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American Rhododendron Society

American Rhododendron Society
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ARS On-line Journals: http://scholar.lib.vt.edu/ejournals/JARS/
ARS Archives: http://www.lib.virginia.edu/small/

Society's Purpose

To encourage interest in and to disseminate knowledge about rhododendrons and azaleas. To provide a medium through which all persons interested in rhododendrons and azaleas may communicate and cooperate with others through education, meetings, publications, scientific studies, research, conservation and other similar activities.

Membership Benefits

- Chapter affiliation with scheduled meetings
- *Journal American Rhododendron Society* published quarterly
- Annual convention and regional conferences
- Seed exchange
- Listing of registration of names and descriptions of new rhododendron hybrids published in the Journal

To Join the Society

Membership categories:
(January 1 – December 31)

Regular	$40.00
Commercial	$90.00
Sustaining	$75.00
Sponsoring	$150.00
Life single	$1,000.00
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You can join the ARS through your local ARS chapter (check the website www.rhododendron.org for chapter contact info) or by sending a check or money order directly to the Executive Director of the American Rhododendron Society at the above address. Checks must be in US funds. Make checks payable to the "American Rhododendron Society." Membership includes one year (4 issues) of the *Journal American Rhododendron Society* and affiliation with the chapter of your choice.**To receive the winter issue of the Journal, renewals must be postmarked no later than Dec. 1.**

From the President

Don Smart
Carnation,
Washington

Where does the time go? By the time you get this, most of us will be hot and heavy into our 2012 spring flowering season and hybridizers will be deep into their ongoing plans for the future. I myself have not tried hybridizing with a plan, but I admire those of you with the future in mind and the years of patience it takes to see your successes. Elsie Watson used to tell me that what kept her going all those years was to see the results of her efforts!

I want to pass on some thanks this month. Ted Stecki, our ARS immediate past president was also our Budget and Finance Chairman for many more years than I have been involved with the ARS board. As the ARS has declined in membership, and in turn income, he has worked the numbers to keep the ARS boat afloat. Yes, there were a couple of dues increases, but there was lot of other work that had to be done in the background to keep us "in the black." He has finally "retired" from that position. I want to thank him for his many years of service and I'm sure the many headaches in keeping the numbers straight for the rest of us. Thanks, Ted, for a job well done.

I also want to thank Dave Collier for accepting the position of the new Budget and Finance Chairman. It is a tough job, especially in today's economy. A lot of thanks also goes to our Treasurer, Bill Mangels, for his efforts in controlling our financial boat in stormy seas,

It's a sad reality in the ARS that the average age of our membership is increasing— well, that's not entirely sad as it's better than the alternative for existing members—and that we are not getting as many new younger members as desired. I don't know the actual numbers, but I think that at 66, I am below the average ARS member age. In addition, we are losing members that have given many years of service to the Society. I'm especially thinking of Harry Wright from District 1 on Vancouver Island. He held many of the executive positions in his chapter and District, including being a District Director. The loss of these folks is really missed.

Our ARS membership chair, Shirley Rock, who is also our District 2 Director, is well versed in the problems of maintaining ARS membership. She had done a lot over the past four years to bring the districts and chapters together in discussing what works and what doesn't in growing and maintaining membership. I really want to thank her too for all of her work and also to all of the people that helped her in her efforts. She thinks there needs to be some new ideas and methods developed and is looking for a replacement for that committee chair. Please consider whether you could be that person or if you know someone that might fit that position.

I am looking forward to seeing a lot of you in Asheville, NC. I have seen the updated registrations and they are approaching capacity for the banquets and tours. They've added more hotels to house the folks coming so it looks to be a great success thanks to all of their efforts. Have a great spring and summer and then let's get together in Nanaimo, BC, this fall.

From the Editor

Dr.Glen Jamieson
Parksville, BC
Canada

It's been an interesting winter in the Pacific northwest again—benign at first, and while never excessively cold, our winter is nevertheless hanging on. It's looking like it may again be a late spring! While eastern North America in March was basking in temperatures way above normal, the Pacific Northwest was still stuck just above freezing and was experiencing strong wind storms and lots of rain! The positive side of such weather is that it allows one to anticipate summer activities and to think about upcoming ARS conventions and challenges. In particular, I hope that many of you will get your cameras out to take photos for submission in the upcoming ARS photo context, described on Page 92 of this issue. The spring is the best time to capture images of flowering rhododendrons, unless perhaps you grow vireyas which can be in flower throughout the year, so think about image composition, be creative and capture photos of your favourite plants that will make people gasp in appreciation! I know many of you are great photographers, so I look forward to seeing your submissions.

Finally, like our President above, I encourage all of you to attend ARS conventions. I realize that travel is costly, but there are presently two conventions each year on opposite sides of North America, one in the spring and the other in the fall. Attendance at the one closest to you may be within the travel budgets of many of you, and if you have not previously attended an ARS convention, I'm confident that you will enjoy it when you can. Activities are well-organised and educational, people are friendly, and it's a great opportunity to meet new people with similar hobby interests. This year's fall convention is on Vancouver Island in Nanaimo, British Columbia, just a short distance from my home, so I admit that I am biased in encouraging you to visit Canada if you have never previously done so. We will welcome you as neighbours and happily show you some of the unique features of our island paradise. With five ARS chapters on the island, about one every 30 miles (50 km) or so apart, gardening is big, and being mountainous, Vancouver Island has much to offer in the way of scenery, hiking and simply getting away!

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Inside this issue…

Dennis MacMullan pursues the elusive hardy orange rhododendron. Page 75.

Four scientists write about new approaches to understanding rare plant species distributions in the Indian Eastern Himalayas, including the above *R. keysii.* Page 78

Frank Fujioka discusses his use of species when hybridizing for foliage, including the above *R. arboreum* ssp. *zeylanicum*. Page 101.

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R. 'Carillon Bells' flowering in *Syzygium jambos.*

Vireyas as Epiphytes and Lithophytes

Martin Monthofer
Bremen, Germany

Photos by the author

R. emarginatum growing as a lithophyte.

R nieuwenhuisii with *Aeschynanthus* on *Cyathea.*

R. 'Hot Tropic' x *R. saxifragoides* growing as lithophytes on the top of Mt. Kinabalu in the botanika.

This article first appeared in Rhododendron & Immergrüne *Vol. 7, the semi-annual publication of the German Rhododendron Society. Reproduced with permission.*

For some years I had known that rhododendrons grow not only as terrestrials (in the ground) but also as epiphytes (growing in the branches of tall trees where they get plenty of light, but not growing as parasites) and lithophytes (growing on rock surfaces or actively penetrating into the rock). I had never tried to cultivate vireyas as epiphytes or lithophytes as I was happy to grow them in container culture.

I became enthusiastic about vireya epiphytes when I attended the International Vireya Seminar in Hawaii in 2003. While staying there, we visited several private gardens belonging to Hawaiian vireya lovers. In these gardens, the vireyas grew not only as terrestrials but also as epiphytes in the branches of trees covered with moss or in *Platycerium* spp. (staghorn ferns). These vireyas looked very healthy and well fertilized. This therefore seemed to be a real alternative, if one has the available growing space. They grew there with companion plants, as in nature, of ferns and orchids. Not only trees were used as new habitats but also the Hawaiian native tree fern *Cibotium splendens*. Vireya cuttings could be placed in *Platycerium* sp. and would form roots in the specialized microclimate. All these impressions were stored in my mind but I never believed I would soon need to recall them.

Back in Bremen I thought about what I had seen but did not really consider epiphytic culture. All this changed in April 2003 when I started a new job with the Rhododendron Park GmbH. From then on I had to take care of the Borneo and New Guinea area of the green science centre botanika. This greenhouse area opened new ideas of vireya culture for me as it was possible to cultivate them their under their "natural" conditions. These "natural" conditions consist of man-made rock formations, which symbolise Mount Kinabalu in Borneo, and the enormous trees and tree ferns that were integrated in the plantings at the outset to give a more natural look. This manmade natural habitat was the beginning of the epiphytic and lithophytic culture of vireyas.

Before one cultivates vireyas as epiphytes, one must consider several factors. The root system of the chosen plant should not be too large to place onto the branch of a host tree. A small root system is also necessary with tree ferns if they have a slender trunk—you cannot position a root system from a two litre (2.11 qt) container on a thin trunk. One has to be a designer; one has to create a "natural look." It is necessary for the vireyas to get plenty of light if they are to grow successfully and the most important thing is that the new epiphyte can be handled like a terrestrial, i.e., be placed so that it can be watered—it is no good if it is placed high in the trees where one cannot water it! The plants should be positioned where they will catch the eye of the visitor, but this depends on the branch structure of the trees and of the tree fern trunks. One has to take what nature gives and make the best of it for the visitor's experience.

Now the question arises about the type of growing medium to be used and how to fix the plants in place while maintaining a natural look. Here at the Rhododendron Park, vireyas grow in our own substrate mix, which holds water but also has good aeration, both of which guarantee survival of the roots. The growing mix consists of 20% orchid substrate from the Wichmann Orchid Company, 10% long gramofibre, 10% coarse peat (particle size 5-25 mm (0.2-1 inch)) from Gnarrenburg, 10% broken Lecadan (2-8 mm; 0.1-0.3 in), 40% pine bark (20-40 mm; 0.8-1.6 in) and 10% lava (8-16 mm; 0.3-0.6 inch).

The first vireya epiphytes in the Borneo greenhouse area of botanika were planted in man-made tree branches. The branches consisted of a flexible black plastic fabric with a rough surface, which was used as a base on which concrete was applied when building the rock formations in botanika. Additional material was bound around the stem of the tree to form a small pocket. The pockets were filled with our growing substrate and into this selected vireyas were planted. The plastic pockets, being black, did not look natural and so moss was used to cover the pockets to give a more natural appearance.

The bad thing with these plastic pockets was that the moss was not in contact with the substrate and so the vireya's roots could not secure the plant by growing into it. A new solution was needed. At that time I thought that plenty of substrate was required for successful epiphyte culture but over the years have found that less is better and, once established, the plants flower better.

I next decided to use commercial 40 x 40 cm (1.3 x 1.3 ft) root-ball cloth. Vireyas were planted in these with some substrate and placed in the branches of suitable trees. This version looked a little more natural. Moss was fixed around the cloths using green rubber bands. Unfortunately, the root ball still looked too heavy, so again I had to think of something more satisfactory.

I asked myself, what would happen if I simply covered the vireya's roots with moss and fixed it with rubber bands to the branches? I tried it out and found this solution worked well, and I have used this method ever since. The general impression is quite natural. The vireyas roots can grow into the moss and the moss is able to grow on the branches of the tree. As the moss grows, new areas are formed for the cultivation of other epiphytes, such as ferns or orchids.

The following vireyas now grow as epiphytes on trees at botanika: *R. acrophilum, R. album, R. apoanum, R. aurigeranum* × *intranervatum, R.* 'Carillon Bells', *R. celebicum* pink form, *R. crassifolium, R. culminicolum* hybrid, *R. dianthosmum, R. pneumonanthum, R. gardenia, R. goodenoughii, R. herzogii, R. hellwigii, R. jasminiflorum, R. jasminiflorum* var. *oblongifolium, R.*

javanicum hybrid, *R. kawakamii, R. konori, R. leptanthum, R. leucogigas, R. loranthiflorum, R. orbiculatum, R. pauciflorum, R.* × *planecostatum, R. praetervisum, R. suaveolens* hybrid, *R. superbum, R. taxifolium,* and *R. verticillatum.*

Cultivating epiphytes on tree ferns is more complicated as tree ferns have only a single, slender trunk that can grow tall very fast. One advantage of this rapid growth is that within a year a new area for cultivation of 30-60 cm (1-2 ft) can develop!

As tree ferns have only a single trunk, what is the best way to position and attach vireyas, orchids and ferns for them to grow successfully? The tree fern must have a trunk at least two metres (6.6 ft) in height, as this allows sufficient light through to the trunk and the large fronds do not cover the trunk. If you have fast growing tree ferns, it is necessary to prune the fronds to ensure plenty of light gets through to the epiphytes; leave only four fronds and remove the rest. Because the tree fern grows fast, one should plant from the bottom to top. With larger tree ferns one can use the whole trunk to position epiphytes. Planting on the black trunks of tree ferns optimizes the natural look of the epiphytes and invites the visitor to find out what is growing there. Placing and fixing the epiphytes is exactly the same as for cultivating in trees, using moss and elastic bands, but one has to look at the root system of the chosen vireyas. It has to be small because of the slender trunk and it has to look natural—you do not want a ball on your tree fern!

The following vireyas have grown successfully on tree ferns (*Cyathea leichhardtiana*) in the Bremen glasshouse: *R. apoanum, R. bagobonum, R. brookeanum, R. burttii, R. curviflorum, R. dianthosmum, R. fallacinum, R. goodenoughii, R. gracilentum, R. multicolor, R. nieuwenhuisii, R. orbiculatum, R. pauciflorum, R. praetervisum, R. suaveolens, R. taxifolium,* and *R. wrightianum*.

The root system should not be larger than that from a 7.6 cm (3 inch) pot as this will be easier to attach to the trunk. The fast growth of the moss and the roots of the tree fern ensure that it very soon looks natural. It is also possible to place unrooted vireya cuttings in moss on the trunk. It is important that these are watered regularly so that the cuttings do not dry out, but this method takes somewhat longer to establish plants than using a dedicated propagating unit.

There is, however, a limit to cultivating epiphytes as the tree ferns can grow too tall and the epiphytes need looking after on a daily basis—water and fertilizer must somehow find their way to the plants—so do not hang them too high!

The small Mt. Kinabalu at botanika has not only rock pockets, in which the vireyas grow, but also a few terraces and ledges—new habitats for the plants. Over the years, due to the high humidity, the moss quickly covered the rock giving it a natural patina. This was an indication to me that I could start cultivating more plants. If moss can cover man-made rocks, then there will be other plants that can also grow in it, if one is tricky! So far, the following vireyas grow as lithophytes in the display house: *R. apoanum, R. brookeanum, R. christianae* 'Sunset'*, *R. culminicola* hybrid, *R. dielsianum, R. emarginatum* aff., *R. goodenoughii, R.* 'Hot Tropic' × *saxifragoides, R. leptanthum, R. nervulosum, R. pauciflorum, R. phaeochitum, R. rarum* hybrid, *R. stolleanum* aff., *R. superbum,* and *R. verticillatum*.

When one is choosing a substrate for lithophyte [rock] culture, one has to remember that plants have differing requirements. When planting plants with different cultural requirements near each other, these must be skillfully combined so that each plant is in its niche. So, for example, while *Paphiopedilum* sp. are planted in pure mineral substrate, alongside them vireyas can grow in a man-made substrate. This also has to be borne in mind when attending to the daily needs of the plants as an error can result in the loss of the plants.

When starting work on a new planting, the growing substrate is spread generously over the rock. Then the chosen plants are planted. After that, more substrate is distributed around the plants in order to get a more harmonious look. Then moss is used to totally cover the growing substrate which can now grow on the substrate and further on to the rock. When the planting is complete, it needs to be watered. The end result is that a new microhabitat is developed in which the following companion plants can grow together: *Rhododendron* Section *Schistanthe* [vireyas], *Dendrobium* spp., *Vaccinium* spp., *Coelogyne* spp., *Hemigraphis repanda, Pratia nummularia, Bulbophyllum* spp., *Lilium philippinense* and other plants. If everything grows well together, further cultivation is straightforward. It is important that the moss is not allowed to dry out as only living moss can grow on the rock and expand the planting habitat.

The best time to make new epiphytic or lithophytic plantings is in the autumn. The cooler weather between October and March gives small plants time to establish and grow so that by spring, they are strong enough to withstand the warmer months.

The type of moss used should also be carefully considered as not all mosses are suitable for this method of cultivation. For example, mosses of the *Sphagnaceae* family are only suitable for lithophyte culture if grown in shade and are heavily watered. They then show fast new growth and may even have to be pruned regularly during the growing season or they will cover and overgrow other plants. Mosses of the *Dicranaceae* family are not suitable for epiphyte or lithiphyte culture as they need warmer temperatures and are sensitive to drying out. They are only suitable for cool, mossy forest situations. Mosses of the *Bryaceae* family are suitable for lithophyte culture but only if sufficiently well watered and grown in high humidity. Mosses of the *Lepidoziaceae* family can undoubtedly be used for both epiphyte and lithophyte culture. They are more robust and can tolerate not being watered for a day.

R. orbiculatum flowering in *Syzygium jambos*.

Vireyas growing in *Platycerium* on *Canarium pseudosumatranum.*

Several vireyas growing on *Syzygium jambos.*

Vireyas growing with *Aglaomorpha novoguienensis* as lithophytes.

When cultivating mosses, it is important to ensure the root system of the moss is intact so it is able to grow into the substrate. All the mosses mentioned are also suitable for forest situations. However, the well-known moss cushions found in forests are not suitable for this type of culture as they do not tolerate heat and dry air. Under favourable conditions, the growth of mosses starts quickly and tender new green shoots will soon be seen. If kept moist, lots of new growth is produced and the moss establishes very quickly. Autumn is the best time to "plant" moss, for the same reason as with the epiphytes and lithophytes already mentioned.

Moss is very easy to establish on a non-natural under-soil. After a small amount of substrate is spread over the area where the moss is to grow, place a moss with a good root system on this and water it. It is important that the moss is watered regularly so that it grows strongly. Once this area is covered by the moss, it will continue to grow across the rock, thereby creating new locations for other plants to grow. One has to experiment with different types of moss to see which one is most suitable for one's own growing environment.

Dead tree stumps have also proved suitable for the cultivation of epiphytes. Small notches were cut in a stump using a power saw to create pockets into which vireyas were planted. In botanika, one *R. jasmini*florum hybrid and one *R. rarum* hybrid grow as epiphytes in tree stumps.

Also, the following epiphytes growing on other epiphytes (e.g., *Platycerium bifurcatum*) can now be found in botanika: *R. aurigeranum* × *intranervatum, R. jasmini*florum, and *R. loranthi*florum.

Fertilizing for both methods of cultivation should be carried out from March to October. Before fertilizing, make sure the plants are first well watered so that the fertilizer does not burn the moss or the fine roots of the vireyas. Morning is the best time to apply a fertilizer so there is plenty of time for the plants to dry out before nightfall. Epiphytes and lithophytes can be fertilized through their roots although generally it is easier to apply a fertilizer to epiphytes over their leaves. The application of fertilizer to the roots and leaves should alternate to provide the best care. The following fertilizers are used in vireya culture: Wuxal Super (8-8-6 + micronutrients), EUFLOR Flory 1 (25-10-15), Flory 3 (15-10-15) and Flory 4 (8-16-24). It is advisable to start with Wuxal in the spring to gently stimulate the plants. In the summer alternating between Flory 1 and Flory 3 is optimal. In the late summer and autumn, Flory 3 and 4 should be used to get the wood and flower buds to ripen. Flory 4 is only to be used at most four times up to the end of autumn. Fertilizing at 2% strength is carried out at two-weekly intervals using a dosage machine.

Providing plants with a plant tonic is also advisable as they are growing in more extreme conditions than plants growing in normal conditions in the ground. Biplantol [http://www.biplantolusa.com/] has proved good so far, with the plants getting healthier and more robust. Biplantol is applied once a month throughout the year following the manufacturer's recommended dosage. It is again necessary to water the plants first to ensure the Biplantol reaches right down to the roots where it can be taken up by the plant. It can also be watered over the leaves in the case of epiphytes.

In summary, the types of culture described above take a lot of time and patience. One must give the plants time to establish and adapt. A high degree of care is needed at the outset so the plants will thrive in their new habitats. The plants will likely mostly put on new vegetative growth in the first few years before they commence flowering. Vireyas sometimes start flowering in their second year in these conditions but it may depend on whether they are a species or a hybrid and a seedling or a cutting. Orchids need more time to establish, taking up to five years to start flowering. Depending on the type, ferns can take up to two years before new fronds grow. If they all survive, a new ecosystem with its own unique habitats can be established in a large greenhouse.

Martin Monthofer is a member of the Deutsche Rhododendron Gesellschaft and a friend of the Hawaii Chapter of the American Rhododendron Society. He is the main gardener for the Borneo and New Guinea area of botanika and for the two rhododendron nurseries (with species, hybrids, decidious azaleas, and Japanese azaleas) in the Stiftung Bremer Rhododendronpark. He hand pollinates species in the Himalaya area of botanika and other areas where possible, and collects rhododendron species seed in all areas.

Darmera peltata

(Modified from the Avant Gardener 44(5), March 2012.)

A native American perennial with magnificent foliage that thrives on wetness in Zones 5 to 9 is being praised by gardeners. *Darmera peltata* inhabits stream banks in the Siskiyou Mountains of California and Oregon.

Darmera is often called umbrella plant or Indian rhubarb. Its green and glossy leaves average 12" to 15" (30-38 cm), and their orange and red fall colors are most brilliant when the plant is grown in full sun. They are borne on 3' to 4' (0.9-1.2 m) stems, after the heads of pink flowers on 2' (0.6 m) stems spring up in early spring. The plant's rhizomes creep slowly to make handsome clumps in full sun to dappled shade.

Variables Involved in Rooting *Rhododendron* Cuttings

Dennis Bottemiller
Rhododendron Species Botanical Garden
Federal Way, WA

The mission of the Rhododendron Species Botanical Garden (RSBG) has always been to build and maintain a comprehensive collection of species rhododendrons. Of course this requires that we send collectors into the field to acquire plant material from the entire range and distribution of the genus *Rhododendron* which implies a great deal of plant variety. Rhododendrons grow from tropical latitudes to the tundras of Siberia and most habitats in between. Much of the plant material that we grow is not in general cultivation and therefore not commonly propagated, which has led to some difficulty in replicating many of them. As a result of this difficulty, I have come to view the general rules of cutting propagation as variables. Looking at these variables individually has helped me develop practices that have increased our success rate with cutting propagation. By viewing each of these variables as something to be manipulated either individually or in combination and by keeping close records, we have done pretty well with new plant material coming from lands far away. This is of course nothing more than a review of how to use standard propagation practices but I find that review of things such as this are often helpful and seldom done. Also, these principles are valid and important whether you are in commercial production of rhododendrons or are simply aking a few cuttings of your favorite plants to share with friends and chapter members.

Before looking at some of the variables of cutting propagation for rhododendrons, let me list a few things I will call "constants" and "variab;es":

Constants:

1. **Observation** - Attention to details involving the plants in question, cultural conditions and details of every step of the process involved with replicating the plants desired.
2. **Cleanliness** - With each step of the process the propagator should be concerned with keeping the plant material and the work spaces involved as clean as possible.
3. **Record keeping** - It nearly goes without saying that clear and concise records should be kept of propagation. Especially with plant material that has no propagation history it is important that records be kept with as much detail as one can manage if anything is to be learned and successes repeated and failures remembered. Many rhododendrons have a narrow window of opportunity for root-ability and record keeping is the only way to close in on the requirements that will achieve success.
4. **Really sharp tools** - Dull tools cause damaged tissue which in turn feed micro-organisms that will move into the damaged tissue and then opportunistically move on to the rest of the tissue of the cutting, often causing it to rot. Dull tools also lead to sloppy method. Notice that once a tool is determined to be extremely sharp, its use becomes far more precise than a tool which is dull. All propagators should know how to sharpen the tools of their trade!
5. **Heirarchy of rootability**
    a. Difficult to root = More attention to detail.
    b. Easy to root = Less detail required.

