is but one facet, merits a lengthy article in the Journal. We are growing quite a few of his many gems and in time will incorporate more of

them into our own dwarf material to increase both hardiness, colour, diversity and adaptability.

### Dwarf Headaches

Breeding for a good red—dwarf, medium or tall—is 'la cause célèbre' here in the cold north. The late Joe Brueckner once told me "getting good reds will be very difficult, the yellows will come easily". There being no truly hardy red species makes it very difficult to formulate a breeding plan for red, especially dwarf reds. The brilliant red creeping species *R. forrestii Repens* Group 'Tower Court' has persisted here, though it is a cranky customer to grow. But how can we use it to produce a super-hardy clear barbatum red? Kentville Research Station's extremely dwarf (aureum x repens) F2, an old Hobbie cross, bordering on rose red, might be useful, albeit a perilously early bloomer even here. The Doi and Jens Birck plants of ('Fantastica' x proteoides), our own ('Morgenrot' x proteoides) and [(Lath House Red'\* x yak) x proteoides] perhaps point the way for us. Someday we will cross them with Repens and the super hardy Finnish 'Elviira' (brachycarpum Tigerstedtii Group x forrestii Repens Group). *We cannot thank the Finns enough for that ground-breaking red hybrid.* My own backcross of 'Elviira' x forrestii Repens Group 'Tower Court' should bud and bloom red in 2003 and we hope for a hardy repens look-alike. Ken Shannik has already crossed many red, yellow and orange species and hybrids with 'Elviira'. Blooms are anxiously awaited, especially on his ('Elviira' x barbatum), ('Elviira' x 'Elizabeth'), ('Elviira' x 'Baden Baden'), ('Elviira' x 'Lionel's Red Shield'), ('Elviira' x Steele's [yak x (repens x 'Barclayi')]) and [(Elviira' x Doi's (Carmen x brachycarpum Roseum Group)]. We presume that 'Elviira', which is reputed to tolerate -29°C (-19°F) or lower, can toughen its mates. From these, with luck, will come some dwarf, emphatically red-flowered plants. Factor Steele's red (aureum x lanigerum 'Roundwood') into the final equation and we could be on the road



to Nirvana. As a safeguard, I have crossed (Haaga x forrestii Repens Group) and ('Francesca' x forrestii Repens Group 'Tower Court') should other Repens combinations fail due to tenderness. Barry Starling has been a great help to us, growing our crosses and sending seed from his own. He tells us that his now-budded [aureum x (forrestii Repens Group x 'Popacatapetl')] are as compact and prostrate as Repens itself. Bravo to aureum and repens for flattening effects! This hybrid and his ['Elvira' x (forrestii Repens Group x 'Popacatapetl')] will undoubtedly prove slightly tender here but their pollen might be very useful. One very slow (yak x 'Carmen') from the ARS Seed Exchange is at last budded here and ready for pollen. My own ['Sumatra' ('America' x 'Gertude Schäle') x 'Lionel's Red Shield' ('America' x 'Carmen')] is as yet unbudded but should someday be worked into the Craig 'Elizabeth' hybrids and Brueckner sanguineum hybrids. Yasayuki Doi's (Carmen x brachycarpum Roseum Group) inspires us; it will be of great use to breeders in Atlantic Canada in the quest for a truly hardy red.

### Reality Check

Our recent seedlings have not been easy to grow in the early stages. Hardly surprising, given that some of the species involved are not without cultural challenges. It will be interesting to see if these shortcomings are passed on to their hybrids. For instance *R. aureum*, very temperamental in youth but rock-hardy, sports a very distressed look in winter with yellowing, drooping leaves and appearing for all intents and purposes to be in the final stages of phytophthora. As well, blooming during the earliest days of Spring, the flower texture lacks sufficient substance to take the battering of rain and wind; an ivory seedling we grew from the Arnold Arboretum's Hokkaido Expedition is a rare exception. Once established, the Steele aureum hybrids are, for the most part

