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JOURNAL

American Rhododendron Society



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American Rhododendron Society

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ARS Office: <http://www.arsoffice.org>

ARS On-line Journals: <http://scholar.lib.vt.edu/ejournals/>

JARS/

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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)

Student (include proof if over 18)	\$10.00
Regular	\$40.00
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Sustaining	\$75.00
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Life family	\$1,500.00

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

Bruce Feller
Old Field,
New York



A wise philosopher once observed that we all view the world from whence we stand. Sounds reasonable enough, but then it could be argued that some among us can rise above the obvious and enjoy a perspective unrestrained by the practicalities and limitations of our immediate situation—true visionaries. I do not claim that ability. I would suggest, however, that attempts in that direction can be helpful and enlightening for all of us. That mind set is required of your Board of Directors and Committee Chairs in response to the changes

and challenges faced by the ARS, and I applaud their efforts and accomplishments in this regard. It is equally important that we measure our progress in the larger context of the Society's overarching goals—the basis of its tax exempt status—"public education about and appreciation of the genus *Rhododendron*."

As an example, we are often disposed to evaluate the "health" of the ARS in terms of membership counts. Since Chapter affiliation is the common point of contact between the Society and most of its members, our diminishing numbers become our "yard stick." However, there is arguably no direct correlation between that metric and our achievements in the domain of public education, especially given the astounding high level of public access, inquiry and educational value provided by the Society's archival resources.

Separate archives of our rhododendron materials are hosted by two different universities. At the University of Virginia, the Albert and Shirley Small Special Collections Library maintains an archive of ARS Chapter Newsletters, rhododendron and azalea books and manuscripts, hybridizer records, personal papers and correspondence, rhododendron photo slide collections and other mixed media (<http://small.library.virginia.edu/>). The Science and Engineering Library hosts another archive consisting of Rhododendron and Azalea Newsletters – Volume 6 -14 (<http://guides.lib.virginia.edu//rhododendron>).

Previously published issues of ARS quarterly publications are archived at the Virginia Tech University Digital Library and Archive (DLA). To date, all volumes of the quarterly bulletin of the ARS and volumes 36 – 47 of JARS are accessible online (<http://scholar.lib.vt.edu/ejournals/JARS/>). In 2012, site visitors from all over the world—in descending order: U.S., Russia, China, France, Great Britain, Canada, India, Australia, Netherlands, Ukraine, and Germany—accessed 3,677 different articles on a broad range of topics. The presence, reach and value of these resources are a sterling example of how the ARS is fulfilling its commitments in the domain of public education.

With respect to our declining membership, the more practical among you will hasten to point out the financial consequences of this trend. While membership dues constitute a major income source for the ARS, funding for the support and continuity of its operations are substantially augmented in other ways. Donations from individuals and Chapters, bequests, shared Conference and Convention income, grants, and amounts drawn down from endowment fund earnings, collectively represent a significant revenue stream. While relative proportions vary from year to year, the Society's economic base is supported by a number of sources and remains healthy.

The "Online Store," described in greater detail on page 23 in this edition of the Journal, holds the promise of additional income. We have Steve Henning, District 8 Director, to thank for bringing this concept to functional reality for the ARS. Please read his description and learn how you can participate to the Society's financial advantage.

While income and expense management will continue as a major challenge for the ARS, be assured that these issues will receive the attention of your Board as we move forward. On balance, I believe the Society and its members should share a sense of accomplishment in the context of our overarching goals. I further believe there is every reason for optimism and confidence in our continued viability among world class horticultural organizations, despite the challenges that we face.

From the Executive Director

Laura Grant
Toronto,
Ontario,
Canada



With our gardens put to bed for the winter, I hope many of you will enjoy our winter issue of the Journal with more color pages than ever. For those of you computer savvy souls, our on-line version offers the same information as the printed copy. To access the on-line version, you will need to go to www.arsoffice.org. Follow directions to register using your membership number which is found on your mailing label. Your number does not change from year to year: Make a note of it before you discard the Journal cover. Feel free to contact our office if you still need help locating your number

or wish to stop delivery of the printed copies.

You can also access the old Bulletins and many of the old Journals that have now been digitized and available for viewing. These contain many valuable articles that our Society decided to preserve and make available to all. These can be found at <http://scholar.lib.vt.edu/ejournals/JARS>. This link is now printed under the heading "ARS Digital" on the Contents page of JARS.

Back in November, our Treasurer Bill Mangels mailed a request for donations to our General or Endowment Funds. I wish to thank to all of you who so generously responded with a gift to the Society.

I also wish to remind you that your employer may have a matching gift program whereby your contribution may be matched. US members of 70 ½ years of age and above can make a tax-free donation from your IRA if made directly to our Society.

In effort to survive in times of ever-rising costs and declining membership, Steve Henning came up with an idea to start an ARS online store. He is now in the process of setting it up and by the time you read this Journal, it will be up and running. Any purchases you make through the ARSStore.org will benefit our Society. (See page 23.)

A reminder to all of our chapters to go to www.arsoffice.org and utilize all the tools provided to you to help you manage the operations of your chapter.

The members of our Great Lakes Chapter are hard at work planning to welcome you to Cleveland, OH, May 15 to 18. One of the tours will go to David Leach Research Station which is conducting leading research on rhododendron disease and heat tolerance.

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Wolfgang Ruff's woodland in Nanoose Bay,
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Developing Heat Tolerant Rhododendron Hybrids with Disease and Insect Resistance Using *R. hyperythrum*



Papa Cook' ('Red River' X *R. hyperythrum*), cross #29-1997.



Stan Southerland
Chapel Hill,
North Carolina

Photos by the author



My Background

In 1992 my wife and I purchased a new house under construction outside of Chapel Hill, NC. I liked the house but loved the lot it was situated on. The one acre (0.4 ha) plus lot was sharply sloped downward from front to back toward the house and also on the two sides adjacent to the house. What I loved about the lot was that it had many mature hardwoods, including white oaks, red oaks, hickories, maples and sourwood trees. There were also understory trees such as our native dogwood and a variety of ground cover plants that included wild ginger, various ferns and wild huckleberry. In the spring there is an assortment of ephemerals delightfully blooming along the ground. Another striking feature to the lot was the profusion of exposed and weathered rocks, many of them quite attractive, being large and covered with lichens. The largest rock has resurrection ferns (*Pleopeltis polypodioides*) growing on top of it as well. These rocks apparently rendered the land unsuitable for farming or grazing of animals, thus allowing for this natural beauty to be largely preserved. The lot obviously had not been timbered in some time. The presence of the exposed rocks both large and small turned out to be a mixed blessing, however, because there were just as many rocks beneath the soil surface as above! This would later prove to



('Janet Blair' X *R. hyperythrum*) yellow eye selection 3, cross #84-1999.

be a frequent obstacle to finding planting sites for my plants. So began my journey and quest in growing and hybridizing with the genus *Rhododendron*.

I am originally from the mountains of western North Carolina. I was raised in the town of Brevard, close to the better known city of Asheville. I spent my youth fishing, hiking, chasing and catching any animal that was too slow to elude me. All of this was done in or surrounded by the many thickets of *R. maximum* that grow in such profusion in the mountains and valleys of western North Carolina. After graduating from Western Carolina University with a B.S.

in Biology, I relocated to Chapel Hill, NC, where I worked in various areas of biological research, mainly the neurosciences. At the end of 2009, after 25 years with UNC/Chapel Hill, I took retirement.

Inspired by my childhood experiences in North Carolina's mountains, I took another long look at my acreage and determined what this lot needed was some rhododendrons! I first obtained the hybrids 'Roseum Elegans' and 'Mrs E.C. Stirling' from local garden centers. Both these plants are still alive and doing well. I begin to add other hybrids from local garden centers and from the newly discovered (by me) mail order nurseries that sold rhododendrons. At the same time, I began collecting and studying all the reference books on rhododendron hybrids that I could get my hands on. In short, I was becoming "hooked." Membership to the ARS Piedmont Chapter soon followed. After about a year or so I noticed that a number of the hybrids that I had planted had died or were



('Red River' X *R. hyperythrum*) top of hill right side of drive facing house, cross #29-2000.



('Summer Peach' X *R. hyperythrum*) cross # 24-2002.

declining as apparently a great many of the hybrids I had purchased, even those locally available, were not adapted to the very warm environment of central North Carolina.

Problems with Local Weather Conditions

I thus quickly found out that the weather in our area could be an obstacle to growing rhododendrons. Highs of 100° F (38° C) are not uncommon in the piedmont of North Carolina during the spring and summer months. Adding to the stress on plants is a very frequent moderate to severe drought that this region experiences simultaneously to the high temperatures. Our area is continuously on the dry side during either a La Niña or El Niño Pacific Ocean climate phenomenon. Sometimes I feel that the only pause in the frequent dry conditions is for the drought "to catch its breath" before the onset of the next drought. These conditions of heat and drought increase problems with disease and insect attacks.

Phytophthora root and stem dieback are common rhododendron disease problems in our area. These diseases can be limiting factors as to which species and hybrids can be grown, and problems increase with heat and moist con-

ditions. Despite our frequent droughts, the area can also have very heavy rainfalls at any time of the year.

Selecting Heat Tolerant Rhododendrons for Use as Parents

Further study of my reference material revealed hybrids that the authors thought should have some heat resistance. There have also been lists of hybrids compiled by the ARS and its chapters of heat resistant hybrids. However, I found that even some of these so-called heat tolerant rhododendrons did poorly in our region. After a short period of time collecting “heat resistant” hybrids and trying to modify my growing sites and technique to fit the plants, I decided that I

could do better by creating my own hybrids to fit my climate and environment. I thus started my hybridizing program over 16 years ago.

The late Ted Van Veen (1986) in his very useful book *Rhododendrons in America* mentioned species and hybrids that might be useful for the creation of heat tolerant plants. I found this book to be one of the more useful reference sources in selecting parents for my hybridizing efforts in my quest for heat tolerance and general adaptation to my region’s environment.

“Discovering” *R. hyperythrum*

The greatest impact to my hybridizing program came when I “discovered”



[Olin O. Dobbs' X ('Tina's Picture' × *R. hyperythrum*)], cross #12-2000.



[('Vulcan' × *R. hyperythrum*) X 'Sedonna'] cross 5-2005.



[('Vulcan' × *R. hyperythrum*) X 'The Honourable Jean Marie de Montague'], cross #15-2001.



[('Vulcan' × *R. hyperythrum*) X yellow *R. decorum* yellow form], cross #6-2005.

R. hyperythrum, an elepidote rhododendron native to Taiwan where it is found at 3,000 to 4,000 feet (914-1219 m) elevation. Greer (1986) stated that it is “the foliage ...[that] makes it of upmost interest.” This attractive plant grows to about three feet (0.9 m) in ten years. *R. hyperythrum* has a tight well branching habit with narrow leaves up to six inches (15 cm) long. The dark green leaves are sometimes recurved with some forms having curly leaves. The leaves are thick if not leathery; dark green and sometimes with a shiny surface; and are held for three to four years. It has an undersurface “dotted with red pits,” and hence the name “hyperythrum” (red underneath). It is renowned for its reputation for being heat tolerant as well as both disease and insect resistant. Its cold hardiness is rated at -15° F (-26° C). Surprisingly given its many positive qualities, *R. hyperythrum* to date has been underutilized as a parent in hybridizing.

To me this “discovery” was the most important and the largest piece of the puzzle in my hybridizing rhododendrons for hot climates. It was found literally “under my nose.” The Piedmont Chapter president at the time was Dr. Robert Means of Winston Salem, NC. He was

an early proponent of using *R. hyperythrum* for breeding for heat tolerance. Dr. John Thornton of Franklinton, LA, was also an early advocate of using this species in hybridizing. It was through both these men that I became aware of the potential of *R. hyperythrum* in breeding for heat tolerance and disease resistance. Historically among rhododendron hybridizers, there has tended to be an emphasis on breeding for cold tolerance, and breeding for heat tolerance and the problems associated with heat (disease and insect attack) have not received the attention they deserve. There have been several hybridizers using *R. hyperythrum* in the last 30 years, but none have had the impact of the above men who have published articles in *JARS* on using *R. hyperythrum* for conferring heat tolerance to their hybrids. Dr. Thornton established a nursery in Louisiana from which he sold his own *R. hyperythrum* hybrids [see <http://www.hirsutum.info/hybridizers/plants-hybridizer.php?hyb=825&order> for a listing of some of Thornton's hybrids] as well as other heat resistant rhododendrons (Means 1999; Thornton 1989, 1990). From these men, I obtained forms of *R. hyperythrum* and many of their hybrids that had *R. hyperythrum* as a parent.



'CeeCee' ('Vulcan X *R. Hyperythrum*), cross #19-1997.



'Fred Jennings' ['Blue Ensign' x ('Tina's Picture') X *R. hyperythrum*], cross #8-2000.



('Janet Blair' X *R. hyperythrum*) selection #1, cross #84-1999.



'Janet Blair' X *R. hyperythrum* Selection 5, cross #84-1999.

When I started using *R. hyperythrum*, the most common variety available at the time was the "Nelson" form. The physical description of this form roughly fits the information above in habit, leaf and flower. It has flowers which typically open pinkish in color and then fade quickly to white, with purple speckling in the dorsal flower lobe. Early in my endeavors, I was allowed to select from a group of budded four-year-old *R. hyperythrum* plants that Dr. Means had raised from seed

(ARS seed lot # 223-92, Means 1999). I selected a beautiful plant that had red vegetative buds, flower buds and petioles and was a white flowering form similar to the Nelson form, with dark green recurved leaves slightly depressed in the midrib. There were also pink forms "floating" around that other individuals grew from seed and I obtained pollen from many of these plants for my hybridizing. Locally grown pink forms that I have personally seen only held the pink color for about a nanosecond longer than the white form, before the flower turned white. The Rhododendron Species Foundation does, however, have a selection that does hold its pink flower color longer than the other forms and is truly pink (RSF # 76/038). I have received pollen from this plant from my earliest hybridizing efforts to the present. I have also received pollen from their white form (RSF #69/884). I obtained seed from the 1997 ARS seed exchange (ARS cross #139) of a cross between RSF #1976/038 "pink form" × RSF *R. hyperythrum* # 69/884 "white form." This had been donated to the ARS seed bank by the RSF. A plant from this cross would in time become a prime seed and pollen parent in my breeding program. The selections that I raised to flower greatly resembled the white form (pink buds fading to white flowers). There are also forms that have longer and thinner leaves. The leaves are frequently > 7 inches (17.8 cm) long and about 1.5 inches (3.8 cm) wide. It is not uncommon for these leaves to display some degree of twist or curliness. An example of this variation is called the "Caperi" form. This twisting or curling can sometime be so extreme that at an ARS convention I saw plants of this form on sale with such extreme twisting that they could only be described as grotesque. Dr. Thornton also selected a fine specimen of this form that he named 'Dr. John L. Creech'.

Its flowers are similar to the other common forms in that the bud opens pink and the flowers quickly fade to white, and its leaves are long with a slight twist. I obtained one from Dr. Thornton for my work. Using these forms and other *R. hyperythrum* hybrids that I obtained from Dr. Means and Dr. Thornton, I made crosses with commercial hybrids and other hybrids that possessed qualities that I was seeking to achieve. From this point to the present, almost all my hybrid crosses have *R. hyperythrum* in their parentage.



'The Honourable Jean Marie de Montague' X *R. hyperythrum* selection #3, cross #16-2000.

My General Hybridizing Objectives

My objectives are to produce attractive elepidote rhododendron hybrids that will grow well in the environmental conditions common throughout the southern United States and other hot environments. The adaptive qualities I seek are heat tolerance, disease tolerance and resistance to insect attack. Cold tolerance of a least -10° F (- 23° C) is also being pursued. Second, I am breeding to produce compact well-branched plants with dark green leaves of heavy substance. Leaf retention of greater than two years is being sought. Third, I consider the ease/ability to root from cuttings and the tendency to bloom as a young plant in my selection of breeding stock parents as this may decide whether a cultivar "succeeds" with rhododendron enthusiasts and in the plant trade. Fourth, my first objective was to produce hybrids with red and purple flower hues but I have expanded this to include cream, yellow, orange and mixtures of these colors, sometimes referred to as "tropical." Lastly, I am trying to "move" the flower bloom time later into the growing season. *R. hyperythrum* and many of its hybrids bloom early and can be damaged by late frosts.

The parents used for hybridizing with *R. hyperythrum* were selected with as many of the above-mentioned qualities as possible. I studied the many rhododendron guides and articles, and noted which hybrids or species had these characteristics and would reliably pass them on to their offspring.



'James Micheal' ('Vivaceous' X *R. hyperythrum*.
Selection 1, cross #10-2000.

Cultivation Practices and Methods

After harvesting seed from my hybrid crosses, the seed is sprouted and grown on peat plugs in clear topped containers inside my house under grow lights. After three to four months they are transferred under my house into the "crawl space" where tables are set up under grow lights. The best seedlings are transplanted into self-watering growing containers under the grow lights. There they are grown with an extended photoperiod of at least 18 hours.

The seedlings are bottom watered with a dilute solution of fertilizer and a dilute mineral supplement. In total, the seedlings spend up to 15 months being grown inside. The problem with growing in my "crawl space" is that it can be far from an optimum environment. There can be excessive moisture which can lead to mold on the seedlings. Also the winters in the years 2009-2010 and 2010-2011 were colder than in previous years, leading to seedling growth "stalling out." Both these problems have now been easily solved. The addition of heating mats and thermostats allows maintenance of a good growing temperature of > 55° F (13° C) throughout the winter months, and the discovery of effective fungicides has solved my mold problems.

In the spring when the danger of a late frost has passed (around April 15), the seedlings are transplanted outside into the ground into one of my evaluation beds. Many of the smaller seedlings start in a modified Nearing cold frame [a Nearing frame is a cold frame modified to not allow any direct sunlight into the frame; only indirect sunlight is allowed to enter the frame] that has an earthen bottom instead of wood. The one side of the frame that is open to the air faces north and is covered with chicken wire to keep out birds and squirrels.

The larger seedlings and the overflow plants from the cold frame are planted in test beds completely exposed to the elements. The purpose of growing seedlings under the house for over a year is to put the plants through as many growth cycles as possible, thus speeding up the age at which the plants bloom. Unlike container grown plants, the progress toward setting flower buds can be slow with ground-grown plants. Pot grown plants can be fed a steady diet of fertilizer and water and be "forced" through a number of growth cycles leading

to a relatively early flower buds set. Container grown plants, however, are not subjected to the selective pressures that a plant in the ground would endure so there would be no feedback on its adaptability to the severe environment. I feel accelerating the growth of the plants for 12–13 months under controlled conditions and then growing the plants outside in the ground till blooming allows me to have both the early “pushing” of growth cycles and then the selective pressures of hostile outdoor conditions. It generally takes me six to eight plus years to grow plants to blooming from seed. I have, however, had some bloom in as little as three years from seed.

