

# American Rhododendron Society





# American Rhododendron Society

## A GUIDE TO THE SOCIETY

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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)

|             |            |
|-------------|------------|
| Regular     | \$40.00    |
| Commercial  | \$90.00    |
| Sustaining  | \$75.00    |
| Sponsoring  | \$150.00   |
| Life single | \$1,000.00 |
| Life family | \$1,500.00 |

You can join the ARS through your local ARS chapter (check the website [www.rhododendron.org](http://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.**

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## From the President



Don Smart  
Carnation,  
Washington

I just got back from the Spring Convention in Asheville, NC. I want to give a big thanks and congratulations to the ARS Southeast Chapter and the ASA Vaseyi Chapter for a very successful convention. Thanks, also, from the ARS Board of Directors for a great meeting location and luncheon. Those of us who been involved in planning and implementing previous conventions and regional conferences can appreciate the hard work and dedication that goes into these events, so particular thanks to all of the volunteers that made this happen—a job well done!

Along these lines of dedication to the ARS and volunteering, I am disappointed that some chapters and districts are showing reluctance to hosting future conventions. For example, we still do

not have a scheduled location for a 2014 Spring East Coast Convention.\* Please consider getting more involved in the Society by volunteering or helping to organize groups in your chapters and districts to make these future meetings a reality. Our Policies of the Board state that *“Every effort shall be made to maintain a schedule for such meetings five years in advance of the actual meeting dates,”* so we are behind in our planning. If you help in this effort, please contact your District Director, Eastern Vice President (Bruce Feller), or Western Vice President (Bob MacIntyre) and discuss options with them.

One of the great things I as President get to do at the annual meeting is present the ARS Silver and Gold medals. You can read about the recent presentations in this issue of the Journal. The thing that I really like about it, though, is the surprise reactions by the awardees and the appreciation of their contributions by all those present. Please continue to submit names of people who have significantly supported the ARS and the genus *Rhododendron* to the Honors Committee Chair (Dee Daneri) for potential future awards.

As always, your Board discussed membership—ways to find new members

and to retain existing members. The Board cannot increase membership by itself, and it is really up to local chapters to be involved in their communities and to have activities that will attract people to their chapter. One method, started in the Eureka, CA, chapter, seems to be spreading. It's “Bring a guest—get a free plant.” There are many other ideas throughout the Society and I encourage you to contact our Membership Chair, Shirley Rock, if you have questions about what works for other chapters, or new ideas. We also voted to create a new class of ARS membership, one for students with dues of only \$10, which includes being able to access digital copies of the Journal. So, if you know any young people who are interested in gardening, biology, or are in a horticultural program, please approach them and see if they would like to join the ARS. We will be developing methods to get this out to horticulture programs in general in the near future.

Have a great summer and I look forward to seeing many of you in Nanaimo, BC, this September.

**\*Editor's note:** The 2014 convention has since been scheduled. See *Rhododendron Calendar* on page 152.

## From the Executive Director



Laura Grant  
Toronto, Ontario  
Canada

After a very mild and short winter, we are now enjoying an early, cool spring with lots of rhododendrons and azaleas in bloom. I am writing this in May just after our joint Convention with the Azalea Society in Asheville, North Carolina. The convention was an overwhelming success. This is the

first time in recent history in North America that we had a waiting list for registration. A huge amount of work went in preparations and harmonizing the activities of the two related societies. ARS members arrived from Australia, New Zealand, Germany, Denmark, France and other far-away lands. I would like to extend my sincere “Thank You” to the handful of hard working members that made this convention such a success. I also wish speedy recovery to Marilyn Haynes, who after a couple of years of hard work on the convention, had an unfortunate fall during the event. We need to have joint conventions more often.

The Executive Director's Forum is held during every Convention and Conference. This was no exception. The main focus of

the conversation was the need to educate the public on proper planting of pot-grown plants.

Shirley Rock, Chair of the Membership Committee, is looking for members from different areas of the continent and world to join her committee and share ideas on ways to expand our membership.

Marvin and Linda Fisher have kindly agreed to look after ARS DVD orders (see page 170). Walter Przybeck had to resign due to his wife Sybil's medical issues. We would like to encourage all of our members that have pictures, CDs or DVDs of their beautiful gardens, to share them with the rest of the members. Have a great summer and see you all in Nanaimo, BC, Canada, on September 21, 2012

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*R. viscosum* var. *serrulatum* by Ron Miller; *R.* 'Cherries and Merlot' by Frank Fujioka; 'Casanova' by Roger Dunlap; *R.* 'Hendrik's Kanarie' by Hendrik van Oost; *R.* 'Hardy Giant' by Bruce Clyburn.

# *Rhododendron viscosum* var. *serrulatum*: Dirt Roads, Mud Holes, and Living Things



Figure 1. Var. *serrulatum* flowers and glossy leaves on mature growth.