quite presentable in winter. Brachycarpum Tigerstedtii Group has this same distressed and yellowish winter guise, especially severe in full sun. Its leaves are the first to hang straight down—and I mean straight down!—with a good freeze, and they don't fully recuperate until frost has completely left the ground. The very dwarf Roseum Group of brachycarpum we hope will be an exception, but we have not had it long enough to be certain. Reds are generally miffy but *R. forrestii* Repens Group has a litany of drawbacks; it is intolerant of heat, warm soil, nitrogen fertilizer, overhead competition and planting near sun-drenched foundations or under roof overhangs. As if that weren't enough, it also detests poor drainage, drying out and is a shy budder—a fault luckily not passed on to most of its progeny. Peter Cox's report on a trip to Yunnan in the Spring 1995 ARS Journal says much about this species and its wants, the time was late May: "Sadly this part of the meadow covered with *R. forrestii* was still under snow"! Surely, by the time it finally emerged to both grow and bloom, frost was no longer a threat. Yes, we are quite mad to use it, but do recall Kingdon Ward's likening of the wild repens to sheets of molten lava when in bloom—who can resist? Maximum, according to the Americans, is intolerant of too much exposure to sun and wind and requires a relatively moist spot. Here it will happily grow in full sun in driveway gravel when fully established.

Our work in Nova Scotia may well be of local importance only, as both heat and late frosts seem to plague the big eastern U.S. market areas. And will our dwarfs suddenly become rank growers in benign climates with longer growing seasons? Time will tell. We would be quite content to produce just a few good-lookers and a respectable bank of sturdy genes for our younger breeders to use. Without the support and generosity of our local comrades and an abundance of inspiration and superb pollen from the cognoscenti:

June Sinclair, Warren Berg, Yasuyuki Doi and Peter and Ken Cox we would be still at the starting gate. I will report back when our new hybrids start blooming, but don't hold your breath. I note in the inventory that I did the maximum x proteoides cross in 1995 and the plants are still under 7.5 cm. (3")—in fact I still have some seedlings in the original seed pot!

### The Cure

The need to recruit younger members—the breeders of the future—becomes especially urgent as we breed for dwarfs and slow-growing rhododendrons. Much of the work discussed will have to be done by them. I urge you to write about your experiences and ideas. Offer your pollen and plants for breeding purposes and share your enthusiasm and dreams (delusions too) with anyone that shows an interest.

### footnotes:

\* 'Road Red' is Steele's unregistered name for an old unknown red ironclad growing roadside in Digby County, N. S. It was planted in the late 1800's.

\*\* (Lath House Red x yak), another unregistered Steele hybrid with fine indumented foliage and perfectly round small pink trusses. Hardiness superior.

\*\*\* The Cox team tells us that roxieanum v. parvum and proteoides aff. (Hillier's clone) are in fact Mother Nature's jump on us all—proteoides x roxieanum; it would be interesting to repeat this cross using the various leaf forms of roxieanum.

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In time, pictures of these dwarfs will appear on the Atlantic Chapter website: [www.AtlanticRhodo.org](http://www.AtlanticRhodo.org)

# Winter Protection for Rhododendrons

By John Weagle

With the recent 10 year bout of mild winters it hardly seems appropriate to speak on this subject. The lesson of the last 30 years is that the winter of our nightmares will appear when we are least prepared. So pre-emptive action is in order as another winter like 1992/93 may be just around the corner.

For well established plants hardy in your zone little need be done unless conditions are somewhat short of ideal. I need not lecture anyone on planting a wind-sensitive rhodo in a windy spot; if the site is quite windy plant a rhodo that will tolerate wind—the old right plant / right place scenario. Why plant a rhododendron intolerant of wind and look at burlap all winter long? Now if the burlap is up just until a suitable rhodo gets established that's quite another matter. Here are a few of the concerns I have about my rhodos as winter approaches, including a few misconceptions. Our past newsletters contain zoning information for most of the plants we have brought in for members. If in doubt don't hesitate to ask other members on a zone rating or conditions suitable for your plant.