Variables:

A. Variables at cutting time:

1. **Time of year** - Many rhododendrons have a very narrow window of opportunity when it comes to their ability to form adventitious roots. This is also an easy variable to manipulate if the window is unknown. With intuitive knowledge of timing of cuttings and record keeping the best time of year for taking cuttings of a particular species can easily be determined.
2. **Time of day** - This is not so variable but is important to mention. If cuttings are taken from the stock plant late in the day, they are under transpirational stress as soon as they are removed from the stock plant. Shifting the time of day when the cuttings are taken to early morning when the transpirational rate is lower and tissues are turgid will eliminate some of the immediate water loss a cutting suffers, thus increasing the chances of rooting. This can be the difference between success and failure on plants that are moderately difficult to root.
3. **Type of cutting selected - lateral, terminal, flowering, or vegetative**
The ability of a cutting to form roots is controlled by many factors and among them is the hormonal status of the plant or plant parts in relation to one another. This gives us another interesting and useful set of variables to manipulate in the pursuit of greater rooting success. Some plants produce growth with a flower bud at every terminal, which as nursery stock is very good, but from a propagation standpoint is not necessarily so good. Many plants will form roots on flowering wood but the hormonal changes which initiate flowering act to inhibit root formation, so if a plant

is difficult to root, one might consider taking only cuttings which do not have flower buds. The question always arises: "Can the flower buds be removed from the cuttings?" Well, yes they can, but for difficult to root plants, this is not necessarily productive as the change that has taken place in the tissues of the plant to cause flowering cannot be reversed by removing the flower bud, and so, it is no more likely to root. This also adds an injury to the cutting that makes it more susceptible to decline by fungal infection in the cutting bed.

Likewise, there is a hierarchy of rootability between vegetative terminal growth and lateral growth of plants that can be a useful variable to manipulate in pursuit of rooting success. Apical dominance of a terminal cutting can reduce the capacity to form roots, so it may be productive to select non-terminal or lateral cuttings.

4. **Location of cutting selection - sun and shade**

   It is often useful before taking cuttings from a stock plant to walk around the entire plant and closely observe the condition of the possible cuttings that can be taken from all sides of the plant. This is useful for taking cuttings grown under different light levels from the same plant. In this way, the propagator can determine an optimal level of sunlight by recording the situations of batches of cuttings, such as for instance, collected from the north side or the south side of the plant. It is also important to notice subtle clues that the plant will express if it is exposed to too much sun, which can be a stress that possibly diminishes the plants capacity to initiate roots.

5. **Juvenility** - It has been shown that many plants in their juvenile stage, that is, before they reach flowering maturity, are much easier to root than those that are mature. This has occasionally been true of rhododendrons I have worked with, and those collections which are known to be difficult to propagate vegetatively are often easily grown from seed. I have had occasion to grow a crop of seedlings and take cuttings from them as soon as they are large enough, and most of the time these cuttings root quite easily. Of course, if clones of a particular selection are required, then this variable will be of little use, but for increasing your number of species plants, this can be an effective method.

   Some rhododendrons can be induced to partial juvenility through severe pruning, especially those rhododendrons that have a tendency for rapid growth stimulated by pruning. In this manner, clonal propagation of some selected material may be accomplished.

6. **Physiological condition of stock plants** - Of course, disease presence, cultural conditions and turgidity of the stock plants being considered are important variables which can lead to all manner of manipulation. A plant which is diseased or growing under poor cultural conditions should be grown back to health before attempting to root cuttings from it. However, being the eternal optimists that we are, we often try anyway, sometimes to save a dying plant, but usually to find out that cuttings taken from these poor plants don't root very well.

   The amount of water in a plant, i.e., its turgidity, is of high importance as well. Plants should be well watered prior to cutting removal, preferably the night before, so that the material taken is turgid and will not dehydrate prior to being prepared for the growth chamber. On the other hand, cuttings taken from a plant which is growing in too wet a medium may be stressed, and so might be less likely to root and should thus be moved to more suitable cultural conditions before attempting to root cuttings from it.

7. **Fertility level of the stock plant** - Plant tissues must have moderate levels of nitrogen and other nutrients in them to root. Also, plant tissues that have too much nitrogen seem to rot very quickly in the warm and wet conditions of a rooting chamber, owing to the fact that nearly every pathological organism in their environment is also looking for nitrogen. Nutritional levels in stock plants can be an important variable to manipulate and can be done with relative ease with close observation and good record keeping.

8. **Carbohydrate vs. nitrogen level in cutting stems** - This variable relates to both the fertility level of the stock plant and the time of year in which the cuttings from a particular plant are taken. I mentioned earlier that many rhododendrons have a narrow window of opportunity when cuttings will root. This has to do with the "ripening" or stage of lignification of the cutting material in relation to the level of nitrogen contained in the stem. This can be useful as a variable in timing cutting removal from stock plants by developing intuitive skills in the propagator through taking "snap tests" of cuttings throughout the possible cutting season, and using these data to determine the readiness of having cuttings root successfully. I have seen many propagators remove a cutting from a plant and bend it in half, maybe more than once along the length of the stem, to get a feel for the conditions of the stem breaking. When the ratio of carbohydrate to nitrogen approximates the optimal rooting time, the stem will have a good "snap" feel to it and this feeling can help determine if the general timing for taking cuttings is correct. I know it sounds a bit folkloric but it seems to be a pretty good rule of thumb when working in the field.

B. **Variables at cutting preparation time:**

1. **Cutting length -** Attention should be paid to the length of the cutting stem and where the final cut is placed. Often it is helpful to cut near or even through a latent bud or node, thus stimulating a meristematic site. Stem length must also be long enough to support the cutting in the medium but short enough not to have the leaf material waving around in the atmosphere high above the medium supporting it. Again, this is another detail that can be manipulated in the quest for better results.
2. **Leaf area removal** - Reduction in leaf surface area and hence transpirational water loss can be an excellent variable. A death commonly suffered by cuttings is caused by dessication. This can be easily moderated by leaf removal and by cutting leaves in half. With record keeping, a good balance between transpirational surface and photosynthetic capacity can be found for any particular plant being propagated. This can increase your chances of successfully rooting difficult rhododendrons.
3. **Wounding and rooting substances (Hormone analogs) -** With difficult to root rhododendrons, I pay careful attention to wounding and end cuts. Wounding is a nice variable to work with as wounds can be larger or smaller, more or less aggressive or any number of different styles. One thing they should not be is sloppy, i.e., leaving thin tissue flaps and crushed or bruised tissue. This is where very sharp tools become important. With plants that are difficult, I do not use pruners for end cuts as they cut with one side and crush with the other. This leaves bruised and damaged tissue which will die, feeding fungal and bacterial organisms and causing the whole cutting to rot because of the tissue damaged in the preparation. We use knives for preparing cuttings and sharpen them to a keen edge to prevent tissue damage and to keep the propagator from becoming lackadaisical. In conjunction with end cuts and wounding, there are many rooting hormones or analogs of plant hormones that promote rooting and can be varied in strength, application and type.
4. **Indumented Stems -** An interesting but sometimes problematic feature with cuttings of some species rhododendrons is fuzzy stems. Although not that common, a dense fuzzy material can be quite attractive on the plants but on cuttings, it can sometimes interfere with physical contact of the stem's cambium with the rooting medium, thus creating an airspace inhibitive to rooting. On most such species, this material can be rubbed off to improve contact if labor time is not an issue or it is a very valuable plant that needs to be replicated. Hairs on the tops of leaves (known as tomentum) may often stay too wet in mist beds and quickly form a dark layer of algae that shuts off the photosynthetic surface of the leaf and certainly inhibits rooting. Again, with most rhododendrons, the tomentum is easily rubbed or washed off, which can be most helpful.

C. **Variables on the cutting bench:**

1. **Humidity and watering -** The optimal atmosphere for rhododendron cuttings is generally fairly humid but for plants which seem to rot too quickly or suffer from botrytis or other fungal infection even after disinfection, it may be desirable to experiment with varying levels of mist and humidity. Another variable related to this is rooting medium temperature, which if high, can more quickly dry out the medium. It is important to pay close attention to the physical interaction between temperature and humidity changing one of them affects the other. Decreasing the misting interval can cause drying of the flats from bottom heat, so additional hand watering may be required to replace the water in the medium which was previously supplied by the mist. Attention to detail is important.
2. **Rooting medium** - The three things important to a rooting medium are support of the cuttings, water holding capacity and airspace. All three of these items can be changed and manipulated to supply a specific need for any particular plant.
3. **Light** - Again, three variables to be worked with are light quality, intensity and day length. There are any number of ways these variables can be changed to produce results. An example of this in rhododendrons is the North American group of deciduous azaleas. They generally root quite easily and can be potted on and they look fine, but if they do not get extended day length (at least at the 49° N latitude), they will go dormant and then never grow again. The terminal buds will still be green and the cambial tissue alive and they can remain that way for two or more years and still not grow. Give extended day length immediately after they are rooted and until they push new growth. If they are then allowed to go dormant and overwinter outdoors or in a cold frame, these plants should grow the following spring in their normal fashion.

The overview of the variables listed here is brief and certainly not comprehensive, but they have been instrumental in helping me achieve some success in rooting many species rhododendrons which are generally very difficult. In my experience with new and often unknown plant material, I have found that careful observation and detail oriented practices plus simple thought of the variables affecting the formation of adventitious roots can go a long way in determining the success or failure of rooting species rhododendrons.

Rhododendrons and Azaleas as Bonsai

Lee Cheatle
Tigard, Oregon

An azalea, grown in the ground for five years, and then potted for an additional five years. Photo by David Rowe.

To get started in creating bonsai from rhododendrons/azaleas, it is important to know some of the following information about what makes a good bonsai and in particular a good rhododendron/azalea bonsai.

Let's start with "What is a bonsai, pronounced (bone-sigh)?" Literally translated, it is a plant in a shallow container. More to the point, it is a tree in a container, but to the enthusiast, it is not just about the tree but what the whole feeling of bonsai is about. The goal for most bonsai artists is to create a tree that looks old even if it is not, but if it is really old and dwarfed, so much the better.

Rhododendrons and azaleas make great bonsai. They make great bonsai because they have characteristics that make a tree look older than it is. Starting from the bottom, they have a great sprawling exposed root structure ("nebari") that spreads out, making the tree look like it is clinging to the ground. This allows the trunk to also spread out, giving the tree a wide bolstered girth at the bottom. They taper well and have year-round foliage that on many varieties has small leaves. Small leaves are desirable because when you are dealing with a small tree, you want the leaves to be in perspective with the trunk and branches. Azaleas also grow rather quickly and have a phenomenal rate of back budding, not only on the branches but on the trunk as well. To top it off, the variety of flowers they produce is astounding.

A 20-year-old potted azalea. Photo by David Rowe.

In Japan there are generally two kinds of azalea bonsai enthusiasts; ones that grow the trees for their structure as bonsai and the ones who grow the trees for their flowers. In Japan, the cultivar that is most

commonly used for bonsai is probably the Satsuki azalea, pronounced "sats-key," *Rhododendron indicum*, an evergreen azalea that in the wild grows as a small shrub up to six feet (2 m). Satsuki means "five moons" and is named this because of the fact that it mostly blooms in the fifth month of the year, although sometimes the sixth. In the spring, the Satsukis grow out their new leaves and then flower while our western North American azaleas do the opposite, as do most flowering trees.

Where to Start?

Creating bonsai involves a lot of illusion. If you put a tree in a pot, it will look bigger than if it were in the ground. If you put it in an even smaller pot, the tree will appear even larger. If the tree is a foot (25 cm) tall and you cut it back to 6 inches (15 cm), the trunk will appear to look bigger. These are just a small sampling of the illusions that bonsai artists use in creating small-scale trees.

Because most, if not all of you, probably have some smaller trees in garden pots, I encourage you to look at your own collection first and judge those trees first as potential bonsai based on what you read here. If you want to have a bigger tree sooner, you may first want to evaluate as bonsai prospects the smaller ones that are already planted in the ground in your garden. Failing that, a trip to the local nursery always turns up good material, at least where I go. I search for overlooked trees that the nursery has had around for a long time and have not been sold. Traits that are unattractive to normal tree buyers are generally exactly what a bonsai enthusiast is after; crooked, knurled trunks and twisting branches are two that come to mind. Try not to see the tree as it is but what it could be in miniature. I have purchased rhododendrons and azaleas in the winter and taken them home and removed all foliage and branches but a few, including just one inch (2.5 cm) stubs of the primary branches, as well as lopping the trunk down to three or four inches (8-10 cm). Come spring, that tree sends out new growth everywhere and I have my choice of what to keep and what to remove based on how I want the tree to look as a bonsai. This practice can also be done in the early spring before the new growth kicks in too strongly, usually near the start of April. Look for small leaf and small flower cultivars.

Styles of Bonsai

When looking for potential bonsai, look at each tree and review in your mind the varied styles of bonsai and see if one of them can work well with the tree you are looking at. It is easy to remember if you remember potential styles in this order: formal upright, informal upright, slanting, semi-cascade, and full cascade. As you can see, the styles start as a rigid erect tree and move to cascading downward like a waterfall. There are several variances on these basic styles. There is windswept, root over rock, a tree planted directly onto a rock and my favorites, forest or scenic. The Japanese name for the scenic-style is "saikai."

Some Do's and Don'ts of Bonsai Cultivation

Do not trim or wire the tree and then repot it too. If you do too much too soon together, the tree can weaken to the point of dying. Light trimming and repotting, especially of young stock, generally does not weaken the tree enough to cause it to die.

Do not remove too much root the first time you repot your bonsai. Generally, if the tree is in a nursery pot ,you will take off approximately two thirds of the root mass.

Do not try to create instant bonsai; start with a bonsai pot that is a bit bigger than you want to finish with. Remember, the tree is a living thing and you are responsible for its health. Bonsai take time. Try to do things gradually.

Soil

What the best is soil for bonsai is a subject that ranges all over the board. However, there are some things that all bonsai enthusiasts do agree on. The most important is that the soil drains very well and holds moisture well but not to the extent that you get root rot. Different trees do better in different soils. Azaleas can grow well in a good potting soil but will do better in a potting soil that also has pumice mixed into it. What I use and the Japanese Satsuki growers use is volcanic clay. The volcanic clay they use is called Kanuma (kuh-new-muh). You can go on line to find and purchase Kanuma or in my case, take a short trip to Corvallis, OR, and visit the Wee Tree Farm at the Garland Nursery. Kanuma is used without adding any other soil components. It is sifted through a series of screens to obtain a uniform soil particle size, which helps to form a better draining soil with air pockets for the roots to grow into. Fertilizer is administered during the time of year that the grower feels is best for the tree.

Just Have Fun

So, whether you are gung ho, all out for tiny trees, or have a small whim to give it a try, just have fun with it. Bonsai is not as difficult as some perceive. Yes, you may have some die on you but you will also have many successes. Like the current gardening you do that can occupy your mind and take you away from your problems for awhile, creating and growing bonsai will do that too. Relax and create what you feel is something you like. Enjoy and please have fun.

Lee Cheatle is a member of the Bonsai Society of Portland, OR.

Storm Damage at the Rhododendron Species Botanical Garden

Steve Hootman
Director of the
Rhododendron
Species Botanical
Garden
Federal Way,
Washington

Photos by Dennis Bottemiller

(*From the Rhododendron Yahoo Group*)

Today (Saturday, January 21, 2012) I was finally able to make it to the RSBG to assess the damage and our situation. Dennis Bottemiller, our Nursery Manager, had been in two or three times over the last few days so I had some idea of what to expect. He reported widespread damage in the garden but was unable to give a full assessment due to falling limbs and ice chunks.

We have had the garden, office, and gift shop closed since Tuesday, Jan 17, for safety concerns and we have been without power since Thursday morning. We received several inches of snow on Wednesday and Thursday followed by freezing rain. According to the *Seattle Times* report, Federal Way was "Ground zero for the ice bomb" and this was quite evident once I reached the Federal Way area along I-5. I saw very little damage on my drive south this morning until right at Federal Way. At that point, most of the deciduous trees (alders, etc.) had been topped out or stripped of upper branches. The road into the Weyerhaeuser campus was blocked by fallen trees in a couple of places as was the main entrance to the two gardens.

I connected with fellow staff members, Atsuko Gibson, Dennis and Grace Pham who had all come in to assess our situation. We did a walk around the garden and noted the following:

The Rutherford Conservatory, Rhododendron Species Botanical Garden, Federal Way, WA.

The entrance to the Rhododendron Species Botanical Garden.

•The Coolhouse Annex in the nursery collapsed from the weight, no other buildings seriously damaged as far as we could tell, lots and lots of smashed collection stock plants;

•Most of the *Stewartia* trees have been destroyed or knocked over, these are among our best ornamental trees and were in really great shape following our conifer thinning two years ago.

More damage in the Rhododendron Species Botanical Garden.

•Virtually all of the 12 to 15 *Amelanchier* trees which were the theme-tree ringing the meadow have been destroyed; this will change the entire look of the middle of the garden.

•Another *Amelanchier* near the Conservatory was pulled out of the ground and hit the building but did little damage;

•Lots of Douglas-fir branches down on rhododendrons, across paths, etc.

•Our biggest *R. fortunei*, which was one of the original plants in the garden, was pulled out of the ground and is lying across the path in the big leaf collection.

•In the same area our biggest and oldest *R. auriculatum* has been almost completely destroyed.

•The top one-third of our *Manglietia insignis*, grown from my collection in Sichuan in 1995 and one of the most valuable trees in the collection, was taken out as was the top half of our *Alniphyllum fortunei*, a very rare tree in cultivation that is related to *Styrax*.

•We have lost several fine specimens of maple (*Acer* spp.) grown from wild collected seed as well as several specimens of various evergreen and deciduous *Magnolia* species.

•We have lost all but two specimens of our diverse and beautiful *Betula* (birch) collection.

I could go on and on but you get the idea. To recover will involve a great deal of work and it is going to cost some money due to all of the "widow-maker" branches now suspended high up in the trees over the paths. These will have to be removed by a professional ASAP. I will do a survey of these right away and close off the most dangerous sections of the garden until these can be dealt with. This is forcing a major removal of some of our core, backbone ornamental flowering trees and it will be years before we have the look that we have only just been able to enjoy following the recent removal of all of the conifers and oaks around the meadow and conservatory. It's time to start over again, but this does allow us to expand our horizons a bit and to utilize some of the exciting new ornamental trees that we have grown from wild collected seed and that have been languishing in the nursery. I wanted more light but…"

More Photos on page 95.

'Orange Rufy'.

The Elusive Hardy Orange

'Billy Wilder'.

Dennis MacMullan
Hamburg,
Pennsylvania

Photos by the author

Text on next page

In my early hybridizing years, I spent a great deal of time sharing ideas with other like-minded people via the telephone. One day, speaking to a friend, I used the phrase "that dammed elusive orange." My young son, passing nearby, heard that snippet and asked me later on if the "elusive orange" was some kind of animal? I assured him that he need not march through the woods looking for an "elusive orange." I was working on the problem myself.

At that time, I was a commercial illustrator—one who painted pictures of subjects or objects determined by the person who paid me. Over the yeas I have continued to paint, but now I chose the subjects. I mention this because when I started hybridizing rhodys (at the age of 36), I viewed the color spectrum of plants through the artistic eye. For example, to get pink, you mix red and white. The more red or the deeper color red added to the mix, the deeper pink you would get.

Mix yellow with white and cream or creamy yellow will result. Back in those days, there were no yellow rhodys hardy to -5º F (-21º C) and able to withstand the hot, humid Eastern North America summers. Over the years, dedicated hybridizers have developed some lovely hardy yellows that are worthy of praise from our West Coast friends, but what about orange rhodys for the Northeastern climate? When I first contemplated the non-existence of such rhodys, my artist's eye said "mix yellow and red and *voila*!—orange."

But Mother Nature doesn't see it that way. I wasted a lot of time pursuing the orange goal using that fallacious theory. As Elvis once said, "It's all in the genes!" This note is not intended to be a primer on hybridizing. I would like to suggest a few ideas that have worked for me, and others, in order to increase the chance of success and to avoid the color-blending trap.

1. Try to use plats that are bud hardy to - 5º F or lower on both sides of the cross. That is 40–50% genes for those degrees of cold resistance.
2. The more complex the parentage of each plant used in the process, the greater the color variance in the result, meaning you will have to grow many more seedlings in order to have any kind of acceptable results, and even then there is no guarantee of success.
3. Don't try to reinvent the wheel! See if anything is available that you think might be useful as a good parent. Unfortunately there aren't many hardy "orangish" rhodys in the trade. One you might consider is 'Delp's Fiery Orange'* ('Ginny Mae' × 'Dead Ringer'). Jim Barlup has used it in a few of his efforts to produce some orange rhodys. Another is 'Orange Ruffy'* (Marshall Stilwell selfed). It is a fine plant and literally drips pollen, but is not a reliable bloomer in my area due to borderline bud hardiness.
4. Orange-colored species would be excellent from the genetic standpoint (as a pollen parent) but all are tender or very tender. *R. dichroanthum* is available in a number of forms, a few bud hardy to 0º F (-18º C), but none can tolerate Eastern summer heat. Carl Phetteplace sent me pollen from a form he said had bloomed at 0º F, and in 1970, I put its pollen on 'Powell Glass' (third generation selection from seed from 'Catalgla'), a very hardy white and a "good-doer." The best plant of that cross bloomed in 1975 and was labeled (D75-4-#2), but was never named or registered.

I had been growing 'Goldsworth Orange' for a few years and found it hardier than rated. By no means "orange," in spite of its name, it contains genes (*R. dichroanthum*) that offered a depth of color that enhanced some of my yellow hybridizing efforts. One was 'Goldsworth Orange' × ('Inca Gold' × *R. yakushimanum [R. degronianum* var. *yakushimanum]*). The best of this group was (D77-3-#1), again not named or registered. It was a medium-colored yellow, average size truss with medium orange speckles on the corolla lobes. The over-all effect from a few feet away was a light orange.

This plant was used as the seed parent of (D83-2-#2)—('Goldsworth Orange' × (Inca Gold × *R. yakushimanum*)) × ('Powell Glass' × *R. dichroanthum*)). It was subsequently named 'Billy Wilder', and the photo shows how the *R. dichroanthum* genes dominated.

Many people tell me that it is the most interesting rhody in my small garden. It roots easily and has survived temperatures below -9º F (-23º C) while growing in Pennsylvania, Connecticut, West Virginia and southern Ohio. I believe it can be improved upon by someone with informed interest. Some Fabia Group hybrids that have been crossed with hardy types are also useful. *R.* 'Wizard', 'Capistrano' × 'Fabia Tangerine' and some of Jim Barlup's West Coast orange efforts with some of the afore-mentioned east coast parents ('Billy Wilder', 'Orange Ruffey'*, etc.) should be worth the effort.

I have a seedling of a cross made by Jens Birck (Denmark) some years ago. It has six buds and should bloom for the first time in spring, 2012. The cross is *R. dichroanthum* 'Böhmen'* × *R. brachycarpum* ssp. *brachycarpum*. The pollen parent is bud hardy to -30° F (-34° C). While the plant may not produce blooms that are very orange, it has the gene balance that makes it a good "building block." I intend to take as many cuttings as I can and get them rooted—then put them into the hands of serious hybridizers! Likewise pollen—if available. At my age, I am not the one to try, but some younger hybridizer like Mike O'Hara might work on it. Rhody hybridizing needs some young guns!

* = not registered.

Dennis MacMullan is a member of the Lehigh Valley ARS Chapter.

Joe Coleman's Azalea Seed Sowing Method

Joe Coleman
Lithonia, Georgia

(*From the Azalea Chapter of the American Rhododendron Society February, 2012*)

1. Collect seed pods. I use old paper envelopes from the office so they will dry out; wet seed pods are impossibly difficult!