In a hybridizing program, using parents that pass on an early flower bud set to their progeny is at a premium. I have discovered some species/hybrids that do just that. Growing in the ground allows the environment to select the strongest plants. I provide water through hand watering for the test beds and drip irrigation for all the plants in the landscape/display garden. A number of light applications of organic fertilizers and soil amendments are used during the year. These are used mainly on the plants in the test beds. In recent years I have purposely used various forms of phosphate, both liquid and solid, with both surface application and dug in at planting. These applications hopefully promote an earlier flower bud set. In the first several years, the plants being tested are moved three or four times, usually from one of my five test plots to another. This is partly to allow room to grow and partly to make sure the plant is truly adapted and not just unintentionally sited in a suitable or ideal microclimate, where it would not experience the harsh conditions certain planting sites may offer, such as a greater sun exposure and less than perfect soil conditions (drainage, etc.). The older larger plants that are thought to be superior in habit and other plant characteristics are moved into the landscape display garden for even further testing. This transplanting is frequently done whether the plants have bloomed or not.

Plants with yellow flower genes are generally allowed greater latitude with regard to habit and foliage as they may be useful parents for further hybridizing. Disease-prone plants or plants with bad leaf spotting are culled regardless of the flower color of the parents. Frequently the environment does this for me. However, a sparse or poor branching habit in plants with yellow flower genes can possibly have this corrected with back crosses with other *R. hyperythrum* × yellow-flowered hybrids.

Results and Observations

Plant habit and foliage: As a group I have many attractive *R. hyperythrum* hybrids that are well branched with dark green leaves of heavy substance. Many plants hold their leaves at least three years but as is the case of *R. hyperythrum*,

some hybrids hold their leaves for up to four years. Some possess recurved leaves with depressed midribs while others have flat leaves.

Flower Color: As noted in the hybridizing objectives, I am seeking flowers with red, purple, yellow and “tropical colors.”

As would be expected white, lavender and pink flowers have also been produced in pursuit of the primary deeper color goals. A great many bicolor and picotee flowered hybrids have also been created. On many of the bicolor and picotee flowers, the outside of the corolla, the flower rib and the base of the corolla are as brightly colored but sometimes differently colored from the inner portion of the flower. Many of these are very pretty and some will be named. I have succeeded in producing plants with colors in the major hues. My hybrids with red and purple flowers are paler than desired. These plants are now serving as parents for deeper colors and many crosses to this end have been made. Light yellow, creams and tropical colors have also been produced and many F2 crosses have been made to intensify these colors. Many of these crosses have been in the ground for > six years. I strongly feel that many of these plants will soon produce the sought after deeper colors.

Insect and Disease Resistance: The species *R. hyperythrum* does not appear to suffer from noticeable insect attack in our particular environment. This could be in part from the thick leathery leaves it processes. Also the leaves “harden off” early in the growing season before the majority of chewing insects mature. In our area this resistance is also present in many of its hybrid offspring. Some but not all of its hybrids sometime have late second growth partly eaten by the varieties of katydids and tree crickets which are in their adult stage in mid to late summer. The fact that not all hybrids with new growth are affected raises the possibility that there may be a chemical resistance from *hyperythrum* parentage that is inherited by some of its hybrids.

One insect pest that does affect rhododendrons is a tip borer. I assume it is the azalea tip borer as this is the only species of borer that is reported to be found in our area. In my experience, I have never noticed a borer attack on a plant that was identified as species *R. hyperythrum*. Some of its hybrids can, however, suffer a limited isolated attack, but many are not attacked at all. Years ago I noticed that hybrids with *R. catawbiense* in particular in their background suffer particularly from borers, although this is not limited to hybrids with *R. catawbiense* parentage. I believe that drought stress is a greater contributor to susceptibility to this pest than high temperature alone and there is some antidotal evidence of this susceptibility. In the summer of 2011, in five test beds there were only three limited borer attacks on the many dozens of *R. hyperythrum* hybrids planted there. Four of the beds were hand watered and during droughts they were heavily watered. One of the plants attacked was a

'Janet Blair' × *R. hyperythrum* hybrid. 'Janet Blair', as with many of the Dexter hybrids, is thought to contain *R. catawbiense* as well as the genetic contributions from the subsection *Fortunea*. The plants in the landscape and display garden were on drip irrigation, yet displayed a greater incidence of borer attack than the hand watered beds. The drip irrigation helps, but is clearly no substitution for a frequent heavy rainfall or heavy hand watering. The hybrids grown in the landscape were clearly under greater stress than those in the hand watered beds. Concerning the drought conditions of 2011 in a *Raleigh News and Observer* newspaper article dated August 7, 2011, Bryant Spivey, Director of the N.C. Cooperative Extension Office, remarked that "an inch and a half [38 mm] of rain won't last long when you have 102° F [39° C] temperatures." He also remarked "that in some local places the soil is parched for 12 or so inches [30+ cm] into the ground."

The thick leathery leaves of *R. hyperythrum* characterizes many of its hybrids and can take a good amount of sun and appear to be lace bug resistant.

If present, the various weevil species have also not been a problem. The garden, test beds and surrounding area have a large population of worm snakes and moles which prey on grubs of many types, and it may be that these predators are keeping insects with soil dwelling larva and pupa stages under control.

There was some leaf damage from leaf cutting bees but this was only a scattered and minor cosmetic concern.

Mites (arachnids) have never been a problem.

Disease: *Phytophthora* root rot and "stem dieback" are common rhododendron disease problems in our area. These diseases are also limiting factors as to which species and hybrids that can be successfully grown, and these diseases increase with heat and moist conditions. Despite our frequent droughts the area can also have very heavy rainfall during the growing season and at other times of the year. The 100 year average is 44 to 48 inches (1117 to 1219 mm) a year. Plant roots frequently cycle through combinations of hot, dry and wet during the seasons. This is very conducive to root disease as well as stem dieback. When plants suffer a general wilting or collapse of the entire plant I assume it to be phytophthora. If there is only one to several stems affected I assume it to be one of the dieback fungi.

Phytophthora cinnamomi is ubiquitous in the soil and the conditions for it to flourish are ever present in our region. Personally, I have never lost *R. hyperythrum* to phytophthora and I have never noted dieback on *R. hyperythrum*. The years of experience that Dr. Robert Means and Dr. John Thornton have had successfully growing *R. hyperythrum* and its hybrids under field conditions conducive to phytophthora would certainly be indirect evidence of resistance to this pathogen (Means 1999).

The heat and disease resistance qualities that have been demonstrated in our southern gardens now has supporting scientific evidence though the research work of Dr. Stephen L. Krebs. Krebs (2009) presented evidence that not only is *R. hyperythrum* highly resistant to the root rot pathogen, but confers this resistance strongly to its hybrid offspring. Krebs screened various hybrids and species in pots to which an inoculum of *P. cinnamomi* (#544) was added. The percent mortality was quantified for up to 60 days after inoculation. Plant mortality and degree of root damage of surviving plants were assessed at the end of the experiment. He compiled lists of those species and hybrids that had high resistance and those with moderate resistance to phytophthora. *R. hyperythrum* was found to have high resistance (Krebs 2009). In a separate study to test the ability of *R. hyperythrum* to transmit this resistance to its hybrid offspring, Krebs (2009) used *R. hyperythrum* as a pollen parent crossing onto the phytophthora susceptible hybrid 'Calsap'. Krebs made crosses to generate seedling populations containing 100, 50, 25, 12.5 and 0% of *R. hyperythrum* genes. These seedlings were treated at six months of age by inoculation with the pathogen and the percent mortality rates noted at ten day intervals post inoculation for up to 60 days. The results from using *R. hyperythrum* as pollen parent "indicate at a genomic level of 50% or higher *R. hyperythrum* confers considerable resistance while at a 25% or lower there is no significant improvement in resistance" (Krebs 2009).

There are no rhododendrons known that are completely resistant to phytophthora, but there are degrees of resistance, since even the most resistant plants show some evidence of infection and root necrosis (Krebs 2009). Root rot can still be induced by stress such as drought or excess water being present. Krebs also stated that among rhododendrons, there are not taxonomic commonalities among resistant plants, suggesting multiple sources of resistance and that different resistance genes and mechanisms may be involved (Krebs 2009). Even before the published work of Krebs confirmed resistance of *R. hyperythrum* to *Phytophthora*, I was convinced by the field testing of this species' usefulness in breeding for heat tolerance and disease resistance.

It would be interesting now to test hybrids produced with *R. hyperythrum* as the seed parent, and to test hybrids with *R. hyperythrum* as both a seed and pollen parent crossed with non-*R. hyperythrum* hybrids to see if they also show heat tolerance and resistance to phytophthora. It would be desirable that the non-*R. hyperythrum* hybrids used also demonstrated some degree of heat tolerance. This would be particularly important if the resulting hybrids have less than 50% *R. hyperythrum* in the final genotype.

Rhododendrons with yellow flowers are particularly prone to both root rot and dieback. The survival rate is low whether the plant was developed on

the east or the west coast of North America. Therefore, it is difficult to use yellow flowered hybrid as seed parents, but I have frequently used many of the yellow flowered hybrids as pollen parents only. Some used as seed parents have, however, survived long enough to provide me with seed before declining and dying, as was the case with the popular west coast yellow flowering hybrid 'Karen Triplett'. I crossed *R. hyperythrum* ARS # 233-92 onto it and obtained a number of very attractive plants that grow very well in my environment, but these have yet to bloom.

Stem dieback can also be caused by a number of fungi such as *Pythium*, *Botryosphaeria* or *Phomopsis* (Greer 1996). It is not known what fungi are involved in dieback that occurs in my garden, as I have never had infected samples assayed for pathogens. Among my landscape garden collection of rhododendrons without *R. hyperythrum* parentage, it is not uncommon for dieback to occur. Dead limbs can be due to excess shading of interior branches. In many, however, the dead limbs are no doubt due to dieback fungus. Although dieback does occasionally affect some *R. hyperythrum* hybrids, it is not a great problem as the fungus generally affects only a small number of branches. Many of these hybrids are not affected at all.

This lack of disease is in contrast to some non-*R. hyperythrum* hybrids grown in my garden such as 'Blue Ensign', 'Purple Splendour' and some Dexter hybrids such as 'Ben Mosely'. Many of these frequently suffer from dieback, although these hybrids generally survive and only require a good pruning of the diseased branches. Almost all hybrids with yellow flowers suffer from dieback on a yearly basis. Frequently what appears to be dieback is a stem affected by borers. This borer damage becomes apparent when the stem is pruned and the borer or its feeding track is revealed. It can then be pruned out or a wire can be inserted down the hole to crush the larvae.

Propagation of my R. hyperythrum Hybrids: In the hands of rooting professionals such as Van Veen Nursery, my hybrids have been shown to root easily with a high percentage possessing large well-developed root balls. This is good for potential commercial propagation and distribution of *R. hyperythrum* hybrids in general.

Summary

What really characterizes our region and much of America are the recent extended heat extremes of spring and summer, and many areas have recently experienced 100° F (38° C) daily highs for weeks at a time. The need for heat tolerant rhododendrons with disease and insect resistance has thus never been greater!

R. hyperythrum has both these qualities and passes them on reliably to its

hybrid offspring when used both as a pollen and seed parent.

Acknowledgements

The report is the 2012 progress report for ARS Grant #132. I would like to thank the Research Foundation of the American Rhododendron Society and Committee members for helping to fund my hybridizing efforts through the ARS grant program.

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ARS Photo Contest Winners 2013

Best in Contest



Best in Contest, Tied: Marc Colombel (Scottish Chapter): *R. thomsonii*. Canon 7D, 100 macro, F9, 1/125, 400 ISO.



Best in Contest, Tied: Susan Lightburn (Nanaimo Chapter): Wolfgang's woodland, Nikon D300, lens 17-55 mm, F2.8, 1/200, 250 ISO.

1) Flower, truss or spray



Category Winner: Marc Colombel (Scottish Chapter): *R. haematodes* Canon 7D, 100 macro, F8, 1/500, 400 ISO.



Category Runner-up: Susan Lightburn (Nanaimo Chapter): *R. flammeum*, Nikon D300, lens 17-55 mm, F4.5, 1/50, 400 ISO.

2) *Plant in bloom*



Category 2 Winner: Marc Colombel (Scottish Chapter): *R. hodgsonii*, Canon 5D, Mark 2, 24-70 mm, lens at 43 mm, F6.3, 1/320, 400 ISO.



Category 2 Runner-up: Susan Lightburn (Nanaimo Chapter): 'Carmen', Nikon D200, lens 17-55 mm, F4.5, 1/50, 400 ISO.

3) *Landscape or plants in the wild or in gardens*



Category 3 Winner: Kristian Theqvist (Finnish Chapter): Azaleas at Crystal Springs Garden, Portland, OR, Canon PowerShot SX20 IS, F5.6, 1/50, ISO 80.



Category 3 Runner-up, Tied: Kristian Theqvist (Finnish Chapter): Japanese Garden in the Washington Park Arboretum, Seattle. Canon PowerShot SX20 IS, F6.3, 1/125, 80 ISO.



Category 3 Runner-up, Tied: Marc Colom-bel (Scottish Chapter): *R. barbatum*, Canon 5D Mark 2, 24-70, 30 mm, F10, 1/30, 400 ISO.

4) Foliage



Category 4 Winner, Tied: Linda Derkach (Mount Arrowsmith Chapter): ARS Seattle, May 2013, in Frank Fujioka's garden.



Category 4 Winner, Tied: Marc Colombel (Scottish Chapter): *R. rex* ssp. *fictolacteum*, Canon 7D, 100 macro, F5, 1/125, 400 ISO.



Category 4 Runner-up: Mary Parker (Mount Arrowsmith Chapter), 'Snow Lady'.

5) *People, insects or animals*

Category 5 Winner: Susan Lightburn: Wolfgang's woodland, Nikon D300, lens 17-55 mm, F2.8, 1/200, 250 ISO. For photo see front cover and page 21 this issue.



Category 5 Runner-up: Susan Lightburn (Nanaimo Chapter): Jeannie in Nixon's garden, Nikon D300, 17-55 mm lens, F6.3, 1/80, 250 ISO.

6) *Other, for creative or artistic effects of any kind that involves these plants*

Category 6 Winner: Marc Colombel: *R. thomsonii*, Canon 7D, 100 macro, F9, 1/125, 400 ISO. For photo see page 21.



Category 6 Runner-up: Susan Lightburn (Nanaimo Chapter): 'Etta Burrows', F6.3, 1/80, 250 ISO, Picassa special effects.

International Rhododendron Experts met in Edinburgh and Developed an Action Plan to Save Threatened Species

John Hammond

Starling, Bury, Lancashire, Great Britain

(Modified from the Royal Botanic Garden, Edinburgh Press Release)

The Royal Botanic Garden Edinburgh played host from April 20-21, 2013, to the most knowledgeable and influential group of international rhododendron experts ever assembled under one roof to develop a plan to save threatened *Rhododendron* species from extinction in the wild. Although common in cultivation, earlier research by Botanic Gardens Conservation International (BGCI) and the Royal Botanic Garden Edinburgh (RBGE) (Gibbs et al. 2011) showed that a quarter of the more than 1,000 known species of *Rhododendron* are under threat in their native habitats. Indeed, one particular species (*R. kanehirae*) would be extinct but for collections in botanic gardens such as the RBGE.

Famous for their flowers, rhodo-dendrons (including azaleas) have long drawn plant hunters to their centres of diversity in the Himalayas and mountains of Southeast Asia. In their native habitats, rhododendrons are valued for their medicinal properties, and in some communities they have a wide range of other uses, including firewood, timber, teas, jams, narcotics and as a source of insecticide. Rhododendrons grow in areas of high rainfall and high humidity on acidic soils, conditions under which few other plants would survive. They stabilize slopes and protect watersheds, notably in the Himalayas where five of Asia's major rivers start. De-forestation on a massive scale, either for timber, mining, clearance for grazing, road construction, or to make way for development of towns and tourist infrastructure is having major impacts on the native habitats of rhododendrons.

Time is of the essence, and the concerns raised by the BGCI publication are beyond the sphere of control of taxonomists and scientists alone to resolve. In seeking a way forward, the conference aimed to assess and recommend what opportunities exist for implementing a practical approach through the involvement of garden curators, head gardeners, horticulturalists, nurserymen and enthusiasts from around the world, who have the knowledge, expertise and ability to work together and make a difference. The BGCI publication was a major step forward in recording the data available to taxonomists and scientists. This data will now be placed on a website platform by BGCI to enable the

conference delegates and other knowledgeable individuals to provide input to verify the data and add further details from their findings during expeditions in the field. In this way, the 290 species that were classified as “Data Deficient” will each be targeted with the aim of making a viable assessment, wherever this is practicable. Taxonomists and scientists residing in the Himalayas and Southeast Asia will also seek to establish the numbers and locations of these plants in the wild. Educating people in the local communities and developing their horticultural skills to care for threatened plants in the wild, and encouraging them to take an active role as custodians of their plant heritage, is a vitally important component of the plan.

BGCI also operates an informative and comprehensive website embodying tabulated data for many different genera, including rhododendrons. Access to this website will be available for both speakers and delegates, which will enable a two-way stream of information to flow and enhance the database records, which will benefit all concerned. BGCI’s 2011 report highlighted the urgent need for conservation of 75 of the most threatened rhododendrons—species that were considered to be on the verge of extinction in the wild. Furthermore, the internationally adopted Global Strategy for Plant Conservation calls for 75% of all threatened plants to be conserved in “*ex situ*” collections (e.g., botanic gardens) by 2020. In the case of rhododendrons, this equates to 238 species.

In 2012, BGCI carried out a survey to see how many of the threatened rhododendrons were already in the collections of botanic gardens and arboreta around the world. Worryingly, only 48 such species were identified. This means that many of the Critically Endangered and Endangered species are currently not known in cultivation and therefore are at great risk of extinction if the threats that they are facing in the wild are not addressed. It is likely that some specimens may still exist in private gardens, some of which contain old collections of plants dating back to the days of the great plant hunters. However, many of these collections have received little maintenance and care as a result of the harsh economic climate that dates back to the cessation of WW II. These private collections will be gradually surveyed with the aims of locating and propagating threatened species, and establishing conservation collections in botanic gardens, arboreta, parks and woodland gardens where climatic, geographic and environmental conditions enable the various species to flourish. In this way we can work together to secure these distinctive and beloved plants for future generations to enjoy.

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(Copies of the report can be downloaded for free (<http://www.bgci.org/ourwork/Rhododendron-Red-List>); printed copies are available from the BGCI website.)

A Remarkable Home for a Remarkable Rhododendron

Peter Kendall
Portland, Oregon



Photos by the author

In its range from the state of Oregon to the southern reaches of California, *Rhododendron occidentale* occupies any number of specific niches. It generally enjoys high humidity and cool temperatures and often finds its roots in or very near water. One outstanding repository is along the “Wild River” stretch of southern Oregon’s Rogue River. This 40+ mile (64+ km) stretch from Graves Creek to Illahe constitutes nearly a fifth of the Rogue’s 215-mile (346 km) run from its headwaters in Oregon’s Cascade Mountains to the Pacific Ocean. It sports spectacular canyons, waterfalls, rapids, and tributary streams amid a diversity of flora and fauna. Its fame, on a relatively recent global stage, harks back to 1929 when writer and world class fisherman Zane Grey wrote his novel *Rogue River Feud*. Thirty-nine years later,



Rhododendron occidentale, Cat Black Bar Lodge. Photo by the author.



the year 1968 heralded the Wild and Scenic Rivers Act during the Johnson administration and the Rogue was one of the first eight or so rivers designated.