**Wind.** As mentioned there are plenty of rhodos for super windy sites: lepidotes like *impeditum*, 'Ramapo', 'L'Abeille', 'Karen Seleger' and most of the really small leafed species (and their hybrids—all with leaves fingernail sized) along with *R. kiusianum* and *R. yakushimanum* revel in open windy sites when established. If you feel your plants are not quite settled in then by all means erect a burlap or spruce bough screen to cut the wind. Boughs can be stuck cut end first into the ground in early December but it can be a race against frozen ground. The screen should not touch the plants. Snow fencing is another possibility—plastic or wooden, but be sure your stakes are deep enough in the ground and stout enough to take a hurricane. Screens which crash onto the plants are another unforeseen hazard.

**Anti-desiccant / anti-transpirant sprays.** There are plenty on the market these days. In a word, avoid them. Rhododendrons have evolved mechanisms to deal with winters. By losing a bit of water through transpiration they roll their leaves and hence protect themselves from greater winter water loss and sunburn. In my experience these sprays seem to restrict their ability to roll somewhat and this can result in increased injury.

**Snow and snowload damage.** There is a common misconception that snow on your plants is bad, that is: snow equals cold. Rather the opposite. Snow can keep frost out of the ground or more importantly, keep the ground from freezing and thawing repeatedly. Mulches of bark, pine needles, oak or beech leaves are excellent mulches and help minimize freezing of the ground until it gets really winter-like. (This is in addition to the necessity of mulching when

properly planting rhodos to keep the soil cool, moist and furnish a slow supply of nutrients to those shallow roots of rhodos). This mulch, combined with snow, is very beneficial. A word of warning: evergreen azaleas should be mulched sparingly and NEVER excessively, especially in the fall; serious bark-splitting can occur. So, screens or structures should never be arranged in such a way that a roof is formed to prevent snow covering the root area or the whole plant if the snow is deep. Plants under snow can hover at or just below freezing while the air temperature above plummets. (I can be frequently seen shovelling snow onto my plants in winter!) One problem we all faced in the winter 2000/2001 was deep snow that persisted from late January till early April. In many areas each snowfall was followed by rain or brilliant sunshine which caused a layer of ice to form in layers between each successive snowfall. The net result was tremendous weight bearing down on branches causing breakage. Cape Breton and Newfoundland were particularly hard hit with rhodo's central stems being snapped. Short of building a large lath house over big plants there is really not much you can do to protect large plants from such devastation. The aforementioned dwarf lepidotes seem quite immune from such damage; this is not surprising considering they originate at high snowy altitudes in their homelands. Only when grown in shade do their structures become too weak to withstand such pressures; grown hard in sun and wind they can withstand a steam roller. A few hybrids susceptible to breakage come to mind: 'America', the ironclad red, is very susceptible to breakage until it gains a height of about 2 meters, 'Olga', the bright pink PJM look-alike, is very brittle as a young plant. Smaller more delectable plants can be protected by sturdy lath structures sufficient to take the weight; these again must be open enough to allow snow to fall on the soil beneath AND over the plants. Spruce boughs can be used to cover smaller plants to protect from sun and wind: early December seems to be the time to apply though I often wait till the spent Christmas trees are put out. Another favourite item is the hefty plastic milk crate with which many are familiar. They measure about a foot by a foot by a foot—perfect for covering those choice dwarf seedlings. The top mesh is a bit too dense to allow snow penetration though it bears weight perfectly. These are often found at yard sales.

**Winter sun: the big culprit.** Sun on a borderline or poorly established plant in winter combined with frozen ground is a killer. Consider these points: the ground is frozen, the plant cannot take up water because the roots are frozen and the sun bears down causing the rhododendron leaves to unroll and lose water. The net result is burnt leaves. How many times have we boasted this or that hybrid has come through the winter after a stroll through the garden in early March? The ground is still frozen, the warm March sun—we are at the same latitude as Milan, Italy and Eugene, Oregon!—