2. After the pods are good and dry, about 10-14 days, they are ready to be cleaned.

3. Materials I use:
   A. A folded section of the newspaper protects the kitchen counter and helps protect the ziplock bag that is between the two layers of paper;
   B. A freezer zip-lock bag, its tough and can take the abuse of being pounded a number of times;
   C. A rubber maillot with a large striking surface; a hammer will do if small, and a rolling pin will not crush the pods;
   D. A nearby trash can to dump the debris in with each sifting;
   E. Several mesh strainers of different sizes to remove debris, found at any local grocery store; professional set ups are available, but are expensive;
   F. Clean coin envelopes or containers for seed storage. These must be able to be labeled individually;
   G. Two white pieces of paper to work on; you see seed better on white, or at least I can; and
   H. A sense of real aggression, as to crush seed pods takes force, no little tapping, and after the first session of pounding, agitate the zip-lock bag and pound again!

4. Empty the seed pods into the thick zip-lock, place it inside the fold of newspaper and pound away several times until the pods are all crushed and no intact pod is evident when you open it up.

5. Place your widest screen; mine is nothing more than window screen on a frame made by a colleague 25 years ago, over a piece of white paper and dump the contents of the zip-lock onto the screen.

6. Agitate the screen; the seed will fall through leaving the chaff, which is dumped, into the wastebasket at your feet.

7. Repeat several times to get rid of the obvious chaff.

8. There is still a lot of dust in the mix, so go to the smallest screen and shake all the dust through the seed onto white paper; at this stage, all the seed should remain in the strainer.

9. Pour the seed into labeled envelopes and seal, unless you are going to sow the seed shortly.

Sowing Seed:

1. Prepare seed boxes a few days before sowing to allow moisture to settle in. I use clear bakery containers from the grocery store, as they seal very tight to retain moisture and are free! Hit on the bakery early when they are baking, and if you ask nicely, they may even give you a clean container or two!

2. Fill the bottom half with a mixture of perlite and bark with a light covering of screened sphagnum moss. It's naturally fungicidal and moisture retentive. You can also just use regular sphagnum, but the surface is irregular. I like roots to go down into the perlite and bark. Any moist medum substitute should work, such as coconut coir.

3. The box should be moist, not standing in water; sprinkle the seed on the surface.

4. Put a label in. It is always nice to know as much information as you have on the seed - type, source, location, cross, etc

5. Just before closure, I give a last misting. I use a mist of Consan 20, which is a fungicidal soap that prevents the black mold growth that can take out an entire seed container quickly—any good fungicide should do the job. I ordered Consan 20 from a place in IL, and it may now be hard to find, as it has gone out of fashion!

6. Place the sealed box under fluorescent lights, 10" (25 cm) above or more. Mine are in an unheated basement, but the furnace keeps the area in the 50s to 60s° F (10-15° C). Faster growth would occur at about 70° F (21° C). Just remember, plants do quite well in the spring and the fall at moderate temperatures, and so will seedlings.

7. After the green leaves are up and hitting the lid, simply cut off the lid and with an ice pick. I punch several drainage holes in the bottom and begin misting the boxes with the rest of the plants on the plant cart once a day .

8. After the seedlings are established and comfortable with the humidity in the basement, I can then fertilize with half strength or less liquid fertilizer—anything mild will do. Plants do not read or appreciate attractive pictures on fertilizer containers!

Dr. Joe Coleman is a member of the Azalea Chapter.

Rhododendron Species in the Indian Eastern Himalayas: New Approaches to Understanding Rare Plant Species Distributions

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Article Overview

Rhododendrons are an important, dominant, and primitive group of flowering plants with considerable ecological and economic importance found in the temperate, subalpine and alpine regions of western Arunachal Pradesh, India. In addition to aesthetic, sacred, and ethnomedicinal values, several species have commercial and social importance. Rhododendrons are one of the preferred plant species used by local inhabitants in the region. Anthropogenic disturbance associated with deforestation, unsustainable extraction, over-exploitation, and agricultural practices have collectively put pressure on *Rhododendron* species; as a result many species have become endangered, rare, or threatened. Knowledge of the specifics of a species' distribution is essential for its *in situ* conservation and management. We focused, in this study, on four rare *Rhododendron* species (*R. edgeworthii*, *R. kendrickii*, *R. keysii*, and *R. maddenii*). We recorded geographic locations of the selected species through extensive field surveys, and obtained additional occurrences from secondary sources. We used a NASA-MODIS/Terra data set to summarize environmental characteristics. We incorporated location and environmental data into evolutionary-computing approaches to develop ecological niche model predictions of the likelihood of occurrence of these species. Seven new populations of the studied species were encountered in subsequent field surveys of the predicted sites. Ecological niche modeling can thus serve an important role in various *in situ* as well as *ex situ* measures for establishment of arboreta, sanctuaries, parks and reserve forests, protected areas through community management, botanical gardens, and also for *in vitro* research activities for species conservation.

R. edgeworthii. Photo by Pijush Kumar Dutta.

R. kenderickii. Photo by Ashish Paul.

R. kenderickii. Photo by Ashish Paul.

R. maddenii 'Gigha', form *jenkinsii.* Photo by Steve Hootman.

R. maddenii. Photo by Pijush Kumar Dutta.

R. keysii. Photo by Ashish Paul.

Figure 1. Examples of *Rhododendron* taxa occurring in western Arunachal Pradesh. (*a*) *R. edgeworthii*, (*b*) *R. kendrickii*, (*c*) *R. keysii*, and (*d*) *R. maddenii.*

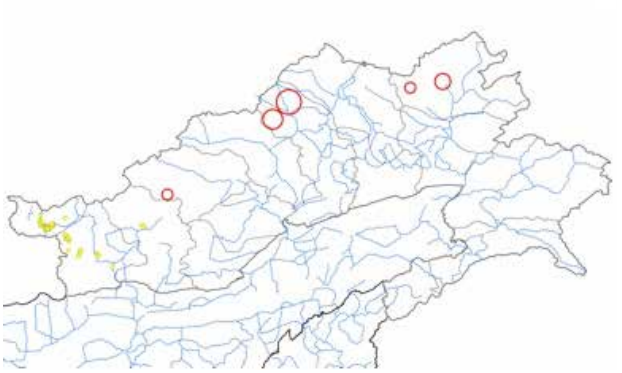

Figure 3. Sites predicted with high probability of *Rhododendron* species occurrence falling far from known sites of occurrence used to guide initial field sampling efforts. Yellow dots are known occurrences, and the red circles are areas that were of interest based on repeated prediction of potential occurrence of species.

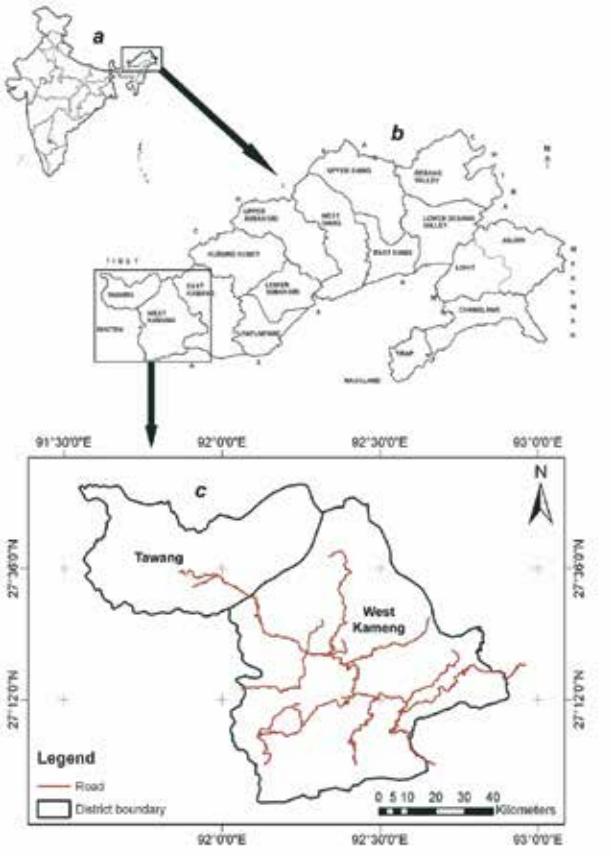

Figure 2. Map of study area: (*a*) India, (*b*) Arunachal Pradesh, and (*c*) Tawang and West Kameng district.

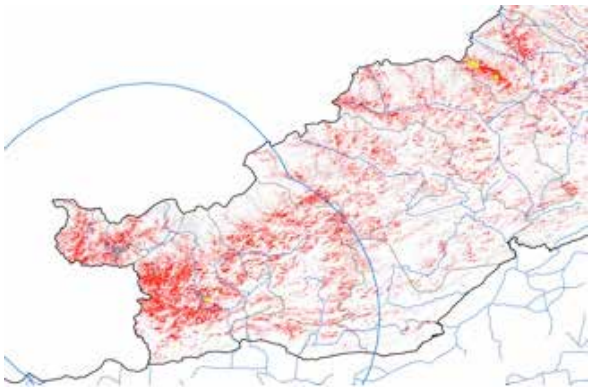

Figure 4. Niche model predictions (red areas) for one *Rhododendron* species (*R. kendrickii*). The arc indicates the boundaries of the area used for calibrating ecological niche models. Yellow areas indicate location of new populations from field surveys.

Figure 5. Sites identified for field surveys based on niche model predictions and accessibility. Purple lines are major roads and blue lines are district boundaries.

Abstract
Rhododendron species serve an important ecological and economic role in the mountains of the Eastern Himalayas. Recent changes in this once-pristine landscape have resulted in the classification of many *Rhododendron* species as threatened or endangered. This study used field surveys and ecological niche modeling to expand existing knowledge about *Rhododendron* species' distributions in the region, with a view to helping develop strategies for conservation action and possible reintroductions.

Introduction
Keystone species play a crucial role in maintaining the organization and diversity of their ecological communities. Rhododendrons (Figure 1) act as keystone species in the high-elevation portions of the Eastern Himalayas. The subalpine-to-alpine transition zone that includes timberline is the most fragile ecosystem in this part of the Himalayas. *Rhododendron* is the only group of plants that extends broadly across this ecotone. Unfortunately, however, increasing anthropogenic demands and technological development have rendered the region no longer immune to large-scale land-use change (Menon *et al.* 2001), and the last few decades have seen major transformations of once-pristine landscapes. As many as 46 *Rhododendron* species have been classified as rare or threatened in the Eastern Himalayas of India (Paul *et al.*, 2005). Many of the species also have ethnobotanical significance, as local people use rhododendrons as fuelwood and for medicinal purposes (Paul *et al.*, 2010).

Often, knowledge about the locations of populations of species is constrained by limited field surveys owing to rugged terrain and low population sizes with widely dispersed individuals. Precise information on species' distributions and ecology is important for assessing conservation status of endangered and rare species, and developing effective *in situ* and *ex situ* conservation and reintroduction strategies. All of these benefits can be leveraged still further using novel, GIS-based ecological niche modeling techniques that can assist in locating new populations as well as identifying suitable areas for reintroduction (Soberón and Peterson, 2005; Siqueira *et al.*, 2009).

We used ecological niche modeling (ENM), which combines known species' occurrence records with relevant environmental data layers to estimate species' ecological requirements and potential geographic distributions (Guisan and Zimmermann 2000; Soberón and Peterson, 2005). ENM provides a predictive framework for targeting areas for field surveys to locate additional population of rare and endangered species. We have already prototyped ENM applications to plants in this region in a recent study that resulted in discovery of several previously-unknown populations of the highly endangered tree species *Gymnocladus assamicus* (Menon *et al.*, 2010). An application of ecological niche model predictions to *R. arboreum* ssp. *nilagiricum*, an endemic tree species in the Nilgiri, Anamalai, Palni, and Meghamalai regions of the Western Ghats, India, found the species' distribution primarily influenced by mean diurnal temperature and number of dry months, and identified priority areas for *in situ* conservation of that species (Giriraj *et al.* 2008).

Specific objectives of this study were to: (1) prepare known-distribution maps of selected endemic, rare, threatened, or endangered *Rhododendron* species in the Eastern Himalayan region of Arunachal Pradesh, (2) identify ecological factors limiting species' distributions, and (3) assess threats to the species and analyze management practices at sites not presently under conservation. These steps would allow us to identify possible areas for reintroduction and examine new sites for as-yet unknown populations. The results of this study will enhance ongoing efforts for *in situ* conservation of such *Rhododendron* species in the Eastern Himalayas and contribute to building a broader conservation action plan.

Materials and Methods
Priority areas for field surveys within the state of Arunachal Pradesh (Figure 2) were determined based on prior knowledge about the likely distribution of pure to mixed *Rhododendron* forest. Such priority areas were in West Kameng, East Kameng, Tawang, West Siang, Upper Siang, Lower Subansiri, Upper Subansiri, Dibang Valley, and Anjaw districts (Figure 2).

The following 12 *Rhododendron* species were selected for study: *R. arboreum* ssp. *delavayi* var. *peramoenum*, *R. coxianum, R. dalhousiae* var. *rhabdotum*, *R. edgeworthii*, *R. falconeri* ssp. *eximium*, *R. hookeri*, *R. kendrickii*, *R. keysii*, *R. maddenii*, *R. megeratum*, *R. neriiflorum* ssp. *phaedropum*, and *R. tanastylum.* The species were selected on the basis of conservation status (Sastry and Hajra, 1983; Mao *et al.*, 2001) to include large and small trees, shrubs, and epiphytes that are endemic, endangered, rare, or threatened.

The distribution of selected *Rhododendron* species was investigated in initial exploratory field surveys. A set of parameters including geographic coordinates, biogeophysical characteristics of the area, and prevailing local threats to the species was recorded. Samples were collected and preserved in the herbarium after proper identification and labeling (Jain and Rao, 1977). Species were identified by consulting available references, including *The Rhododendrons of Sikkim-Himalaya* (Hooker, 1849), *Sikkim-Himalayan Rhododendrons* (Pradhan and Lachungpa, 1990), *Encyclopedia of Rhododendron Species* (Cox and Cox, 1997), *The Rhododendrons of Nepal* (de Milleville, 2002), *Flowers of the Himalaya* (Polunin and Staninton, 2006), *Materials for the Flora of Arunachal Pradesh* (Giri *et al.*, 2008) and *Flora of Assam* (Kanjilal, *et al.* 1939). Several herbaria, such as the State Forest Research Institute (SFRI), Itanagar; Botanical Survey of India (BSI), Itanagar and Shillong; and Central National Herbarium (CNH), Kolkata, were also consulted for validation of identifications, and further validation was achieved

Table 1. Habit, status, and occurrence data for 12 selected *Rhododendron* species.

Species	Habit	Status	Georeferenced occurrence points*
R. edgeworthii	Epiphytic shrub	Rare	42
R. maddenii	Shrub	Rare	34
R. arboreum ssp. *delavayi* var. *peramoenum*	Large tree	Endemic	26
R. neriiflorum ssp. *phaedropum*	Large shrub/tree	Threatened	23
R. kendrickii	Large shrub/tree	Rare	12
R. tanastylum	Shrub/small tree	Rare	16
R. keysii	Shrub/small tree	Rare	10
R. falconeri ssp. *eximium*	Large tree	Endangered	4
R. dalhousiae var. *rhabdotum*	Epiphytic shrub	Rare	3
R. hookeri	Shrub/small tree	Rare	3
R. megeratum	Dwarf shrub	Rare	2
R. coxianum	Epiphytic shrub	Endemic	1

by consultation with *Rhododendron* taxonomists Mr. Kenneth Cox (Managing Director, Glendoick Gardens Ltd., Perth, Scotland) and Dr. D. Bhattacharjee (*Rhododendron* revisioner, Botanical Survey of India, Kolkata).

Geographic coordinates of known occurrence sites, for the selected species were compiled from the exploratory field surveys; additional occurrences were obtained from electronic sources (www.gbif.org). Five of the 12 species had very few available occurrence points (n = 1 to 4), whereas seven species had ten or more occurrence points available (Table 1). We report here on preliminary analyses for four of the latter species: *R. edgeworthii*, *R. kendrickii*, *R. keysii*, and *R. maddenii*.

The occurrence data were used as input points to train an initial set of niche models for each of the four species. We used remotely-sensed layers from the NASA-MODIS/Terra data set (spatial resolution 500 x 500 m) to characterize environments across the region. Six of the layers were 16-day composite images of the Enhanced Vegetation Index (EVI) from every second month in 2005 and five of the layers summarized differences between consecutive pairs of the six EVI layers. We used two evolutionary-computing approaches to develop ecological niche models and associated geographic predictions: the Genetic Algorithm for Rule-set Prediction (GARP; Stockwell and Peters, 1999) and Maxent (Phillips *et al.*, 2006).

We generated a second set of niche model predictions by combining previously available occurrence data with new locations obtained from field surveys conducted in October-November 2009. Based on the second set of model predictions, we identified sites for targeted field surveys to explicitly validate and test the accuracy of the models and discover new populations in a systematic way. Sites were chosen for field surveys based on

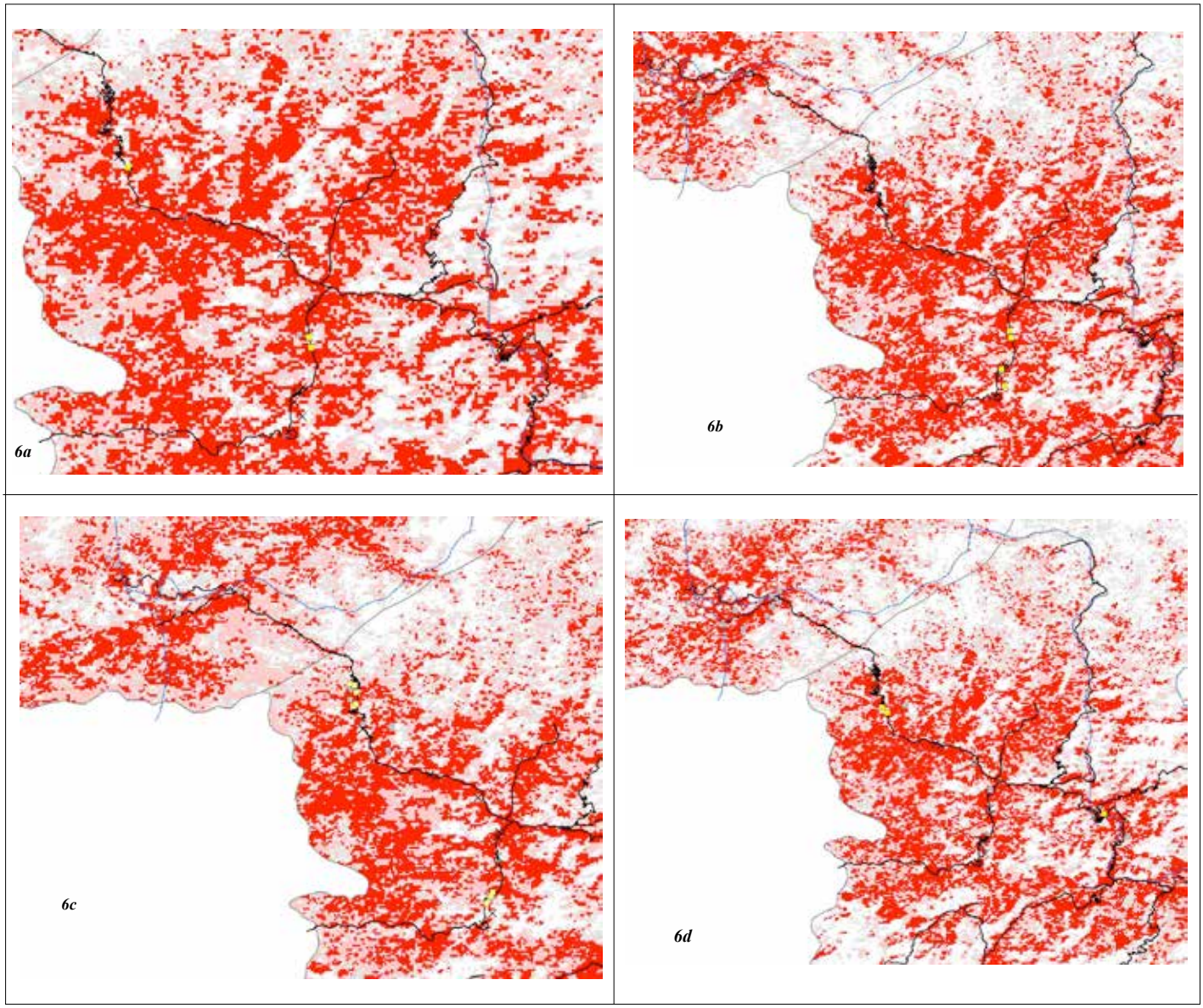

Figure 6. Niche model predictions and field validation for *Rhododendron* species: (*a*) *R. edgeworthii*, (*b*) *R. kendrickii*, (c) *R. keysii*, and (*d*) *R. maddenii.* Red areas are predicted potential presence, gray squares are previously known occurrences, and yellow squares are new occurrences located during field surveys to validate the niche model predictions.

niche model predictions and accessibility of predicted locations. These sites included those identified as highly probable for occurrence of particular species and sites identified as unsuitable for individual species: the field crew was unaware of the prediction (suitable versus unsuitable) for any given species, so that the tests of the model would be objective. Field surveys were carried out in February-March 2010 to validate the niche model predictions.

Results

The basic plan of the study was to generate an initial suite of models from data already available, and to visit a series of sites based on the initial models. Predictions from these initial models could then be tested in a second round of field surveys. A summary of areas thus identified as "of interest" based on the initial suite of niche model predictions is shown in Figure 3.

An example of an individual species' prediction is shown in Figure 4. Indeed, this initial suite of predictions and tests of predictions was quite successful. That is, the area remote from known occurrences of *R. kendrickii* in the north-eastern corner of Figure 4 indeed was confirmed to hold populations of the species in our initial field surveys. As a consequence, we had considerable confidence in further predictive efforts. Figure 5 shows a large number of sites identified for further study

based on the initial success, and combining the initially available occurrence data with the new data from the first set of surveys.

The field survey team located seven previously unknown populations of the four study species as a result of the niche model predictions. All of the new detections of species during validation field surveys were either in or quite close to areas of predicted presence (Figure 6 a-d). Newly located populations consisted of one to two individuals; no large patches or populations were located. Individuals occurred at elevations of 2000-3800 m, and were observed growing along roadsides, forest edges, and in mixed forest with other rhododendrons. Individuals were found in flower bud formation or flowering phenophase. Individuals were recorded in adult and seedling stages; saplings were rarely observed. Pressures resulting from anthropogenic and developmental activities were noted at each of the new locations. While all the new detections closely matched areas of predicted presence, other surveyed areas of predicted presence did not contain individuals of these species, at least to the extent that our rapid surveys could establish.

Discussion

This study illustrates how a little knowledge can be turned into a lot more knowledge, using ecological niche modeling techniques. The niche model predictions allowed us to target field surveys, and facilitated the discovery of new locations of populations for *in situ* conservation of the species. The field validation demonstrated that the niche modeling did a better job at predicting presence *versus* absence. In other words, new individuals located in field surveys were found in areas closely matching model predictions; however, some areas predicted as suitable by the model did not appear to contain any individuals. Many reasons exist why a species might not be present in an otherwise suitable location, including local extirpation owing to overexploitation by humans, dispersal limitations, or presence of a competitor. Ecological conditions at these locations are suitable for *Rhododendron* species, but reintroduction efforts might only be successful, for example, if anthropogenic pressures at such locations were reduced by involving the local people in conservation efforts.

A majority of the region's human population lives in rural areas, where fuel-wood is the prime source of energy for cooking, boiling water, and heating homes during chilly winters. Ongoing land-use changes and exploitation of forest resources exert tremendous pressure on *Rhododendron* survival in the Eastern Himalayan region. Reduced availability of other plant species results in even greater anthropogenic pressure on *Rhododendron* species. The increased pressure in turn affects natural regeneration in a taxon comprising species that are generally slow growing. As a result, many *Rhododendron* species in the region have been categorized as threatened or endangered. Although, the Sikkim government has established two sanctuaries, Shingba and Barsey, as "*Rhododendron* sanctuaries" for conservation of rhododendrons (Singh *et al*., 2003; Tiwari *et al*., 2006, Singh, 2009), to date no conservation measures (such as sanctuaries, parks, or reserve forests) have been initiated for rhododendrons in Arunachal Pradesh.