A close look at *R. occidentale* finds it in section *Pentanthera*, subsection *Pentanthera*. It is the only rhododendron in this particular grouping that is totally isolated from its closest relatives, which, with the exception of *R. luteum* (Euro-Asia near the Black Sea), reside for the most part among margins of the eastern and southeastern North American continent. They are remarkable in their own right and number about a dozen. In many instances, their natural hybridizations create a plethora of interesting forms. *R. occidentale* is uniquely monotypical and varies widely in its morphological sign posts. Its attractive white or pale pink flowers with an upper petal manifesting a yellow to orange flare (in its most common form) harbors a perfume that is powerful and irresistible.

Although many people worldwide are drawn to the Rogue to actually ply its waters, about ten years ago I and a number of close companions were bent on hiking its edges to see what interesting objects we could uncover there. Accompanying this article is a map, richly detailed, of the portion of the Rogue River Trail that our group negotiated. We chose the Wild River stretch for our hike and resided at four locations along the way—Black Bar Lodge (where I photographed *R. occidentale*), Mariel Lodge, Paradise Lodge, and, finally, Illahe Lodge. We passed many notable places, among which were Zane Grey's Cabin, the dramatic Mule Creek Canyon, and Blossom Bar (a notoriously challenging stretch of white water named after *R. occidentale*). Over the course of our 40-mile journey, a multitude of flowers, trees, and shrubs with accompanying fauna awaited us.

Of the numerous flowers we observed, perhaps none was more alluring or excited the imagination more intensely than the native *Iris innominata*. At the inception of our odyssey, every observed flower of this species was a pronounced yellow with distinctive veining from one flower to the next. Upon reaching

the exceedingly beautiful Mule Creek Canyon, this all changed. The flower became, with some variation, principally lavender in color, but again retained notable and distinctive venation.

The geologic underpinnings that make up the course through which the Rogue so sinuously weaves was thrust into place over untold millions of years. I found the account of this process riveting. Beginning about 200 million years ago, with the breakup of the ancient supercontinent Pangea, the Pacific Ocean Plate, with its island terranes (island masses similar to what might presently exist in Indonesia), eventually collided with and dove under the North American Plate. In its subduction, the Coast and Cascade Mountain Ranges of the Pacific Northwest found their initial origins. The inception of this piece of the Coast Range, often referred to as the Siskiyou, constitutes the northern most extension of the Klamath Moun-



Mule Creek.



Iris innominata.

tains. This range is only the latest, in what amounted, over tens of millions of years, to successive upliftings of sedimentary depositions to the west in concert with massive, and sometimes explosive, volcanic activity to the east. The first eruptions, forming the Western Cascades, may have begun erupting about 40 million years ago at the end of the Eocene. Their major activity transpired, however, during the Oligocene between 35 and 25 million years ago. These precursors of our present day Cascades rose up quite a distance to the west of what constitutes the current Cascade Range. These upliftings created the network of run-offs that support the rivers, including the Rogue, we see today.

From about 20 to 12 million years ago, during the Miocene, this area was overrun and further uplifted through general outpourings of magma through which the river continued to cut new channels. Beginning some 12 million years ago, the most recent episode of volcanic activity began with the eruptions of the present day Cascades, including Mount Mazama (the current site of Crater Lake, which resulted from the collapse of over 12,000 feet (3650 m) of mountain into an immense caldera 6,850 years ago). It is from the north remnant flank of this once towering mountain that the Rogue River presently emerges. Before its final cataclysmic collapse, lava tubes and outpourings of volcanic ash were intermittently strewn many miles to the west and the river continued to adjust to these events. The river's footprint today reflects these geologic happenings.

For many years the flora and fauna evolved precariously but relentlessly in these very footprints. We bear witness at the beginning of the third millennium to the magnificence of rock and living features that hold sway in this moment of moments.

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Peter Kendall is a member of the Portland ARS Chapter.

School Participation in Annual Rhododendron Truss Shows

Kathy Bones
Florence, Oregon



In 2000, my husband Mike and I along with Jim and Sylvia Smith took a trip to Australia and New Zealand to attend rhododendron conferences in both countries. Of course, we also had to sightsee for six weeks, and so had a spectacular time. While in New Zealand, we all went on one of the conference tours offered to gardens around Dunedin. One day we had lunch at Waitati Hall in Dunedin and adorning the walls all around the large dining room were pictures of rhododendron flowers, people and scenery, all drawn and colored by grade school children. It was enchanting and we all studied this artwork until the time to leave for the next leg of our tour. After arriving back home, the memory of the children's work stuck with Mike and he pondered on how to use the idea of getting youth involved in our own flower show. He got very excited about including our elementary school, Kindergarten through 5th grade, in our annual flower show and invited them to draw, paint, color, or sketch a picture of a rhododendron to be displayed during the show. The Siuslaw Elementary School got on board with this idea and by our May show, we had a variety of amazing art work for the walls. This brought in many new faces to our show, many to see their child's, grandchild's, niece's or nephew's pictures. Of course these new people also enjoyed the show and learned things they didn't know about rhodies. Each picture earned a participation ribbon and certificate.

The Siuslaw Chapter decided to encourage the school to participate in our show again the following year, and the chapter donated \$100 for materials to the art program. The response was overwhelming with the pictures doubling in count and different mediums being used. As a bonus, the teachers used this opportunity to teach the children about rhododendrons, even going to the

library to use computers to find more examples of the flower. This activity continues to grow and the pictures now cover much of the walls at the Florence Events Center where the annual rhody show is held. We invite everyone to come visit our wonderful flower show the third weekend in May and see not only the splash of color from the many trusses on exhibit but also the creative talents of our local children.

Mike and Kathy Bones are members of the Siuslaw Chapter.



Children's work inspired by the Siuslaw Chapter exhibited at the Florence Events Center,

Bibliography of a Rhododendron Library - Part II

An annotated bibliography of books and literature on the discovery and geographic distributions

Past and Present - of the genus *Rhododendron*, Entries 19–47
Its Physiography, Prenology, Botanical Classification & Nomenclature of, Wild & Cultivated Species, Affinities & Hybrids with the Biographies of the Women and Men who discovered, collected seed, Hybridized Photographed, Exhibited, Named & Registered these Flowering Broad Leaved Evergreen & Deciduous Plants; Introducing them into our Gardens & Landscapes of the Cool & Warm Temperate Zones of the World.

Clive Justice
Vancouver, BC
Canada



[Editor's note: This is the second part of Clive Justice's bibliography of his rhododendron library, with his comments of the content of each entry, which has been gifted to the University of BC Botanical Garden in Vancouver, BC, Canada. Part I was published in the Summer 2013 issue.]

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22. Cox, Peter A., *The Larger Species of Rhododendrons*, B. T. Basford, London, 2 Copies, 1979
- 23 _____, *Dwarf Rhododendrons*, B. T. Basford, London, 1978.

24. Cox, Peter and Hutchison Peter, *Seeds of Adventure in Search of Plants*, Garden Arts Press, The Antique Collector's Club Stourbridge, Suffolk, U.K., 2008. [The Cox family of Scottish Nurserymen of Glendoick, Perth: grandfather: Euan, father: Peter and grandson Kenneth with their writings on the genus Rh and its hybrids. On growing, propagating and selecting them for the garden in various hardiness zones is unmatched since the horticultural work and writings of Liberty Hyde Bailey.]
25. Croix, I. F. La, *Rhododendrons and Azaleas*, David & Charles, Newton Abbot, 1973. [All that's involved in choosing and growing Rhs in acid and non acid garden soils UK in particular. Listings by size of then available hybrids rated by UK hardiness ratings. List of nurseries marketing rhs in UK, US, Canada, Germany, Holland and Japan. All in Canada now out of business. Many in UK and US, also. Cultural practices and ratings still valid. Black and white photos and drawings of trusses; no colour plates.]
26. Crosseley, J. H., *An Evaluation and Record of Generally Recommended Trees & Shrubs planted at the Research Station, Sidney, BC, 1913-1973*, "Rhododendron species and hybrids planted in the garden beginning in 1918, incl. 21 Azalea cultivars," Canada Dept. of Agriculture, Ottawa, Can. 1977. [Rhs are mostly UK named Waterer hybrids and Azaleas, mollis & Ghent hybrids.]
27. Davidian, H. H., *The Rhododendron Species*, 4 volumes, Timber Press, Portland, Oregon, 1992. [The last exponent of the Balfourian system of rh classification. A monumental work on the two Rh types: lepidote (scaly) and elepidote, (not scaly) Vol I lepidotes, II & III elepidotes, with Vol IV Azaleas. Each is grouped by Balfourian Series (grps of similar looking plants) completely described botanically with colour variations, where found in the wild, when and by whom. Many coloured illustrations of Pacific Northwest and Scottish gardens. Those in PNW by ARS members Britt Smith, H. Gunn & etc. Many full page and half page B & W photos of China by Joseph F Rock.]
28. Desmond, Ray, *Sir Joseph Hooker Traveller and Plant Collector*, RBG, Kew Antique Collectors' Club, Woodbridge, Suffolk, 1999. [Voyage of the HMS Erebus & HMS Terror in which Hooker was Surgeon Botanist with Sir James Clark Ross on his Antarctic Expedition 1839-43, the Sikkim Himalayas Expedition of 847-1851 collecting rhododendrons]

and alpine plants, Syria & Lebanon plant collecting in 1860 Morocco and the Atlas Mtns in 1871, California and the US Rockies in 1877. All fully described and documented with many Fitch etchings of Hooker's maps and field sketches of Rhododendrons and other Himalayan and Antarctic Island Plants from Rh's of Sikkim Himalayas. Also some of Hooker's pen and ink sketches.]

29. Dinger, Philip, Editor, *Azaleas Rhododendrons & Camellias*, Sunset magazine, Lane Publishing Co., Menlo Park, California, 1988. [**Cultural requirements and lists of Hybrid and Species suitable for Pacific Coast Climate Zones.**]
30. Elec., Charles, Editor. *Notes contributed by members of the Rhododendron Society*. Vol. 1, 1916-1919; Vol.2,1920-24; Vol. 3, 1925-31, W. S. Cowell Ltd., Ipswich, UK, reprinted by Pacific Rhododendron Society, Tacoma, Washington, 1948. [**Then Current and mid 19th Century writings on rhs by English rh, elite and aristocratic pioneers relating experiences growing rhs. A rich source of historical data of the post WWI pre WWII days by such as Stevenson, Johnstone, Millais, Rothschild, Williams, Fox, et al.**]
31. Fang, Wen-pei, Editor, *Icones Plantarum Omeinsium*, National Szechuan University, Chengdu & Omei-hsien, Szechuan, China, Vol.1, No. 1, Bound copy, 1942, [**Bound copy of Fang, Wen-pei's Rhododendrons of Mt Omei, Sichuan, China. There was only Vol I #1 ever produced. See: #11, above**]
32. Fang, Wen-pei, Editor, *Sichuan Rhododendrons of China*. Science Press, Beijing, China, 1986. English text. [**Rhodo species pictured in colour in their natural Sichuan Province habitats. On a personal note We met Professor Fang & his son, Kuo-Mei who botanized with us when the First Canadian Botanical Delegation toured China in 1981. The delegation was led by UBCBG Director Dr Roy Taylor, Roy Forester Director Van Parks Board Vandusen Gardens, Dr Keith Wade, Chair Biology Dept., Capilano College, NV., Rosarian Henry Marshall, Can Ag Experiment Station, Morden, Man and L A Clive Justice, landscape architect for UBCBGardens.**]
33. Feng, Kuo-Mei, *The Rhododendrons of Yunan Province*, P.R.C. Text in Chinese, photo illustrations of rhododendrons identified in Latin, Chinese and

Japanese. Printed in Japan, 1981. **[Rh occurrences mapped on Yunnan Province county maps. Excellent *in situ* coloured photos of rh species.]**

34. Fletcher, Harold, *A Quest for Flowers The Plant Explorations of Frank Ludlow and George Sherriff*, Edinburgh University Press, Edinburgh, 1975. **[Ludlow & Sherriff collected in SE Tibet and Bhutan in the 1930s and 40s. A full documentation of their travels and discoveries. The portrait of George Sherriff is on the left not the right as captioned in the double portrait picture of the two placed after the *frontispiece*.]**
35. Fletcher, Harold & Brown, William, *The Royal Botanic Garden Edinburgh*, HMSO (Her Majesty's Stationery Office), Edinburgh, 1970. **[Official history and development of the RBGE.]**
36. Forrest, G. *Some Plants, Shrubs and Trees found by Mr. G. Forrest in 1925*, Anon, privately printed. **[Forrest's next to last collecting trip in western China.]**
37. Forster, John Reinhold, Translator, *Peter Kalm's Travels Into North America*, The Imprint Society, Barre, Massachusetts, 1972. **[Peter Kalm was Linnaeus' assistant. He came to North America in 1748 botanizing for 2 years in Eastern US and New France (Quebec). The poisonous (to cattle) Eastern NA native ericaceous shrub *Kalmia latifolia* is named for him.]**
38. Forster, Roy, Curator, *Rhododendrons of the Van Dusen Botanical Display Garden*, with map, Vancouver Botanic Gardens Association, Vancouver, B.C. **[A listing of the rhs mainly UK and American Hybrids with some Himalayan species and old large Waterer hybrids, Ghent and mollis azaleas moved in from West End and other Vancouver gardens lost to redevelopment during the 50s, 60s & 70s.]**
39. Fortune, Robert, *Three Years Wandering in the Northern Provinces of China Including a Visit to the Tea, Silk & Cotton Countries with an Account of the Agriculture and Horticulture of the Chinese, New Plants, etc.*, John Murray, London, 1847 **[Robert Fortune was sent out by the secretary Joseph Sabine of the then London Horticultural Society, (LHS) later to become the Royal Horticultural Society (RHS). and the East India Company (EIC) to China to collect plants for the LHS and find out how green and black tea differed for the EIC. His introduction of**

herbaceous plants like the bleeding heart, others and of the rh specie *Fortuneii*, named for him, enabled the development of hybrids like the Loderi grex and other large flowered Rh hybrids.]

40. Fox, Helen M., Editor & Translator, *Abbe David's Diary, Being an Account of the French Naturalist's Journeys and Observations in China in the Years, 1866-1869*, Harvard University Press, Cambridge, Massachusetts, 1949.

[Translation from the French of Catholic Priest: Armand David' travels and collections in Western China. Many plants birds and animals bear his *Davidii species epithet* — *Rosa, Lilium, Rhododendron, Viburnum* & etc including the Pocket Handkerchief or Dove Tree: *Davidia involucrata*. Skins with feathers of the many birds, some 600 species he shot and were stored in bales in the basement of the Jardin de Plantes in Paris during the Franco Prussian war of 1870 and the skins were eaten by vermin rendering the plumage a mixed up pile of feathers, beaks & feet . They could not be restored by the taxidermists. David also obtained the skin of the Giant Panda. It was the first known evidence of the existence of this elusive animal, now the World Wildlife Fund (WWF) Mascot.]

41. Galle, Fred C., *Azaleas*, Timber Press, Portland, Oregon, 1985.

[Complete modern work on all varieties species and Hybrids, cultural conditions history of introduction both American, Japanese and European hybrids, Phrenology of azaleas and their pathology, Many coloured photos B&W drawings and photos and distribution maps. The modern classic Botanical/Horticultural work on the Azalea subgenus in all it's forms.]

42. Gelderen, D. M., Smith Hoey, J.R.P., *Rhododendron Portraits*, Timber Press, Portland, Oregon, 1992.

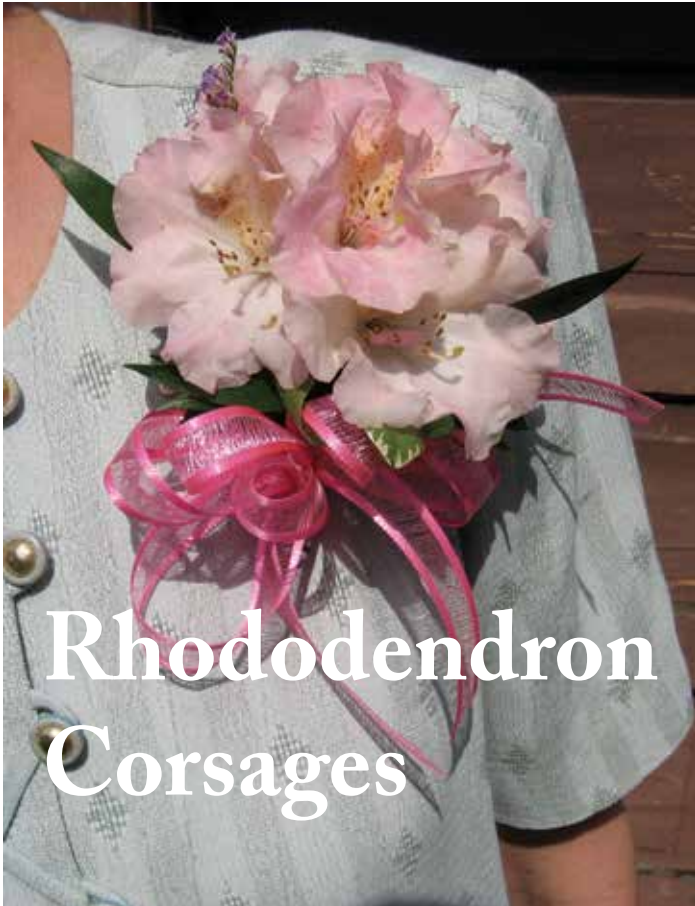
[Colour photos of the 19th, and 20th century Dutch, German English and American commercial nursery grown registered and named hybrids arranged under species parent: *ponticum, caucasicum, smirnowii, catawbience, maximum, yakusimanum* & etc. some named hybrids grouped with parent species in their Series. A great aid to identifying hybrids in the garden when in bloom; but because all the pictures are printed from Kodachrome slides, the printed flower colour may not be the true colour (particularly for the reds) of the flower in the garden; otherwise a good reference to the commercial hybrids.]