seems so harmless even though the temperature may feel miserably cold. Then to our horror burnt leaves appear in April or later and, even worse, the plant is dead as a nit by May. The culprits: March sun and / or drying wind; most likely sun. The dilemma: most rhodos need sun to grow and bloom here; we plant early and they are in part sun in June, but by November the leaves fall and suddenly the plants are in full sun in winter. With careful siting—this involves watching where the winter sun falls—you can choose a spot for that borderline or young plant where it gets spring, summer and fall sun but misses the winter sun entirely with the aid of buildings or evergreen trees. Note: early blooming plants are best planted to avoid the rising sun—such frosted blossoms can survive nicely if they have time to thaw the next morning before the sun hits them. Western sun—the setting sun—is the worst scenario in winter: the leaves can be warmed by day and then the temperature suddenly plunges after sunset; the result burnt leaves, bark-split or death.

**Loss of Flower Bud Dormancy.** Another concern with extremely early bloomers is that the January thaw or the March sun will cause the buds to start moving too early; should that happen a mere frost down to  $-4^{\circ}$  to  $-7^{\circ}\text{C}$  or lower can kill those buds which have survived lower dead-of-winter temperatures. A winter covering of boughs can avoid this; it seems strange that *R. lapponicum* rated to Zone 1 or 2 is one very early rhodo that I routinely cover to avoid late bud blast!

**Water.** The books tell us to water evergreens heavily before the onset of winter. Since our wettest month is November in coastal Nova Scotia—and I'm talking monsoon-like—I doubt that anyone has ever bothered to go out with the hose in mid-November. Indeed the only dry fall followed by a dry snowless winter I have ever witnessed here was in 1991-1992; perennials were particularly hard hit. It would have helped immeasurably to have watered that year. The lesson: if it is dry by mid November don't hesitate to give precious plants a good drink even if the neighbours look on thinking you're as mad as a hatter. I wouldn't water too early as plants need a little stress to harden off for the winter. A fall drought this year will be especially important after the coast's very cool foggy summer of 2002!

**Heaving.** A notorious problem here on the coast of Nova Scotia. Many low pressure systems pass by this way in winter; cold followed by melting or the reverse. An event every three to four days is to be expected. Heavy rains and freeze - thaw - freeze. After the first good hard freeze in the fall it is wise to check small or newly planted rhododendrons to make certain they have not been heaved out of the ground. In my garden the first hard freeze causes the most dramatic heaving, after that all's usually well; in other gardens I've seen repeated heaving the entire winter. By April you may very well have replanted several times, replanting is very difficult if you discover this problem after a good freeze. The only remedy is to throw some bark (if the pile hasn't frozen solid!) over the roots and hope for the best.

**Plants in pots / tissue culture plants / very tender plants / young seedlings of unknown hardiness.** Obviously these plants will need to go into a coldframe for the winter. A coldframe is ideally situated where no winter sun falls. Usually coldframes are built where the sun falls. Remedy: If the plants are planted in the coldframe a lath lid and solid sides are recommended. A lath lid should have the lathes arranged running north-south so the winter sun moves over the plants; running east-west you can sometimes see burnt leaf stripes where the sun shines through. Potted plants must be heeled into wood chips to the brim; a light covering over the soil surface helps as well. Roots in the ground rarely go below  $-7^{\circ}\text{C}$ , and if snow covered are much less cold. Potted plants will be killed dead if their roots freeze sitting above grade. To assure complete (well almost) success cover the entire frame in white plastic around early to mid December and seal it tight after the plants have had a good drink. This is how the professional nurserymen deal with their leftover stock in winter and you will find the results amazing. A large lath house can achieve the same results; Walter Ostrom near Peggy's Cove routinely grows and blooms Zone 8 plants in his large walk-in lath house.

**Root damage.** Although this was discussed earlier the question often arises on how to handle rhododendrons received bareroot in early spring, since such bare-rooting is mandatory for importation from Europe. I doubt that these plants will be fully established to take on a Maritime winter outside. Having avoided direct sun from March till November, the only winter remedy is to store them in a ( $+1^{\circ}$  to  $+7^{\circ}\text{C}$ ) cold greenhouse. After mid-November the plants can be safely acclimated to full sun in the cool greenhouse and planted out the next spring. There is little chance they would survive without such treatment

**Cold temperatures.** Not much to be done about that aside from saying that the lath house and white plastic covered coldframe certainly can minimize the rapid temperature fluctuations for which the Maritimes are notorious. If extreme cold is prolonged nothing can ameliorate that aside from a cold heated greenhouse. The intelligent gardener will maximize the plants' requirements and pray a lot.