Ron Miller  
Pensacola, Florida



*It is the mark of an educated man to look for precision in each class of things just so far as the nature of things admits.*

Aristotle, *Nicomachean Ethics*

Except in print, I have never known a single azalea fancier to heed the disappearance of *Rhododendron serrulatum* into the sea of generic *R. viscosum*. Whenever someone mentions “serrulatum,” either aloud or by email, the exchange continues as blithely as a chat about *R. arborescens* or the weather. If the banishment of this indispensable name happens to come up,



Figure 2. Streamside var. *serrulatum* with *Chamaecyparis*.



Figure 3. Banded buds, rusty newer shoot, and vigorous leaves.

the grousing often betrays impatience with having to belabor the obvious; yet the obvious, except for the azalea's height, is never spelled out. Fortunately, Alan Weakley (2011), in the latest draft of his authoritative "Flora of the Southern and Mid-Atlantic States," has at last offered a professional justification for what we amateurs have been doing by instinct all along:

***R. viscosum* var. *serrulatum*:** Shrubs to 7 m [23 ft] tall; floral winter bud scales 15-20, at least the inner acute and aristate; corolla tube glabrous within, > 2× as long as the lobes;

***R. viscosum* var. *viscosum*:** Shrubs 1-2 (-5) m [3-7 (-16) ft] tall; floral winter bud scales 8-12 (-15), rounded (-mucronate) apically; corolla tube pubescent within, < 2× as long as the lobes. (Weakley (2011), p. 720; my boldface)

Though the move toward reinstatement as a variety comes as a surprise, Weakley (2010, p. 665) seemed headed that way in his previous year's draft, where he opined that the plant "may well deserve recognition at some taxonomic level." (*R. viscosum* varieties will be referred to below simply as "var. xxxx").

### Common Experience, Elusive Details

One may wonder, still, whether those 15-20 "acute and aristate" scales and glabrous inner corolla tubes could actually have been the source of anyone's growing conviction of the variety's distinctness. The other details are old hat. Someone who has observed var. *serrulatum* in its native haunts can scarcely avoid its individuality, its personality. It is a stretch, however, to imagine a researcher who sees this azalea *in situ*, fails to find anything singular, takes a sample anyhow, and while hunched one day over a lab bench with forceps in hand, cries out with a wild surmise that the plant is after all a separate taxon because it has 15 to 20, rather than 8 to 12, flower bud scales.

Surely our uninterrupted talk of var. *serrulatum* must hang on something more

immediate than a hidden bud scale count or a hard-to-see glabrous surface whose significance escaped notice for at least 90 years. After first reading Weakley (2011), I pictured myself being driven down a back road by a companion who says, slowing to a crawl, "That low viscosum in the ditch there—is that just a cut-off *serrulatum*?" And my reply, "Stop. Let's dissect a flower bud and count the scales." Ten minutes later, no doubt with the motor still running, I saunter back with open palm and my Exacto knife to ask, "Would you call these inner scales aristate or mucronate?"

Too often it seems as though institutional taxonomists and we field men dwell in parallel universes. This suspicion recurs whenever I consider the case against this azalea formulated in K. A. Kron's (1993) revision of the *Pentanthera*:

*[I]ndividuals of R. serrulatum and R. oblongifolium are often not only morphologically similar to each other, but also similar to the northern individuals. In addition, the morphological variation does not correlate with any geographical subdivision. Even the distinctive brown band on the bud scales of R. serrulatum is variable, and can occasionally be found in northern individuals, and is absent in some of the more southern populations. Bud-scale pubescence is also variable but shows no clinal pattern. (p. 333)*

It is hard to decide which to marvel at more, such painstaking study or such utter irrelevance, at least to someone who has known the Texas azalea for 50 years and the Southeastern for over 40. The quotation above marks the breakdown not so much of an official description as of a reductive purview. A marble pebble and Michelangelo's *David* will be hard to tell apart if you limit yourself to a square centimeter of surface. In the wide, wide world of dirt roads and mud holes and living things, there can be no mistaking

an early-May-blooming, occasional, leafy, horizontal, brown-stemmed "oblongifolium" for a late-May-to-October-blooming, omnipresent, sparse, vertical, rusty-red-stemmed var. *serrulatum*.

Down here, var. *serrulatum* is not a chance acquaintance but more like an all too familiar, tedious neighbor. Walk into damp, acid, sphagnum-flecked woods in the Florida Panhandle, and you will see an abundance of tall, scraggly azaleas with small, pointed buds: var. *serrulatum*. Stop your boat along a narrow saltwater inlet, scramble up the bank, and you may well heft yourself aloft by the stout trunk of a var. *serrulatum*. Admire a bog full of pitcher plants or orchids; its woody edge will be lined with var. *serrulatum*. Dig a necessary hole while camping beside a stream, and often you will slice through a few var. *serrulatum* roots or runners. When you canoe a brown-water creek in late summer, from time to time you may glide through corridors of narrow-tubed, spindly-flowered, spicy, white var. *serrulatum* (Figures 1 and 2).