43. Gould, N. K. & Synge, P. M., Editors, *Rhododendron Year Book* 1949, No.

4 Conference Number, RHS, London.

44. _____ Editors, *The Rhododendron Handbook 1952, in one vol; 1956, and 1957 in two vols part 1, Rhododendron Species; part 2, Rhododendron Hybrids*, RHS, London.
45. _____ Editors, *The Rhododendron Yearbook 1946, 1947*, RHS, London, 2 vols.
[These are Handbooks issued by the RHS contain listing of species in Vol 1 or combined, with the hybrids in one as with No 44 (1952) above. Rhs species described by name, collector with separate lists of collector numbers Vol 2 Hybrids lists the past, current and newly registered available hybrids and their parentage by species. Same formats used in all handbooks. Hybrids receiving RHS awards: First Class Certificate (FCC) and Award of Merit (AM) also listed.]
- 46 Greer, Harold & Salley, Homer, *Rhododendron Hybrids, 2nd Ed.* Timber Press, Portland, Ore, 1986, 1992. [A complete history and description of all named UK, European and North American registered hybrids, their parentage, flower foliage and plant sizes and description in English in accordance with RHS/ARS guidelines; hybridizer and/or introducer, when introduced with rate of growth and size in years, real or assumed if younger. Five Hundred ninety-two: 2.3 x 3.3 inch colour photo plates of the registered hybrids.]
47. Halliday, Pat & the trustees of RBG, Kew, *The Illustrated Rhododendron. Their classification portrayed through the artwork of Curtis's Botanical Magazine*, Timber Press Edition, Portland, Ore. 2001. [The Curtis Botanical Magazine's (CBM) aim was to illustrate in colour and describe new exotic plants introduced "likely to interest professional and amateur gardeners." (Desmond 1999). CBM was edited by Sir William Hooker from its beginning in 1781. He was the father of second son (also sir) Joseph Dalton Hooker. Halliday has taken JD Hooker's Sikkim rhs and other rhs that were portrayed in the CBM and reclassified them under the new system, (Sleumer, Chamberlain *et al*) and republished them in this volume.]

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



Rhododendron Corsages

Alan Suchy
Bellingham,
Washington



Mother's Day is only a few months away and I would like to share my limited experience on rhododendron corsages. In 2006 I noticed, as you probably have, that some flowers that get broken off can lie on the ground for days before they wilt. So I figured I'd do a little test and see if any rhododendrons might be good for a corsage for my wife on Mother's Day. I went into the yard and cut trusses of everything in bloom that looked like it might be good for a



corsage. I put each one on the kitchen counter in a bottle with no water. The next morning they were all wilted except one, 'Point Defiance'. That Saturday before Mother's Day I took my fresh cut 'Point Defiance' truss to the florist to have a corsage made and they promptly refused. They said they would not waste their time making a corsage out of a flower that would not last. I tried to argue but they said they were the absolute authority on flowers.

I then took my truss to a different florist. The second florist was excited to participate in the experiment. They did a beautiful job and the corsage lasted through Mother's Day and still didn't look too bad a day later. This was okay for a few years until 2009, when 'Point Defiance' was not in bloom for Mother's Day. So I started all over again by cutting everything in the yard that looked like it might make a good corsage. Again they all wilted except one, 'Louisa Wittrock'. Since then I have not had to do any further experiments, i.e., one of those two rhododendrons has always been in bloom for Mother's Day. In 2013 it was 'Point Defiance' and I had two of them made into corsages on Friday. The reason is that we were celebrating Mother's Day with our daughter on Saturday and I wanted a fresh one for Sunday. As it turned out the one I used on Sunday still looked great. I wonder which one I will use this year? The photographs are of three corsages made over the years.

Alan Suchy is a member of the Komo Kulshan ARS Chapter.

Society News

Awards

VICTORIA CHAPTER

Bronze Medal: Gareth Shearman

The Victoria Rhododendron Chapter of the ARS is pleased to bestow its "Highest Award" to Gareth Shearman for his many years of service to the Chapter. Gareth set up and maintained our internet site when such technical wizardry was new to us. He has diligently maintained our membership records since 2008. He has contributed his time and expertise at our shows, sales and conventions. He hosted the executive meetings at his office for many years. He has been an active member of the propagation group. We are honoured to award Gareth the Bronze Medal. September 2013

CALIFORNIA CHAPTER

Bronze Medal: Richard Starkeson

You have enriched all aspects of Cal Chapter's activities. You have served on our Board of Directors for many years. You have served as our President for three years and are presently serving as our Treasurer. Your legal advice and continual help with our annual shows and especially its advertising has been a tremendous asset. Thank you for your versatility and hard work!

California Chapter is honored to present you with its highest award. June 23, 2013

In Memoriam

Romy Millais

Rhododendron enthusiast Romy Millais (1923-2013) died peacefully on 11th November, 2013, aged 90, after a short illness. Romy married Edward (Ted) G. Millais in 1947 after he returned from WW II in which he was a Captain in the Eighth Army. Ted was the youngest grandson of the famous Pre-Raphaelite artist Sir John Everett Millais, and also the nephew of the author John Guille Millais who wrote the two volume *Rhododendrons and the Various Hybrids* in 1917 and 1924. Romy and her late husband Ted bought the derelict Crosswater Farm at Churt, near Farnham, England in 1947 and for more than 50 years she supported Ted growing various crops including mushrooms, guinea fowl, pigs and cattle; and together they established Millais Nurseries, specialist growers of rhododendrons, in 1970.

Romy was fully involved with the Nurseries for more than 35 years, working tirelessly on production, despatch and administration. Throughout this time, Romy also enjoyed developing the woodland gardens at Crosswater Farm, where rhododendrons, magnolias and sorbus were planted under the Scots pines. She and Ted were amongst the first Westerners to be allowed back into China on plant hunting trips when the borders were opened in the 1980s, and in 1982 made their first trip to Sikkim. During several trips to Sichuan and Yunnan, as well as Bhutan and Nepal, she trekked with Peter Cox, Warren Berg, Steve Hootman, Dr. Garratt Richardson and Clarice Clark. Romy and Ted found many important new rhododendron species

Society News

In Memoriam continued.

for the first time, including *R. denudatum*, *R. glanduliferum*, *R. huianum*, *R. irroratum* var. *yiliangense* and *R. ochraceum* in 1995. These are still available from the Nurseries today, which is run very successfully by their son David, who has won Gold Medals in the rhododendron displays at the recent RHS Chelsea Shows in London. Ted, a long-time member of the Scottish Chapter, passed away in 2003 and Romy is survived by three sons, a daughter, and four grandchildren.

David J. Williams, MD

While "David J," as his friends used to call him, has not been active in the ARS for some time due to health, he was one of the most devoted chapter members that I have known in the nearly 60 years I have had the joy of attending Eugene Chapter meetings.

For years "David J" wrote and printed the newsletter for the chapter. One Thursday of every month he would come up to our nursery to print the newsletter on our copy machine, and "we always got to help"! It was a Thursday we always looked forward to. He created many illustrations for our publication of one species or another. Along with these, he would always draw small characters and make various comments in the margins of the newsletter. Also in each newsletter, David would create a unique crossword puzzle using rhododendron names. For the 2001 ARS convention held in Eugene, a small booklet was published which was a collection of all the puzzles that he authored. What an accomplishment!

David J loved rhododendron species and although he was a rhododendron "addict" who wanted any rhododendron he could get, he always had a place for the latest species he heard of! He had a large city garden that was on tours when the Eugene Chapter hosted ARS conventions, and he grew many rhododendrons in containers on his huge deck as well as in the ground.

Then there was his dry humor and his doctor jokes, versus the lawyer jokes of some of our other members at meetings. There are many fond memories for all of us who had the pleasure of knowing David J. He was always the first to arrive at rhododendron shows to check his trusses into the show, and we could be assured that he would add to the show with his flowers that always won some ribbons and trophies.

Yes, David J will continue to be missed, as he has been missed since he became less active. David was the kind of friend rare in life and his dedication to the Eugene Chapter of the ARS is seldom found in people today. It is with respect that these memories of a special person are given, both as a friend to so many and as a part of the Eugene Chapter. He will not be replaced in our membership or in the lives of those that had the pleasure to know him.

Harold Greer



Drawing of *Rhododendron occidentale* by David J. Williams.

Society News

ARSSore.org - The New ARS Online Store

Every Amazon.com purchase benefits the ARS

Steve Henning
Fleetwood, Pennsylvania

At the October 4, 2013, ARS Board of Directors meeting, the Board authorized the creation of an online ARS site that would not be selling items but would link to other providers. The online store was authorized to develop a relationship with Amazon as an affiliate store. The online store was also authorized to use the ARS logo and name to sell logo merchandise. Product providers accessed through the ARS online store at ARSSore.org pay referral fees directly to the ARS on sales made from ARSSore.org referrals. These commissions from sales referrals go 100% directly to the ARS. ARSSore.org has no expenses, only earnings.

The store has three divisions:

- **ARS Logo Merchandise:** featuring knit, woven and denim shirts, caps, visors, and computer briefcases.
- **Amazon Merchandise:** featuring Rhododendron & Azalea Books, Garden Books, Garden Tools, and any other item sold on Amazon.
- **Participating Merchants:** featuring other merchants who agree to give referral fees to the ARS for each purchase when you mention ARSSore.org .

To access each division, just go to ARSSore.org and from there select what interests you. If you don't see an item, just use the Amazon search feature. Amazon sells just about everything. You get the same low Amazon prices from the ARS store, but by using it the ARS gets a fee for referring you. As long as you go to Amazon from ARSSore.org before making a purchase, the ARS gets a referral fee.

For example, from the ARSSore.org home page, if you click on any of the buttons except for the logo merchandise or other merchants, you will be in Amazon. Just select what you want and then select "Add to Shopping Cart." Then continue shopping. When you are done, select "Shopping Cart" to review what you have selected. When verify it you want its contents, click on "Proceed to Checkout" to complete the transaction which will prompt for the shipping address, shipping method, payment method, and provide you a final review before you are asked to complete the transaction.

ARSSore.org has the Main Store, a Canadian Store and a European Store. Canadians and Europeans can use the Main Store which uses Amazon.com, but the shipping can be expensive. The Canadian Store uses Amazon.ca, a Canadian affiliate, which carries many of the same things. If Amazon.ca has the item, the shipping within Canada will probably cost less. The European Store uses Amazon stores in the UK, Germany, France, Spain and Italy which can offer lower cost shipping within Europe. Do not go to the other Amazon stores directly from Amazon.com. If you do, your purchase will not qualify for a referral fee. Go to ARSSore.org first and use links from there.

Society News

ARSSStore.org - The New ARS Online Store, continued

All purchases made after entering ARSSStore.org and using links on ARSSStore.org will be eligible for referral fees to the ARS. Once you enter Amazon from ARSSStore.org, the connection may time out after several hours of no activity, so make sure you always enter Amazon from ARSSStore.org.

You may wonder if people who are not members of the ARS may use ARSSStore.org. Yes, most certainly! The objective of creating the ARSSStore website is to raise money for the ARS. The more money we raise, the better it is for the ARS. Invite all of your friends to use it. There are lower resolution illustrated links (ARSSStore.org/about2.php) that you can use in forwarded emails, as well as higher resolution illustrated links more suitable for printed material (ARSSStore.org/about3.php) that you can use in newsletters and other printed media. Invite your favorite nurseries to add links to **ARSSStore.org**.

A natural question is actually how much does the ARS receive on purchases. Every ARSSStore.org purchase results in a contribution directly to the ARS at no additional cost. The referral rate we receive starts at 4%. If a total of seven or more items are purchased from Amazon in a month, the rate received is 6% or more. Typically, our rate will likely be between 6% and 6.5%. It is 17% on ARS Logo Merchandise.

In summary, at ARSSStore.org, every purchase you make results in a contribution to the ARS at no additional cost either to you or to the ARS.

Steve Henning is the District 8 Director, a member of the Valley Forge chapter and the developer of ARSSStore.org.



ARSSStore.org

*Where every purchase benefits the
American Rhododendron Society*

Society News

District 2 to Host Fall 2014 ARS Conference “Fall into Rhodies”

ARS District 2 will host the 2014 Western Regional Conference in Everett, WA, Sept. 26–28, and invites members and their guests from up and down the West Coast and beyond to “Fall into Rhodies” as the theme of their conference suggests.

Members of District 2 take pride in being able to grow an astounding number of species and hybrids in their rhododendron-friendly Puget Sound climate and are anxious to share what they have learned.

The Board will meet on Friday, the plant sale will begin Friday afternoon, and Friday night dinner will be “on-your-own.” The conference opening ceremony will be Friday evening. There will be a full schedule of speakers on various subjects Saturday morning and early afternoon. On Sunday morning there will be an Executive Director’s Forum discussion and the Hybridizer’s Roundtable. Other events include a photo contest, raffle, silent auction and Saturday night banquet. Maps will be available to help attendees find the many rhododendron gardens in the area and other tourist sites.

The venue for the conference is the Holiday Inn in Everett, WA, where the 2009 spring convention was held.

District 2 includes Cascade, Komo Kulshan, Pilchuck, Seattle and Whidbey Island chapters. More information on the conference will be forthcoming in the Journal and on the ARS website.

Research Foundation Update

The Research Foundation of the American Rhododendron Society (ARS) announces changes in its Board of Trustees and Treasurer.

At its meeting on October 4, 2013, in Halifax, Nova Scotia, the Board of Directors of the ARS approved the appointment of Perc (Percival) Moser, as Trustee of the Research Foundation for the unexpired term of Jean Beaudry ending May 2015. He will serve as Treasurer of the Foundation. Perc is a long standing member of the ARS and has a banking and investment background. Jean has resigned as Treasurer and Trustee.

With this appointment the Board of Trustees will be constituted as follows:

1. Karel F. Bernady, Chairman, for term ending May 2014
2. Mike Stewart, for term ending May 2014
3. Perc (Percival) Moser, Treasurer of the Research Foundation, for the term ending May 2015
4. Harold Greer, for term ending May 2015
5. Harold Sweetman, Chairman of the Research Committee, for term ending May 2016
6. H.C. (Bud) Gehnrich, for term ending May 2016
7. Bruce Feller, President of ARS, *ex officio*, for term ending 2015

We welcome to the Board our new member and Treasurer. The Trustees thank Jean for her service to the Foundation.

Karel F. Bernady, Chairman, October 9, 2013

Society News

Tour of the Gardens, Parks, Arboretums and Nurseries of Germany, Monday 12th - Monday 19th May, 2014

Hosted by the Scottish Chapter & German Rhododendron Society

This is a rhododendron tour that you should definitely not miss, as its itinerary has been crafted by Hartwig Schepker, Director of Bremen Botanic Garden and Rhododendron Park, in liaison with the German Rhododendron Society, and with recommendations from Kenneth Cox. This way of approach means you will get to visit the “key” gardens, parks, arboretums and nurseries of Germany. But more than that, it is a “one-off” opportunity to meet members of the German Rhododendron Society, some of whom will lead the conducted tours around their gardens and nurseries, whilst Hartwig himself will take our group around Bremen Botanic Garden and Rhododendron Park, continental Europe’s largest collection of rhododendron species and hybrids.

From another perspective, Germany grows more rhododendrons than any other country in Europe; indeed, some of its nurseries are on a vast scale, and you will see the work of its key hybridisers who raise a staggering number of crosses to find cultivars that are both spectacular and will survive the rigorous German winters.

Brightwater Holidays, whose services the Scottish Chapter have used for all of its Conference and Garden Tours, will be arranging the accommodation and transport, and they have arranged to quote for two options. Firstly, for travel by coach from Scotland for the whole of the tour, including the ferry crossings from Newcastle-upon-Tyne to Amsterdam, and return; secondly, for the five days of the tour itself in Germany, when members will need to organise their own transportation arrangements to and from Oldenburg, near Bremen, Germany. This is a Tour to a rhodoholic’s paradise—grab yourself a place now!

Rhododendron Calendar

- 2014** International Vireya Seminar, Island of Hawaii, HI, Feb. 21–22.
- 2014** ARS Annual Convention, Cleveland, OH, May 16–18. Board Meeting.
- 2014** Scottish Chapter & German Rhododendron Society Tour of Gardens, Parks, Arboretums and Nurseries of Germany, May 12–19.
- 2014** ARS Western Regional Conference, District 2, Everett, WA. Sept. 26–28.
- 2014** New Zealand Rhododendron Association International Conference, Dunedin, NZ, Oct. 20–25.
- 2015** ARS Annual Convention, 70th Anniversary, Sidney, British Columbia, Canada. May 6–10.
- 2016** ARS/Azalea Society of America Annual Convention, Williamsburg, VA, April 20–24. Board meeting.

Society News

Summary of ARS Board of Directors Meeting, Oct. 4, 2013

There were several topics discussed at the October Board meeting. Complete notes are available on the ARS website. Key highlights include:

CERTIFICATION OF MEETING MINUTES: Motion: Unanimous. Note that the term for the new treasurer (**Sam Burd**) begins in 2014.

PAST PRESIDENT/FUND RAISING COMMITTEE: **Don Smart** provided brief update on the recently reinvigorated fund raising committee. The committee is currently working on getting the booklet "How to identify rhododendron and azalea problems" updated and available at a reasonable cost to members. **Laura Grant** will be assisting the ad hoc committee made up of the following members: **Bob Weissman** (chair), **Glen Jamieson**, **Bob MacIntyre**, **Dave Collier**, and **Laura Grant**.

TREASURER: General and Life Membership funds change related to investment and use (POB 2.2.4.5). Motion: Unanimous. New language: Life membership dues shall be placed in a separate fund and invested to provide income for supporting cost of life memberships. The following spending formula will be used: 3 percent times the three year final market value of the Life Fund account (as of August 31 of each year). This amount shall annually be transferred to the General Fund.

Bill Mangels asked for input on Endowment Fund management and discussed potential ways to improve year-end funding processes suspending POB 12.4.1 and resulting in a one-year increase of approximately \$4,000 to the General Fund. Motion: Unanimous.

DISTRICT DISCUSSIONS: Future Board meetings to be held prior to the start of the convention/ conference to allow Board members to participate. Motion: Unanimous.

District 9 – Don Hyatt reported on the 2016 ARS and Azalea Society of America Convention. The costs will workout to be approximately \$119 per night (includes some food) and will be extended two days before and after the conference. Their goal is to have **great plants for great people at great prices**. The convention should be very interesting with the historic surrounds and attractive azaleas and dogwoods.

COMMITTEE ACTIONS:

Budget and Finance – Dave Collier reminded members of the need to get budget information by the first of March.

Bylaws – Fred Whitney lead the group through several POB changes:

2.2.4.9 – Potential 9th membership class. This subject was TABLED pending more work.

2.2.4.8 Student Membership. Motion to accept the clarified wording below; Unanimous:

2.2.4.8 STUDENT Membership (individuals under 25 years of age)

Benefits: All benefits accorded by a Chapter to its members, except hard copy of Journal.

Dues: \$10 with \$5 to Chapter.

Society News

5.9 Conflict of Interest. Motion: New policy outlines process and provides a certification form. Form distributed to Directors, available in meeting notes. Results: Unanimous.

5.10 Anti-Harassment and Discrimination: Motion: To accept rewritten POB 5.10 Anti-Harassment and Discrimination. Results: Unanimous.

5.10 Anti-Harassment and Discrimination: The ARS is committed to providing a work/interaction environment that is free of discrimination and unlawful harassment based on protected status. The ARS expects participants in meetings and other interactions with/between members to be accomplished in a professional, businesslike manner. Harassment or discrimination due to race, color, religious belief, sex, sexual orientation, marital status, national origin, ancestry, age, disability, veteran status or any other legally protected characteristic is strictly prohibited. Such harassment and discrimination is unacceptable by, toward, or between any members of the ARS.