Conservation efforts are more effective and economical if species are protected *in situ*. Vulnerable *Rhododendron* species are likely to become extinct in the Eastern Himalayas in the absence of adequate financial, technical, and extension efforts. Moreover, the region's biodiversity is under pressure from limited or alternative sources of income for the indigenous people. More than 50% of the reported *Rhododendron* taxa of Arunachal Pradesh occur in western (Tawang and West Kameng district) Arunachal Pradesh, which should be brought into the region's protected area network to conserve the endangered, endemic, rare, and threatened species occurring there from various anthropogenic disturbances. Various *in situ* as well as *ex situ* management practices such as the establishment of arboreta, sanctuaries, parks and reserve forests, protected areas through community management, botanical gardens, and in vitro research are imperative for conservation of keystone taxa.

Ecological niche modeling also plays an important role in identifying suitable locations for introductions or reintroductions of species. Reintroductions of the species could be initiated in suitable areas by introducing seedlings or saplings from areas where the species is more abundant. This step could also be achieved by introducing nursery-raised seedlings or by multiplication through tissue culture of species that are under threat. Like other germplasm, seeds of endemic, endangered, rare, and threatened *Rhododendron* species can be deposited in gene banks such as the National Bureau of Plant Genetic Resources (NBPGR) for future conservation and reintroduction. Reintroductions can eventually be carried out in deforested, degraded, and wasteland areas that once held *Rhododendron* forests, which not only conserves the species but also help to re-establish the species' habitat.

Acknowledgments

This work was supported by a research grant from the American Rhododendron Society, USA. The authors thank the officials of the Forest Department, of the Government of Arunachal Pradesh, village headmen (Gaon Burahs), and the local people for cooperation and support during the field surveys. Thanks are also due to Mr. Kenneth Cox, Dr. K. Haridasan and Dr. Debojit Bhattacharjee for helping in the identification of *Rhododendron* species. Also thanks to local guides for support and help during the field surveys, and to Mr. Jyotishman Deka and Mr. Sanjeeb Bharali for help in preparing the district shape file and study area map.

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*Source: Previous field surveys and www.gbif.org (georeferenced locations were from the Harvard University Herbaria)

See page 92 for Instructions on submitting photographs for the Photo Contest

Rhodies 101: On Fertilizing Rhododendrons

Harold W. Fearing
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British Columbia,
Canada

(*Reprinted with permission from http://www.fearing.ca/*)

When writing about a particular rhododendron, it is always possible to consult the experts and the various books to get fairly definitive information. When it comes to fertilizing, however, consulting two rhododendron experts will lead to at least three contradictory bits of advice. What is on the Internet is also not so useful as it is often tailored to specific climates and soil conditions. I am going to try to distill my experience and things I have learned from other local rhododendron growers, where "local" refers primarily to the lower mainland, i.e., Vancouver area, of British Columbia, though most of this should apply to the Pacific Northwest which has a similar climate. However, I am certainly not an expert, so what follows should be taken with a very large grain of salt . . . er, fertilizer.

Like any plant, rhododendrons need a steady supply of nutrients, nitrogen, phosphorus, and potassium, the N-P-K of fertilizer mixtures, as well as calcium, iron, sulfur, and other micronutrients. The nitrogen promotes vegetative growth. Phosphorus is important for root development and flower production, and potassium improves vigor and disease resistance. Some fertilizer mixtures include something to make the soil acid, but that normally isn't really necessary in this area since with all the rain we get most soils are naturally acid.

The question is whether one needs to use chemical fertilizers to provide these nutrients. The world is divided into "those who don't" and "those who do," with a significant group of us categorized as "'those who intend to, but sometimes don't get around to it."

Whether you plan to use chemical fertilizers or not you should start as though you were not going to. That means you should regularly add a layer of mulch to your rhododendrons, an inch or two thick, out past the drip line. Bark mulch, well-rotted compost, pine needles, or other coarse organic materials are good. Peat moss, sawdust, and green grass cuttings are not good, as they shed water. Manure is not good as it tends to be alkaline. The late Frank Dorsey of the Vancouver Rhododendron Society used shredded oak leaves, which he said, with his usual wry sense of humor, he pirated from a secret location in the middle of the night. One caution though—fresh organic material, e.g., fresh bark mulch, absorbs a lot of nitrogen when it first starts to decompose. This nitrogen is later released and slowly made available to the plant as the decomposition proceeds. However, such fresh materials can lead to an initial nitrogen deficiency and so if you use them you should add some high nitrogen chemical fertilizer at the same time.

So you have done everything right so far. Do you need to use additional chemical fertilizers as well? It is probably not really necessary in most lower mainland gardens, at least once the plants are well established. However, I do, as do most others with large collections with whom I have talked. I missed a year a few years ago and I thought the plants suffered. They didn't die, but the next year when I got back to my usual schedule of fertilizing, I thought they grew better, were healthier, and bloomed better.

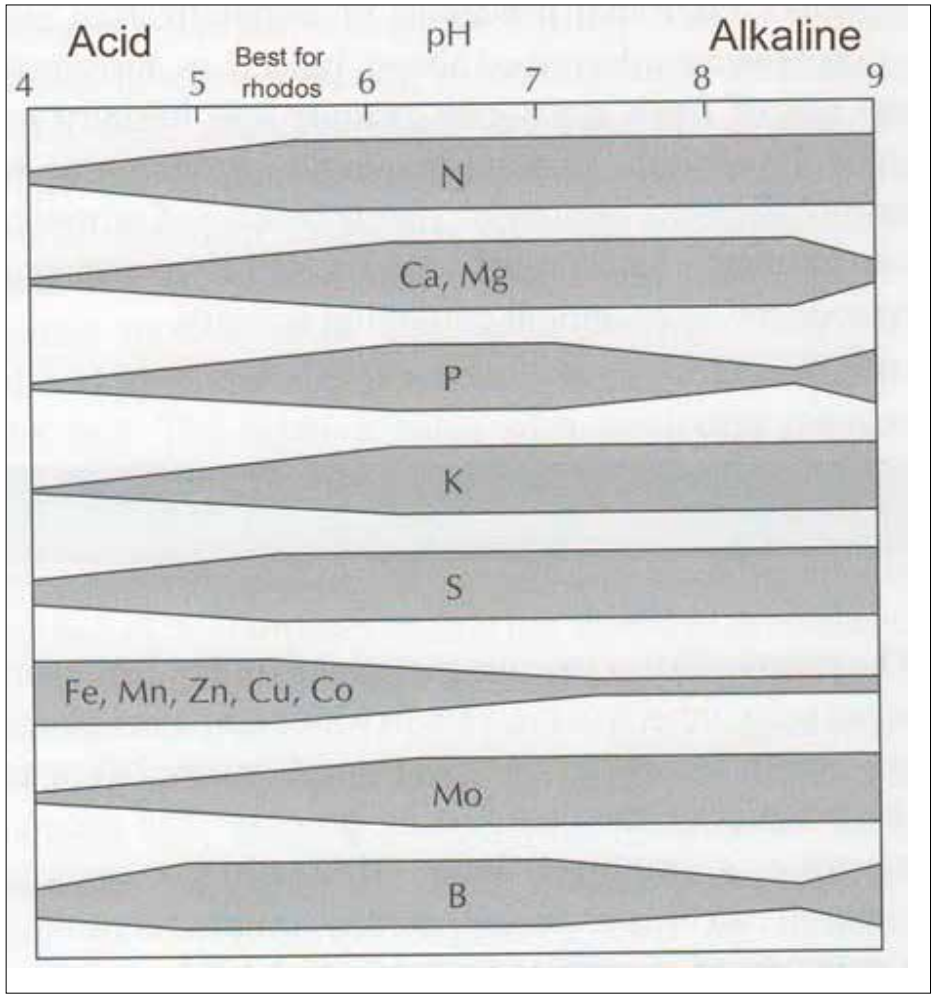
What most people seem to do is to fertilize twice a year, the first time in February/March before the plants really start growing and the second time in June, right at the end of flowering season. For the first application I usually use Green Valley 10-8-6 Rhododendron and Azalea fertilizer. This was developed for our climate 20 or 30 years ago by a number of members of the local rhododendron societies, working with the Green Valley people. It is reasonably high in nitrogen, some of which is delayed release, and contains the needed micronutrients. It should be broadcast under the plant out to the drip line. I use a carefully measured amount for each plant—a small handful for small plants and a large handful for large plants! This seems to be less available in garden shops than it used to be, but can still be obtained (at least it could last year) from the Green Valley plant in Abbotsford. For the June feeding I use this same fertilizer or any of the other brands of specifically rhododendron fertilizer which are available in garden shops. These tend to have relatively less nitrogen and may be more appropriate for later season application, as they may be less likely to stimulate new growth so late in the season that it doesn't have time to harden off before winter.

There is another approach, espoused by some, which advocates fertilizing in the late fall or early winter. The theory is that in our climate where the ground (usually!) isn't frozen over most of the winter the roots continue to develop through the winter and early spring. Thus a winter feeding stimulates root growth and leads to a healthier plant. I have never tried

this, but it does sound logical. However, one would have to time the application so the fertilizer reached the root zone, which is very shallow for rhododendrons, in the very early spring as the ground started to warm up. If applied too early I would think the winter rains would wash a lot down below the root zone before it could be used.

Finally, one reads that some rhodos "don't like fertilizer." This is supposed to be true particularly of the small leaved varieties and of some specific hybrids. I have never seen any evidence of this. I do match the amount of fertilizer to the size of the plant, but I have never seen any obvious fertilizer burn for plants in the ground. For plants in pots it is a different story, and I have over fertilized and burned a number of them.

I am sure there is formal research about fertilizing practices applicable to controlled situations in commercial greenhouses, but for the wide variety of conditions we experience in home gardens, our knowledge comes mainly as word of mouth from local growers. So perhaps the best approach is to talk with experienced growers in your own local area.



Graph showing the availability of nutrients to rhododendrons, depending on the pH of the soil.

Addendum:

Rhododendrons in general are said to like acid soil. The reason for this is that acidity of the soil affects the availability to the plants of specific nutrients in the soil or in the fertilizer which is added. Take a look at the graph on this page. [Taken with modifications from *Science and the Garden - The Scientific Basis of Horticultural Practice,* 2nd edition, ed. by D.S.Ingram, D. Vince-Prue and P.J. Gregory, page 102, published by Blackwell for the Royal Horticultural Society.] The figure shows the relative availability of various plant nutrients as a function of the pH of the soil. Neutral is pH 7. Lower numbers correspond to acidic and higher numbers to alkaline soils. Most rhodos are said to prefer a pH of 5-6, which is slightly on the acid side. At the preferred pH the main nutrients N (nitrogen), P (phosphorus), K (potassium) and also S (sulfur) are available. Also Fe (iron) and some of the other micro nutrients are available. Not shown is the fact that as the pH becomes much more acidic, aluminum, which is toxic to plants, becomes more available, so one doesn't want the soil too acid.

As the pH rises (soil becoming more alkaline, or sweeter) two things happen. First iron becomes unavailable. In rhodos this leads to chlorotic leaves with yellow veins. Secondly Ca (calcium) becomes more available. That is bad for rhodos which need some calcium, but not too much, though there is still scientific debate as to whether it is the calcium or the carbonate which goes with it that causes the damage. That is why one should never use regular lime on rhodos, as it is mainly calcium carbonate. Instead, if the soil needs sweetening, use dolomite lime, which is slower acting, but contains a lot of Mg (magnesium) in place of the calcium, and thus does less damage. Normal pure rainwater has a pH of 5.6, but the pH can be much lower in polluted areas (acid rain). Some of this acid is neutralized by elements in the soil, depending on the soil type. But the end result is that in our rainy climate the soil tends to be naturally acid, part of the reason we can grow rhodos so well. In extremely rainy areas the soil may get too acid and so some people in such areas use a bit of dolomite lime on their rhodos. In our garden the pH seems to be around 6, so I have never found that necessary.

Harold Fearing is a member of the South Fraser Chapter. He and his wife Ginny are owners of Fearing's Farm Nursery, specializing in species rhododendrons and azaelas.

Awards

FRASER VALLEY CHAPTER
Bronze Medal: Jill Futros
We present to Jill Futros the American Rhododendron Society Bronze Medal for her contributions to the Fraser Valley Rhododendron Chapter.

From the beginning Jill has embraced the true meaning of an active member. Willing to help in any way possible she has worn many hats. From Membership Chair to a term as President Jill has gone to where she was needed. You could find her helping out at Whonnock Lake Gardens or involved with our plant sale. There were few tasks that she was not willing to take on. Her gentle demeanour, along with her husband Fred, always makes the club a better place.

With sincere appreciation, we are pleased to present Jill Futros the American Rhododendron Society Bronze Medal—our highest award. We appreciate you and all you do for us. November 28, 2011 .

Bronze Medal: John Gardner
We present to John Gardner the American Rhododendron Society Bronze Medal for his contributions to the Fraser Valley Chapter.

John has always loved plants and the history behind them. He would give educational presentations on some botanist travelling to faraway places.

John has been active for many years in the planting and maintenance of the Whonnock Lake Rhododendron Garden along with many other positions within the club. From a term as President to manning booths for shows and always helping at all the plant sales John has played a major role in these activities.

With appreciation, we are pleased to present John Gardner the American Rhododendron Society's Bronze Medal—our highest award. We appreciate you and all the work you have done for us. November 28, 2011.

Bronze Medal: Scot Henney
We present to Scot Henney the American Rhododendron Society's Bronze Medal for his contributions to the Fraser Valley Chapter.

It is due to Scott's dedication and perseverance that Whonnock Lake Rhododendron Garden has become such an asset to the community. Tirelessly working to make sure that the right Rhododendron was in the right place and anything else that is needed is in place.

He held regular work weekends encouraging everyone to come out and help with weeding, pruning and planting. Scott wants everyone to learn and share. He held workshops and contributed many articles to our monthly newsletter. We also learned that he is a bit of a poet.

With sincere appreciation, we are pleased to present Scott Henney the American Rhododendron Society's Bronze Medal—our highest award. We appreciate you and all you have done for us and the garden. November 28, 2011.

Bronze Medal: Art Prufer
We present to Art Prufer the American Rhododendron Society's Bronze Medal for his special contributions to the Fraser Valley Chapter.

Art is one of those people who seem to be happiest working in the background. He has, for many years, creatively managed our website and kept things up and running in a most excellent manner.

He has, with his wife Rose, been a gracious co-host to summer barbecues as well as co-hosting many executive meetings over the years at their home.

Art has always been a willing worker, helping to set up meetings and plant sales and special events, adding greatly to the ongoing life of the club.

With sincere appreciation, we are pleased to present Art Prufer the American Rhododendron Society's Bronze Medal—our highest award. We appreciate you, and all that you do for us. Thank you, Art! November 28, 2011.

Bronze Medal: Rosemary Prufer
We present to Rosemary Prufer the American Rhododendron Society's Bronze Medal for her special contributions to the Fraser Valley Chapter.

Rosemary has cheerfully served several times on the executive committee in the capacity of President, Vice-President and Director, giving much of her time and talent. She has been effective in creating a welcoming atmosphere at our monthly meetings and at the many special occasions she has been involved in.

With energy and dedication Rosemary does not hesitate to get involved in working at our shows and plant sales. As well, she is a major contributor to the ongoing success of our regular meetings with her knowledgeable contributions.

She is a passionate and accomplished gardener, plant propagator and grower. Her contributions in this area have added much to the success of our club over the years.

With sincere appreciation, we are pleased to present Rosemary Prufer the American Rhododendron Society's Bronze Medal—our highest award. We appreciate you, and all that you do for us. Thank you, Rosemary! November 28, 2011.

MOUNT ARROWSMITH CHAPTER
Bronze Medal: Marilyn Dawson
In recognition of her long and dedicated service, Mount Arrowsmith Rhododendron Society is pleased to present the Bronze Medal to Marilyn Dawson. For many years Marilyn has been a dedicated secretary and director and has organized all publicity for MARS. She has been a driving force behind MARS' participation in Seedy Saturday and the Spring Fling plant sale. She has been on the Garden Tour committee, the Truss Show committee and the Christmas Party committee. She has hosted many potluck celebrations and directors' meetings and has had her garden on the Garden Tour. The awarding of this Bronze Medal is our way of saying thank you for her service, dedication and enthusiasm for MARS.

POTOMAC VALLEY CHAPTER
Bronze Medal: Phyllis T. Rittman
The Potomac Valley Chapter of the American Rhododendron Society presents to Phyllis T. Rittman the Bronze Medal in recognition of her many contributions in support of our chapter. Phyllis has served as our chapter treasurer for many years. Not only has she managed our chapter finances but she has also maintained our membership records and published our roster. She has assumed other demanding responsibilities including treasurer for the 2003 District Meeting and treasurer for the 2006 Joint Convention of the American Rhododendron Society and the Azalea Society of America. She has been a tireless worker at our plant sales, auctions, banquets, picnics, flower shows, and numerous other chapter activities. With deepest appreciation for her dedicated service, kindness, and willingness to help whenever needed, we present to Phyllis T. Rittman the ARS Bronze Medal, the highest honor our chapter is able to bestow. November 1, 2009.
(Continued on next page.)

Awards (Continued from page 87.)

Bronze Medal: The Wallenmeyer Family
The Potomac Valley Chapter of the American Rhododendron Society is pleased to award the Bronze Medal to the Wallenmeyer family: Jon, Phyllis, Jackie, and James. For many years, the Wallenmeyers have promoted the goals and activities of our organization. Jon served as Vice President and then President of the chapter, providing key leadership throughout the 2006 ARS Convention and beyond. He has served as banquet coordinator and has assisted with flower shows, plant sales, and auctions. Phyllis helped with many convention details, and has helped publicize the Potomac Valley Chapter, always encouraging her own family's support of the ARS. Jackie and James have faithfully attended our meetings since they were very young. They have joined us on many trips to see rhododendrons, acted as young ARS ambassadors at local and national meetings, and actively bid on auction plants to help raise chapter funds. The Wallenmeyers helped recruit new members and are always there to assist when needed. For these and many other reasons, the Potomac Valley Chapter wishes to honor the entire Wallenmeyer team with the highest award we can bestow, the ARS Bronze Medal. November 5, 2011.

In Memoriam

Amy Spelbrink Beaupre

Amy Spelbrink Beaupre, long-time dedicated member of the Tualatin Valley Chapter of the ARS, died on January 22, 2012, just four days short of her 101st birthday. She graduated in 1933 from Pacific University in Forest Grove, Oregon, majoring in political science and music. She performed as a concert pianist for 30 years. In addition to love of music and education, her greatest joy was her rhododendrons. Reportedly, she managed to squeeze in 88 rhododendrons on her city lot.

At the age of 80, Amy was unable to continue to care for her treasured rhodies and moved to a nursing home. Although she lost her own beloved rhody garden, she was the first large private donor of $5,000.00 to help develop what was to become to become the Lloyd Baron Rhododendron Garden at Rood Bridge Park in Hillsboro, Oregon. To insure the success of expansion of the rhododendron varieties, Amy later donated an additional $5,000.00 to the garden.

Amy and her husband, Herschel Beaupre, who preceded her in death, are missed by their friends in the community and especially by their many rhody friends.

Ron Mapes

Harold T. "Ron" Krug

Born on Dec.19, 1918, revered past-president of Tualatin Valley Chapter ARS, died on Dec. 07, 2011. Harold, as he was known by his rhody friends, is survived by his wife, Gerda, three children, seven grandchildren and four great-grandchildren.

In addition to serving as TVARS president, Harold was also active as a member of the Portland Chapter ARS. Until just a few years ago Harold was an active and successful participant in the spring truss shows of the Portland Chapter as well as the TVARS Chapter. Harold took rightful pride in his many prize-winning rhododendrons.

A private memorial service was held at his home sheltered by the tall firs surrounding his treasured rhododendrons.

Friends may sign on online guest book at www.oregonlive.com/obits

Eleanor Philp

Not only the Noyo Chapter, but the entire Society lost one of our pervasive linchpins. Eleanor Philp peacefully passed away on February 12, 2012, with her family at her side She was 87. Eleanor was born and raised in San Diego. In 1948 she headed north via San Francisco and Point Arena before settling in Fort Bragg in 1953. Her first husband, Jim Drewry, succumbed to cancer in 1965. Eleanor and Bruce were married in 1971. Together they raised Eleanor's five children.

Most of us here in the Noyo Chapter can trace our rhododendron roots, both figuratively and literally, back to Eleanor and her Trillium Lane Nursery. She and Bruce, a teacher, operated what Sunset Magazine described in the seventies as the largest rhododendron nursery on the West Coast. What made Eleanor and her nursery so special was her interest and concern for each of us and our gardens. Having hybridized and registered several hybrids she was a wealth of experience and knowledge which she was so happy to share. If you had a question and did not know the answer she would look it up in her rhododendron books.

Eleanor's involvement in the rhododendron world extended far beyond the Noyo Chapter. The Philp garden was frequently on garden tours. Eleanor especially enjoyed showing visitors her extensive big leafed collection. She used her photographic skills to enhance her enthusiasm and excelled in this endeavor when it was much more difficult, before the advent of point 'n shoot and photoshopping. On a regular basis her images enriched the ARS Journal. Numerous publications and ARS Chapters have enjoyed her papers and programs.

Eleanor presented the Noyo Chapter Charter to the ARS in 1981. In the Noyo Chapter she's held all the offices, written newsletters, organized our annual show and also served as Alternate District 5 Director. Her service has not gone unnoticed as the Noyo Chapter awarded her a Bronze Medal in 1996 and the ARS awarded her a Silver Medal in 2002.

We've lost a true friend and mentor and will miss her and the opportunity to, once again, "run this by Eleanor" before we go off half cocked.

Dick Jones

Deane Smith

We were all greatly saddened by the news of Deane Smith passing, on January 21, 2012. Deane was a Charter Member of the ARS Cascade Chapter and a past member of the Seattle Chapter. He served the Cascade Chapter as a board member in years past, and enthusiastically participated in the annual truss show.

He will be remembered and missed by many in the rhododendron community as being instrumental in the development of many of the newer hybrids that we enjoy. Deane allowed many local hybridizers to use his property as a testing ground when developing their latest creations. Deane took as much joy in watching the plants grow as the person who made the crosses. To walk through the Smith's woodland garden in the springtime with Deane was (Contined on next page.)

In Memoriam

(Continued from page 88.)

a true pleasure; he would proudly point out John Winberg's, Bob McKinney's, or Jim Barlup's plants that were in bloom.

While Deane always had an interest in plants, it was in the early 1960s that he developed an interest in rhododendrons. When Deane and Charlotte moved from the Enatai area in Bellevue to their Phantom Lake home with their five sons, the woodland setting provided an ideal environment for growing rhododendrons. The Phantom Lake property allowed Deane an opportunity to learn more about rhodies in his "spare time," which when one has five sons, is truly a scarce commodity. Deane would ask questions of the experts and gradually became quite astute about rhododendrons, though Deane would not have agreed with my summation and would downplay what he knew. There were many Saturday afternoons when my father and uncle would "go over to Deane's to see that new plant" he had acquired or to just talk about rhodies.

Deane's love of plants wasn't just limited to rhododendrons, and for the past decade, he had become very enthusiastic about Japanese maples. Deane grafted many different cultivars of *Acer palmatum* and was establishing a commanding collection. He had a keen eye for detail and was a quick study when it came to grafting maples. He mastered the technique well enough that he could simplify it to layman's terms, and always willing to share his knowledge to those who would take the time to listen to discern his humor and wisdom. Deane could show and explain most tasks of horticulture in his humble fashion, while not appreciating his own immense knowledge that he had gleaned from years of hands-on experience.