No wonder, then, that those of us who comb the landscape have persisted in using the S-word, much like Russians of an earlier era continuing to whisper of non-persons who had vanished from the *Great Soviet Encyclopedia*. Named or unnamed, var. *serrulatum* could possibly have, along with *R. canescens*, the greatest biomass of any of our American azaleas after *R. calendulaceum*, making up for its limited range by brute size and truly remarkable population density. Then why much ado about bud scale bands which are most likely chance markings? A bandless viscosum growing in acid, moist coastal sand in the characteristic var. *serrulatum* competitive manner (see the "From description to narrative" section, below) would remain var. *serrulatum*; an azalea as banded as a zebra that is indigenous to gumbo soil or to a dry mountain top would not be var. *serrulatum* at all.

How can any plantsman finding a new taxon foresee what the range of variability of a single trait will be when the collections



come marching in? In his description of *R. alabamense*, Alfred Rehder was dead wrong about flowers appearing with the emerging leaves—they appear after the full unfolding—and dead right about the species (Wilson and Rehder (1921), p. 142). His label persists because everyone who knows azaleas now recognizes the azalea that he described imperfectly. Whatever its higher systematic ambitions, taxonomy teaches us to see what we overlooked before. As Degas once said of painting, it “washes the eye.”

### **Blink**

When a species author sits down at his desk to select a few traits to epitomize a previous encounter in the field, the words chosen are necessarily abbreviated, a thumbnail of a complex experience. Most of all, he is guided by jealously guarded conventions about the design and content of a diagnosis. One must get published. Yet var. *serrulatum* entered botanical consciousness not as banded flower buds or supernumerary scales or sharp apexes or whatever else that can be stored in a filing cabinet and translated into Latin. Surely it materialized as an azalea glimpsed in a bog with *Cliftonia* and *Cyrilla* and *Magnolia virginiana* crowding about, bugs buzzing above, and muddy sand squishing beneath.

Anyone who has visited several such sites will find it easy enough to examine any intact, living azalea, budded or otherwise, to see whether it is var. *serrulatum*. This taxon is recognizable in much the same way that friends and family and movie stars are known from a fleeting glance, not by a list of necessary and sufficient traits (as mathematicians might say) but by a flash of aggregate pattern recognition. What matters is a combination of a dozen interrelated clues weighted by experience and context, not a linear sequence of either/or choices in a formal decision tree.

Imagine peering over a crowd in an airport looking for your spouse. You might think confidently that “Dave is tall and gray headed,” yet you would

recognize him effortlessly—if not happily or unsuspectingly—with dyed hair. Ours is a highly visual species hard-wired for pattern recognition that far outruns plodding point-by-point analysis. Malcolm Gladwell (2005), in a book-length meditation on this ability, calls it “blink.” Blink is the gut feeling that allows an art expert to know immediately whether the new Cezanne is a fake or a policeman to sense in a crucial split second whether the figure in the dark has a gun.

For botanical blink in action, imagine stopping along a sandy road one sweaty summer morn and trudging downhill toward a wooded watercourse, slapping yellow flies and wondering how much “Off” would have been enough. The plants along the edge begin to resolve themselves, and you see something in front of the green wall of *Cliftonia* that just might be, from the layering, several azaleas. Though they could be *R. canescens*, you also see poison sumac, so the area is probably too wet and too acid. “Can” leaves are seldom that dark; “can” growth is usually fuller. A few more steps. The leaves are definitely roundish and glossy on older branches; they are strap-like and duller on the reddish, erect, vigorous palisade of shoots sprouting within that bulldozed area nearby. The small flower buds (you are now quite close) are not yet open. Hmm, they might be next year’s buds. Though you would like to see whether the buds are banded, those blackberry canes look impenetrable. Maybe this stick will part them and scare away snakes. O well, why get your shoes wet? You can see (BLINK!) they are just “*serrulatum*.”

Welcome to the alternative universe of fuzzy logic and living things. I have come upon *R. canescens* in Texas as stalk-glandular as any *R. austrinum*, *R. austrinum* in Mississippi as glandular as any *R. canescens*, *R. periclymenoides* in South Carolina with glandular flower tubes, and *R. arborescens* in Alabama in its initial bloom in September, all without collapsing into angst or cognitive dissonance or radical doubt or senior-citizen gardening.

After some bewilderment, the blinks came into focus, though keys cobbled together out of thumbnails would have led to an endless loop. A botanical key is not (in Hamlet’s fine phrase) a mirror held up to Nature but a reflection of a soft science trying to be hard by imagining Nature more tidy than she really is.