5.10.1 Sexual Harassment: As an example, sexual harassment (both overt and subtle) is a form of member misconduct that is demeaning to another member, undermines the integrity of the organization, and is strictly prohibited. Actions of this category include, but are not limited to: sexual advances, verbal or physical conduct of a sexual nature, requests for sexual favors or subtle forms of behavior, such as offensive posters, e-mails, cartoons, caricatures, comments, pranks and jokes which (1) interfere with performance of Society duties, (2) create an intimidating, hostile, or offensive working relationship, (3) influence or tend to affect the working conditions, responsibilities, duties or other aspects of the Society's functions, or (4) are an explicit or implicit condition of an individual's membership.

5.10.2 Any member of the ARS who becomes aware of instance of the above behavior is required to promptly notify the President for consultative action by the Executive Committee in dealing with the occurrence.

5.10.3 Action by the Executive Committee will be: ascertain the facts of the infraction, conduct interviews with the parties, and attempt resolution of the situation.

5.10.4 Unresolvable outcome of the infraction may ultimately result in requesting the resignation from membership of the party(ies).

5.10.5 Confidential Communications. Most of our members use electronic mail providers who are public in nature, such as yahoo, comcast, gmail, hotmail, AOL, etc. There are thousands of these providers. Mail created or exchanged using these systems is immediately scanned for content. Even electronic mail systems that charge a premium may disclose data after a short period of time (after 180 days electronic mail loses its status as a protected communication as described under the Electronic Communications Protection Act) that can be detrimental to the Society and members. Occasionally, there are communications within the ARS that should be confidential. However, electronic mail is far from confidential. Inappropriate electronic mail content can lead to charges of harassment, or other legal actions related to libel, slander, and defamation. Members are encouraged to minimize the use of identifying information in their electronic mail that might lead to such problems.

5.11 Whistleblower Procedures: Motion: Accept as written; Results: Unanimous.

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5.11 Whistleblower Procedure: Should a situation arise which a member envisions as inappropriate behavior or detrimental to the functioning of the ARS, they are encouraged to bring this to the attention of a member of the Executive Committee. The Executive Committee, as a body, shall determine the facts of the situation WITHOUT recrimination to the individual bringing the item to their attention and pursue resolution per the process outlined in POB 5.10.2-4.

10.0 Records Management. The 990 form for non-profit organizations also requires that records management policies be spelled out. This policy is preliminary and interim, however can be used throughout the Society. MOTION: Accept 10.0 as written; Results: Unanimous.

10.0 Records of Office

10.1 Point of Contact and Scope: The administration of records falls under “general business activities” of the Executive Director (ref. POB 8.2.2, and Bylaws: Art V, Sec 1). The Executive Director (ED) serves as a point of contact for the Society for all issues related to records. This includes requirements related to document schedules and destruction, as well as, protecting sensitive documents from disclosure (such as those protected under the Oregon Identity Theft Protection Act).

10.2 Policy and Guidance: The ED is responsible for providing and maintaining policies related to records management, and is responsible for managing records in the central records collection located at the ED’s office. The ED is not responsible for filing or managing all records produced throughout the Society, but is expected to provide guidance to the Districts, Chapters, and members regarding legal recordkeeping requirements. The ED may request the assistance of an *ad hoc* committee for the development of policy or procedures as needed.

10.3 Records Schedule: Generally the ARS will follow the Oregon Revised Statutes 65 and Oregon record retention guidelines (see http://www.oregon.gov/osp/SFM/docs/lepc/oregon_record_retention_guidelines.pdf). Record retention guidelines for record types typical to the ARS have been extracted from these guidelines and appear in Appendix 1.

10.3.1 If members have questions regarding retention guidelines for records not described in Appendix 1, they should look for records that are similar to those described in ORS 65 before contacting the ED.

10.4 Records Maintenance:

The ED maintains several records including: membership, newsletters, Society-level awards, and [ED to complete]. District Directors and Chapters maintain other types of records specific to their Districts and Chapters. Some offices have records that are related to gardens, partnership agreements, employment, volunteers, etc. that may require special handling and protection to avoid identify theft and misuse as described under the new Oregon Identity Theft Protection Act. All offices must review their records and determine if the information captured might lead back to an individual’s bank account or contain personal information (such as name, address, phone, credit card number, etc.). Check www.cbs.state.or.us/dfcs/identity_theft/safeguard_data.html for additional information on the Act and actions required by the Act.

10.4.1 Some of these records must be maintained (for tax and legal purposes),

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while other records might be only beneficial to maintain (such as show schedules and results, topics and programs presented, etc.). The Oregon retention guidelines will provide guidelines regarding what records to retain and how long.

10.4.2 Chapters that file for dissolution should send their financial records to the District Director who will maintain them for the required retention period when the records can be destroyed.

Journal. **Fred Whitney** was asked to follow up on the appropriate language required for the POB and bring it back at the next meeting. Glen will work with the new membership chair **Cathy Bird** on the electronic journal ideas. Glen was asked to provide recommendations to **Bruce Feller** on the Convention advertising space and make a presentation at the next Board meeting. The start date of any new processes would be the Spring, 2015, convention. There was also a motion to increase the number of color pages to 36 at a cost of approximately \$1328 (or less) this fiscal year; Results: approved, 1 abstained.

Fund Raising – Don Smart and Harold Greer working to make an updated version of “Rhododendron Basics Growing Healthy Plants” available.

Membership - Cathy Bird, new membership committee lead, has been asked to sort out the membership options which includes potential discount for members opting for an electronic journal only option.

Online Store Ad hoc Committee-Steve Henning reported that the online site would not be directly selling items but will serve as a coordination point for connecting with other and glean a commission on sales. He is looking for suppliers that might be interested as there could be a wide variety of sources. Also included two motions: For the Online Store to develop a relationship with Amazon.com; Results: unanimous with 1 abstention. Motion to allow use of the ARS logo and name to sell logo merchandise; all proceeds would come back 100 percent to the ARS. Result: unanimous. **Richard Fairfield** volunteered as a secondary administrator.

Research –Motion: to accept Perc Moser as the new trustee and Treasurer replacing **Jean Baudry**; Result: unanimous.

Website Enhancements –Motion to remove the searchable email application on the public website. Results: unanimous. **Steve Henning** volunteered to help develop a brief Society history section for the website. **Ann Mangels** volunteered to help.

Bob Weissman asked Board members to do an annual look at Chapter info and meeting information to make sure that it is correct (web address, contact information, meeting, etc.). Report back any corrections to **Laura Grant** and **Bob Weissman**. See www.rhododendron.org/chapterinfo.asp

OTHER AD HOC ASSIGNMENTS: Steve Henning summarized his report on a potential name change for the Society (*ad hoc* Chair lead **Mary Parker**). The Board was in total agreement that a name change is not recommended.

NOTE: Complete Bylaws and POB are available on the ARSOffice.org web site.

Kath Collier, ARS Secretary

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ARS/ARHS 2013 Eastern Fall Rhododendron & Garden Conference Wrap-up

Since this was the first time for District 12's Atlantic Chapter/the Atlantic Rhododendron & Horticulture Society to host an ARS conference, the organizing team is pleased that the innumerable hours and energy invested in budgeting for, organizing, and promoting the 2013 Eastern Fall Conference resulted in a successful event. Thanks to all ARS members who made the trip! We'd appreciate any feedback from those who came, and those who didn't, too! (What would have attracted you to come? What kept you back?)

Registration numbers

- 61 ARHS members (included 17 ARS District 12 Atlantic Chapter/ARHS members)
- 11 ARS members from District 12 Toronto and Niagara chapters
- 45 ARS members other than District 12 (42 US + 3 BC)
- 13 neither ARHS or ARS members (4 from NB)
- 130 Total**

Highlights

- Informal positive feedback. (We didn't do a formal evaluation)
- The three bus tours were full.
- ALL speakers were informative and engaging.
- A successful plant sale featured rhodos and azaleas hybridized in the Atlantic region.
- All members of the organizing team are still speaking to one another
- The private garden tour attracted both ARS conferees and local people. The opportunity to see fall gardens was attractive to locals.
- We made some new plant and garden friends and extended our contacts.

Sheila Stevenson



ARS Executive and Board of Directors at the ARS Eastern Fall Regional Conference, 2013: Back row: Steve Henning, Bob MacIntyre, Glen Jamieson, Bruce Feller, Ken Webb, Don Hyatt, Richard Fairfield, Don Smart, Tim Walsh, Dave Collier, Bill Mangels, Bob Weissman, Ann Mangels; Front Row: Laura Grant, Marianne Feller, Ann Gross, Fred Whitney, Kath Collier.

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2014 ARS Photo Contest

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 photos.

All photos submitted must have been taken between August 1, 2013, to July 31, 2014. Entries must be received by midnight PST, July 31, 2014. 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 or in gardens; 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.

Note from the Editor re the New JARS Format

The format of *JARS* has been constant for many years now with only 16 pages of colour. I feel that this has negatively affected the overall "look" of the *JARS*, and has increasingly provided problems for myself and Sonja with respect to both content and layout as it has required considerable material that did not have a colour component. With the widespread use now of digital cameras, good quality images are now both low cost and easily obtainable, with the result that most articles now submitted have colour images. In recent years, it has thus become more challenging to obtain solely black and white material. To address this situation, the Board has recently approved a modest printing cost increase to allow colour now on 36 pages per issue. As compensation, we have reduced each issue length to 58 pages. The benefits are that pictures can now be both bigger and nearer where they are referenced in the text, *JARS* is more colourful and the challenge of acquiring sufficient black and white articles has been reduced. We have also redesigned the front cover and Table of Contents pages, and will be including access info for the ARS online store in each issue.

We welcome feedback from ARS members on these changes, and any other suggestions members may have to improve both the content and look of *JARS*. Thanks.

Glen Jamieson, Editor

An Early History of *Vireya*, The People, Places & Plants of the Nineteenth Century - Part 2

Chris Callard
Colliers Wood, London, UK

(Continued from *Vireya Vine*, Fall 2013.)

Rhododendron brookeanum (now considered a subspecies of *R. javanicum*) followed (Callard 2013), collected by Lobb in Sarawak. This flowered for the first time in 1855 and was exhibited in July of that year where it “attracted great attention.” Lobb’s next introduction was *Rhododendron malayanum*, the species originally found by William Jack, collected on Mount Ophir in 1854. The last remaining introduction, from Sarawak in 1861, was named in his honour, *Rhododendron lobbii*; however, this name has since been reduced to synonymy under *R. longiflorum*.

These five Lobb introductions were supplemented by a further two *Vireya* species collected by Charles Curtis, who followed in Lobb’s footsteps as Veitch’s collector in the East Indies between 1878 and 1884. *Rhododendron teysmannii* (now another subspecies of *R. javanicum*) was sent from Sumatra and exhibited in March 1885. *Rhododendron multicolor*, also from Sumatra, flowered for the first time at the Veitch nursery on November 2nd 1883. Both the pale creamy-yellow flowered form of this species and the red form, (at that time given the species name *curtisii* in honour of its collector, but since reduced to synonymy), were introduced, although the latter no longer appears to be grown in cultivation today. It was the red form however that was the more widely used in the Veitch’s hybridizing work.

From this group of species, the Veitch nursery produced...

“by hybridizing and cross-breeding in a variety of ways, several hundred new forms, many, from a horticultural standpoint, exceed the original species in brilliant and varied colours, large size of truss and individual blooms, compact habit of growth, and the ease with which they can be cultivated”.

Indeed, no time was lost in attempting to breed from the new arrivals—the first two species received from Lobb were crossed as early as 1850, the beginning of a whole range of so-called “javanico-jasminiflorum” hybrids. Veitch states,

“The first hybrid raised was named Princess Royal, the product of a cross between *R. jasminiflorum* (white) and *R. javanicum* (yellow), and the result is remarkable. The flowers of Princess Royal show no trace of yellow, but are of a delicate pink or rose colour. Another hybrid produced later from the

same cross, named *Jasminiflorum Carminatum*, resembles Princess Royal in all but colour, which approaches crimson.”

The man behind many of these cultivars was George Taylor, the nursery’s principal hybridist, for whom *Rhododendron* ‘Taylori’ is named. When Taylor retired, his position was filled by John Heal. According to Veitch,

“Heal’s great success was achieved when varieties appeared with double flowers, which now constitute what is known as the *Rhododendron balsamaeflorum* hybrids. This section originated by impregnating the stigma of a flower which had one of the filaments slightly petaloid, the others being normal, with the pollen from its own anthers:- self-fertilization. From the seed capsule which resulted, about twenty plants were raised, and when these flowered they were found to produce double or semi-double blooms. The section received the name of *balsamaeflorum* from the resemblance the flowers bore to those of the double flowered Balsams.”

Possibly it was the unpredictable outcome of the crosses, made using a relatively restricted gene pool, that stimulated such a large breeding programme. Whatever the reason, it attracted the interest of the Reverend Professor George Henslow, the Royal Horticultural Society’s Professor of Botany, who studied the Veitch vireyas and their parentage records, presenting his results in a paper read to members of the Society on 12th May 1891v. Henslow’s genetic study was remarkable for the time, pre-dating the rediscovery and eventual acceptance of Mendel’s earlier, disregarded work on peas that later became the basis for the Mendelian Laws of Inheritance.

Despite the large number of hybrids raised by the Veitch nursery, the majority have been lost over the years since the nursery closed its doors in the early 1900s. Of the handful of cultivars still grown today, most, including *R.* ‘Pink Delight’, *R.* ‘Ne Plus Ultra’ and *R.* ‘Taylori’, are considered first-rate plants that compare very favourably with their more recent counterparts—welcome reminders of a pioneering nursery, whose introduction of two of the most outstanding *Vireya* species into cultivation in 1845, did so much to promote this group of plants.

It was in 1848 that Blume’s genus *Vireya* was finally, and firmly, rejected. John Lindley, then Vice-Secretary of the Horticultural Society of London, writing in the Society’s Journal of 1848 vi, states:

“The four species now described belong to a supposed genus called *Vireya* by Blume, and distinguished from *rhododendron* by the seeds being extended at each end into a slender tail-like process. But this circumstance, the only one that is at all peculiar to the Malay *Rhododendrons*, disappears in *Vireya retusa*, whose seeds are shown by Dr. Horsfield’s figure of that plant to be in no respect different from those of *Rhododendron arboreum*. ... Hence we are led to infer that such circumstances are of no generic value, and therefore botanists have universally rejected the genus *vireya*.”

Interestingly, the so-called “tailed seeds” described by Blume are still considered

one of the principal defining characteristics of the *Vireya* group (Argent 2006).

Following this dismissal of the idea of a separate genus, the name *Vireya* continued to be used within *Rhododendron*, although its taxonomic rank has see-sawed over the years, starting with Clarke, in the Flora of British India (1882)vii, who first proposed a subgenus *Vireya*. More recently, Sleumer's classification of *Rhododendron* included section *Vireya* (1949, 1960, 1966) however in the latest revision of *Vireya* by Dr. George Argent of the Royal Botanic Garden Edinburgh, the taxonomic rank of the group has once again been raised to subgenus (2006).

The four new species Lindley was referring to whilst rejecting Blume's genus *Vireya*, had been brought to him by Hugh Low (later Sir Hugh) in 1847 as dried material collected in Sarawak, Borneo; namely *Rhododendron brookeanum*, *R. gracile*, *R. verticillatum* and *R. longiflorum* (the first two now both considered to be subspecies of *R. javanicum*). Low had originally been sent to Singapore by his father, Hugh Low Sr., from where he was expected to mount expeditions to the various islands in the surrounding area, particularly Borneo, to collect plants and seed to be sent back to the family nursery business in Clapton, on the outskirts of east London. However, after just a few weeks botanizing in Singapore in late 1844, Low was invited to visit Kuching, Sarawak where he was introduced to Rajah James Brooke. The two men got on well and, over the next two years,

Brooke took Low on many of his expeditions into the interior of Sarawak, presenting him with the ideal opportunity to study and collect the local flora. Brooke had gained his title from the Sultan of Brunei several years earlier as reward for helping to suppress a revolt, and when the Sultan ceded Labuan (an island 5 miles (8km) off the north-west coast) to the British in 1847, Brooke was appointed Governor of Labuan and Consul General for Borneo. Brooke promptly offered Low the administrative position of Colonial Secretary of Labuan—an offer Low accepted despite the restrictions this would place on his botanical activities. After a short visit home to Britain, Low returned via Singapore (getting married to the Lieutenant-Governor of Singapore's daughter en route following a whirlwind romance) to take up his new role in Labuan. Low remained in Borneo, with only a few short breaks, for the next 28 years before being transferred to the Malay Peninsula to become the British Resident in Perak.

Low was fascinated with the rhododendrons he found, writing in his account of his early years in Sarawakviii that

“Perhaps the most gorgeous of the native plants are the various species of the genus *Rhododendron*, which here assume a peculiar form, being found epiphytal upon the trunks of trees, as in the genera of the tribe *Orchidaceae*. This habit, induced probably by the excessive moisture of the climate, is not, however, confined to the Ericaceous plants, but also prevails with the genera *Fagraea*, *Combretum*, and many others, usually terrestrial; the roots of the Rhododendrons, instead of being, as with the species, inhabitants of cold climates, small and fibrous, become large and fleshy, winding around the trunks of the forest trees, the most beautiful one is that which I have named in compliment to Mr. Brooke.

Its large heads of flowers are produced in the greatest abundance throughout the year: they much exceed in size that of any known species, frequently being formed of eighteen flowers, which are of all shades, from pale and rich yellow to a rich reddish salmon colour; in the sun, the flowers sparkle with a brilliancy resembling that of gold dust.”

Lindley was equally enthusiastic in his paper about these new rhododendrons, quoting liberally from Low’s descriptions and offering many insights of his own. He writes,

“It has been suggested to me that these fine plants will not prove cultivable, because they are epiphytes. I cannot concur in this opinion. The mode of managing epiphytes is now so well understood, in respect to Orchids and Bromelworts, that even if it should be necessary to treat the Malay Rhododendrons in the same manner, no serious difficulty can be apprehended. Blume tells us that the Java species are mostly “parasitical on trees”, that is to say epiphytes; and yet the *Rhododendron javanicum* is as manageable as *Rhododendron arboreum*. “The probability however is, that they do not require to be treated as epiphytes, and that, like orchids, they will grow better if committed judiciously to the earth... It is quite conceivable that they may have taken refuge in Borneo in the branches of trees, because of the impossibility of establishing themselves in the marshy soil of a country frequently under water for long periods at a time: and there is nothing in the nature of things to render it improbable that the saturated air may yield them all the food they require in a country visited by incessant thunderstorms, which deposit large stores of nitrogen upon every branch and every leaf. In this view of their nature, it may be conjectured that the Malay Rhododendrons will grow under the usual treatment of a damp stove, provided the soil in which they are potted is chiefly composed of loose decayed vegetable materials, such as half and wholly rotten leaves and sticks. It will also be important to consider whether in resting them, it will be requisite to do more than slightly lower their temperature, and diminish, without withholding, the moisture which they appear to require. From the statements of Mr Low, it would appear that *Rhododendron gracile* is perpetually in bloom, a circumstance that leads to the inference that a season of rest must be almost unknown to it.”