This past spring we had taken a class on Japanese maples and plant propagation at the ARS convention. I asked Deane after the classes how many maples he intended to graft this past fall and he gave his usual somewhat hazy answer of "not so many this year." I had learned through the years a follow up question was in order and would help to clarify what "not so many" entailed. Deane had intended to graft around two hundred trees this past fall, and then to send his usual box full of rhododendron cuttings down to Van Veen Nursery to be propagated, but failing health precluded his plans. Deane was always planning for the next season, but that season now awaits those he mentored.

I feel privileged and honored to have been able to count Deane as a friend, teacher, and adviser. Deane influenced my life in many ways, much as my own father had. Mr. Smith was a man that I had known since I was a young boy and came to cherish, and we will miss him.

Randy Jones

Tom Smith

The Mason-Dixon Chapter lost one of its long-time members when Tom Smith passed away on October 11, 2011, at the age of 86. A native of Tennessee, Tom served in the United States Army Air Corps during World War II and in the US Army during the Korean War. Serving in Germany after the Korean War, Tom met and married Barbara Flynn, and they settled in Barbara's home state of Maryland. After obtaining a master's degree from American University, Tom taught history in the Montgomery County school system, also serving as coach of the golf team and the chess club. Along with his activities in the Rhododendron Society, Tom enjoyed golf and woodworking and was an avid camper.

Tom was the type of member that every organization needs, always willing to pitch in and help with chapter events. At all our activities, whether it was the annual show and sale, a workday for a chapter project, or helping to man the booth at various home and garden shows, Tom would be there. He also helped to supply many of the plants given out as door prizes at chapter meetings. Many chapter members will probably remember him for his great sense of humor, particularly as he assisted at our annual cutting and plant auctions, all the while trying to keep his wife Barbara from buying up most of the cuttings. She would then expect him to root them, of course!

Tom was awarded the Mason-Dixon Chapter's inaugural "Golden Shovel Award" in 2010. This award, sponsored by the family of the late Gilbert Myers, one of the chapter's charter members, recognizes those who provide vital support for the Mason-Dixon Chapter and the American Rhododendron Society in a quiet, behind-the-scenes way.

Tom is survived by his wife Barbara, who served as the chapter's membership chair for many years, three children, and six grandchildren.

Letter to the Editor

To the Editor:

A statement on page 52 of the Winter 2012 issue, namely "*R. semibarbatum* was first introduced by the Russian botanist Tschonoski to the Botanical Gardens of St. Petersburg," contains an error that persists. A likely reason is that the name "Tschonoski" appears to be Russian. Tschonoski was not a Russian botanist. The name is, in fact, the German transliteration of the Russian (Cyrillic) transcription of a Japanese name—in English, "Chonosuke." The Japanese youth, Chonosuke Sukawa (Sugawa), born in 1842, became an assistant and plant collector for the Russian botanist Maximowicz during the latter's trip to Japan in 1860-1864.

Following Maximowicz's return to the botanical garden at St. Petersburg, Tschonoski continued to collect plants and seeds and send them to Maximowicz. As Maximowicz studied the Japanese plants, he found many that were new to Western science and, in naming some of them, memorialized his Japanese assistant and collector with the specific epithet tschonoskii.

Donald H. Voss
Vienna, Virginia

Chapter Shows

Chapter shows from April 15 through May 2012. Early shows were reported in the Winter 2012 issue.

No admission charge unless noted.

CASCADE – Early Rhododendron Sampler; 10 a.m. - 5 p.m., Sat., April 21, 2012; Wells Medina Nursery, 8300 NE 24th, Medina, WA 98039 -Don Smart.

Annual Show and Sale; 10 a.m. to 5 p.m., Sat., May 19, and 10 a.m. to 4 p.m., Sun., May 20; Bellevue Botanical Garden, 12001 Main St., Bellevue, WA. Public is welcome to submit show entires by 9 a.m., Sat., and to vote for their favorites in the show.

EUGENE - Spring Rhododendron Show and Awards Banquet; Sat., April 21; Mookie's Northwest Grill, 400 International Way, Springfield, OR. Afternoon flower show judged by attendees, foliage exhibit, no-host dinner, speaker, plant auction. For details: www.eugene-chapter-ars.org. Contact Ted Hewitt.

EUREKA – Rhododendron Show and Sale; 9 a.m. to 4 p.m., Sat., April 28, and 10 a.m. to 3:30 p.m., Sun., April 29; entries received 6 to 9 p.m., Fri., April 27, and 7 to 9 a.m., Sat., April 28; St. Bernards School, Miles Hall, Henderson St., Eureka, CA; Mary Marking.

KOMO KULSHAN – Chapter Flower Show; 10 a.m. to 4 p.m., Sat., April 28; Christianson's Nursery, 15806 Best Rd., Mount Vernon, WA; Lynn Torset.

MASON-DIXON - Annual Show and Sale; 9 a.m. to 4 p.m., Sat., May 12; Carroll County Agricultural Center in Westminster, MD; judged truss show and sale of a wide variety of rhododendrons, azaleas, and companion plants.

MIDWEST - Annual Plant Sale and Truss Show; 10 a.m. to 4 p.m., Sat. & Sun, May 12 & 13; Chicago Botanic Garden, Glencoe, IL. The Truss Show is a non-juried event and will include trusses from members' gardens in northern Illinois and southern Wisconsin. Our Plant sale will include over 30 varieties of rhododendrons and azaleas from our Michigan growers.

MOUNT ARROWSMITH - MARS Truss Show and Rhododendron Sale; 10 a.m. to 2 p.m., Sat., April 21; Parksville Curling Rink, Parksville, BC Canada; Glen Jamieson.

NEW YORK - May Flower Show; 1 to 3 p.m., Sat., May 19; Planting Fields Arboretum, Oyster Bay, NY; Bruce Feller.

NORTH ISLAND - NIRS Truss Show and Rhododendron Sale; 10 a.m. to 1 p.m., Sun., May 6; Komox Band Hall 3320 Comox Road, Comox BC, Canada; Nadine Boudreau.

NOYO - 35th Annual John Druecker Memorial Show & Plant Sale; 7 to 10 a.m. Sat., May 5, submit entries, open to public 1:30 to 5 pm.; 9 a.m. to 4 p.m., Sun., May 6, open to public; Mendocino Coast Botanical Gardens, 18220 North Highway One, Fort Bragg, CA 95437.

OLYMPIA - Olympia Chapter Truss Show; 8 a.m. to 6 p.m., Sat., May 5, and 8 a.m. to 5 p.m., Sun., May 6; Tumwater Falls Park, 110 Deschutes Way S.W., Tumwater, WA.

PENINSULA - 8th Annual University Place Spring Flower Show and Plant Sale; 9 a.m. to 5 p.m., Sat., April 28, and 10 a.m. to 2 p.m., Sun., April 29; Homestead Park, 3715 Bridgeport Way W., University Place, WA. An amazing array of rhododendrons will be in bloom and on display. The annual exhibit featuring over 400 trusses is one of the largest rhododendron exhibits on the West Coast. In addition to a juried rhododendron exhibit, the event will also feature a juried nature photo exhibit. The plant sale includes locally grown plants from 14 Puget Sound nurseries, "garden art" vendors, and an "Environmental Fair" featuring sustainable gardening techniques. The sale is sponsored by the Peninsula Chapter of ARS and the Freinds of Homestead Park. Barbara Lee.

SCOTTISH - Scotland's National Rhododendron Show; Show open: judging commences at 10.00hrs, show open 12.00hrs - 16.00hrs, Sat. 28th April 2012; Community Hall, Gargunnock, Stirling, Scotland; On Sun. 29th April 2012 there will be a programme of garden tours in Central Scotland. William Campbell.

SEATTLE - May Truss Show; noon to 3 p.m., Fri. May 11, set-up and entries; 8 to 9:30 a.m., Sat., May 12, entries, judging 10 a.m, and open to the public noon to 4 p.m.; open 9 a.m. to 4 p.m., Sun., May 13; Rhododendron Species Botanical Garden, 2525 South 336th St., Federal Way, WA, Weyerhaeuser Campus. Judged show of trusses, floral d isplays, educational entries, peoples choice photo exhibit, plant sales. Diane Thompson.

SIUSLAW - Early Flower Show and Plant Sale and Bonsai Exhibit; flower show open to public no charge after judging, 1 to 5 p.m., Sat., April 14, and Sun., April 15; Florence Events Center, 715 Quince, Florence, OR 97439, tel: 541 997-1994; plant sales, open to the public, south side of the building from 10 a.m. to 5 p.m. The public may bring flower trusses for judging on Saturday from 7 to 9 a.m. Ribbons and trophies will be awarded. It's a great time to ask questions, find books and information and enjoy azalea and rhododendron blooms; Sandra Jensen.

SOUTHWESTERN OREGON - Southwestern Oregon Rhododendron Show; 11 a.m. to 5 p.m., Sat., April 28, and 12 noon to 4 p.m., Sun., April 29; Pony Village Mall, North Bend, OR 97459; Pete Baumer.

VANCOUVER - Vancouver Rhododendron Society Annual Show and Sale; 10 a.m. to 3 p.m., Sat., May 5; Park and Tilford Gardens, 333 Brooksbank Avenue, North Vancouver, BC, Canada; Tony Clayton.

VICTORIA - Westshore Village Centre Show & Sale, 9:30 a.m. to 5:30 p.m., Sat., April 21. Abkhazi Gardens Sale, 9 a.m. to noon, Sat., May 12. Tillicum Mall Show & Sale, 9:30 a.m. to 5:30 p.m., Sat., May 26. BC Blooms, Government House, 1:30 to 7 p.m., Fri., June 22, and 10 a.m. to 4 p.m., Sat., June 23.

WILLAMETTE - 2012 Truss Show with Friends of Bush Gardens Plant Sale; 10 a.m. to 6 p.m., Fri., Sat., Sun., April 20, 21, 22; Bush House, Bush's Pasture Park, High and Bush Streets S.E., Salem, Oregon 97302; Wallace Reed.

Individual ARS Donations in 2011

General Fund Donations

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Rhododendron Calendar

2012 ARS-ASA Annual Convention, Southeastern Chapter ARS and Vaseyi Chapter ASA, Asheville, North Carolina. Joint convention with Azalea Society of America, May 4-7. Board meeting
2012 ARS Western Regional Conference, Nanaimo Chapter, British Columbia, Canada. Rhodos In Paradise, Destination Vancouver Island. Coast Bastion Inn, Sept. 21-23, Nanaimo, BC. Board meeting
2013 ARS Annual Convention, Olympia, WA/Tacoma, WA area. May 1-5. Board meeting.
2013 ARS Eastern Regional Conference, RSC Atlantic Region, Oct. 4–6, Dartmouth, NS Canada
2014 ARS Western Regional Conference, District 2, Everett, WA (dates to be announced). Board meeting.

Late Journals

If you as an ARS member do not receive your journal **one month** after the normal mailing period, please notify Executive Director Laura Grant and she will mail you one from her office. This notice is for all members, including Canadian and off-shore members.

You should wait to receive your journal up to the following dates:

Winter issue: March 1
Spring issue: June 1
Summer issue: September 1
Fall issue: December 1

See the inside front cover of a recent journal for Laura's email address, phone number, and mailing address.

The reason for late journals is not entirely clear but probably is due to slow processing at local post offices.

Fall Western Regional Conference, Nanaimo, British Columbia

Nanaimo, BC, with generous support from other District 1 chapters, is getting ready to give a West Coast welcome to ARS members from near and far in its hosting of the 2012 Fall Regional Conference from September 21 to 23.

For full information about our programs, speakers, tours, hotel, and registration details, please go to our website at www.arsnanaimo2012.ca, which will be accessible in early April. We hope to see you at " Rhodos in Paradise - Destination Vancouver Island."

We suggest that you register early to get in on tours you won't want to miss.

Gaylle McRae and Chris Southwick
Conference Co-chairs

2011/12 ARS Rhododendron Photo Contest Rules

Glen Jamieson, Editor

The Contest is open only to ARS members in good standing as of the contest closing date. Judges and their immediate family (spouse, parents, siblings, and children) and household members are not eligible.

By participating in the Contest, each entrant fully and unconditionally agrees to and accepts these Official Rules and the decisions of the Judges, which are final and binding in all matters related to the Contest. There are no prizes except bragging rights, and the Editor of *JARS* has the right to publish runner up and winning entries in *JARS* and to put them on the ARS website.

All photos submitted must have been taken between January 1, 2011, to July 31, 2012. Entries must be received by midnight PST, July 31, 2012. All entries should prominently feature either **rhododendrons, azaleas** and/or **vireyas** in the composition.

Competition categories:

1) Flower, truss or spray;
2) Plant in bloom;
3) Landscape or plants in the wild;
4) Foliage;
5) People, Insects, or Animals; and
6) Other, for creative or artistic effects of any kind that involves these plants. This could involve the use of software products like PhotoShop.

Photo Guidelines:

1) The Photo must be in .jpg .jpeg, or .gif;
2) Images submitted should be sent by email and be of modest size, about 1024 to 1280 pixels in length and 480 to 768 in width, which would correspond to a dpi of at least 300 for a 3 x 5 in (7.6 x 12.7 cm) photo;
3) Cropping of digital images and minor adjustments to exposure and color balance is permitted for entries in all categories. Advanced image editing features available in software products like Photoshop should not be used except for entries in category six;
4) The Photo caption and/or description must not exceed 200 characters in length. Provision of some details about the camera and settings for each entry is also required, and for submissions in category 6, include a brief explanation of how the image was created;
5) The Photo cannot have been submitted previously in a contest of any kind; and
6) The number of entries by any individual per category is restricted to two.

Here is a link on the web to photography guidelines, as we hope this competition can also be an educational tool, especially for our new photographers: http://photo.tutsplus.com/articles/roundups/100-helpful-photography-tutorials-forbeginners-and-professionals/.

ARS Program Library

The ARS Program Library provides programs on DVDs that chapters can purchase for use at their meetings. These DVDs are viewed with the digital projector, with a computer or DVD player, or viewed on a television set with the DVD player.

Chapter members may borrow from their chapter library, and make a copy, or purchase personal copies.

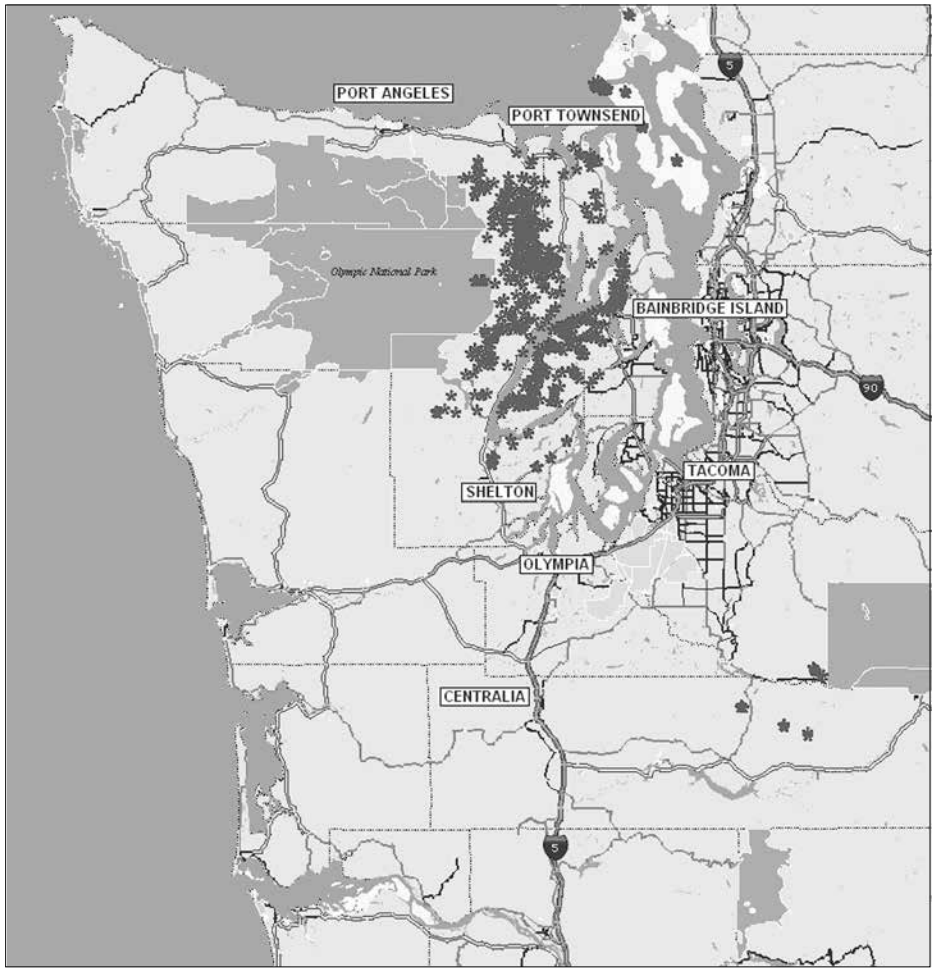
The DVDs currently available:

- Garden Walks 2006 - Gardens visited during the joint convention of the ARS and Azalea Society of America in Rockville, Maryland.
- Frank Fujioka's Program – May 2006 Societe Bretonne Du Rhododendron in France.
- Elepidote Hybrids in Central New Jersey – Hybrids selected by the Princeton Chapter Study Group. Narration by Jerry van de Sande.
- Arunachal Pradesh, India – Ron Rabideau's trip, narration by Ron Rabideau.
- The Zurich Garden – A narration by the garden's creator, Dr. William M. Zurich.
- Rhododendrons at the Golden Gate – 2007 Annual Convention with narration.
- Rhododendrons in the Wild West – 2008 Annual Convention in Tulsa with narration.
- A Spring Walk in Walters' Woods – Spike & Kay Walters' garden in Western PA.
- Nepal: Our Ultimate Rhodo Flowering Experience! – Narration by Ian Chalk, Australia.
- Oban, Scotland ARS 1996 Convention Revisited – Narration by Win Howe.
- Lendonwood Garden – Len Miller's garden in Grove, Oklahoma. DVD produced by Oklahoma State University Cooperative Extension Service. Available on VHS and DVD for $15 each.

- New DVD: Charles Feryok on Pruning. Chuck, retired horticulturist living in central NJ, discuses pruning principles and demonstrates as he walks about a small NJ garden.

ARS District 3

Clarice Clark
Puyallup,
Washington



Map 1: District 3 city locations are shown in boxes, and locations of *R. macrophyllum* populations are shown as star icons.

I would like to introduce ARS District 3 with a northwestern Washington State map (Map 1) with an overlay of star icons representing our native *Rhododendron macrophyllum* populations that grow "in the wild" around the Olympic peninsula. These plants generally begin blooming around the middle of May and into June, depending on elevation and exposure of the site. The Annual Rhododendron Festival in Port Townsend is a weeklong event culminating on the third Saturday in May and features this rhododendron, Washington's state flower, on floats in the parade.

Although it would seem that our area is a natural growing area for rhododendrons, our climate is really unlike other parts of the rhododendron world such as in Asia or much of the Eastern United States. Here in most of District 3, our summers are dry, as we generally get little or no rain in July, August and September. Imported rhododendrons thus often need supplemental watering to match the wet summer months in their places of origin. However, we are generally able to supply this water due to the availability of plentiful snowpack runoff, held by reservoirs or running in creeks and rivers. *Rhododendron macrophyllum* seems to resent this summer watering regime forced upon it by its foreign relatives, but there are hybrids available, such as 'Jackie Ann' and 'Mrs Jamie Fraser'.

The other limiting factor facing gardeners and homeowners in District 3 are the average low temperatures—not the highs. We have not historically experienced high temperatures in the 90s° F (> 32° C) for extended intervals, and temperatures are often moderated by cloud cover. However, most areas in our district dip into the teens (< 20° F, -7° C) for a brief period in the winter, and we often get snow, although it typically does not stay on the ground for a prolonged period. The entire district was USDA zone 8 (10 to 20° F, -12 to -7°), but the latest update to the map has split our district into two subzones: "A" and "B." Temperature in the A zone, with Olympia and areas to the south, is still expected to dip down as low as 10° F (-12° C), while gardeners in the B zone (15 to 20° F, -9 to -7° C) have a better chance to grow successfully some of the big leaf species and slightly more "tender" early blooming hybrids and perennial companion plants, especially if located near a large body of water, such as Hood Canal.

District 3 (Map 2) started 60 years ago with the formation of the Tacoma chapter (41 members), followed by the Grays Harbor (1955, but no longer existing), Olympic Peninsula (1958, Port Townsend, currently 19 members,) and Olympia (1962, 29 members) Chapters. The current roster of chapters also includes Lewis County (Centralia, 7 members), Juan de Fuca (Port Angeles, 12 members), Kitsap (Bainbridge Island, 16 members), Shelton (10 members) and Peninsula (Gig Harbor, 7 members), with a total membership of approximately 140 over eight chapters.

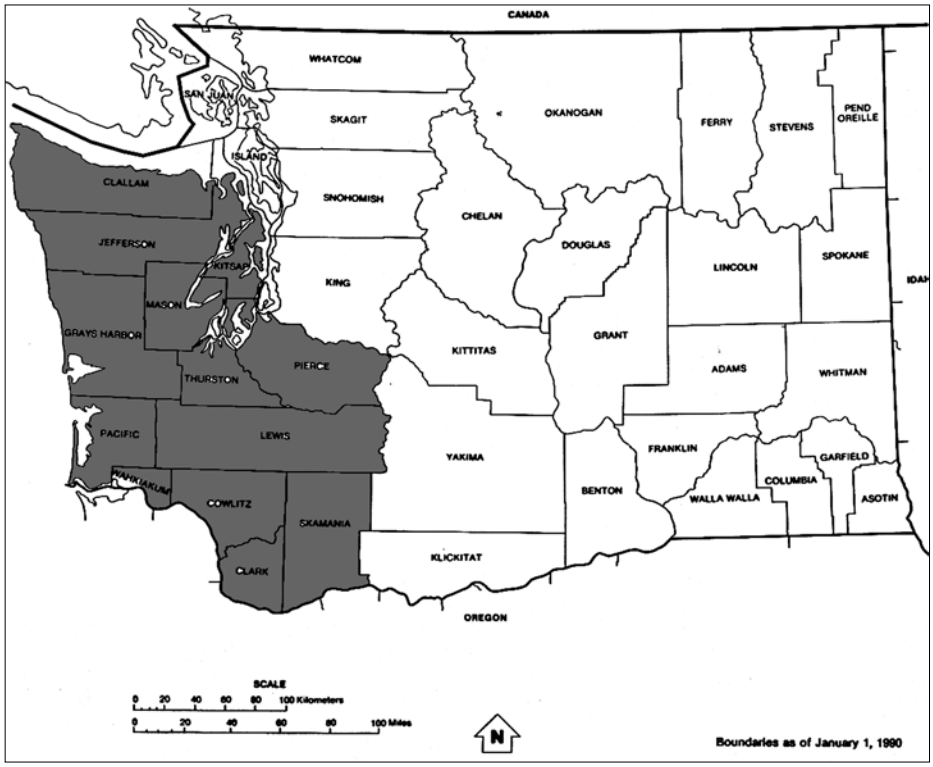
In 1974, the Rhododendron Species Foundation collection was relocated to its present location on the grounds of the

Weyerhaeuser Corporate Headquarters in Federal Way, and many District 3 members have volunteered and worked for the Rhododendron Species Botanical Garden (RSBG). Gold medal awardees June Sinclair and the late Warren Berg are District chapter members who played a large role in the development of the RSBG. The extraordinary contribution of Fran Rutherford to the building and endowment of the new conservatory at the RSBG is reflected by naming the building in his honor. E. White Smith is one of the founders of the popular newsletter "The Vireya Vine," for which the Tacoma Chapter awarded him the Silver Medal. Many members also volunteer at community gardens in local parks, such as in the City of Gig Harbor, Point Defiance Park, Homestead Park and Tumwater Falls Park. The [Olympic] Peninsula Chapter has maintained the Rhododendron Centennial Garden at Fort Worden for over 20 years. The original rhododendron garden at Point Defiance in Tacoma, WA, was moved in 1968 when the zoo was expanded, and over 1,000 plants have been donated and cared for by the Tacoma Chapter over the years.