In fact, var. *serrulatum*’s aggregate traits make this azalea easier to recognize from its vegetative parts alone than any other azalea, except maybe bullate-leaved and chocolate-stemmed *R. prunifolium*. Combinations of some or all of the following are unmistakable: (1) shiny, obovate, and often dark green and serrate leaves on mature growth; (2) red-rusty, upright, and bristly new growth; (3) terminal clusters of small, thin, sharp, banded vegetative buds giving a checkerboard appearance; and (4) tall flat-topped or umbrella-pine habit. Spot any two of these four “tells” in a sandy setting and a buggy southern ambiance, and you can’t go wrong. Or, if the plant is flowering and a viscosum, just check the calendar.

Nonetheless, even a few leaves will usually do. Last spring I emailed photos of a pale tidewater *R. austrinum* to Clarence Towe, who replied eagerly that the leaves looked like those of “*serrulatum*.” Alas, no triploid hybrid. It is rare indeed but possible for those two azaleas to grow with their branches intertwined. Admittedly, out of context, var. *serrulatum* leaves, like those of other species, can fool you, but my life in the field would be far less embarrassing if all the accepted taxa had such distinctive leaves.

### **Boots on the Ground**

If you insist, nonetheless, in believing that an obliging Nature will always invest each and every taxon with at least one invariant signature trait, then revisit those rejected brown bands. I must now confess never to have seen, over the wide area I roam, a single budded var. *serrulatum* without those bands. Not one. Nada. Maybe some plants somewhere lacked them. After a few thousand encounters, admittedly,



Figure 4. Early May blooming Florida aemulans.



Figure 6. Var. *serrulatum* shoot in shore litter.



Ron Miller. Photo by Rick Lewandowski.



Figure 5. Comparison of bud scales and surfaces.

who bothers to check markings when one recognizes the gestalt? I cannot swear that all the women seen in the mall last week wore eye liner, but from years of field experience I am somewhat confident they were women. Of course, nowadays, a few non-women wear eyeliner, too. Absolutely inevitable biological categories often have uncertain boundaries.

In my forays, those bands on var. *serrulatum* (Figure 3) have been no less reliable than the telltale surfaces of *R. arborescens* or the stems of *R. prunifolium*. Because the buds are often held at eye level, I have surely glanced at buds on more phenotypes than the total number of all the specimens of all the viscosums in all the herbariums in the world. Unless you have pushed and crawled, scratched and bleeding, though our smilax-barricaded brush or boated slowly along the ridges and hummocks lining the



lower reaches of our brown-water streams, you cannot conceive how common and consistent this azalea can be.

The source of the confusion about these bands never occurred to me until last mid-May, while slogging in Florida's Blackwater State Forest about midway between the saltwater to the south and the Alabama state line to the north. The episode is worth recounting because it illustrates the fundamental limitations of analysis founded upon amputated parts rather than upon living systems.

The longleaf pine and wiregrass forest is var. *serrulatum* country. Every sandy creek bottom, every baygall edge displays the erect stems and sharp buds of this azalea. That day, however, I was seeking *Fothergilla* along the brushy ecotones of steepheads. There amid the controlled-burn-recovering *Ilex glabra* and *Lyonia lucida* and *Clethra alnifolia* stretched a trail of a low, spreading, almost bloomed out viscosums. I blinked the type before seeing a few last flowers, gleeful at finding it in my own state, though I had seen that variety a number of times before on slopes in the Alabama Red Hills. So had Skinner (1955), who mentions "a curious little May-flowering white azalea of Central Georgia and Alabama, hitherto overlooked. The next day or so was spent in following this low growing plant, now past bloom, as far as Mississippi." I had previously checked out one of Skinner's sites from western Alabama mentioned in his field notes. A friend by chance had a few days before emailed me a photo from another Alabama site very near the Florida border.

All were what an earlier age would probably have labeled *R. viscosum* var. *aemulans*, or today, among friends, just "aemulans": a thin-stemmed, exceedingly rhizomatous low grower which blooms in April or May and has bandless, canescent, often not quite appressed flower bud scales. A very recognizable sort growing there on a hardpan outcrop distant from the sandy flats preferred by var. *serrulatum*. For a nicely flowering plant only 10 in (25 cm)

tall, see Figure 4. Note the long tubular flowers that are even more drawn out than those of var. *serrulatum* and the dull leaves that are probably indistinguishable when dried from those of the more common azalea. If the plant were var. *serrulatum*, a living new shoot would be reddish, as in Figure 3. For a bud scale surface comparison, see Figure 5.