Much of what Lindley wrote all those years ago still holds true today—his suggestion of an open, free-draining but moisture retentive growing medium, containing a high proportion of organic matter, has been found to be perhaps the most important requirement for growing vireyas successfully. Lindley was also correct in predicting that vireyas will grow equally well in the ground or in a pot (given the correct growing medium), as they will when growing as epiphytes on the branches of trees. As for the requirement of a “damp stove”... suffice to say the majority of vireyas will be happy growing in a temperature range of 7 to 24 degrees C (45 to 75 degrees F), although a few degrees either side for a short period should not present a problem.

Low’s diplomatic role as Colonial Secretary required him to travel widely across the country which, fortunately, allowed him to still pursue his botanical interests to some extent. It was not long before Low conceived the idea of climbing Mount Kinabalu—perhaps lured by its distant presence, tantalisingly visible from the shores of Labuan. At 4,095 metres (13,435 feet), Kinabalu is one of the highest peaks in south east Asia, surpassed by few, most notably Puncak Jaya (formerly known as the Carstensz Pyramid) in the Indonesian Province of Papua (previously Irian Jaya) at 4,884 metres (16,023 feet).

To put Low's venture into perspective it should be noted that at the time of his expedition, there were only four mountains across the globe of greater height than Kinabalu, whose conquest had been documented.

According to Low's account of the expedition, he set out with his party in a native prahu from the shores of Labuan on February 21st, 1851, and, upon reaching the mainland, travelled up the Kimanis and Tuaran rivers until they reached Bawang on March 3rd. From there they continued overland towards the mountain, on the 6th, Low commenting

"We had several fine views of Kina Balow to the east of us today. It appears of an intense blue colour, and through the spy glass its indented top is perfectly bare of vegetation, appearing to be inaccessible buttresses with very narrow ridges running up the mountain ...",

adding, the following morning

"... notwithstanding the great fatigue of the preceding day determined to push on towards the great mountain, which now appeared only 2 or 3 miles distant."

It is on March 8th, by then on the lower slopes of the mountain, that Low first mentions a vireya –

"I picked up also ... a flower of a very fine Epiphytal *Rhododendron*. It had fallen from some plant above and was of amazing size, the limb being salmon coloured and the tube and centre yellow—a long search for the parent plant was not crowned with success."

From the description and relatively low altitude, it is probable this was *R. javanicum* ssp. *kinabaluense*. Several other species of *Rhododendron* are recorded during the ascent, including *R. lowii*, *R. buxifolium* and *R. ericoides* on March 10th—

"As rest was necessary for my men, and as it was impossible to proceed until our route should be first explored, I determined to devote this day to the collection of such seeds as might be in perfection, and examining the plants in the surrounding ravine. One of the most conspicuous was a large *Rhododendron*, with a trunk 9 inches in diameter, and with fine majestic foliage, crowned with tresses of flowers of a yellow or orange or salmon colour, for they varied. Another grew immediately behind my hut, on the edge of a basin into which a cascade rushed. This species had verticillate box shaped leaves, about 1 ½ inch long, was of rather slender habit, but covered with the most gorgeous flowers of a deep crimson colour. The comparatively large flowers of this species and its neat foliage render it the most brilliant I know of the genus. A less pretending, but not less interesting relative of this last, was one with linear leaves and red tubular flowers about an inch long, in all respects so precisely resembling some of the African Ericas, that I had some difficulty in persuading myself that it was not one; it formed a bush about 4 to 6 feet high."

Low set out the following morning for the final push to the summit, his journal for March 11th recording,

"Finally, after innumerable rests we reached the base of the one of the jagged peaks of the hill. The base of another, which appeared about two hundred feet higher and was situated about 500 yards to

our left, seemed inaccessible, but the rising mists from the valleys forced me to make for the nearest, which we attained about noon. Instead of something like a table land which I had expected to find, on the summit of this part of the mountain was a sharp ridge not 6 inches broad. On placing my breast against it and looking over the ridge, I gazed into a circular amphitheatre about 80 yards broad, the bottom of which, from its great depth and my position overhanging it, was undiscernable, though I imagine I could see down two thousand feet. All its sides were overhanging precipices, except that opposite my position, where I could see a sea line of clouds through a rent or opening in the rocks looking northwards. I found the jagged summits of the hill to consist of thin fragments of syenitic granite, with sharp water worn edges of most fantastic shapes, my position was between the bases of two of them – they were about 150 feet above my head. I could not long remain admiring the majestic scene around me, for the frightfully dangerous position we had passed in the ascent, made me quite alive to the rapid lifting of the clouds from the valleys which I knew would conceal everything from our view, and caused me, immediately after having finished a bottle of excellent Madeira to Her Majesty's health and that of my far distant friends, and deposited the bottle turned upside down with a paper in it in a conspicuous place, to read off the barometer and hastily begin my descent."

Low made two later attempts to climb Kinabalu, in April and July 1858, both with Spenser St. John, a kindred spirit and at that time the British Consul-General in Brunei (also appointed by James Brooke). Their first attempt ended in failure for Low who had to be carried down the mountain suffering from severe blisters on his feet; however, St. John continued to the summit area where he found Low's empty Madeira bottle from seven years earlier. Both men returned just three months later and together once again reached the summit area—St John climbing the smaller of the two peaks at the very summit. Neither man climbed the other, slightly higher peak a short distance away but nevertheless it seems most apt that the two peaks at the summit of Mount Kinabalu are today still known as Low's Peak and, four metres (13 feet) shorter at 4,091m (13,423 feet), St. John's Peak.

In between the two successful ascents of Kinabalu by Low, an attempt to climb the mountain was made by Thomas Lobb in 1856, under instruction from James Veitch. Veitch was keen to obtain specimens for his nursery of some of the many orchid and pitcher plant species, particularly the magnificent *Nepenthes rajah*, of which he had heard reports. The introduction of exotic new plants from these far flung lands was a highly competitive business, success doing much to enhance the reputation of a nursery (less so, the collector); bringing also a substantial financial benefit from the sale of these rarities, many exchanging hands for large sums. Lobb's plans, however, were thwarted by the local tribes-people, James H. Veitch, later writing in *Hortus Veitchii* that "Thomas Lobb, the most successful of all Eastern plant-hunters, also endeavoured to find the habitat of these plants (*Nepenthes rajah*) in 1856, and had actually reached the foot of the mountain on which they grew, but was prevented by the hostility and extortion of the natives from completing the ascent."

Reference

Callard, C. 2013. An Early History of Vireya, The People, Places & Plants of the Nineteenth Century -Part 1. *J. American Rhodo. Soc.* 67: 217-221.



Fig. 1. Flowers of the typical form of *Rhododendron dauricum*.



Fig. 2. Flowers with rich pink corolla, without mottling, with red anther filaments and pistil style.



Fig. 4. Flowers with white-pink corolla and pink anther filaments.

Flower Shape and Color Variation in *Rhododendron dauricum* L. from the Mountains of Southern Siberia (Russia)

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Photos by the author



Fig. 3. Flowers with pink corolla and pink anther filaments and pistil style.

Introduction

Rhododendron dauricum L. has the largest geographic range of all *Rhododendron* species found within the Asian part of Russia. This range in Russia stretches from Central Altai in the west to the western slopes of the Sikhote-Alin Mountains in the east, and from the Western Yangi Mountains (Republic of Yakutia) in the north to the southern Russian border with Mongolia, China, and Korea, where it extends further in those countries. *R. dauricum* is highly polymorphic in the form and growth type of its bush, leaf size, degree of deciduousness in winter (from completely deciduous to evergreen), flower size and color, and number of flower petals. During our spring fieldwork, we discovered some interesting forms of *R. dauricum* with variable flower color.

Flower color polymorphism in *R. dauricum* has been reported previously; forms with white and double flowers have been reported as well (Koropachinskiy and Vstovskaya 2002). However, major diversity of coloration was not described probably due to the difficulties in subjective perception and identification of colors.

Materials and Methods

R. dauricum belongs to subgenus *Rhododendron*, section *Rhododendron*, subsection *Rhodorastra* according to the classification of Hamberlain et al. (1996), and to subgenus



Fig. 5. Flowers with pink-white corolla and white anther filaments.



Fig. 6. Flowers with pinky-white corolla, pale-red anther filaments and red pistil style.



Fig. 7. Flowers with white corolla and white anther filaments.



Fig. 8. Flowers with light-lilac corolla and white anther filaments.

Rhododendron, series *Daurica* according to the classification used in the Russian botanical literature (Pojarkova 1952; Alexandrova 1975; Koropachinskiy and Vstovskaya 2002).

Material was collected in early June, 2005, on the slopes of the Baikalsky and Verkhneangarsky Mountain Ranges (Republic of Buryatia), and in early May, 2011 and 2012, on the slopes of the Terektinsky Mountain Range (Republic of Altai). Collected specimens were deposited in the herbarium of the Central Siberian Botanical Garden, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia (NS).

We used the following features in the descriptions of shape and coloration of flowers: flower bud coloration; number of petals; width of petals; coloration of corolla and its uniformity; presence or absence of mottling on upper petals, its color and intensity of coloration; and coloration of stamens and pistil style.

Coloration of corolla was determined using the color scale (Bondartsev A.S. 1954) only with fresh flowers that opened in the morning of the same day, since color is prone to fade under sunlight.

Results and Discussion

Rhododendron dauricum L. **Sp. Pl. (1753) 392.** Highly branched bush 0.5-2 m in height, with branches pointing upward. Young shoots are thin, usually arranged in a fascicle of several shoots at the end of a branch; rusty brown,

with short pubescence, densely covered with round sessile glandules. Old branches with grey bark. Leaves are (8) 12-33 mm in length and (6) 8-11 mm in width, light green when young, later dark green, softly leathery, covered with scale-like glandules that are rare on the top, very dense on the bottom. Flowerbuds singular, rarely in groups of 2-3 at the ends of shoots, with single, rarely two flowers. Pedicel 3-5 mm long, hidden in surrounding bud scales. Calyx 1.5-1.75 mm in diameter, green, completely scaly, with barely visible denticles. Corolla light pink, without mottled pattern, with slight violet shade, sometimes white (var. *albiflorum* Turcz.), externally hirsute, campanulate-infundibular, 14-20 (22) mm long and 25-30 (40) mm in diameter, subdivided along 2/3 into reverse-ovate or elongate-elliptical blunt lobes 8-15 mm long. Stamen number 10, equal in size to corolla, pistil style purple, longer than corolla, Ovary densely covered with glandular scales. Fruit is elongate-ovate capsula 8-10 (12) mm on pedicel 3.5- 7 mm long. Flowers from late April to early June. Fruits in July-August. Often has second flowering in August-September.

R. dauricum was lectotypified by D. Chamberlain in 2002, based on the icon of *Chamaecistus folio glabro, majusculae, amploflores roseo* in Amman, *Stirp. Rar. Ruth.*, Tab. 27, 1739. A typical plant of *R. dauricum* is shown in Fig. 1.



Fig. 9. Flowers with light-lilac-white corolla and white anther filaments.



Fig. 10. Flowers with lilac corolla, white anther filaments and lilac pistil style.



Fig. 11. Flowers with purple corolla, white anther filaments and red pistil style.

Observation of numerous populations of *R. dauricum* has shown that flower bud color varies from white to violet-carmine with all possible transitional shades between these extremes.

Corolla petals could be smooth or wrinkled, broad and overlapping or narrow non-overlapping. Sometimes, flower's pentactinal symmetry is violated, and one can observe in the same plant flowers with five, six, seven or even eight parts, while the number of stamens varies from 10 to 15. We observed one plant where all flowers had hexactinal symmetry (Fig. 2-11).

Petal coloration also varied from white to violet-carmine with all possible transitional shades. Coloration could be evenly distributed across petal surface, when flower center and petals are of the same color. Sometimes this uniformity is violated, in which case either petal edges or flower center have more intense coloration. Individuals, which have very intense coloration forming a central stripe along the petal's axis, have the most decorative appearance.



Fig. 12. Flowers mottled on all 5 petals of the corolla.



Fig. 13. Flowers mottled only on the upper petal of the corolla.

Mottling can be often found on the upper petal (or on three upper petals); note that the typical form lacks mottling. This mottling also has different intensity and coloration, which varies from yellowish-white to prune (Fig. 12-14). Finally, inner elements of the flower in *R. dauricum*—stamen and pistil style—also can be colored, varying from white to blood red stamens.

Therefore, different combinations of colors of different flower parts make *R. dauricum* highly variable, which provides a lot of possibilities during selection of decorative forms in nature to be vegetatively propagated and introduced into culture. The first naturalist who paid attention to highly decorative features

of *R. dauricum* was Peter Simon Pallas who recommended its use in culture in his article titled “On Siberian trees and bushes that can serve for decoration and propagation of groves and gardens in northern lands” (Pallas 1776). Unfortunately, *R. dauricum* is still very rare in Russian gardens and parks, although it has a long flowering season, produces a high number of flowers, is tolerant of low temperature and is easy to maintain.



Fig. 14. Flowers rich mottled on 3 upper petals of the corolla.

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Rhododendrons of the Year, 2014



'Red River'.
Photo by S. Bryson



'Molly Fordham'.
Photo by H. Greer.



'Frank Abbott'.
Photo by S. Perkins



'Bixby'.
Photo by J. Looye

Ray Smith
ARS Plant Awards Committee Chair
Glenwood, Maryland

NORTHEASTERN REGION

Elepidote Rhododendron: 'Red River' ('Leach's Mount Mitchell' (s) × 'Mars' × 'Fanfare'). A David Leach hybrid of a rare red maximum, inheriting its large, wavy margined, dark green leaves and late bloom, extending the blooming season into June; funnel-shaped flowers of strong purplish red, lighter in the center with a near white dorsal blotch and sparse greenish-yellow spotting held in a conical truss of 15-19 flowers; a vigorous, upright plant with an open growth habit, reaching about 6' in ten years; hardy to -20° F.

Lepidote Rhododendron: 'Molly Fordham' ('Balta' (s) × white flowered *R. minus* Carolinianum Group). Beautiful, rain-resistant trusses nearly cover the plant, blooming a little later than the PJM group; pale purplish-pink in bud, opening white with greenish-yellow spots on the dorsal lobe, with 7 saucer-shaped flowers in a flat truss; may have a slightly pink tone in a cold spring or a shady location; glossy dark green foliage on an upright and relatively compact plant, reaching 3-4' in ten years, growing nearly as wide as tall; hardy to -20° F; Ed Mezitt/Weston Nurseries hybrid, named for the wife of Al Fordham, a long-time horticulturalist at the Arnold Arboretum.

Deciduous Azalea: 'Frank Abbott' (Red flowered Mollis hybrid (s) × *R. prinophyllum*). Vivid purplish-red, spicy scented flowers in a flattened ball truss, blooming in midseason, appearing nearly red from a distance; a wide growing plant, robust and upright, maturing to 6 to 8 feet; the foliage often turns reddish orange before dropping in autumn, leaving clusters of silvery pointed buds visible on the tip of every branch throughout the winter; mildew resistant and hardy to -30° F; Ed Mezitt/Weston Nurseries hybrid from the 1960's named for hybridizer Frank Abbott of Bellows Falls, Vermont.

Evergreen Azalea: 'Bixby' [('Vuyk's Rosyred' or 'Vuyk's Scarlet' × *R. yedoense* var. *poukhanense*) open pollinated]. Openly funnel shaped, wavy-edged flowers of strong red cover this dense, slow growing cultivar, putting on an outstanding show; deep green summer foliage turns mahogany red in fall; a late midseason bloomer, hardy to -20° F; a compact, low, spreading plant perfect for small spaces, reaching 1-2' tall and twice as wide in 10 years; Ed Mezitt/Weston Nurseries hybrid.

MID ATLANTIC REGION



'Nestucca'. Photo by E. Philp.



'Kehr's White Ruffles'. Photo by D. Hyatt.



R. calendulaceum. Photo by H. Greer.



'Caitlin Marie'. Photo by D. Hyatt.

Elepidote Rhododendron: 'Nestucca' (*R. fortunei* × *R. yakushimanum*). Large, frilly 5" white flowers with greenish-brown spotting in throat, held in dome shaped trusses of 12-15 flowers; a compact, spreading plant habit with glossy, dark green foliage, with a tendency to produce abnormally narrow foliage; tolerates heat and sun, and hardy to -10° F; grows to 3' in ten years and blooms in midseason; hybridized by Francis Hanger, former Curator of the Royal Horticultural Society Garden at Wisley; seed sent to John Henny of Brooks, Oregon, one of the ARS' early presidents, and this seedling given to Cecil Smith of Newberg, Oregon.

Lepidote Rhododendron: 'Kehr's White Ruffles' ('Epoch' (s) × white-flowered *R. mucronulatum*). An early bloomer with openly funnel-shaped, single white flowers with a greenish dorsal blotch, held in a flat truss of 2 or 3 very wavy-edged flowers; has a dense growth habit, reaching 4' tall and twice as wide in 10 years; holds the semi-glossy, deep green leaves for 3 years; plant hardy to at least -15° F, although the buds may be a little less hardy; hybridized by Augie Kehr, of Hendersonville, North Carolina.

Deciduous Azalea: *Rhododendron calendulaceum*. One of the most spectacular native shrubs of the Appalachian Mountains, described by William Bartram in his book *Travels* as "certainly the most gay and brilliant flowering shrub yet known"; often called the Flame Azalea, it ranges from southern New York southward through the Appalachians to north Georgia, growing in open oak woods, on mountainsides and slopes, and along the stream banks; in late May and June, entire hillsides are covered with brilliant color, leading Bartram to say "we are alarmed with the apprehension of the hill being set on fire"; larger than most natives, the funnel shaped flowers, 1½-2½" across, occur in a wide range of colors from light lemon yellow through deeper yellow, to gold and orange, and orange-red to rich scarlet red, some with broad contrasting blotches; the long-lasting clusters of blossoms appear at the ends of the branches as the leaves are unfurling and are particularly attractive to Ruby-throated Hummingbirds; a naturally occurring tetraploid that does not hybridize easily with most of the other natives; difficult to propagate from cuttings, but very easy from seed; a well-branched, upright and spreading shrub or small tree growing to 6' in ten years, occasionally reaching as high as 15', and hardy to -20° F; French botanist Andre Michaux gets the credit for first describing *R. calendulaceum* in 1795; many years earlier, though, John Bartram and his son, William found them and sent specimens back to England; even earlier, in 1749, Cadwallader Colden mentioned finding them in southern New York.

Evergreen Azalea: 'Caitlin Marie' ['Elsie Lee' (s) × 'Satellite' (USDA)]. Heavy midseason bloomer has 2" double, vivid purplish-red flowers with a small, strong red dorsal spot and narrow greenish-white stripe outside along the central axis of the lobes; flowers with as many as 40 ruffled petals held in a ball-shaped truss; glossy yellow-green leaves on a plant of medium height, hardy to -10° F; hybridized by Joe Klimavicz of Vienna, Virginia, and named for his eldest daughter. (There are two evergreen azaleas named 'Satellite.' The parent here is the Glenn Dale hybrid.)