All the chapters have or continue to have a judged truss show and many include a plant sale as part of their activities. Commercial members are crucial to the success of these sales, with donated or reduced price plants for fund raising and raffles. Briggs Nursery's unfailing support was recognized with an ARS Gold Medal for Bruce Briggs in 1994. Also, many Bronze medals have been awarded to both Regular and Associate members, who donate plants for shows, auctions and for community beautification; serve as officers and support the local chapters.

District 3 will be your host for the 2013 Annual Convention that will be held near the SeaTac airport, a central location for regional garden tours, sightseeing and travel before and after the convention. We encourage all members to put May 1-5, 2013, on their calendars and to begin planning along with us for a fun and social event. Why not invite your son or grandson to come along or meet you here and perhaps see the new LeMay Car museum (http://www.lemaymuseum.org/), just a few miles away in Tacoma? Alternatively, how about inviting a family member to accompany you and ride the new light rail—only ½ mile (800 m) from the hotel—to Seattle, and have a public transportation adventure? You may also see the Experience Music Project, the new Chihuly Glass museum scheduled to open in April, 2012, or even catch a jet boat and visit Victoria, B.C.

Naturally, we are planning tours of local gardens, workshops, and speakers on a wide range of topics, with a focus on the many attractions in the Tacoma and Olympia area and the surrounding natural beauty. We especially appeal to our Pacific Rim neighbors to visit and bring with them the knowledge and international stimulation that will make our convention a trip to look forward to.



Map 2: The shaded area is District 3 in Washington State. ARS members from the Vancouver, WA, area (Clark County), however, belong to the Portland, Oregon, Chapter, as there is no ARS chapter south of Lewis County in Washington.

Map 1 legend: Data on locations of *R. macrophyllum* populations was furnished by the Western North American Rhododendron Species Project. More maps are available on their website at www.wnarsp.org.

Clarice Clark is a member of the ARS Tacoma Chapter and Project Manager for the Western North American Rhododendron Species Project.

Big old *R. fortunei* prooted.

Coating of ice.

Storm Destruction at the Rhododendron Species Botanical Garden, Federal Way, Washington January 2012

Photos by Dennis Bottemiller

Rhododendrons bent by snow.

Coolhouse annex full of potted rhododendrons.

"The World of the Rhododendron"

Proceedings of the Scottish Rhododendron Society's Silver Jubilee 2008 Conference, Royal Botanic Garden, Edinburgh

Clive Justice
Vancouver, British Columbia
Canada

(*Conference Proceedings are in SRS Yearbook No. 11, 2009*)

[Editors comments: Although this is a summary of an ARS Chapter Conference held three years ago, it was a particularly significant conference that has not previously been written about previously in *JARS*. It was just submitted to *JARS* by an ARS Gold Medal member who presents a very personal perspective about a meeting that greatly impressed him, significant because he had previously attended almost every ARS conference between the years 1953-2007. I am therefore including it in *JARS* as recognition both of a great conference and of the author's support for the ARS.]

Those members of the ARS who didn't make it to the Scottish Rhododendron Chapter's (SRS) 25th anniversary Conference in 2009 missed one of the best meetings I have ever attended. Even though I could only take in one of the several tours offered, I did manage to take in all of the sessions of expert and learned papers given on a wide range of rhododendron subjects, from species old and new, distribution natural and manmade and hybrids commercial and hobbyist created. It included species newly discovered, and variants reclassified, and included species from China; the Caucasus; Japan; the three rivers area of China; northern Vietnam; India's Arunchal Pradesh, Nagaland, and Sikkim; Bhutan; Nepal; Pakistan's northwest Frontier; Afghanistan; other troubled …'stans; and Georgia. It covered the Eastern USA azalea story, "the ironclads" in Finland, Germany's hardy hybrid backcrosses and how the Pacific Northwest's (PNW) not so hardy hybrids fare in the UK.

Although the wine flowed more freely at the restored Royal Botanic Garden (RBG) Palm House Reception, the outstanding social event was the SRS Banquet in the King's Hall at the recently refurbished 200-year-old George Hotel in the heart of Edinburgh. All the Scottish Chapter members including myself went in highland attire: clan kilt (mine was Menzies), Prince Charles Jacket and sporran. With the SRS ladies in long skirts and shoulder plaids, it was a bonnie affair!

The casually written program for the speakers and lectures for Streams A and B at the Scottish Rhododendron Society's Silver Jubilee Conference belied the importance and serious nature of subsequent professional presentations held in the RBG's Herbarium lecture hall just along from the east side entry gate. Directions contrasted with the program note in italics "that all garden bus tours assembled and left from Inverleith Place," as there was also Inverleith Terrace, Row and Avenue, making it somewhat confusing for the spatially challenged! Our close-to-the-Gardens-hotel, the Inverlieth, was on Inverlieth Terrace and bordered the South side of the Gardens.

Edinburgh and Vancouver share much the same climate and our seasons even coincide in a calendar year. They too had a long cool and cloudy wet spring, so the March and April blooming star and soulange [saucer] Magnolias (*M. stellta* and × *soulangeana* respectively), tulips and daffodils were still in bloom. Instead of the shiny yellow green leaved English laurel (*Prunus laurocerasus)* hedges so common in Vancouver, in Edinburgh they have the silver grey-under and dull green-over leaves of *Elaeagnus angustifolia,* commonly called silver berry, oleaster, or Russian olive. We passed by these gardens every morning on our way to the lectures and to get to the garden tour busses. This enabled my son Douglas and I to play the game of first-to-identify the shrub, tree or herbaceous perennial we passed in each front garden. Years ago I used to best him, but now he wins most times except occasionally when I'd score by naming some obscure shrub I had learned in California fifty years ago!

We left Vancouver on Tuesday May 5th with the March-April blooming *Prunus* 'Kwanzan' cherries just coming into full bloom and flew overnight to London's Heathrow, and then on to Edinburgh, over which we had flown a couple of hours earlier on our way in from Canada. On the taxi drive to our Edinburgh hotel, the rows of 'Kwanzan' cherries were also in full bloom!

After registering at the Herbarium Foyer and getting our Conference package, we attended the cocktail (wine) hour or so hosted by the RBG Edinburgh (RBGE) in their newly renovated Victorian Palm House. Although it's not as spectacular or as big as the one at Kew, its cast iron structure is a fine example of Victorian garden architecture. There among the palms we were able to mingle with conference delegates from ARS Chapters from Pacific Northwest ARS Districts; Regional Chapters of the Rhododendron Society of Canada in eastern North America; ARS Chapters in Denmark, Holland, and Sweden; the German Rhododendron group; and delegates from the antipodes rhododendron societies in New Zealand and Australia. I had earlier registered for the conference as a member of the J.D. Hooker (Sikkim) Chapter, so with the SRS Conference hosts headed by John Hammond's committee, all five of the "At Large" ARS Chapters were represented. There was even a delegate from Finland who was one of the invited speakers.

I had signed up for two Garden Tours: Gardens of the Scottish Borders and the Gardens of Perthshire. The Borders tour included Dawyck Botanic Gardens and Arboretum that now does the research, educational and conservation work of the RBGE. The Perthshire tour went north of Glasgow to the Cox's garden and nursery and other gardens. I'd been there earlier during the Oban Conference tours in '94, so I let Douglas take that one. Dawyck has many of the conifers of the PNW introduced by David Douglas, as well as rhodos collected by Earnest Wilson and by the Balfour family. I learned the latter were no relation to Henry Bailey Balfour, the creator of the Balfour Rhododendron Series Classification system. The other gardens we visited are tucked into the rolling, rounded grassed and forested Pennines [a low-rising mountain range separating the North West of England from Yorkshire and the North East] in the two border counties of Mid Lothian and West Lothian. The gardens were tucked into vales between the hills, incorporating the burns with their rills, falls, ponds and bridges as garden features. Some of the gardens are part of working farms, and were pastoral, rustic, natural and idyllic. Dawyck had an Arcadian flavour, although no nude statues!

The lectures and talks were professionally presented using PowerPoint and other computer technology. A presentation that particularly caught my interest was Finland's Dr. Peter Tigerstead's work (the grandson of Mustilla Arboretum's [in Mustilla, Finland] founder) in developing Finnish-hardy rhododendron hybrids by raising and growing very large batches of a thousand or more of his rhodo crosses, and then planting them out in the woodland parks of Helsinki. They provide enjoyment for Helsinkians, while being survival-tested over several decades of winters. Survivors of this on-going program are being propagated for Helsinki's gardens and parks and for export to Russia, Estonia, Latvia and Sweden.

Another talk of particular interest to me was the PhD thesis by a young candidate, Tobias Marczewski at the University of Edinburgh, who suggested that rhododendrons originated in the Western Hemisphere of North America and have moved back and forth across the pole region at least three times through succeeding ice ages and continental drift over several million years. The present disjunct world-wide distribution of the genus are the sequestered remains from that long process. His proof was that rhododendrons in the Caucasus Mountains were most similar to those in Japan, Korea and Siberia, and at some time in the past they separated from these populations and established themselves in the Caucasus. The Caucasus rhodendron species and those in North Pacific Asia all apparently share similar DNA and are unrelated to those in Nepal, Bhutan and western China. I found it a fascinating suggestion, as did others and it provoked great discussion.

The final conference presentation was by the Conference Chairman John Hammond, luckily not a summing up, but the description of a process he had developed either to root stock from large old rhodos that were in poor shape and couldn't be moved, or to duplicate one-of-a-kind (unique) rhodos in garden restorations. John showed slides of 3-4 inch (7.6-10.1 cm) diameter limbs from an old rhodo that he had wrapped in black plastic around peat moss, up to the size of a large Bologna sausage. The bark on the limb's upper surface was given a large cut to expose the cambium and a permanent drip water supply was fed into the "sausage" to keep it damp. The next slide taken some time later showed the plastic removed and a mass of roots growing from the covered area. The limb could then be severed from its parent and planted into soil. The audience response to the unveiling of the root mass was impressive, and what a conference closer, as they used to say of vaudeville shows! I and some others who had gardened in the tropics whispered "Marcotting" quietly [see Marcotting air layering, sometimes called Gootee-layering, at http://www.cropsreview.com/marcotting.html] so as not to take away from John's presentation! Named for the Frenchman who invented it, and often used to propagate superior fruit bearing and hard-to-root trees and shrubs in the tropics, this technique was particularly practical where one had a local "garden boy" who could water daily the bundle of soil wrapped in coir (palm fibre).

Clive Justice is member of the Vancouver Chapter and has been a frequent contributor to JARS.

The Blansit Hybrids

Jack Olson
Fall Creek, Oregon

Photos by the author

I have known Nolan Blansit for about ten years. Our Eugene Chapter visited his place for spring picnics, and everyone really enjoyed his beautiful garden. He had rows and rows of small rhododendrons, which were always a subject of conversation. I noticed that many of his hybrids were small, and appeared to be very compact and tight in their growth habit. Nolan explained what his goals were, and what steps he was taking to meet his objectives of growing small compact plants with large trusses that bloomed at a young age, two to three years from seed. Nolan chose *Rhododendron* 'Bambi' × *R. proteoides* as a pollen parent to keep the plants small and tight, and 'Yellow Saucer' × Riplet Group for compactness and flower size. 'Yellow Saucer' has *R. aberconwayi* as a parent, so the flowers are flat in the truss. Making these crosses and line crossing them back to 'Bambi' × *R. proteoides* made strong, little, compact plants.

He introduced other species and hybids to give color to the trusses, special foliage, and various plant shapes and sizes. In his last few years of hybridizing, he was doing over 500 crosses a year, and his gene pool was unreal. The true rhodoholic could not spend enough time looking and studying all his various plant material, much of which had incredible foliage. It seems that when you use *R. proteoides*, the plants have lots of leaves, and hold them for three or four years. They were beautiful little miniature plants, with diverse parentage. Some of the other species he used were *R. recurvoides, R. macbeanum, R. thayerianum, R. wightii, R. rirei, R. erosum, R. bureavii, R. bathyphyllum, R. makinoi, R hunwellianum, R. irroratum, R. balfourianum, R. strugillosum* and *R. pseudohrysanthum*. He also used hundreds of hybrids, always shopping for the latest plants with unusual characteristics.

Nolan and his wife Cindy decided to move back to Missourii in 2009 to be with family, so they sold their home. He called me and wanted to know if I wanted to be involved in a large plant sale. He had decided to sell as many of his seedlings as he could, so that his hybrids could get into some of the gardens in the area. The sale was very organized. Don Wallace of Singing Tree Nursery (McKinleyville, CA) came on Monday, Pat Osborne from Thompson's Nursery (Waldport, OR) on Tuesday, Dan Meier from Briggs Nursery (Elma, WA) Wednesday, and all the rhododendron society members shopped on Thursday. On Friday and Saturday, the sale was open to the general public. In the six days of the plant sale, from October 5-10, 2009, I saw more plants being moved than I could ever imagine. The nurseries hauled plants out by the truck-load, and in the three final days, plants were packed so tightly in cars one could hardly see the driver. When the final day was done, Nolan flew out of Eugene and back to Missouri. He later told me that walking away from fifteen years of hybridizing and an incredible garden was one of the hardest things he had ever done.

Nolan not only worked on developing small compact, flowering plants but did some rather incredible hybridizing of other plants. He was the first person to develop a yellow African violet (*Saintpaulia)*, and he worked for about ten years on its development. He had a beautiful perennial garden with exotic trees and shrubs in addition to his rhododendrons. He had hundreds of nice rhododendron hybrids not even been seen by the public, and I bought and named one, now registered as 'Prism'.

An interesting part of Nolan's hybridizing was his use of 'Bambi' × *R. proteoides* as one of the parents. There are about thirty of these little plants around from the cross made by Cecil Smith, who sent seed to the ARS seed exchange. Louis Mensing of Yachats, OR, bought and grew the seedlings. They were all nice plants, and he sold some to Tom and Emma Bowhan, who owned a nursery in West Eugene, and that is where Nolan discovered the cross.

Jack Olson is a member of the Eugene Chapter.

The Blansit Hybrids

(unnamed seedlings, all with *R. proteoides* in parentage)

In the garden of Nolan Blansit.

The Word: Xerophyte

Bruce Palmer
Cutten, California

Xerophyte, from the Greek *xeros* = dry, and *phytos* = plant, is an appropriate word for this issue of *JARS*, given the historic dry winter we experienced up to late January, at least on the North American West Coast.

Xerophytes are plants that thrive in dry conditions, typical of deserts and high altitudes. Rhododendrons aren't typical xerophytes (though many exhibit some adaptations to dryness and high altitude environments). Rhododendrons are in the family *Ericaceae* (commonly known as the heath or heather family, after *Erica*), and some of the members of the family are xerophytes, most notably manzanita (*Arctostaphylos* spp.). Arctostaphylos, from the Greek *Arctos* = bear, and *Staphyle* = a bunch of grapes, describes both the fruit of manzanita and its major means of distribution, as a common name for several species of manzanita is bear berry. Manzanita shows several of the important plant adaptations to dryness. It has thick leaves for water storage, waxy layers on both sides of the leaves to prevent water from escaping and a whitish cast in many species to reflect sunlight. Stomata (Greek, *stoma* = mouth) are multi-celled structures on leaf surfaces used to control the intake and output of gases. Xerophytes, including manzanita, have very few stomata.

Cacti are typical xerophytes. The Cactus family originally was restricted to desert regions of North and South America, with one disputed exception. [*Rhipsalis baccifera* (mistletoe cactus) is the exception; it is native to both the Americas and the Old World, where it is found in tropical Africa, Madagascar, and Sri Lanka. It is thought to have colonized the Old World within the last few thousand years, probably by being carried as seeds in the digestive tracts of migratory birds.] Cactus is an interesting name, taken from the Greek *Kaktos*, designating an edible Mediterranean relative of the artichoke, the cardoon [*Cynara cardunculus*, Aster family Asteraceae], but cardoons are not cacti, they are thistles. Most cacti have no leaves; the petioles develop into the familiar spines. Large quantities of water are stored in the stem, where all the photosynthesis takes place. The carbon dioxide cacti use is taken in only at night when it is cool, and it is sequestered for use the next day in a type of photosynthesis peculiar to xerophytes.

What does all this have to do with our rhododendrons? If there is a sufficient variety in your garden, you can see most of the adaptations to dry conditions. Quite a few of our cultivated rhododendrons have thick, leathery leaves. Many of them have shiny surfaces, indicating a waxy layer that inhibits water movement out of the leaves. In some specimens, the hairy upper surface of new leaves (tomentum) persists for some time as a defense against dessication. Some rhododendrons show reddish leaves when they first emerge, a defense against the drying heat of infrared rays. Most of these structures result from their origins in the high altitude regions of Asia and are definite xerophytic adaptations.

However, not all of our rhododendrons are adapted to dry conditions. Many big-leafed species and hybrids don't have thick, waxy leaves. If we don't get sufficient rain this year in the Pacific Northwest, we may have to watch those plants closely and give them more water than we usually would. Let's enjoy the rare winter sunshine while it lasts, but be prepared to take action if our rainfall is well below average after the flower shows in the spring.

Bruce Palmer is a member of the Eureka ARS Chapter. He was a teacher of biology at Maui Community College in the University of Hawaii system for 25 years.

Vining Covers

(Modified from the Avant Gardener 44(5), March 2012.)

Vines can be more than "draperies" for the garden. They can cover ground as well as trellises, arbors and plants.

Some vines of unruly habits or regionally invasive tendencies should be avoided. English ivy (*Hedera helix*) is a pest in the Northwest: bittersweets (*Celastrus*) in the South and Central states, moonseed (*Menispermum canadense*) in the East, and Hall's honeysuckle (*Lonicera japonica* 'Halliana') almost anywhere, are notorious offenders.

Five-leaf akebia (*A. quinata*) is also a vigorous grower but can be kept in check by annual pruning. Silver lace vine (*Fallopia baldshuanica*), a favorite for cascading over walls, is increasingly recommended for groundcover use. Other good choices include the new groundcover roses; trumpet honeysuckle (*Lonicera semper¬virens*); Virginia creeper (*Parthenocissus quinquefolia*)—prune once in a while to promote dense growth; deciduous *Euonymus obovatus* and the evergreen *E. fortunei* 'Colorata'; clematis such as *C. montana rubens,* semi-climbing *C. jouiniana*, and sweet autumn clematis (*C. paniculata*), plus hybrids with up-facing flowers, including the popular 'Doctor Ruppel', 'The President', and 'Will Goodwin'.

Hybridizing for Foliage

Frank Fujioka, Freeland, Washington
Photos by F. Fujioka unless othewise noted

Glen Jamieson, Parksville, BC
Canada

For many years now, Frank Fujioka has been trying to produce elepidote rhododendron cultivars that offer both exceptional foliage and flowers. At the 2011 spring ARS convention in Vancouver, WA, he gave a breakfast presentation that showcased his efforts. He subsequently sent me his PowerPoint presentation, and together we have produced this text to illustrate some of his efforts, which are focused more on foliage and plant shape than flower characteristics.

To reach his desired goal of creating interesting leaves, hybrids were combined directly with a species, or two or more hybrids each with desirable foliage were combined. Later generational *Rhododendron degronianum* ssp. *yakushimanum* hybrids were used extensively to achieve compactness, darker leaves, and indumentum and tomentum.

The main foliage features being selected for are leaf shape, color, and texture; plant (and hence leaf) size; and leaf indumentum and tomentum. Progress in achieving each of these characteristics will be sequentially illustrated in a series of articles, beginning with Leaf Shape.

Leaf Shape

Species with particularly attractive leaves that he is using in hybridizing include *R. degronianum* ssp. *yakushimanum, R. bureavioides, R. pachysanthum, R. pseudochrysanthum. R. roxieanum, R. macabeanum, R. floribundum, R. rex* ssp. *fictolacteum, R. bureavii, R. arboreum* ssp. *zeylanicum,* and *R. rex* ssp. *rex* (Figs. 1-11). When one looks at the leaf characteristics of these plants, it becomes easy to see why these species are particularly attractive!

Some of the crosses he has produced are the following. Parent species in each cross are complex, making it difficult to concisely elaborate on how each species has contributed to the end result, but main contributions are suggested.

Example crosses:

Cross 1. Parent species: *R. campanulatum, R. floribundum* and *R. degronianum* ssp. *yakushimanum* (Fig 12-13). The lavender flowers are from a *R. campanulatum* hybrid, while the leaf shape is strongly influenced by *R. floribundum.*

Cross 2. Parent species: *R. degronianum* ssp. *yakushimanum, R. rex* ssp. *rex, R. bureaviii, R. pachysanthum* and *R. arboreum* ssp. *zeylanicum* (Fig. 14). In this selection, the elliptical shape is from both *R. bureaviii* and *R. arboreum* ssp. *zeylanicum*, while the deeper flower colour and larger leaf size are from *R. arboreum* ssp. *zeylanicum* and *R. rex* ssp. *rex* respectively.

Cross 3. Parent species: *R. pseudochrysanthum, R. degronianum* ssp. *yakushimanum* and *R. macabeanum* (Figs 15-16). The rounder leaves are from *R. macabeanum.*

Cross 4. Parent species: *R. rex* ssp. *rex, R. degronianum* ssp. *yakushimanum* and *R. roxieanum* (Fig 17-18). The large linear leaves are from *R. rex* ssp. *rex* and *R. roxieanum*

Cross 5. Parent species: *R. arboreum* ssp. *zeylanicum, R. degronianum* ssp. *yakushimanum* and *R. pachysanthum* (Fig 19-20). Features here are the oval leaves from a *R. yakushimanum* hybrid, the red flower colour from *R. arboreum* sp. *zeylanicum*.

Frank Fujioka is a member of the Whidbey Island ARS Chapter. Glen Jamieson is Editor of the ARS Journal.

The Species

Fig. 1: *R. arboreum* ssp. *zeylanicum.* Photo by Steve Hootman.

Fig. 2: *R. bureavioides.*

Fig. 3: *R. pachysanthm.*

Fig. 4: *R. roxieanum* var. *oreonastes.*

Fig. 5: *R. macabeanum.*

Fig. 6: *R. rex* ssp. *rex.* Photo by Steve Hootman.

Fig. 7: *R. floribundum.*

Fig. 8: *R. rex* ssp. *fictolacteum.* Photo by Steve Hootman.

Fig. 9: *R. pseudochrysanthum.*

Fig. 10: *R. bureavii.*

Fig. 11: *R. degronianum* ssp. *yakushimanum.* Photo by Steve Hootman.

Fig. 12:

The Crosses

Cross 1

Fig. 12: *R. campanulatum, R. floribundum, and R. degronianum* ssp. *yakushimanum.*

Fig. 13: *R. campanulatum, R. floribundum,* and *R. degronianum* ssp. *yakushimanum* leaf.