It was not until the following day that I recalled the crucial words: "Even the distinctive brown band on the bud scales of *R. serrulatum* is . . . absent in some of the more southern populations." No bands on "aemulans." That azalea could explain why there was "no clinal pattern" in the bud scale fuzz. The excommunication of var. *serrulatum* assumes that all the "more southern populations" can be lumped with var. *serrulatum*. But how can we know that these anomalies were var. *serrulatum* and not aemulans? Dr. Kron also notes that some northern samples display these brown bands. I have myself examined viscosum buds from Delaware whose bands would pass for those of var. *serrulatum*. For a possible explanation, see the final section, on the so-called founder effect.

In any case, there is simply no substitute for boots on the ground. My boots tell me that two distinct viscosums inhabit var. *serrulatum* country. A collector who made a sheet unwittingly from the second type would dig a pitfall into which a taxonomist would likely stumble, unless the latter went out into the boonies to check the sites first hand. And even then, those sheets would need very exact locations available only recently from a GPS, and the taxonomist would need the leisure to survey the plants as components of complex systems rather than as pillageable sources yielding parts for examination later. There seems to be no way around it. In order to interpret their indoor evidence properly, taxonomists must reluctantly become a bit more like Jane Goodall and a little less like the 19<sup>th</sup> century ornithologist who shot the bird, stuffed it, and then drew its portrait back

in his study.

Now, maybe not a single one of those bandless or hairy samples came from aemulans. However, the existence of another distinct, non-banded viscosum, even here in Baja Alabama, shifts the burden of proof back to the negative to show that the atypical southern buds were indeed from var. *serrulatum*. But how could that be demonstrated unless someone knows how to identify that azalea prior to checking for bands? And if such knowledge exists, why not retain var. *serrulatum*, though with a new description that does not rely upon dubious features?

### Individuals and Species

There is of course nothing scandalous about progress in science, with old conclusions being revisited in the light of newfound evidence. One is tempted just to give Weakley's (2011) new description a whirl. But what if some day a patch of var. *serrulatum* turns up with 12 flower bud scales or pubescent inner flower tubes? Since the general species is as diverse as it is, both variations seem rather likely. Aemulans already violates the rule of thumb that non-var. *serrulatum* has shorter tubes. It is not hard to see where all this is going. Legalism about jots and tittles got us into this bind to begin with, and rigid legalism is the logical consequence of the concept of a taxon underlying both the old and the new descriptions, to wit, that a species/taxon is the arithmetic sum of individual, isolated, cookie-cutter organisms—if not, in actual practice, of individual, isolated, cookie-cutter specimens. Striving to be precise about matters imprecise, we fall under the dominion of a few chance words, while taxonomy lapses into its besetting occupational disease of taking itself, rather than the external world, for its subject. All the while, var. *serrulatum* sits there like the elephant in the bog.

Why not leave the quest for the invariant physical traits of var. *serrulatum* and rethink our azalea according to Darwin's greatest insight, that taxa are

processes appearing and disappearing in geological time? Use convenient morphological traits, by all means, always keeping wary of their frequent unreliability, while also considering other clues, environmental and behavioral and molecular and geographical. The goal would be to reconceptualize var. *serrulatum* as a distinct, recognizable tribe of viscosums produced when its ancestors adapted to a specific niche. From this point of view, physical traits are mere byproducts of processes ideally represented not with a static description but with a narrative.

Fortunately, complex evolutionary systems boil down operationally to viability in a habitat, competitiveness for sites, and readiness to pass along genes. Stephen J. Gould (2002, pp. 595-744) has even made a case, contra Darwin, that the collective species itself, no less than the individual organism, is a competitive unit within natural selection. Evolutionary holism challenges our myopic fixation, historically and horticulturally reinforced, upon the individual organism with detachable parts.

#### **Var. *serrulatum*: From Description to Narrative**

When, in the fullness of time, professionals look at living wholes no less than at dried parts, three categories of viscosums are likely to emerge: two distinct taxa, var. *serrulatum* and var. *montanum* of the Southeastern mountains, and var. *viscosum*, a hodgepodge of late-spring-blooming whites stretching from Texas to Maine. Skinner's "low growing plant," a subset of this "etceteron," may even win the separate recognition that he tentatively proposed, unless it turns out to be, as my own studies suggest, morphologically indistinguishable from the low-growing, rhizomatous, canescent-budded *montanum*.

Var. *serrulatum* apparently owes its coherence, and thus its widespread recognition, to Pleistocene climate fluctuations that sloshed viscosum populations like jetsam onto what became moist subtropical sand. The

process that Ernst Mayr (1976, p. 324) dubs "peripatric speciation"—divergent evolution of smaller, reproductively isolated populations at the edges of the parental ranges—offers a key to many of the idiosyncrasies of our southeastern vegetation. It also reveals that var. *serrulatum* is not a quirk distinguished by trivia but an instance of a rather ordinary regional process. Perhaps the new generation methods for sequencing myriads of genes at once, now in their infancy, will give us the temporal resolution to trace such recent processes that older single-gene methods lack. It would be indeed surprising if there was no specialized warm-weather viscosum down here.