**Deer/Vole damage.** Accelerating lead for deer seems to be the best remedy but there are countless deer—at least in Nova Scotia. Not one of them has read that rhododendrons are poisonous. Keep in mind they are omnivores and can eat small quantities of many poisonous plants with no ill effects. On some rhododendrons they will eat the leaves and not the stems one year and do the reverse the next—even lepidotes are prone to spectacular damage. In my woods they never touched the lepidotes for years and now that's all they eat. Electric fencing is said to be rather effective. Any other type of fencing should be 3 meters tall! Voles will eat very tender growth on small plants and chew bark on older plants causing leaves to flag in summer. Various baits are available but these sometimes tend to be eaten by the wrong critters. Small plants in rural frames must be protected with .8 cm. wire mesh—top and bottom—if a vole problem



exists. Voles are a serious problem every few years and particularly so in Prince Edward Island and in mainland areas with dense underbrush which defies flying predators. **A small amount of waterproof mouse bait should be placed in the frame before sealing.** Small plants can be protected from rabbit foraging with chicken wire. None of the expensive foliar sprays for deer, voles or rabbits have proven very effective.

**Removal of screens, boughs, plastic etc.** In the early days I'd rush out in mid March when the temperature warmed a bit and remove all the boughs. Shortly thereafter the plants would fry. In fact I had just removed the boughs when they

were starting to do what they were meant to do: protect from the brutal March sun. Better to wait till the ground is thoroughly thawed and during a period of cloudy overcast weather that is predicted to persist for a week or longer. Plants shaded by boughs and screens can be suddenly fried when exposed to sun after a long winter in the dark. Snow of course lets plenty of light through if not meters high.

In summary: the right plant in the right place—optimum cultural practices for the rhodo in question. If you have to look at ugly screening all winter then your plants are too tender. N.B. Some of my favourite plants are tender plants. ☞

## Snail and Slug Control with Caffeine

By Chris Helleiner

Is there any garden or greenhouse without snails or slugs? They seem to prefer to feed on the choicest young shoots and the most promising flowers, and they are notoriously difficult to control. Most commercial products for this purpose (baits, sprays, tapes, syrups, etc.) contain metaldehyde or methiocarb as the active ingredient. These substances are toxic not only to snails and slugs, but to a variety of other organisms, including pets, which are sometimes poisoned when they eat the bait.

A recent paper from Hawaii (Nature vol. 417, p. 915, June 27, 2002) reports results showing that caffeine kills snails and slugs when they make contact with it or ingest it. Furthermore, the pests avoid leaves which are sprayed with a solution of caffeine. Caffeine is generally regarded as safe, so this may be a preferable alternative method of controlling snails and slugs. In a greenhouse test, caffeine solutions were applied to the growing medium of potted orchids infested with snails. A solution containing 2% caffeine resulted in 95% mortality. Lower concentrations were not as effective, but even 0.1% caffeine resulted in about 70% killing. This treatment was more effective than the normal concentration of metaldehyde used for this purpose.

Would it be practical to use coffee instead of pure caffeine? Typical brewed coffee contains about 0.045% caffeine, and instant coffee about 0.035%. So if you make extra strong coffee—cool, of course—(about twice the normal strength for brewed coffee, or three times for instant), it should work. At the concentrations used in the experiments reported in the paper, caffeine did not damage foliage of *Dracaena*, *Anthurium*, palms or orchids, but caused leaf yellowing on ferns, bromeliads and lettuce.

The results reported are preliminary, but it would be interesting to follow them up. In the meantime, a cautious test on some of your plants might be worth a try. ☞



Rhododendron 'Bluenose'. A 2003 Tissue Culture selection. [Photo Dr. J. Breuckner]