'Grace Seabrook'.
Photo by D. McKiver

SOUTHEASTERN REGION

Elepidote Rhododendron: 'Grace Seabrook' ("The Honourable Jean Marie de Montague" × *R. strigillosum*). A stunning early bright red with funnel-shaped flowers, currant red at the margin, shading to blood red at the center; one of the first elepidotes to bloom; dark green leaves with light indumentum set off the tight ball-shaped trusses; shows the influence of both parents, with the foliage coming from the seed parent, the indumentum and color from *R. strigillosum*; a well-branching plant growing to 4' in 10 years, hardy to -5° F; hybridized by C. S. Seabrook of Puyallup, Washington.



PJM Group.
Photo by H. Greer.

Lepidote Rhododendron: PJM Group (*R. minus* Carolinianum Group × *R. dauricum* Sempervirens Group). Group of plants that is cold hardy (-25° F) as well as heat and sun tolerant, upright grower, reaching 4-5' in ten years; small glossy green leaves turn bronzed-mahogany in the winter; early, wavy-edged, violet to lavender-purple flowers really glow against this dark winter foliage; numerous forms of this Ed Mezitt/Weston Nurseries hybrid are available.



R. prunifolium.
Photo by D. Hyatt.

Deciduous Azalea: *R. prunifolium*. The Plum Leaf Azalea is one of the last native azaleas to bloom, opening in late summer when the flower buds for the next season are already formed; funnel shaped flowers varying in color, primarily orange to vivid red, 2" across, held in clusters of 5-8, with very long stamens; the flowers attract hummingbirds; completely hairless, dark green oval leaves up to 5" long; a large plant, growing up to 15' tall and spreading 6-8' in the wild, usually smaller in cultivation; one of the easier native azaleas to propagate by cuttings; hardy perhaps as low as -15° F, certainly into zone 5; afternoon shade or a semi-shady woodland situation is best, the shade prolonging the flowers during hot summer months; the rarest eastern native azalea, first collected by R.M. Harper near Cuthbert, Georgia, in 1913; has a limited, vulnerable range in the wild, growing along the southern Alabama-Georgia border in the densely wooded ravines and steep stream banks of the Chattahoochee River Valley; in danger of extinction in the wild and listed as threatened by the state



'George Lindley Taber'.
Photo by D. Hyatt



'Consolini's Windmill'.
Photo by D. Hyatt



'Karin Seleger'. Photo
by H. Greer.



R. schlippenbachii.
Photo by H. Greer



'Rosebud'. Photo by
H. Greer.

of Georgia; perhaps the best natural stand is in Providence Canyon near Lumpkin, Georgia; easier to reach are the fine stands at Callaway Gardens in Pine Mountain, Georgia, which considers *R. prunifolium* its "floral emblem."

Evergreen Azalea: 'George Lindley Taber' (sport of 'Omorasaki'). Single white flowers, openly funnel-shaped and 3½" wide, flushed violet-red with a darker blotch; a midseason bloomer reaching 4-6' with an upright, spreading habit; hardier than often noted and known to grow into southern Pennsylvania and New Jersey; sport of the Southern Indian hybrid 'Omorasaki' selected by H. H. Hume; sometimes known simply as 'George Taber.'

GREAT LAKES REGION

Elepidote Rhododendron: 'Consolini's Windmill' (unknown). Vivid purple-red buds open as wavy-edged purple-red flowers with a longitudinal white band along each lobe blending into a white throat with a speckled yellow-green flare on the dorsal lobe; slightly scented, open funnel-shaped flowers held in a ball-shaped truss of 13 in late midseason; shiny dark green foliage on a plant hardy to -15° F and reaching 5' x 5' in ten years; hybridized by Tony Consolini, for many years the head gardener at Charles Owen Dexter's Heritage Plantation in Sandwich, Massachusetts.

Lepidote Rhododendron: 'Karin Seleger' (*R. impeditum* × *R. dauricum*). A compact, early midseason bloomer with broadly funnel-shaped, wavy-edged, vivid purple flowers held in a ball- or domed-shaped truss of 5-7; a slow grower, spreading wider than tall, reaching 2-3' x 3' in ten years; has a dense growth habit, usually covered with flowers in season; small dark green leaves turning bronze in fall and retained through winter; while very cold hardy (to -25° F), may have problems with the heat of summer in warmer regions; hybridized by Dr. Joseph Brueckner of Mississauga, Ontario, and named for a friend.

Deciduous Azalea: *Rhododendron schlippenbachii*. One of the most common shrubs in Korea, often called the Royal Azalea; the natural range extends from Korea into nearby parts of Manchuria and Russia; the dominant undergrowth plant in many parts of Korea often turns vast areas into waves of pink in the spring; named for a Russian naval officer, Baron A. von Schlippenbach, who introduced the plant to the west in 1854; early midseason bloomer, with the funnel-shaped flowers opening to cover the plant as the leaves emerge; large fragrant flowers held in clusters of 3-6 in colors ranging from white to pale pink to rose-pink, with reddish spots on the upper lobes; does its best in light to open shade, protected from the afternoon summer sun,

too much of which may cause the leaves to become sunburned; a highlight in the autumn garden with its dark green leaves turning a mix of yellow, orange, and red; a slow growing, upright and spreading plant, reaching 5' to 7' tall in ten years; the multi-stemmed branching results in a rounded plant at maturity, when the height can reach as much as 15'; hardy to -25° F and does better in less acidic soils than most azaleas; the widely available selection 'Sid's Royal Pink' has deeper pink flowers with a more compact growth form.

Evergreen Azalea: 'Rosebud' ('Louise Gable' × 'Caroline Gable'). This Joe Gable hybrid derives its name from the opening buds' resemblance to rosebuds; deep purplish pink, double hose-in-hose flowers in late midseason; a slow grower, with a dense, spreading habit, reaching 4' in 25 years; glossy green leaves and hardy to -10°F; received the Award of Merit in 1972 and the First Class Certificate in 1975 from the Royal Horticultural Society; often confused with the taller and faster growing 'Lorna,' a Gable hybrid from the same cross. George W. Ring of Fairfax, Virginia, the Chairman of the Gable Study Group, noted in the Journal American Rhododendron Society that "The true 'Rosebud' . . . is slower growing [and] has tighter flowers with more red color."

SOUTH CENTRAL REGION

Elepidote Rhododendron: *Rhododendron metternichii*. A midseason bloomer similar to *R. degronianum*, but generally larger; native to the mountains of central and southern Japan; a midseason bloomer with light pink to deep pink, and occasionally white, flowers, sometimes lined with deeper pink inside, held 12-14 in a truss; a compact and mounding plant, beautiful throughout the year, with a mature height up to 8' tall; the attractive glossy foliage usually has a thick reddish-brown indumentum on the underside; hardy to -15° F and heat-tolerant; named in honor of Prince Metternich, Austrian foreign minister from 1809 until 1848, a key figure at the Congress of Vienna and a dominant player in European politics; one of many species to have its name changed by the taxonomists and now properly known as *R. degronianum* ssp. *Heptamerum*.

Lepidote Rhododendron: 'Weston's Aglo' (*R. minus*, compact form (s) × pink-flowered *R. dauricum* hybrid). Sister seedling of 'Olga Mezitt,' sharing many fine qualities with its sibling; early blooming and sun-tolerant, having funnel-shaped light pink flowers with wavy edges and a reddish throat held in trusses of 8 blooms; glossy aromatic foliage turns from bright green to bronze in winter; very hardy (-25° F) and compact plant, upright growing to 4' x 3' in ten years; an Ed Mezitt/Weston Nurseries hybrid, sometimes listed simply as 'Aglo.'



R. metternichii.
Photo by D. Hyatt.



'Weston's Aglo'.
Photo by H. Kline.



'White Lights'.
Photo by H. Greer.



'Ben Morrison'.
Photo by D. Hyatt



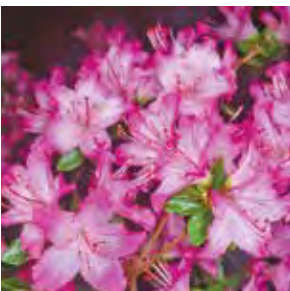
'Fire Rim'. Photo by D. Hyatt.



'Ginny Gee'. Photo by R. Knight.



'Homebush'. Photo by D. Hyatt.



'Komo Kulshan'. Photo by H. Greer.

Deciduous Azalea: 'White Lights' (parentage unknown). Extremely floriferous and extremely hardy (bud hardy to -35°F); light purplish-pink flower buds open to a funnel-shaped, pale purplish-pink flower fading to white with a light orange-yellow blotch; the fragrant clusters of late midseason flowers cover the plant before the leaves emerge; has a rounded, well-branched habit, maturing at about 5' with an equal spread; good fall color, with the narrow, rich green leaves turning to reds and purples in the fall; registered with parentage unknown, but said to be a hybrid of *Rhododendron prinophyllum* and an unnamed white-flowering Exbury hybrid; introduced in 1984 as part of the University of Minnesota Northern Lights series developed under the guidance of Harold Pellett; while bred for extreme cold hardiness, does well in many different climates.

Evergreen Azalea: 'Ben Morrison' (unknown parentage). A real attention-getter with deep yellowish-pink funnel-shaped flowers speckled with deep red, and irregular white margins along the wavy edges becoming more pronounced as the plant matures; a mid to late midseason bloomer and an upright grower, taller than wide, reaching 5' in ten years; hardy to -10°F ; possible parentage often discussed, but nothing is certain; hybridized by Glenn Dale hybridizer and the first director of the National Arboretum, Benjamin Y. Morrison; selected by John L. Creech to honor Morrison after his death.

NORTHWESTERN REGION

Lepidote Rhododendron: 'Fire Rim' ('Nancy Evans' (s) \times 'Pink Petticoats'). An early midseason bloomer with openly funnel-shaped, frilly-edged, light yellow flowers with a purplish-red edge and spotting on the dorsal lobe; large ball-shaped trusses of about 20 flowers on a low-growing, compact plant spreading to 3-4' in ten years, somewhat wider than tall; large olive green wavy-edged leaves; probably hardy to 0°F , perhaps even a little below; hybridized by Jim Barlup of Bellevue, Washington.

Lepidote Rhododendron: 'Ginny Gee' [*R. keiskei* (prostrate form) \times *R. racemosum* (Forrest 19404)]. Two-toned pink and white flowers, changing in color daily as they fade to white, totally cover this dense, compact plant in the early spring; sun, heat, and drought tolerant with small dark green leaves turning a lovely dark maroon in the winter; dwarf, growing to 2' in ten years, hardy to -10°F ; does well throughout the United States and Canada; Warren Berg hybrid, recipient of the ARS Superior Plant Award (Northwest) in 1985.

Deciduous Azalea: 'Homebush' (unknown). Very popular Anthony Waterer/Knap Hill hybrid; semi-double, deep rose pink blooms with pointed petals in a tight ball-shaped truss of up to 16

open, funnel-shaped flowers; has an open, upright growth habit and holds the color of its late midseason blooms well in the sun; hardy to -20° F; growing to 6' in 10 years with attractive fall color; Award of Merit in 1950 from the RHS.

Evergreen Azalea: 'Komo Kulshan' (*R. kiusianum* selection). Midseason picotee flowers, vivid purplish red funnel-shaped with a white throat; a compact, well-branched plant growing to 2-3' x 3' in ten years and hardy to -15° F; selected from a group of *R. kiusianum* seedlings by Greer Gardens of Eugene, Oregon, and often suspected of being a hybrid; the name comes from the Lummi Indian name for Mount Baker in the Cascade Range near Bellingham, Washington.



'Horizon Monarch'.
Photo by H. Greer.

SOUTHWESTERN REGION

Elepidote Rhododendron: 'Horizon Monarch' ('Nancy Evans' × 'Point Defiance'). Scarlet buds open to large funnel-shaped, wavy-edged flowers of pale greenish-yellow to light yellow with a small, vivid red flare; large ball-shaped trusses of 15 flowers held on an upright but compact plant with a spreading growth habit and large, leathery, deep green leaves reaching 6' x 6' in 10 years; a midseason bloomer that may be hardy as low as zero and needs good drainage like most yellows; hybridized by Dr. Ned Brockenbrough of Seattle.



R. burmanicum.
Photo by M. McCullough

Lepidote Rhododendron: *R. burmanicum*. Species found on Mount Victoria in the southern Chin Hills range of the mountains of southwest Burma; grows on the margins of the forest around 9,000 feet; not widely known until collected by Frank Kingdon-Ward on one of his last expeditions in 1956; funnel-shaped flowers, 1-2" long, often sweetly scented, held in a truss of 4-6; has a variety of colors in the yellow spectrum with the best having masses of strong clear yellow flowers; an early midseason bloomer that flowers at a young age; dense deep green foliage with lance-shaped, dark or bright green leaves, up to 3" long, and scaly on both sides, with the young growth having a heavy indumentum; smooth and peeling red-brown bark on a compact grower that will grow in sun to semi-shade, but tends to get straggly in too much shade; has an open and upright habit, normally growing to 4-6' in 10 years; some will grow as large as 8' as they mature; one of the toughest of the Maddenia, heat and drought tolerant once established; an excellent quality plant for milder climates, free-blooming, attractive year round, and easily grown; the hardiness seems to be somewhat in question, with estimates between 0° F and 15° F; does well in a cool greenhouse in areas too cold for good performance outdoors.



'Cecile'.
Photo by J. Willhite.

Deciduous Azalea: 'Cecile' (unknown). Deep pink buds open to large carmine flowers with a saffron yellow blotch, appearing



'Caroline Gable'.
Photo by H. Greer.

salmon pink at a distance; tubular, funnel-shaped flowers, 3”-5” across held in a ball-shaped truss of 8-11 flowers; a mid to late midseason vigorous grower with an upright, open habit, reaching 9’ in ten years; hardy to -15° F; Rothschild/Knap Hill hybrid.

Evergreen Azalea: ‘Caroline Gable’ (*R. yedoense* var. *poukhanense* × ‘Hexe’ (s) × *R. yedoense* var. *poukhanense* × *R. kaempferi*). Hybridizer Joe Gable of Stewartstown, Pennsylvania, named this free-flowering late midseason bloomer for his daughter Caroline; single hose-in-hose, purplish-pink flowers with a darker blotch, blooms more fully in the sun; upright, spreading plant reaching 4’ in 10 years; hardy to -15° F with brick red fall foliage holding on until spring.

VIREYA/SWISHER AWARD

‘Haloed Gold’ (*R. christiana* × ‘Tropic Glow’). An excellent bloomer with large, rippled deep-yellow flowers edged with a vivid reddish orange band held 5-7 in a truss; vigorous, well-branched, upright growing lepidote with glossy green leaves; sun tolerant and compact, reaching 6’ and flowering several times a year; a product of New Zealand hybridizer Oswald “Os” Blumhardt.



‘Haloed Gold’. Photo by S. Bertelmann.

The ARS Plant Awards Committee has selected the Rhododendron of the Year awards for 2014. Because of climate differences, the committee selects plants for seven regions: an elpidote, a lepidote, a deciduous azalea and an evergreen azalea. The Vireya/Swisher Award is given to a vireya rhododendron.

The first criterion is that the plant performs well in the region, even for a novice. The plant has to exhibit good form, foliage and flowers, to prove itself cold and heat hardy for the region, and to show resistance to pests and diseases. In addition, the plant must be available in the nursery trade and the name registered by the International Cultivar Registration Authority.

Early Chapter Shows

Chapter shows from April to early May, 2014. No admission charge unless noted.

COWICHAN VALLEY - Cowichan Valley Garden Fair and Plant Sale; 10 a.m. to 2 p.m., Sat., May 3; main hall at the Cowichan Exhibition Site. See www.CowichanValleyGardenFair.com for registration, booth rentals and Fair info. In addition to thousands of unique and attractive rhodos and plants from more than 16 growers there will be a large raffle and truss show. Do not miss this very special event.

EUREKA - Rhododendron Show and Plant Sale; 10 a.m. to 3 p.m., Sat., April 26, and 10 a.m. to 3 p.m., Sun. April 27; entries received 5 to 8:30 p.m. Fri., April 25, and 7:30 to 9 a.m. Sat. April 26; St Bernards School, Miles Hall, 115 Henderson St., Eureka, CA; Mary Marking.

KOMO KULSHAN - Rhododendron Flower Show; 10 a.m. to 4 p.m., Sat., April 26; Christianson's Nursery, 15806 Best Rd., Mount Vernon, WA; Shirley Rock.

LEHIGH VALLEY - Lehigh Valley Chapter Plant Sale; 9 a.m. to 2 p.m., Sat., May 10; Bethlehem Vocational Technical School in Bethlehem, PA.

MOUNT ARROWSMITH - Truss Show and Plant Sale; 10 a.m. to 2 p.m., Sat., April 26; Curling Rink in Parksville, BC.

NANAIMO - The Nanaimo Rhododendron Society Annual Judging Show and Multi Vendor Sale; May 10, Mother's Day weekend; Centennial Building, Beban Park, Nanaimo.

NEW YORK - Flower Show; 2:15 to 4 p.m., Sat., April 19; Planting Fields Arboretum, Oyster Bay, NY. No fee for Show, but there is an admission fee to the Arboretum for non-members. Bruce Feller.

NORTH ISLAND - Annual NIRS Rhodo Sale and Show; 10 a.m. to 1 p.m., Sun., May 4; First Nations Hall, 3320 Comox Road, Comox, BC. No admission fee. In addition to rhododendrons, there will be a selection of companion plants and a large truss display.

Annual NIRS Mother's Day Garden Tour, Sun, May 11; features six Comox and Courtenay gardens. Each \$10 ticket will provide visitors with a map to all six gardens on the tour as well as the Comox Valley Rhododendron Garden. For more information the sale and where to buy tour tickets in advance, contact Paul Wurz.

SCOTTISH - Scottish Chapter Show; 3 to 7 p.m., Fri., May 2, and 8 to 9:45 a.m., Sat., May 3, staging for exhibitors; 1 p.m., Sat., May 3, doors open to public; Gargunnoch Community Centre. Judging will commence at 10 a.m., Sat., May 3. The judges this year are David Chamberlain, Alan Clark and new judge Richard Baines from Logan Botanic Gardens. Schedules from Matt Heasman.

SEATTLE - Seattle Rhododendron Society May Truss Show; noon, Fri., May 9, setup and receiving trusses, and 8 to 9:30 a.m., Sat., May 10, receiving trusses, judging at 10 a.m., open to public noon to 4 p.m., and 10 a.m. to 4 p.m., Sun., May 11, open to public, raffle drawing at 2 p.m., take down at 4 p.m.; Rhododendron Species Botanical Garden, Federal Way, WA. We welcome the public to enter trusses, photos, flower arrangements and educational exhibits. Diane Thompson.

SIUSLAW - Early Rhododendron and Azalea Flower Show and Plant Sale, and Display of Rhododendron and Azalea Bonsai; open to public: 1 to 5 p.m., Sat., April 12 (after judging), and 10 a.m. to 5 p.m., Sun., April 13; Florence Events Center, 715 Quince, Florence, OR 97439; bonsai display is located inside the building with the flower show; plant sale is open to the public Sat. and Sun. and is located outside, south side of building, from 10 a.m. to 5 p.m.; public may bring flower trusses for judging on Sat. from 7 to 9 a.m.; ribbons and trophies will be awarded; great time to ask questions, find books and information and enjoy azalea and rhododendron blooms. Sandra Jensen.