Cross 2

Fig. 14: *R. degroniaunum* ssp. *yakushimanum, R. rex* ssp. *rex, R. bureavii, R. pachysanthum,* and *R. arboreum* ssp. *zeylanicum.*

Cross 3

Fig. 15: *R. pseudochrysanthum, R. degronianum* ssp. *yakushimanum,* and *R. macabeanum.*

Fig. 16: *R. pseudochrysanthum, R. degronianum* ssp. *yakushimanum,* and *R. macabeanum.*

Cross 4

Fig. 17: *R. degronianum* ssp. *yakushimanum, R. rex* ssp. *rex,* and *R. roxieanum.*

Fig. 18: *R. degronianum* ssp. *yakushimanum, R. rex* ssp. *rex,* and *R. roxieanum.*

Cross 5

Fig. 19: *R. arboreum* ssp. *zeylanicum, R. degronianum* ssp. *yakushimanum,* and *R. pachysanthum.*

Fig. 20: *R. arboreum* ssp. *zeylanicum, R. degronianum* ssp. *yakushimanum,* and *R. pachysanthum.*

New Mountain Laurel Selections and Inheritance Information

Richard A. Jaynes
Broken Arrow Nursery
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My last mountain laurel report to Rhododendron Society members was Jaynes (1998) where I described, among other things, the new *Kalmia latifolia* cultivars 'Creepy', 'Madeline' and 'Willowood'. 'Firecracker' was released since then. It has fiery red flower buds that open to near white on the inside of the corolla and then "fade" to pink (Jaynes 2005). The foliage is glossy, dark green on a compact plant. If it performs well for nursery growers and at garden centers, it may replace 'Olympic Fire', which has a few faults. Here I describe five new cultivars, a unique wild selection, and review and provide up-to-date information on the inheritance of single gene traits.

'Candy Cane' is an enhanced, boldly pigmented 'Peppermint' (Fig. 1). The flowers are the result of a cross made in 1989 combining, from one parent, a brilliant pigmented inner star-ring and, from the other parent, bold candy striping. At 16 years the plant was three feet (0.9 m) high and four feet (1.2 m) across with clean, dark green foliage. Whereas 'Peppermint' is vigorous forming a tall, large plant, 'Candy Cane' is more compact and will be broader than tall and thus be a good foundation plant.

'Show Time' is outstanding for its oversized (1.5 inch, 3.8 cm), richly colored flowers (Fig. 2) that are equal in size to 'Silver Dollar'. They are deep pink to red in bud and open rich pink, reminiscent of 'Pink Charm', and the corolla is strongly lobed. At 20 years the plant was five feet (1.5 m) by five feet and had clean, dark green foliage. It was derived from a series of five crosses begun in 1969 with 'Pink Surprise' as one parent. 'Sarah' is also in the parentage, plus ten other unnamed richly colored selections.

'Starburst' is a little-leaf laurel with a bright full cinnamon/maroon band on a pronounced star-shaped flower (Fig. 3). The foliage is clean and glossy, dark green. It has some similarities to 'Minuet' but the color and shape of the flower are distinct and the plant habit is more spreading. The 25-year-old plant is 5.5 feet (1.7 m) tall and six feet (1.8 m) across. The foliage is dark green, glossy and the leaf somewhat "v" shaped in cross section. Parentage includes 'Bristol' (banded) and a little leaf sibling of 'Elf'. It is propagated by Briggs Nursery.

'Twinkle' is the first named little-leaf laurel with a cut corolla (Fig. 4). The original first generation cross was made by Chuck Molnar between a little-leaf laurel and 'Shooting Star'. All the F_1's were normal appearing for flowers and foliage. Twinkle was selected from an F_2 cross I made in 1990. The flowers are light pink in bud and pale pink to white when open and appear petaled. The plant was three feet (0.9 m) by three feet at age 15. When grown in full sun the foliage develops a bronzy-purplish cast in winter.

Inheritance

Rare, native selections have been found where the flower buds do not open. They do not self-pollinate, but if they did they would be called cleistogamous by botanists. The first plant of this sort that I learned of was found in the Carolina Mountains by Henry Wright and was brought to my attention by Clarence Towe. Clarence named it 'Tightwad'. Flower buds on such plants typically develop a few days later than the species. They hold in full, expanded bud form for many days and eventually wither and fall off. Dan Cappel, a high school biology teacher, found a similar plant in 1973 in the woodlands of Wilton, CT. His attention was brought to it because of the attractive, full but unopened flower buds on July 4, two weeks after the other laurels had finished blooming. Because this plant has better disease resistant foliage, good habit and pinker buds than the Carolina selection, I named it 'Tightwad Too'. Other plants with this trait have been found scattered about the native range of mountain laurel and include (finder and location) Tom Dilatush, Dolly Sods, WV; Douglas MacLise, Guilford, CT; Fred Barnett, Ledyard, CT; Denton Shriver, Sullivan County, NY; Jon Weirether, Orrtanna, PA, as well as a plant at the Holden Arboretum, Kirtland, OH. I have vegetatively propagated the three Connecticut selections and the one from New York. The latter is the least desirable horticulturally because the buds never fully expand and they dehisce prematurely. The MacLise and Barnett plants are notable for their rich pink to almost red bud color when grown in sun.

Occasionally some of the flower buds of these selections open slightly late in the flowering season. The MacLise plant is notable for this and one year, I was able to use several flowers and make two crosses

using pollen from a red budded selection and 'Raspberry Glow'. I felt fortunate to obtain seed because the pistils on these 'Tightwad'-like plants are often fasciated and non-functional. The first generation seedlings developed normal, open flowers. The second generation (F_2) plants are fascinating in that they are segregating for both normal flowers and 'Tightwad'-like with bud color from pale pink to iridescent red (Fig. 5). Of 40 plants that have flowered, 13 are 'Tightwad'-like, a surplus of this type, but none-the-less not statistically off of the expected ratio of three wild type to one 'Tightwad'-like for a single recessive gene. One of these 'Tightwad'-like redbuds was selected and is being tissue-culture propagated by Briggs Nursery. Its cultivar name is 'Forever Red' (Fig. 6).

Another interesting horticultural trait is procumbent growth habit. It is another of those characteristics that has occurred very rarely in the wild. The first of these was brought to my attention in 1973 and grew on the property of Charles Buek, Darien, CT. Two more recent selections, and perhaps more valuable garden plants, are 'Creepy' found in Walhalla, SC, and 'Croft's Carpet' found by the folks at Woodlanders Nursery, Aiken, SC. I have made several first and second generation crosses with 'Creepy' and have finally obtained a few offspring that have the procumbent habit. More data is needed but it is a heritable trait and is likely controlled by one or more recessive genes. A cross of the two named procumbent forms may well yield all procumbent offspring—a cross yet to be made.

A new flower color pattern found in the wild was recently brought to my attention by Clarence Towe and Don Hyatt. Don, with others, discovered a few plants of mountain laurel in the Nantahala National Forest, NC, with a broad, brightly colored inner ring with spokes (Clone A, Fig. 7). The flowers resemble the cultivars 'Peppermint' and 'Candy Cane', which, as already noted, were derived from controlled crosses of one native selection with a broad inner ring and one having streaks of pigment in the corolla. It looks like Mother Nature did a similar thing on her own. Thanks to seed collected by Don Hyatt, I am growing seedlings from two "spoked" laurel found in the wild. The inheritance pattern remains to be seen, but I am hoping that one or more dominant genes may be involved based on results obtained from plants with an enhanced inner ring.

Table 1. *Kalmia latifolia* traits under single gene control (Jaynes 1981). Cultivar or botanical form noted. All are recessive except banded and star-ring.

Banded (f. *fuscata*), 'Bullseye'	Cut corolla, 'Shooting Star'
Star-ring, 'Peppermint'	Petals (f. *polypetala*)
Little leaf (f. *myrtifolia*), 'Elf'	Buds do not open, 'Tightwad'
Willow-leaved (f. *angustata*) 'Willowood'	Reduced corolla 'Bettina'
Compact (f. *compacta*)	No corolla (f. *apetala*)
Broad leaves/compact plant (f. *obtusata*)	Pure white (anthocyaninless) (likely single recessive gene)
Procumbent 'Creepy' (likely single recessive gene)	

Table 1 is a summary of the traits in *Kalmia latifolia* that are under single gene control (Jaynes 1997). All but the banded and star (inner)-ring traits are recessive.

We are fortunate that many valuable horticultural traits in mountain laurel are under single gene control and thus can be managed in a breeding program. One can logically raise the question of why so many traits in the related genus *Rhododendron* seem to be much more complex. I do not have the answer and leave it to others to contemplate and determine why. In the meantime, I encourage you to obtain some laurel selections, make crosses and grow some seedlings (Jaynes 1997).

As with other new *Kalmia* cultivar selections from Broken Arrow Nursery, a breeder's fee of 15 cents for each plant propagated and sold is requested. Contact the author for more information.

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Julia Westhoff is the international registrar of *Kalmia* and the list of cultivars can be found at www.Kalmia-society.org.

Richard Jaynes is a member of the Connecticut Chapter of the ARS, received the Gold Medal award from ARS in 1999, is a retired plant breeder from the Connecticut Agricultural Experiment Station and, with his wife, owns Broken Arrow Nursery.

Photos on next page

Fig. 1. ‘Candy Cane’. Photo by Adam Wheeler.

Fig. 2. ‘Show Time’ (some years are richer in color than shown here). Photo by Adam Wheeler.

Fig. 3. ‘Starburst’. Photo by Adam Wheeler.

Fig. 4. ‘Twinkle’. Photo by Adam Wheeler.

Fig. 5. A red budded selection with flowers that never fully open. Photo taken in late June after native mountain laurels had already bloomed. Photo by Richard Jaynes.

Fig. 6. ‘Forever Red’, a new cultivar and a sibling of the plant in Fig. 5. Photo by Adam Wheeler.

Fig. 7. Clone A found in the Nantahala National Forest, NC. Photo by Don Hyatt.

Rhododendron ponticum Eradication in Scotland

John M. Hammond
Starling, Bury,
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It will come as no surprise to many observers that another chapter is being written in the ongoing debate as to how best to deal with the perceived problems caused by *Rhododendron ponticum* in Britain. On 15th July 2011, a press statement was released by the Forestry Commission Scotland (No.14783) announcing the commencement of a programme to eradicate all *R. ponticum* from the "National Forests" over a 15 year period beginning in 2011, with £1.6M (US$2.513M) allocated for year 2011–2012, and an overall budget of £15M (US$23.562M). This is a most ambitious plan of action, considering a reported £45M (US$70.651M) was spent up to 1995 by the Welsh Development Authority in Wales on clearance work in Snowdonia alone. A copy of the press statement can be found on the Forestry Commission Scotland website at www.forestry.gov.uk/newsrele.nsf/WebPressReleases

Perhaps more interesting is the choice of wordage, which could be interpreted by the general public as meaning that *R. ponticum* is to be eradicated from the whole of Scotland; but in reality this is not the case. Neither does the statement indicate how *R. ponticum* is to be eradicated from private land, or lands administered by District Councils and Government Departments, which probably encompass at least an equivalent volume of this species as that to be found within the National Forests. There is every reason to believe that over the timescale of this programme, seed from land that has not been cleared could make a significant headway in re-colonising any adjacent lands that have been cleared. The ability of *R. ponticum* to bud-up quickly after being cut back to the ground, then produce a scattering of flowers the following season, and flower profusely in the second season, scattering a vast quantity of new seed on the wind, is well documented. The availability of sufficient resources to return to the cleared areas and complete the task year after year is a major factor in determining whether an eradication programme will be successfully achieved.

It was not entirely unexpected that the Forestry Commission's action plan would meet with some scepticism in the media, and the Scottish Chapter was asked by a press correspondent to comment on the plan. We did not take up the invitation, as there was little point in providing the press with further means of sensationalising an already complex issue. Instead, we decided to look further into the background of the *R. ponticum* eradication proposals. Since then, with the assistance of Mike Thornley, our Technical Director, we have put together a statement that outlines the Chapter's position in regard to *R. ponticum*.

Personally, I have doubts if *R. ponticum* can be totally eradicated, as seed will continue to germinate whilst mature plants located close by are being destroyed. However, there are other aspects to be considered. Some years ago I led a tour of Ireland's Gardens, which visited the wonderfully evocative Ard-na-Mona garden in County Donegal. Clearance of *R. ponticum* around the boundary of the garden had commenced the previous year under a scheme supported by the Irish Government. Logs of *R. ponticum*, 2 to 3 in (5 to 7.5 cm) diameter were neatly stacked in piles of right-angled layers in the grass, and in the temperate climate there, every log in the stack was sprouting with new shoots! The climate on Scotland's West Coast is very similar to that at Ard-na-Mona and emphasizes just one of the wider aspects that need to be encompassed. Cutting *R. ponticum* to the ground, inoculating the main stems to kill the roots, burning all the cut down debris, then spraying any new growth in the immediate following years is a gigantic task, particularly when it can be a fire hazard to burn wood waste in a woodland/forest area under potentially dry weather conditions.

From my perspective there is much to commend an action plan that implements the clearance of what is practically possible, supported by a policy of strict controls, which would seem more likely to be achievable in a similar timeframe as that proposed for total eradication by the Forestry Commission. This kind of approach would provide an opportunity to then assess the practicability of implementing a full eradication plan in the light of the experience gained, whilst addressing in parallel the setting-up a methodology for dealing with the thorny, complex subject of clearance of *R. ponticum* from private property or land administered by District Councils and Government Departments.

None of the foregoing addresses the realities of what is to be planted in the vast areas that are to be cleared, which in itself is a major concern, and the lack of any statement in regard to replanting schemes implies that at least in the short-term, the land will be left to nature's own devices. There have already been issues raised on the Ardkinglas Estate on Loch Fyne in Argyll, in regard to the problems arising in the aftermath of clearance work.

It is well worth re-iterating that the invasive problems associated with *R. ponticum* are not an ecological disaster, as has been suggested by some commentators in their sensationalistic articles. This is a man-made disaster that has "roots" in the lack of upkeep and maintenance of woodlands, moorlands and parklands,

on both private estates and public lands, following the major depletion of both labour and financial resources as a direct result of the 1914-18 and 1939-1945 World Wars, together with the poor economic conditions that were an aftermath lasting many years following the cessation of hostilities. There does not appear to be any arrangements in place for funding ongoing maintenance when the currently planned clearance work has been completed, and the manpower resources move on to other areas. Inevitably, there will be a regeneration of *R. ponticum* in areas that have been cleared, so in a way we have come full circle.

This brief commentary outlines some of the major problems and concerns arising from this emotive subject. In conclusion, it is most unfortunate that the public at large, who have diverse views on the subject of *R. ponticum* clearance, are remote from the decision-making processes involved at government level. Nevertheless, large numbers of visitors travel long distances in early to mid-June to see the lakes, lochs and castles surrounded by a carpet of *R. ponticum* flower. It's spectacular, as many tourists and Scottish postcards will readily confirm.

John Hammond is a member of the Scottish Chapter and a recognised historian on rhododendrons.

Hybrids of Haida Gold Gardens

Alan Campbell
Shawnigan Lake,
British Columbia

LOCATION, LOCATION, LOCATION! To any ARS member fortunate enough to have attended a Chapter meeting offering Harry Wright as the evening speaker, his mantra concerning the cultivation of rhododendrons will be a familiar litany, and location is what epitomizes the excellence of Harry's and Gwen's piece of Eden, Haida Gold Gardens in the town of Courtenay, British Columbia, within Vancouver Island's Comox Valley.

Harry Wright began hybridizing during the late 1980s. His desire was to produce plants that extended the bloom time of yellow flowering rhododendrons. His initial work produced the Courtenay Royals or the Courtenay Five as they have become collectively known. The first plant named was 'Courtenay King', a *Rhododendron auriculatum* hybrid that had actually been purchased by Harry as the true species. Though showing many characteristics of its seed parent once it bloomed, its claimed birthright was disproven. 'Courtenay Queen' and 'Courtenay Princess' both come from a crossing of 'Haida Gold' × 'Golden Star'. Each plant is a good yellow and bloom a month apart, ' Courtenay Princess' in April followed by 'Courtenay Queen' opening in May with some slight fragrance. 'Courtenay Lady' (Ladybird Group × 'Enchanted Evening') was followed up with 'Courtenay Duke' ('Madame Guillemot' × 'Gomer Waterer'). The "Courtenay" moniker was used once more in the naming of 'Courtenay Gold' ('Haida Gold' × 'Crest'), as Harry strived again for a stronger yellow.

Mount Washington on Vancouver Island is a world renowned skiing destination which at a mile (1.6 km) high is a prominent feature overlooking the town of Courtenay. To the southwest looms another peak, Mount Albert Edward, a cherished goal for seasoned hikers and climbers. Lying between these two spectacular crags is the Forbidden Plateau, a year round family playground for winter sports, summer camping, and naturalists interested in the sub-alpine. A number of stories in legend and lore venture to explain how Forbidden Plateau came by its name, but I'll recount the one that has most relevance to this article.

Much like the Highland Scottish clans of old, the diverse native tribes of the Coast Salish First Nation were well known to battle each other when not united against some foreign invader. The K'omoks tribe of the Comox Valley, as legend has it, was forewarned of an approaching raiding party of the Southern Qu'wut'sun (Cowichan) tribe. Armed with this knowledge, the K'omoks sent their women and children up into the high country to be safely hidden. At the end of hostilities and after safety had returned, the men of the tribe climbed to the plateau to bring their families back home. In spite of a long and exhaustive search of the various meadows and along the many streams and lakeshores, no sign of the women and children could be found. They had disappeared! The search continued until the first snows of winter began to fall and as the white silence settled on the plateau, it began to turn pink. The men returned from the plateau and forever after called it an evil and forbidden place.

It was Harry's interest in local First Nation's lore that provided the name for his hybrid of 'Courtenay Queen' × *R. fortunei*. A compact plant that first bloomed as a six-year-old opening white, a somewhat disappointed Harry passed it by, only to come upon the plant again a week later to see that it had turned a blushed pink. 'Forbidden Plateau' it thus became.

A fourth hybrid coming out of the

(Continued on page 110.)

Is Godzilla Really *Rhododendron ponticum*? — A Review

Donald H. Voss
Vienna, Virginia

In the British Isles, *Rhododendron ponticum* has come to be considered a dangerous invasive—the Godzilla of the plant world. It is accused of producing vigorous growth resulting in dense stands that crowd out the native plants. Laws have been enacted to prohibit the planting or growing of *R. ponticum* in the wild, and millions of pounds sterling have been allocated for its eradication in various areas of the country. Although doubt as to the evil character of *R. ponticum* has been expressed in some quarters, the species is widely viewed as Godzilla by the British public and media.

An article by James Cullen (2011) was cited in the February 2012 issue of *The Garden* (the Royal Horticultural Society's journal) as raising the question of whether the focus of the legal prohibition should be shifted from *R. ponticum* to the newly named *R.* ×*superponticum*. *The Garden* speculates that this "could alter the Act's [Wildlife and Countryside Act 1981] interpretation, making garden-worthy hybrids of *R. ponticum* no longer threatened by legislation."

In a nutshell, Cullen's article, "Naturalized rhododendrons widespread in Great Britain and Ireland," challenges the popular view of *R. ponticum* and points to a hybrid swarm that he names *R.* ×*superponticum* as being the real Godzilla. The new nothospecies comprises crosses between *R. ponticum* and *R. catawbiense, R. maximum,* or *R. macrophyllum. R. ponticum* was introduced to the British Isles from the Iberian Peninsula (although native to Turkey and other areas in the Pontic region) by the early 1800s. *R. ponticum* was found to be "not reliably hardy in most of Britain and Ireland." Indeed, Cullen cites a 1931 study asserting that in the Iberian Peninsula, "*R. ponticum* itself is neither vigorous nor invasive." He also cites a molecular study of the species that found all of the British and Irish material examined to be derived from Iberian stocks.

The North American *R. catawbiense* and *R. maximum* were also growing in British nurseries and gardens in the early 1800s, and—between the bees and the gardeners—hybridization and back-crossing occurred. The resulting complex hybrid swarm showed better cold hardiness and vigor than the introduced *R. ponticum* and became widely planted, being used as a hybrid parent and often grown as root-stock for grafting of species and cultivars otherwise difficult to propagate.

The article presents the results of morphological examination of 138 specimens collected from rhododendron swarms in 27 areas. Thirty-three of these specimens displayed dimensions and shapes of plant parts that are outside the range of variation found in wild *R. ponticum* but are characteristic of the North American species. For the remaining 105 specimens, such distinction was not evident (apart from a wider range of corolla coloration), but these plants had the vigor characteristic of hybrids.

Cullen concluded that "the British naturalised 'R. ponticum' is a variable hybrid swarm or neospecies" and that "there seems no possibility of recognising any kind of taxonomic units within the British stands." His solution is to treat the hybrid swarm as "one variable entity." After providing detailed morphological descriptions of *R. ponticum, R. catawbiense, R. maximum,* and *R. macrophyllum*, Cullen crafted a new nothotaxon that includes all hybrids between *R. ponticum* and the three North American species and named it *R.* ×*superponticum*.

Alas, the case may not be closed. Despite Cullen's (2011) persuasive argument, some may question the conclusion that the 105 specimens (76 percent of the "R. ponticum" sample) found to be indistinguishable from *R. ponticum* (except by their apparent vigor and corolla coloration) are of hybrid origin. As to the hybrid-vigor hypothesis, one might question whether in the two centuries that *R. ponticum* has been grown in the British Isles natural selection may have entered the picture. Did some plants of *R. ponticum* adapt incrementally to growing conditions (which themselves have undergone change), thereby leading to increased vigor and reproductive success? Ruling out this possibility calls for determination from a larger and geographically more complete sample of the UK population that the plants morphologically indistinguishable from *R. ponticum* are in fact not pure *R. ponticum.* If the plants are found to be of hybrid origin, inclusion in the new *R.* ×*superponticum* requires verification that the other parent is one of the North American species. To unscramble the egg, molecular studies now appear necessary for a definitive determination that Godzilla is actually *R.* ×*superponticum, and* not *R. ponticum.*

Following Cullen's (2011) article in *Hanburyana* 5, J. C. David (2011) of the Royal Horticultural Society Garden at Wisley provided "A short note on the names of primary hybrids in *Rhododendron* section *Pontica.*" Five nothospecies are listed, three of which are crosses between *R. ponticum* and, respectively, *R. catawbiense, R. caucasicum,* and *R. maximum.* That article concluded with the statement: "It is interesting to note that while *R. macrophyllum* (syn. *R. californicum*) has been in cultivation since 1850, there are apparently no primary crosses with other members of section *Pontica* recorded or named."

Those who have access to the *2011 Yearbook* of the Scottish Rhododendron Society will profit from reading a discussion by John M. Hammond (2012) dealing with the monstrous problems relating to governmental efforts to eradicate *R. ponticum.* In a personal communication, Hammond pointed out that "the sudden death of *R. ponticum* is not 'unexplained,' it simply is not hardy away from a temperate coastal climate in Britain . . . so it is understandable that crosses with *R. maximum* and *R. catawbiense* were made to improve hardiness."

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Donald Voss is a member of the Potomac Valley chapter and is a frequent contributor to JARS.

Hybrids of Haida Gold Gardens (Continued from page 108.)

'Haida Gold' × 'Golden Star' crossing was given the name 'Paradise Meadows', after an area located at the north end of Forbidden Plateau below the slope of Mount Washington. After eighteen years of evaluation, this plant has grown to only three feet (0.9 m) high by two and a half feet (0.8 m) wide. 'Paradise Meadows' further differs from its siblings in that the yellow flowers are tinged amber on the outside and bloom in early May between 'Courtenay Princess' and 'Courtenay Queen'.

In the spring of 2011, Harry proposed to the members of the North Island Chapter a "Name that Rhodo" contest, as he had concluded his evaluation of a new hybrid and was in need of a suitable name. The only provisions were that the name again commemorate a feature of the Comox Valley and allude to the diminutive nature of the hybrid plant. Chapter member Adela Smith submitted the winning name and gratefully accepted as her reward a rooted cutting of the hybrid, newly named 'Beaufort Gem' (*R. argyrophyllum* var. *nankingense* 'Chinese Silver' × 'Pygmy'). The Beaufort Mountain Range is to the southwest of the Comox Valley.