Var. *serrulatum* must be the founding of a viscosum that migrated south to the generally recognized refugium for mesic-temperate flora near the Gulf Coast, where it over-wintered in equitable climes. This azalea was perhaps indistinguishable from the May-June blooming *R. viscosum* now scattered along the seaboard from the Carolinas to Maine. For a parallel, consider *R. minus* var. *chapmanii*, a fragment of *R. minus* that also pushed down during a chill. The lepidote parent was some subset of *R. minus*, broadly conceived. During glacial maxima, since the climate was cool temperate (spruce pollen has been found deep in Florida bogs) and since the sea level was more than 300 feet (100-120 m) lower (Graham (1999), pp. 284-293), with steep continental margins, there was no extensive, flat, low, sandy, evergreen belt that now stretches from coastal North Carolina to easternmost Louisiana. *R. viscosum* must have occupied wet, relatively cool openings in the hardwood forests of the refugium, and *R. minus* surely found plenty of steep, rocky slopes near the withdrawn Gulf.

The various ancestral plants, almost all in the static or equilibrated phases of their development (Gould (2002), pp. 745-1024), were well equipped to resist modification during their snowbird stays. When the rapid warm up occurred, the

ancestral species migrated back north again unchanged, leaving like slovenly campers bits of genetic litter across the Gulf Coast: a few chestnut trees and *Magnolia tripetala* in Florida and southern Mississippi, yellowwood trees and *R. cumberlandense* in strange spots in middle and southern Alabama, trout lilies and *Cornus alternifolia* on the Florida Apalachicola bluffs. Most of these genetically isolated relics remained dispersed and static, either because they found no empty niche to invade or because the parental stock lacked sufficient genetic diversity.

However, a few such as *Lilium iridollae* (ex *L. superbum*) and *Magnolia macrophylla* var. *ashei* and *Magnolia fraseri* var. *pyramidata* and *R. prunifolium* (ex *R. cumberlandense*) and *R. viscosum* var. *serrulatum* branched off, isolated from the parental species as required in order to diverge peripatrically into new taxa. One fragment of *R. minus* evolved a deviant lifestyle amid the saw palmetto patches separating the *Cliftonia* bogs from the dry pinelands near the coast, becoming *R. minus* var. *chapmanii*. For all its amazing resourcefulness, this lepidote is a failure of sorts, a taxon surely doomed, like *Taxus floridana* and *Torreya taxifolia*, to early extinction because of the precarious niche it has homesteaded.

Var. *serrulatum* was by contrast a rousing success in adapting the basic viscosum model to the wide stretch of an often boggy, often xeric evergreen belt that developed when the sea rose and its fluctuations, along with freshwater outwash, laid down continuous beds of sand across the flat coastal areas. On the USDA or Biota of North America websites, check out the strikingly coextensive ranges of *Cliftonia monophylla* and *Seranoa repens* and *Licania michauxii* and *Kalmia hirsuta* and *Quercus geminata* and *laevis* and *Ilex coriacea* and *glabra* and *Taxodium ascendens* and *Osmanthus americanus* and *Lyonia lucida* and *Gordonia lasianthus* and *Pinus glabra*—acidophiles and silicophiles all. A var. *serrulatum* map would fall smack-dab in the common area, with a bit of diffusion

inland and down the peninsula.

Surely these near-identical ranges suggest that specialized adaptations were often needed for exploiting the sand-and-sphagnum niches. An opportunity obviously lay open for an orphaned *R. viscosum* developing heat and drought resistance in a flat, sandy land with high rainfall. Adapt it did: var. *serrulatum* may be our most aggressive azalea,

- (1) coppicing and running wildly when logged, burned, or (recently) bulldozed;
- (2) germinating seeds profusely whenever moist sandy areas are laid bare by fires or erosion;
- (3) overtopping other scrub vegetation to grow very large indeed when undisturbed;
- (4) showing a remarkable ability to survive in droughty sand near damp areas;
- (5) tolerating deep shade within dense riparian forests along sandy watercourses;
- (6) acting as a halophyte while dominating sandy, overwashed ridges and slopes along the brackish tidewater, where the azalea is in fact most vigorous and frequent;
- (7) growing continuously in our summer's heat when most other azaleas and rhodies are aestivating; and
- (8) blooming late, over several months, to catch late rains and/or the varying migrations of returning pollinators.

And yes, acquiring bands on its flower buds. These are probably a latency in generic viscosum blown out of proportion by a genetic bottleneck early on during the taxon's development (a.k.a. the founder effect). The presence of a few banded azaleas northward noted by Dr. Kron, if they really are not vanguard var. *serrulatum* mixing with its reunited cousins, suggests as much. If there was an Azalea Designer's Award, I would nominate this one, in spite of a little useless frippery.