VANCOUVER - The Vancouver Rhododendron Society Show and Sale; 10 a.m. to 3 p.m., Sat., May 3; Park & Tilford Gardens, 333 Brooksbank Ave.; North Vancouver, B.C., V7J3S8, Canada



Cowichan Valley Chapter truss show, 2013.

The Word: Symbiosis

Bruce Palmer
Cutten, California



The word is **symbiosis**. It's from the Greek *sym*, together with, and *bios*, life. Symbiosis is the word for this issue because a good friend and Noyo Chapter member, Bea Aker, recently passed on. She was a very active member of the ARS and reviewed a previous word, mycorrhiza (Palmer, *JARS* fall 2013), suggesting that an explanation of symbiosis should come before mycorrhiza. I didn't do it that way, but it is appropriate to discuss symbiosis in detail because so many symbiotic relationships are found among organisms, including our preferred plant genus *Rhododendron*. Symbiosis refers to the relationship of two very different types of organisms living together. The relationship can be neutral, mutually beneficial or harmful to one of the symbionts.

If the symbiotic relationship between the two organisms is neutral, we call it commensalism. The term derives from the Latin *com*, with, and *mensa*, table. Before it was appropriated from the Latin *commensalis* by biologists it meant a companion at meals. That describes the relationship very well. In commensalism, one organism lives in or on another one, deriving its nutrients from the same sources as the host but not harming the host. It is a term more often used in zoology than botany. The classic animal example in our area is the "Innkeeper," a large worm in the Pacific Ocean mudflats of Humboldt Bay and other bays and estuaries along the West Coast of North America. The Innkeeper, *Urechis caupo*, has that common name because it hosts three or more other animals in its large U-shaped burrow. A much smaller scale worm, *Hesperonoe adventor*, eats some of the food the Innkeeper has trapped in a mucous net, as does the tiny pea crab, *Scleroplex granulata*. Both these other species live exclusively in the Innkeeper's burrow. Several small fish, gobies, may also live in the same burrow, more for protection than for food (Ricketts and Calvin 1960). Among plants, the best known commensals are the called epiphytes (Greek *epi*, at, upon or over, and *phyton*, a plant), plants that attach themselves to the outsides of other plants but do not rob their hosts of nutrients. Most orchids and bromeliads are epiphytes, as are a number of vireyas and other rhododendrons. In a majority of cases,

epiphytes live on the branches of larger plants to avoid being drowned by torrential rains on the forest floor and to have better access to sunlight. They may also get some essential nutrients from the dead epidermal cells of the host plant but they do not harm it. The accompanying photo by Hawaii Chapter member Sherla Bertelmann shows two of her vireyas growing as epiphytes on an avocado trunk. The Rhododendron Species Foundation offers some epiphytic rhodos in most of its sale catalogs. One of our favorite epiphytic RSF plants is *Rhododendron seinghkuense*. We aren't growing it as an epiphyte and it hasn't bloomed yet in our garden but it is very happy in a rotted log and the dense cinnamon colored indumentum on all the newer branches is quite striking.



Vireya on tree. Photo by Sherla Bertelmann.

A symbiotic relationship where both organisms benefit is called mutualism. Among rhododendrons the mycorrhizal relationship we discussed (Palmer, *JARS* fall 2013, pp. 226-227) is an example. It is becoming increasingly recognized that a mycorrhizal relationship is a fundamental one among nearly all land plants. One of the best known examples of mutualism, the lichen, is an association of algae and fungi where both organisms depend on each other, allowing both to survive in habitats where neither could make it alone. Another well-known and supremely important mutualistic association that we learned about in our high school science courses is associated with nitrogen fixation. Legumes such as peas and beans have nodules in their roots containing nitrogen-fixing bacteria. These bacteria attach the free nitrogen in the atmosphere to hydrogen, producing ammonia which the host plants can use to produce the building blocks of proteins, DNA and other molecules essential to plant growth. *Gunnera*, a plant genus native to South America, Hawaii, and a few other places in the tropical Pacific, take a different approach. Gunneras live in extremely wet conditions where nitrogen-fixing bacteria cannot survive. Instead they harbor cyanobacteria (formerly called blue-green algae) in their stems which fix nitrogen for them and receive protection as a payback.

Finally we come to the third category of symbiosis, the parasites (Greek: *parasitos*, one who eats at the table of another). We usually think of animals such as ticks and tapeworms when the term parasite is used. Few flowering plants are parasitic, but some important examples are worth mentioning. First there are the hemi-parasites, primarily the mistletoes. There are many species of mistletoes worldwide, not all closely related. They have in common that when they sprout on a tree, they carry out photosynthesis until they are established as parasites, although some mistletoes may photosynthesize weakly even after they have become parasites. Most of the greenish color you observed in your Christmas mistletoe decorations is not chlorophyll but instead other pigments. Mistletoes get their nourishment by invading host plant tissues, sprouting haustoria (Latin: *haustos*, to drink) which are invasive projections from the roots of parasitic plants into the tissues of host plants that absorb nutrients for use by the parasitic plant. The host plant is sometimes killed by mistletoe but parasites in general tend not to kill their hosts. True parasitic plants include Dodder, *Cuscuta*, a parasitic morning glory relative that is more common in the tropics than in the temperate climates most of us live in. It is a conspicuous yellow-orange entangling vine that has no photosynthesis but depends entirely on its haustoria to rob nutrients from host plants. Now we circle back to the discussion of mycorrhizae and the reason Bea Aker thought a discussion of symbiosis should come first. Saprophytes (Greek: *sapros*, dead, and *phytos*, plant) form a special category of parasites. The classic definition is that they are plants that obtain their nutrients from dead material. That definition has become somewhat ambiguous and has been adjusted in a number of ways. It fit well when we thought that fungi were plants and before we knew much about mycorrhizae. We now know that mycorrhizae can connect to two living plants at the same time and transport nutrients directly from one living plant to another (Raven et al. 1986). We usually call the plant that receives the nutrients a saprophyte, even though the nutrients it receives may not all be from dead material. Our rhododendrons may not be saprophytic but several members of the same family, *Ericaceae*, are, including pinesap (*Hemitomes congestum*), gnome plant (*Hypopites monotropa*), pinedrops (*Pterospora andromedea*), Indian pipe (*Monotropa uniflora*) and others (Hitchcock and Cronquist 1994). They have no chlorophyll, are entirely white, pink, brown or red, and are found in deep shade in the coniferous forests of Western North America and other temperate woodlands in deep shade. I'm stretching the research a bit, but it appears possible that most if not all tree species may benefit from saprophytic relationships to get established and that succession from one dominant forest species to another may be facilitated by saprophytic relationships (Simard *et. al.* 1997).

So now we know that it isn't just our rhododendrons that are dependent on

symbiotic relationships with fungi, but most if not all plants. When we dig in the garden and come across fungal strands intertwined with the plant roots, the fungi aren't necessarily the enemy, as we once thought, but may be an absolutely necessary part of the local ecosystem. They may be spreading essential nutrients around the area and helping our rhodos and other plants in our garden thrive. The Victorian English poet Francis Thompson may have been right when he wrote "...All things near or far...hiddenly...to each other linked are...that thou canst not stir a flower without troubling of a star" (Nicholson and Lee 1917). As we come to know more about symbiosis, we are developing a new respect for the role of fungi in promoting plant health including success among our garden rhododendrons.

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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.

Newly Registered Rhododendron Cultivar Names

Michael Martin Mills
North American Registrar of Plant Names
Philadelphia, Pennsylvania

The following rhododendron and azalea names were approved and added to the International Rhododendron Register before Nov. 1, 2013, by the Royal Horticultural Society, which serves as the International Cultivar Registration Authority for the genus *Rhododendron*. (Information on the registration process follows the descriptions of cultivars.)

Key

- (a) – deciduous or evergreen azalea
- (r) – lepidote or lepidote rhododendron
- (v) – vireya rhododendron
- (z) – azaleodendron
- X – primary cross

(s) – seed parent of cross, if known

x – cross of an unnamed parent

* – not registered

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

Royal Horticultural Society color numbers in parentheses, unless another system is noted

(r) ‘Early Winters’

Elepidote rhododendron:

‘Independence Day’ (s) X ‘Snow

Candle’. H (1999), G (2006), N

(2011), REG (2013): Jim Barlup,

Bellevue, WA. Flrs 18/ball truss,

broad funnel, 2.25 inches (57mm)

long x 3.25 inches (83mm) wide with

5 wavy lobes. Bud: light purplish

pink (65B). Interior of corolla:

yellowish white (155D) with dark

red (185A) spotted blotch starting at

base of upper lobe and extending 1.75 inches (45mm). Exterior: yellowish white

(155D). Truss 5.5 inches (140mm) high x 6 inches (152mm) wide. Lvs 8.25 x

2.75 inches (210 x 70mm), elliptic, rounded base, broadly acute apex, upcurved

margins, moderate olive green (147A) above, semiglossy. Shrub 4 x 4 feet (1.2

x 1.2m) wide in 8 years; intermediate habit, lvs held 2 years. Plant hardy to 0°F

(-18°C). Flowering midseason (May in Seattle). Etymology of name: Named

for the Early Winters Spires, a twin peak in the Cascade Mountains.

(r) ‘Honey Gold’

Elepidote rhododendron: ‘Percy Wiseman’ (s) X ‘Orange Prelude’. H (2006),

G (2011), N (2012), REG (2013): Jim Barlup, Bellevue, WA. Flrs 14/dome

truss, broad funnel, 2.25 inches (57mm) long x 3.25 inches (83mm) wide

with 5 wavy lobes. Bud: strong red (53C). Inside of corolla: pale yellow (11C)

blending to moderate yellowish pink (38B) with deep pink (47D) lobe tips;

two strong yellow (153D) flares on upper lobe extending 0.75 inch (19mm)

from base. Outside: pale yellow (11C) blending to moderate yellowish pink



‘Early Winters’. Photo by Jim Barlup.

(38B) with strong yellowish pink (38A) midveins and deep pink (47D) lobe tips. Calyx: 1.6 inches (41mm), moderate yellowish pink (38B) with strong yellow (153D) flaring. Truss 5 inches (125mm) high x 6 inches (150mm) wide. Lvs 5 x 2.1 inches (127 x 54mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A) above, semiglossy. Shrub 2.3 feet (0.7m) high x 3 feet (0.9m) wide in 7 years; intermediate habit, lvs held 2 years. Plant hardy to 5°F (-15°C). Flowering midseason (May in Seattle).



'Honey Gold'. Photo by Jim Barlup.

(r) 'Joker's Wild'

Elepidote rhododendron: 'Sun Stream' (s) X 'Hill's Low Red'. H (2005), G (2012), N (2012), REG (2013): Jim Barlup, Bellevue, WA. Flrs 17/ball truss, broad funnel, 2 inches (50mm) long x 3.25 inches (83mm) wide with 6 wavy lobes. Bud: strong red (53B). Inside of corolla: pale orange yellow (16D)



'Joker's Wild'. Photo by Jim Barlup.



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blending to vivid red (52A) toward margins, with 0.37-0.5-inch (9-12mm) strong red (53C) nectar pouches and two 0.5-inch (13mm) dark red (187A) flares on upper lobe. Outside: strong red (53B) blending through deep pink (52B) to vivid red (52A) on edges. Calyx: 1.5 inches (38mm), pale orange yellow (16D) changing to vivid red (52A) with 0.5 inch (13mm) strong red (53C) flare. Truss 5.5 x 5.5 inches (140 x 140mm). Lvs 4 x 2.1 inches (102 x 53mm), elliptic, rounded base, broadly acute apex, downcurved margins, moderate olive green (147A) above, matte. Shrub 2.3 feet (0.7m) high x 2.5 feet (0.8m) wide in 8 years; intermediate habit, leaves held 2 years. Plant hardy to 5°F (-15°C). Flowering midseason (May in Seattle).

(r) 'Judy Judy Judy'

Elepidote rhododendron: 'Peach Charm' (s) X 'Pirouette'. H (1992), G (1998), REG (2013): Jim Barlup, Bellevue, WA. N (2012): Roy Blackmore, Victoria, BC. Flrs 21/ ball truss, broad funnel, 2.25 inches (57mm) long x 3.75 inches (95mm) wide with 5 wavy lobes. Bud: strong pink (52D). Inside of corolla: pale purplish pink (62D), fading soon after opening to yellowish white



'Judy Judy Judy'. Photo by Jim Barlup.

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(155D), with two pale greenish yellow (2D) flares extending 0.4 inch (10mm) from base. Outside: pale purplish pink (62D) fading to yellowish white (155D). Truss 5.5 inches (140mm) high x 6 inches (152mm) wide. Lvs 5.75 x 1.9 inches (146 x 48mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A) above, semiglossy. Shrub 1.7 feet (0.5m) high x 2.3 feet (0.7m) wide in 6 years; dense habit, leaves held 2 years. Plant hardy to 5°F (-15°C). Flowering midseason (May in Seattle). Etymology of name: Named for the hybridizer's wife, and evoking the apocryphal but widely believed story that Cary Grant uttered, "Judy, Judy, Judy," in the 1939 movie *Only Angels Have Wings*.

(r) 'Sun Blossom'

Elepidote rhododendron: 'Terra' (s) X 'Trina'. H (2005), G (2012), N (2012), REG (2013): Jim Barlup, Bellevue, WA. Flrs 16/ball truss, broad funnel, 2 inches (51mm) long x 3 inches (77mm) wide with 7 wavy lobes. Bud: deep yellowish pink (39B). Inside of corolla: pale yellow green (4D) with upper lobe light greenish yellow (4B); deep red (185A) throat in upper lobe extending 0.75



'Sun Blossom'. Photo by Jim Barlup.

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- Catalog will be open to non-ARS members after March 15th.
- The price of seed from the 2014 catalog remains at \$3.00 per packet. Seed collected in Sikkim and Burma (Myanmar), if available, is \$4.00 per package. A \$3. (US) and \$4. (outside US) shipping and handling fee will be added to each order. ARS members in good standing can pay after receipt of seed. Orders from outside the US are encouraged to pay by PayPal credit card or by postal money order.

Norman Beaudry, Chairman
ARS Seed Exchange

inch (19mm) from base then as spots for 0.5 inch (13mm). Outside: pale yellow green (4D) with midveins and upper lobe light greenish yellow (4B). Calyx: 0.4 inch (10mm), pale yellow green with deep red (185A) flare. Truss 5 inches (127mm) high x 5.5 inches (140mm) wide. Lvs 3.5 x 2 inches (90 x 51mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A) above, semiglossy. Shrub 2.5 x 2.5 feet (0.8 x 0.8m) in 8 years; intermediate habit, leaves held 2 years. Plant hardy to 5°F (-15°C). Flowering midseason (May in Seattle).

(r) ‘Velvet Touch’

Elepidote rhododendron: ‘Terra (s) X ‘Berg’s Yellow’ x *R. proteoides*). H (2004), G (2011), N (2012), REG (2013): Jim Barlup, Bellevue, WA. Flrs 16/ball truss, broad funnel, 1.6 inches (41mm) long x 2.5 inches (64mm) wide with 7 wavy lobes. Bud: strong yellowish pink (37A). Inside of corolla: pale greenish yellow (9D) with light greenish yellow (8C) on upper lobe, blending on upper lobe margin to a 0.25-inch (6mm) band of light yellowish pink (36C) and brilliant yellow (9C); deep red (53A) 0.5-inch (13mm) solid circle at base



‘Velvet Touch’. Photo by Jim Barlup.

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with deep red (53A) spots on upper lobe. Outside: pale greenish yellow (9D) blending to light yellowish pink (36C) at margins. Calyx: 0.1 inch (3mm), deep red (53A) with pale greenish yellow (9D) edge. Truss 4 inches (102mm) high x 4.5 inches (114mm) wide. Lvs 4 x 1.9 inches (102 x 48mm), Elliptic, rounded base, broadly acute apex, downcurved margins, moderate olive green (147A) above, semiglossy. Shrub 1.8 feet (0.6m) high x 2.5 feet (0.8m) wide in 8 years; dense habit, leaves held 2 years. Plant hardy to 5°F (-15°C). Flowering midseason (May in Seattle).

(r) 'Winter Song'

Elepidote rhododendron: 'Lemon Embers' (s) X 'Windwalker'. H (2003), G (2009), N (2012), REG (2013): Jim Barlup, Bellevue, WA. Flrs 23/ball truss, broad funnel, 2.25 inches (57mm) long x 3.5 inches (89mm) wide with 7 wavy lobes. Bud: strong yellowish pink (37B). Inside of corolla: pale greenish yellow (2D), fading to yellowish white (155D) with moderate red (185B) twin flares



'Winter Song'. Photo by Jim Barlup.

extending 0.5 inch (13mm), then becoming spots for 1 inch (25mm), Outside: pale greenish yellow (2D), fading to yellowish white (155D). Truss 6.5 x 6.5 inches (165 x 165mm). Lvs 5.75 x 2.1 inches (146 x 54mm), elliptic, rounded base, broadly acute apex, downcurved margins, moderate olive green (147A)

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above, semiglossy. Shrub 5 feet (1.5m) high x 6 feet (1.8m) wide in 10 years; intermediate habit, leaves held 2 years. Plant hardy to 0°F (-18°C). Flowering midseason (May in Seattle).

Corrections

Photographs of newly registered cultivars 'Howard J', 'Rita May' and 'Thea Ann' (JARS 67.3, p175) and 'Grace Louise' (JARS 67.4, p234) are by John

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and Donna Delano.

References

Names conform to the rules and recommendations of the *International Code of Nomenclature for Cultivated Plants, Eighth Edition* (2009). Color names are from *A Contribution Toward Standardization of Color Names in Horticulture*, R.D. Huse and K. L. Kelly, D. H. Voss, editor (ARS, 1984).

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North Americans: Electronic registration may be submitted at www.rhododendron.org/plantregistry.htm. The site also provides instructions and forms for downloading and completing manually. Those submitting paper applications should use only the current form (revised 2012). The quickest way to obtain paper forms is to ask a friend with Internet access to go to the ARS website and print the form and instructions. Questions, completed paper forms, all photographs and requests for paper forms should be directed to Michael Martin Mills, North American Registrar. There is no fee.

All others: Please direct inquiries to Alan C. Leslie, International Rhododendron Registrar.

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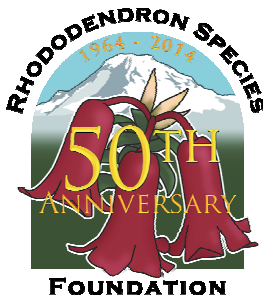
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Journal American Rhododendron Society

Errata:

In the Fall 2013 issue of *JARS*, Table of Contents, two of the photo attributes were switched in error. The Cover Photos should be: Clockwise from top left: A potted landscape by Mary Parker; 'Tidewater Firecracker' by Sandra McDonald; 'Herbstgruss' by Hartwig Schepker.

In the Fall 2013 issue of *JARS*, in the article "Using Potted Plants to Create a Garden Landscape," page 222, the correct spelling of "epson salts" is epsom salts (magnesium sulphate).



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