Harry's dedicating the names of his hybrids to local geographical features took a back seat to adoration and respect when naming his next three plants. Taking pollen from his own 'Courtenay Queen' and placing it onto 'Ring of Fire' has produced an exceptional plant of fine bearing and colouration, as one would expect from such a crossing. Harry chose to name this lovely plant after his wife of 55 years, Gwendolyn Wright. The 'Haida Gold' × 'Golden Star' seedlings produced yet another selection now named 'Iona Cee', named for Iona Campagnola, the Lieutenant-Governor of British Columbia from 2001 to 2007. 'Iona Cee' is similar to her sister seedlings but blooms a month later in mid-June. In the naming of the third plant (*R. fortunei* × *R. decorum*) × *R. decorum* ssp. *diaprepes* 'Gargantua' in honour of the Queen Mother, Harry needed to receive royal permission. The name needed to reflect the royal personage as well as being unique to the genus *Rhododendron*. 'Queen Empress' was mutually agreed upon. When King George VI ascended the British throne, his wife Elizabeth became Queen Consort along with numerous other titles from throughout the commonwealth, one of which was the Queen Empress of India.

Being personally familiar with Haida Gold Gardens, I am aware that there are more, as yet unnamed, hybrids still under evaluation growing in the test field outside the garden proper. Hopefully someone will continue these evaluations as sadly on November 3, 2011, Harry Wright heard the owl call his name. Many rhododendron growers will now never have the good fortune to come to know the man who produced many of the garden plants we now enjoy, the hybrids of Haida Gold Gardens.

Please allow me to pass the pen now to Harry and have him share a last little calyx of rhodo wisdom. "If you find a rhododendron becoming somewhat unruly within its allotted space, grab your secateurs and just give it a little attitude adjustment."

Alan Campbell is a member of the Cowichian Valler Chapter and an historian on Vancouver Island hybridizers.

American Rhododendron Society
Register of Plant Names and Checklist—Spring 2012 Supplement

Jay W Murray
North American Registrar of Plant Names
Colts Neck, New Jersey

Questions from **North Americans** concerning name registration, the availability of particular names, and requests for forms (no fee) should be directed to the Regional Registrar,. Forms also may be downloaded from the ARS web site: http://www.rhododendron.org or completed on-line for automatic emailing to J.W. Murray. **Non-North Americans** should direct questions to the International Rhododendron Registrar **Dr A.C. Leslie**.

Introduction: The following rhododendron and azalea names were approved and added to the International Rhododendron Register prior to March 1, 2012 by the Royal Horticultural Society, International Cultivar Registration Authority for the genus *Rhododendron*. The North American Registrar assisted the RHS by providing data for plants originating in North America.

References: Names conform to the rules and recommendations of the *International Code of Nomenclature for Cultivated Plants – 8th Edition* (2009). Color numbers refer to the RHS Colour Chart unless noted otherwise. Accompanying color names are taken from *A Contribution toward Standardization of Color Names in Horticulture*, R.D. Huse and K.L. Kelly, edited by D.H. Voss (ARS, 1984). Format: Parentage lists the seed parent first, followed by an "(s)" if the direction of the cross is known; this is followed by an upper case "X" and then the name of the pollen parent. If either parent is itself a cross, the individual components within that cross are separated by a lower case "x". Parentheses are used only in describing the more complex crosses. Abbreviations are used where appropriate: (a) = azalea, (r) = rhododendron, (v) = vireya rhododendron, (z) = azaleodendron; H = hybridized by, G = grown to first flower by, R = raised by, S = selected by, N = named by, I = introduced commercially by, REG = registered by; dates are enclosed in parentheses immediately following the activity. Metric conversions of dimensions are reported in 5mm (0.2") increments for dimensions greater than 1" (25mm).

ATTENTION: Non-North American Members of ARS

The International Rhododendron Registrar, Dr A.C. Leslie, accepts registration applications from all areas of the world. Where there is a Regional Registrar, applications may be preprocessed locally and then forwarded to the IRR. ARS members living outside North America who register directly with the IRR, or through other Regional Registrars may have their registrations published by the ARS if they notify the North American Regional Registrar of the plant name and the official registration date. The entry will appear in an early Supplement in the JARS.

(r) 'Amber Honey'

Elepidote rhododendron: 'Apricot Fantasy' (s) X 'Sunstone'. H (1999), G (2004), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 18/dome truss, openly funnel-shaped, 1.9" (50mm) long x 2.5" (65mm) wide, with 6 wavy-edged lobes. Color moderate red (47A) in bud, opening inside pale orange yellow (10D), blending to light purplish pink (55C), edged strong purplish pink (55B), with strong red (53B) nectar pouches and a (53B) spotted flare extending c0.5" (12mm) from the base of the dorsal lobe; outside pale orange yellow (19D) blending to light purplish pink (55B) at the mid ribs. Calyx lobes 0.8" (20mm) long, pale orange yellow (19D) with strong red (53B) flares. Truss 3" (75mm) high x 5" (125mm) wide. Lvs held 2 years, 3.5" x 1.5" (90 x 40mm), elliptic, broadly acute apex, rounded base, flat margins; dull and moderate olive green (147A) above; hairless. Shrub 1.7' (0.5m) high x 2' (0.6m) wide in 5 years; intermediate habit. Plant hardy to at least 10°F (-12°C). Flowering mid May.

(r) 'Golly Gumdrops'

Elepidote rhododendron: 'Ditto's Mom' (s) X 'Francesca'. H (1995), G (2009), N (2011) and REG (2012): Frances Burns, Vida, OR. Fls 15/dome truss, funnel-shaped, 2" (50mm) long x 2.8" (70mm) wide, with 5 frilly-edged lobes. Color vivid red (52A) in bud, opening inside deep pink (52B) at margins and all except the dorsal lobe changing abruptly to strong pink (52D) and fading to light pink (50D) down to center while the dorsal lobe fades quickly to almost creamy white, with five strong pink (52D) rays rising upwards around the nine pale pink stamens; outside lobes strong red (51A) at lobe tops, fading somewhat to side edges, with a broad, strong red (51A) stripe running down to the base. Calyx lobes c0.1" (3mm) long, moderate yellow green (147C). Truss 8" (200mm) high x 7" (175mm) wide. Lvs held 3 years, 4.6" x 1.8" (115x45mm); elliptic, broadly acute apex, oblique base, flat margins; dull and moderate olive green (147A) above; with light olive brown (199B) hairs on leaf stems and along center veins. Shrub 5' (1.5m) high x 3' (0.9m) wide in 15 years; intermediate habit. Plant hardy to

at least -5°F (-21°C); buds, 0°F (-18°C). Flowering late May – early June.

(r) 'Lavender Moonlight'
Elepidote rhododendron: 'Purple Amethyst' X 'Plum Passion'. H (2002), G(2006), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 13/conical truss, saucer-shaped, 1.8" (45mm) long x 3" (75mm) wide, with 5 frilly-edged lobes. Color dark red (59A) in bud, opening inside light purple (75B), edged strong purple (77B), with a yellowish white (155D) dorsal flare having moderate yellow green (138B) spots and extending 1.2" (30mm) from the base; outside light purple (77D), edged strong purple (77B), the mid ribs (77B). Truss 5" (125mm) high x 5" (125mm) wide. Lvs held 2 years, 4.8" x 1.8" (120 x 45mm), elliptic, broadly acute apex, rounded base, upcurved margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 2.5' (0.8m) high x 2.5' (0.8m) wide in 9 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering late May.

(r) 'Lemon Passion'
Elepidote rhododendron: 'Tisa' (s) X ('Berg's Yellow' x *R. proteoides*). H (2004), G (2009), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 16/dome truss, funnel-shaped, 1.8" (45mm) long x 1.8" (45mm) wide, with 5 wavy-edged lobes. Color deep yellowish pink (39B) in bud, opening inside pale yellow (11C-D) with a flare of discrete, deep red (185A) spots extending upwards c1.4" (35mm) from the base of the dorsal lobe; outside pale yellow (11C). Truss 4.8" (120mm) high x 4" (100mm) wide. Lvs held 2 years, 2.8" x 1.6" (70 x 40mm), elliptic, broadly acute apex, rounded base, flat margins; dull and moderate olive green (147A) above; hairless. Shrub 1.8' (0.6m) high x 2.3' (0.7m) wide in 7 years; dense habit. Plant hardy to at least 5°F (-15°C). Flowering late April.

(r)'Maddie Mae'
Elepidote rhododendron: 'Nancy Evans' (s) X 'Pink Petticoats'. H (1989), G (1994), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 16/ball truss, funnel-shaped, 2" (50mm) long x 2.3" (55mm) wide, with 5 frilly-edged lobes. Color strong purplish red (63A) in bud, opening inside pale yellowish pink (159D), with a pale yellow green (4D) dorsal flare speckled with strong red (153D) spots and extending 1.6" (40mm) from the base; nectar pouches strong red (53B), extending c0.3" (6mm) from the base; outside pale yellowish pink (159D), the mid ribs pale purplish pink (65D). Calyx lobes c0.8" (20mm) long, pale yellow green (4D) with strong red (53B) flares. Truss 5" (125mm) high x 5.5" (140mm) wide. Lvs held 2 years, 4.3" x 2" (110 x 50mm), elliptic, broadly acute apex, rounded base, flat margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 4.5' (1.4m) high x 9' (2.8m) wide in 22 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering mid May.

(r)'Mardi'
Elepidote rhododendron: 'Coral Blossom' (s) X ('Bambi' x *R. proteoides*). H (2002), G (2008), N (2009), and REG (2012): Jim Barlup, Bellevue, WA. Fls 13/flat truss, broadly funnel-shaped, 1.8" (45mm) long x 2.5" (65mm) wide, with 6 wavy-edged lobes. Color vivid reddish orange (44C) in bud, opening inside pale yellow (20D), the edges and mid veins deep pink (48A) with the base solid deep red (53A) extending upwards c0.2" (5mm), and spotted flares of the same color extending approximately an additional 0.5" (15mm) mainly on the dorsal lobe; outside pale yellow (20D), with edges and mid veins deep pink (48A). Calyx lobes 0.5" long, pale yellow (20D) with deep red (53A) flares. Truss 3" (75mm) high x 5" (125mm) wide. Lvs held 2 years, 3.8" x 1.3" (95 x 35mm), elliptic, broadly acute apex, rounded base, flat margins; dull and moderate olive green (147A) above; hairless. Shrub 2' (0.7m) high x 3' (0.9m) wide in 9 years; intermediate habit. Plant hardy to at least 10°F (-12°C). Flowering early June.

(r) 'Noiret'
Elepidote rhododendron: 'Francesca' (s) X 'Purple Splendour'. H (1995), G (2006), N (2011) and REG (2012): Frances Burns, Vida, OR. Fls 20/dome truss, openly funnel-shaped, 2" (50mm) long x 2.8" (70mm) wide, with 5 frilly-edged lobes. Color deep purplish red (61A) in bud, opening inside light purplish pink (65B) with a prominent, spotted, dark red (183A or darker) blotch on two dorsal lobes, and a few scattered spots of the same color on adjacent lobes, and with a strong purplish red (57A) ray 0.4" (10mm) long at the base of the other lobes; outside moderate purplish red (64A); ten stamens with strong purplish pink (62A) filaments and white anthers; curved style light purplish pink (65B); stigma deep purplish red (59B). Calyx on upper lobes c0.06"-0.5" (2-15mm) long, pale purplish pink (62D). Truss 6" (150mm) high x 6.5" (165mm) wide. Lvs held 3 years, 6.4" x 2.8" (160x70mm); elliptic, acute apex, oblique base, downcurved margins; dull and moderate olive green (147A) above; hairless. Shrub 4' (1.2m) high x 3' (0.9m) wide in 15 years; intermediate habit. Plant hardy to at least -5°F (-21°C); buds, 0°F (-18°C). Flowering late May – early June.

(r)'Plum Magic'
Elepidote rhododendron: 'Plum High' X 'Violetta's Song'. H (1999), G(2004), N (2011), and REG (2012): Jim Barlup, Bellevue, WA; I (2010): Hazelwood Gardens, Newcastle, WA. Fls 23/ball truss, broadly funnel-shaped, 2" (50mm) long x 3" (75mm) wide, with 5 wavy-edged lobes. Color strong purplish red (72A) in bud, opening inside very pale purple (76C) at base, blending into light purple (77D), edged with a 0.4" (10mm) wide band of light purple (77C), marked with a strong yellow (153D) dorsal blotch spotted deep purplish red; outside light purple (77D) blending to light purple (77C), with strong purple (77B) mid ribs. Truss 5" (125mm) high x 5.5" (140mm) wide.

Lvs held 2 years, 5" x 2" (125 x 50mm), elliptic, broadly acute apex, rounded base, flat margins; dull and moderate olive green (147A) above; hairless. Shrub 2.5' (0.8m) high x 2.9' (0.9m) wide in 9 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering late May.

(r)'Quiet Elegance'
Elepidote rhododendron: 'Sun Blush' (s) X 'Tia'. H (2003), G (2007), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 21/ball truss, broadly funnel-shaped, 1.8" (45mm) long x 2.8" (70mm) wide, with 6 frilly-edged lobes. Color strong purplish red (67A) in bud, opening inside yellowish white (158C), shading to light purplish pink (65B) edges, with deep red (185A) speckling on dorsal lobe and a six-pointed star of the same color at the base; outside similar to inside but unmarked. Truss 4.3" (110mm) high x 5.3" (135mm) wide. Lvs held 2 years, 4.3" x 2" (110 x 50mm), elliptic, broadly acute apex, rounded base, flat margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 1.8' (0.6m) high x 2.3' (0.7m) wide in 5 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering late April.

(r)'Sun Music'
Elepidote rhododendron: 'Sun Quest' (s) X 'Peach Recital'. H (2004), G (2008), N (2010), and REG (2012): Jim Barlup, Bellevue, WA. Fls 18/ball truss, broadly funnel-shaped, c1.9" (50mm) long x 3" (75mm) wide, with 5 wavy-edged lobes. Color deep pink (48A) in bud, opening inside pale yellow (11D), with dorsal lobes a slightly darker shade of light yellow (11B) starting c0.5" (15mm) from the base and extending upwards, and with deep red (53A)dorsal spotting beginning c0.5" (15mm) from the base and extending c0.8" (20mm); outside pale yellow (11D), with light yellow (11B) mid veins. Calyx lobes c0.8" (20mm) long, pale yellow (11D), tipped with light yellow (11B). Truss 5.5" (140mm) high x 6" (175mm) wide. Lvs held 2 years, 4.3" x 1.8" (110 x 45mm), elliptic, broadly acute apex, rounded base, flat margins; dull and moderate olive green (147A) above; hairless. Shrub 3' (0.9m) high x 4' (1.2m) wide in 7 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering mid May.

(r)'Sun Spirit'
Elepidote rhododendron: 'Recital' (s) X 'Goldprinz'. H (2002), G (2007), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 13/dome truss, funnel-campanulate, 1.4" (35mm) long x 2.9" (75mm) wide, with 6 wavy-edged lobes. Color strong yellowish pink (34D) in bud, opening inside light yellow green (150D), the dorsal lobes a slightly darker shade of light yellow green (154D), with two deep red (53A) dorsal flares extending c0.3" (5mm) from the base and speckling of the same color extending c0.8" (20mm) above the flares; outside similar to inside, but without marking. Truss 4.5" (115mm) high x 4.8" (120mm) wide. Lvs held 2 years, 3.8" x 1.8" (95 x 45mm), elliptic, broadly acute apex, rounded base, flat margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 2.5' (0.8m) high x 3' (0.9m) wide in 9 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering mid May.

(r)'Teton Twilight'
Elepidote rhododendron: 'Coral Blossom' X 'Christina Dee'. H (2005), N (2010), and REG (2012): Jim Barlup, Bellevue, WA; G (2010): John Winberg, Fall City, WA. Fls 16/dome truss, broadly funnel-shaped, 2.5" (65mm) long x 3.5" (90mm) wide, with 5 wavy-edged lobes. Color deep pink (52B) in bud, opening inside light purplish pink (63D), edged strong purplish red (63A), lightly tinged pale yellow (18D) at the base, and with two c10mm long, solid dark red (187B) dorsal flares changing to small spots spreading upwards; outside light purplish pink (63D), with strong purplish red (63B) mid ribs. Calyx lobes 1" (25mm) long, pale yellow (18D) with dark red (187B) flares and moderate red (183D) spotting. Truss 6" (150mm) high x 7" (175mm) wide. Lvs held 2 years, 4.8" x 1.8" (120 x 45mm), elliptic, broadly acute apex, rounded base, flat margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 2.5' (0.8m) high x 3.8' (1.2m) wide in 6 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering late May.

(r)'Tropical Gem'
Elepidote rhododendron: 'Mindy's Love' (s) X (['Lem's Cameo' x *R. forrestii* ssp. *forrestii*] x ['Lem's Cameo' x 'Brandt's Tropicana']). H (1988), G (1994), and REG (2012): Jim Barlup, Bellevue, WA; N (2004): Bonnie Johnson, Newcastle, WA. Fls 17/dome truss, broadly funnel-shaped, 2.2" (55mm) long x 3.6" (90mm) wide, with 7 wavy-edged lobes. Color strong red (53B) in bud, opening inside pale yellowish pink (27D) blending to pale greenish yellow (13D) towards base, with a c6mm wide strong pink (50C) central stripe on each petal extending from base to edge of corolla, and pale moderate red (181B) dorsal spotting extending 40mm from base; outside similar except stripes are deep pink (50B) and there is no spotting. Calyx lobes 0.8" (20mm) long, pale greenish yellow (13D) blending into

(Text continued on page 116.)

Register of Plant Names - Newly Registered

'Amber Honey'. See description on page 111. Photo by Jim Barlup.

'Lavender Moonlight'. See description on page 112. Photo by Jim Barlup.

'Lemon Passion'. See description on page 112. Photo by Jim Barlup.

'Maddie Mae'. See description on page 112. Photo by Jim Barlup.

'Mardi'. See description on page 112. Photo by Jim Barlup.

'Plum Magic'. See description on page 112. Photo by Jim Barlup.

'Quiet Elegance'. See description on page 113. Photo by Jim Barlup.

'Sun Music'. See description on page 113. Photo by Jim Barlup.

'Sun Spirit'. See description on page 113. Photo by Jim Barlup.

'Tropical Gem'. See description on page 114. Photo by Jim Barlup.

'Golly Gumdrops'. See description on page 111. Photo by Frances Burns.

'Noiret'. See description on page 112. Photo by Frances Burns.

strong pink (50C). Truss 5.5" (140mm) high x 6" (150mm) wide. Lvs held 2 years, 4" x 2.1" (100 x 55mm), elliptic, broadly acute apex, rounded base, upcurved margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 2' (0.6m) high x 2.7' (0.8m) wide in 5 years; intermediate habit. Plant hardy to at least 5°F (-15°C). Flowering early May.

(r)'Twilight Touch'
Elepidote rhododendron: 'Light Years' (s) X 'Percy Wiseman'. H (2002), G (2007), N (2011), and REG (2012): Jim Barlup, Bellevue, WA. Fls 16/ball truss, openly funnel-shaped, 1.8" (45mm) long x 2.4" (60mm) wide, with 5 wavy-edged lobes. Color vivid red (46B) in bud, opening inside light purplish pink (55C) on lower lobes, and light purplish pink (55C) blending to pale yellow (19C) on upper lobes with strong purplish pink (55B) dorsal spotting; outside similar except for the lack of spotting and the addition of strong purplish pink (55B) veins on mid ribs of all lobes. Calyx lobes 0.6" (15mm) long, light yellowish pink (19B), edged strong purplish pink (55B). Truss 5" (125mm) high x 4" (100mm) wide. Lvs held 2 years, 4" x 2" (100 x 50mm), elliptic, broadly acute apex, rounded base, upcurved margins; semi-glossy and moderate olive green (147A) above; hairless. Shrub 3' (0.9m) high x 3.8' (1.2m) wide in 9 years; intermediate habit. Plant hardy to at least 0°F (-18°C). Flowering mid May.

Corrections and Additions

(r)'Sharon Rose Smith': cf *JARS*, 65:4, p233 (2011). The address of Parker Smith, hybridizer and registrant, was published incorrectly. It should have been Santa Rosa, CA.

Chapter/District & Special Donations

11/19/2011 through 2/8/2012

Donor	Amount	Source
General Fund		
Massachusetts Chapter	$500.00	Chapter donation
Pauline M. Kellam	$1,000.00	In memory of Donald Kellam, Jr.
Endowment Fund		
Middle Atlantic Chapter	$100.00	In memory of John Smith
Middle Atlantic Chapter	$100.00	In memory of Jane McKay
Valley Forge Chapter	$1,063.00	Chapter donation
Research Foundation		
Valley Forge Chapter	$1,063.00	Proceeds from plant auction and annual donation
Massachusetts Chapter	$150.00	Honorarium Karel Bernady as speaker

Errata:

In *JARS* 66 (1) on page 60, Chapter/District & Special Donations, the Research Foundation donation amount from Susquehanna Chapter as an honorarium for Karel Bernady, speaker, was $100, not $10 as printed.

In *JARS* 66 (1) on page 7, *Sequoiadendron gianticum* should be *S. giganteum*.

In *JARS* 66 (1) on Page 9, *R. latum* should be *R. laetum.*

In *JARS* 66 (1) on Page 11, in the Fig 1 caption, the hybrid should be (*R. macgregoriae* × *R. laetum*) × *R. saxiragoides.* This also applies to the photo captions on P 15.

On page 15: Credit for photos 1-4 was given in error to Oswald Blumhardt. The photos should have been credited to Bill Moyles.

Attention! *JARS* Authors/Photographers

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Sonja Nelson, Assistant Editor
Journal American Rhododendron Society

History of *Rhododendron atlanticum* (Ashe) Rehder Culture at the Komarov Botanical Institute

Sergei Shevchuk
Botanical Garden
Komarov Botanical
Institute (RAS),
St. Petersburg, Russia

Photo by the author

Rhododendron atlanticum in the botanical garden of the Komarov Botanical Institute, St. Petersburg, Russia.

Rhododendron atlanticum (coastal or dwarf azalea) is native to eastern North America and is so named because of its native habitat's proximity to the Atlantic coast. The species was initially described by Ashe (1917), who named it *Azalea atlantica* and noted the pleasant rose-like fragrance of its flowers, but it was later renamed *R. atlanticum* by Alfred Rehder (Wilson 1921) in 1921.

This nice and neat rhododendron is a desirable plant in every botanical garden. However, its history in the botanical garden of the Komarov Botanical Institute of the Russian Academy of Sciences (RAS) has been not simple. Olga A. Sviazeva (2005) wrote that the culture of *R. atlanticum* was first initiated in our garden from 1980-1988, but this effort failed. In 2005, we repeated the attempt with seed earlier received from the Dawes Arboretum, Newark, Ohio. Garden planting occurred on Sept 14 with 2-year container seedlings and before planting, the soil was modified with both sand and acid peat. After planting, the ground was covered with a 2.5 cm (one inch) layer of fallen pine needles (*Pinus sylvestris* L.).

The first flowering occurred the next year in 2006 and since then, *R. atlanticum* has flowered abundantly during three weeks in June. In the fall of 2011, the biggest plant had a height of 68 cm (31 inches). In 2010, plants began to form colonies by means of stolons. In our climate, *R. atlanticum* does not have colored leaves in the fall, and they stay green until they drop. We already have new generations from seeds that ripened in St. Petersburg in 2008. Our hope is that *R. atlanticum* can become widely established in garden culture in the northwest of Russia. I want to express our gratitude to the Dawes Arboretum for the seeds they gave us.

References

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New Members 11/19/2011 Through 2/08/12

ANN ARBOR
Lucy Waskell
AZALEA
Robert & Patsy Barr
Wilma L. Coney
Brad Mason
CASCADE
Paul & Jody Safstrom
COWICHAN VALLEY
Diane Allen
Tricia Guiguet
Ali Morris
Susan Scott
DANISH
Finn Bertelsen
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Leif Skytte
FRASER SOUTH
Sandra & Brock Short
HAWAII
John McIntosh III
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