The radical tolerance for salt (up to

11-12,000 ppm. in the soil tested from around the roots) seems highly significant. From the evidence of its population density and relentless presence along brackish nooks, this taxon might well not be a freshwater plant with tidal outliers but a plant that evolved at the salty margins and subsequently colonized the upland by displacing less robust viscosums. At a minimum, this surprising affinity highlights its separation from the other viscosums and suggests rich possibilities for azalea hybridizers. It is rather disconcerting to putt-putt your boat up to a line of 12 to 15 ft (4-5 m) azaleas in full bloom in late September, all with root crowns 18 in (45 cm) or so above water, on a damp bank of a tidal inlet teeming with blue crabs and shrimp and menhaden schools being slashed by predator saltwater gamefish. See Figure 6 for a chipper var. *serrulatum* shoot amid beach wrack, emerging from a hole in a piece of driftwood from a storm-wrecked pier. The densest and healthiest var. *serrulatum* colony so far is located among the washed-up styrofoam and empty plastic bottles on an undeveloped shoreline lot at 30.44823° N, 86.94087° W. Type those coordinates into Google Earth for a nice seascape. Hurricanes Ivan and Katrina and Opal must really have marinated those azaleas with no fresh water around for dilution.

Nonetheless, if you still have doubts about var. *serrulatum*, y'all come on down to meet the azalea. It would be easy enough to run off copies of "An Azalea Hunter's Freshwater Bog and Brackish Water Bank Guide," with a map, for visitors who don't mind a few snakes. The cottonmouths in the wet areas are none too scary if you don't surprise them, though on drier sites, the eastern diamondbacks get big, stand their ground, and really like saw palmettos. Specialized adaptations, each to his very own niche. It might help to think of them as innocent, happy, smiling natives providing local color.

Your task would be to wade in, step back, and ask whether natural selection has concocted another distinct white

azalea. But do not come during late summer. The eyesight of azalea addicts is easily distracted by the attractive nuisance of those detachable parts, the flowers. This is the lesson taken from my previous work with tetraploid azaleas: if the flowers had not resembled other flowers, the azaleas would have been examined *in situ* and recognized long ago. So, abandon for a while your airconditioned libraries and laboratories and those crisply labeled nursery catalogs to check out a fiddler-crab-frequented azalea patch where you can observe *R. viscosum* var. *serrulatum* elbowing her neighbors and passing along her genes. Bring bug spray.

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*Ron Miller is a retired college literature instructor who left the precision of his beloved physical chemistry for the joy of talking to captive audiences about profound ambiguities in King Lear. He has also put in time as a species author. He thanks John Thornton, whose extensive horticultural experience with this azalea and whose insatiable curiosity have been invaluable to the project; and he especially thanks his English teacher wife Patti, whose much-tried patience moved her grudgingly to proofread one more geekish paper.*

**Photos by the author unless otherwise noted.**



# Joseph Rock Revisited

Bruce Palmer  
Cutten, California



It has been eight years since my previous *JARS* article about Joseph Rock (Palmer 2004), so it's time to revisit this important person in the history of both the American Rhododendron Society and of botany. Joseph Rock is not the first name that comes to mind when rhododendron enthusiasts think about nineteenth and early twentieth century plant hunters. George Forrest and Frank Kingdom-Ward clearly outranked him but Rock deserves more current recognition than he gets. The American Rhododendron Society benefited quite directly from the seeds he sent under contract to what is now the Portland Chapter in the late 1940s (Bacher 1949). He was one of the early recipients of our society's Gold Medal in 1954. Nearly thirty years ago, Gwen Bell gave a talk about him and wrote an excellent *ARS Journal* article (Bell 1983). Joseph Rock was definitely what we would call a Renaissance man; his contributions were in no way limited to collecting seeds of *Rhododendron*. Rock's enduring contributions to Hawaiian botany, medicine and ecology can't be overstated and probably EVEN overshadow his importance to the rhododendron world. His contributions to popular and the U.S. government's understanding of early and mid-twentieth century rural Western China were more significant than those of any other single person at the time.

Some *ARS* members knew Joseph Rock or knew someone who did, and many of us have plants from his seeds or from plants descended from them. Mike Bones, for example, has *R. davidsonianum* and *R. rubiginosum* from Rock's seeds. We have an *R. augustinii* 'Rock's Sky Blue'\* whose ancestor would probably have been grown

from his seeds. The list undoubtedly goes on and on, given that Rock sent enough seeds to Portland to "plant the whole of Oregon" (Grace 1948). Many members know a great deal about him, but my understanding of him is in a different context. The name evokes memories as if I actually knew Joseph Rock, even though he died in Honolulu in 1962, six years before I began working in Hawai'i. For twenty-five years, I taught lower division biology courses at Maui Community College, now the University of Hawai'i Maui College, and gained much of my early knowledge of Hawaiian ecosystems and endemic plants from someone who knew Joseph Rock well. Edwin Bonsey, who taught physics in the high schools on Maui, was long retired when I arrived, and he took me under his wing. Ed was a recognized authority on ferns in Hawai'i, both endemic and introduced. Visiting botanists would contact Ed whenever they wanted to visit remote areas on the island. Ed described Joseph Rock exactly the way everyone who knew him did in their various writings about him. Rock knew exactly where every rare or common endemic plant was on each island in the Hawaiian archipelago. He could return to the exact spot where a given plant had been years before, no matter how remote the location. Often the plant was gone, a victim of the ongoing habitat degradation in Hawai'i. Rock, according to Ed, insisted on the daily tradition of teatime. No matter where he might be in the forest on Maui, he would stop at 4 p.m., light his spirit stove and have his tea, complete with silver service. He was a fanatic about recording exact details about plants

and about his photography, producing undoubtedly the very best photographs of endemic trees in Hawai'i, many of which are now extinct. Ed was the same way, at least about knowing the locations of plants. He would take me out on some obscure track in the wet forest and dash off the trail at a location I could never find again to look at an endemic fern or jewel orchid. He always expected me to remember all he taught me. I didn't, but he and his memories of Joseph Rock have certainly stuck with me.

Mike Bones loaned me a biography of Joseph Rock a number of years ago (Sutton 1974). Reading it brought back memories and precipitated more research. Rock was a fascinating character who was born in Vienna, Austria, in 1884, the son of an impoverished steward in the household of Count Potocki. His sensitivity about his humble beginnings stayed with him throughout his life. Looking at life "upstairs" and comparing it to his family situation led Joseph to feel that his childhood was terrible. His mother, Franciska, died when Joseph was only six, and his older sister adopted a mother figure role. She constantly took in waifs to add to the family burden and confuse Joseph as to his position in it. Joseph's father wanted him to be a priest, but he resisted Papa at every turn, as he wanted to be an adventurer. He did just average work in school, probably because he was bored, but at age 13 he became fascinated with China and began teaching himself Chinese.

Rock left home in 1902 as soon as he graduated from high school. He wandered through Europe and Africa for several

years between bouts with tuberculosis. He then sailed to the United States, worked as a dishwasher in New York, went to Texas in the winter of 1906-07 and on to San Francisco less than a year after the great earthquake. Against the advice of his doctors, Rock then sailed for Honolulu and the Hawaiian Islands came as close to being home for him as any place outside of China.

By the time he arrived in Honolulu, Rock had various degrees of fluency in ten languages. Rock impressed everyone he met with his social graces, wit, intelligence and knowledge. All of these qualities gained him status and an enduring place among the missionary descendants and other Kama'aina families who controlled Hawai'i's economics and politics in the early twentieth century. Rock rapidly gained primacy in Hawaiian botany and created a job for himself with the Board of Commissioners of Agriculture and Forestry both collecting and documenting endemic Hawaiian plants and establishing an herbarium for territorial foresters. It was a formidable and important undertaking. Hawai'i was and is far more diverse in its endemic flora and fauna than the Galapagos Islands made famous by Charles Darwin. The government foresters, chief among them Ralph Hosmer, knew little and apparently didn't care about endemic plants in Hawai'i. The major emphasis by the foresters at the time was to find exotic timber trees that could be used to replace the then disappearing endemics such as the Koa (*Acacia koa*) [still the largest and most commercially important native tree species in the Hawaiian Islands]. Hosmer Grove at the border of Haleakala National Park and Poli Poli Springs State Park on Maui feature conifers from all over the globe, typical examples of the mind set that native trees should be replaced with economically viable timber producers. The policy of replacement of endemics with exotics was still dominant during my early years on Maui.

In the process of collecting endemic plants and creating an herbarium, Rock

acquired knowledge about the native flora and ecosystem that surpassed anything since William Hillebrand (1888) published his *Flora of the Hawaiian Islands* when Rock was four years old. Using his new position with the College of Hawai'i as his authority and his friendship with the controlling haole families as a funding base (the subscription list reads like a Who's Who of the dominant haole families in Hawai'i), Rock published his definitive work in 1913, *The Indigenous Trees of the Hawaiian Islands*. This tome rapidly became the major authority on endemic plants in Hawai'i, and along with Marie Neal's (1965) *In Gardens of Hawaii*, it remained so until the publication of the *Manual of Flowering Plants of Hawai'i* (Wagner et al. 1990). Rock's (1913) book was sufficiently important to be reprinted by the Pacific Tropical Botanical Garden in 1974, when it was still acknowledged as the premier publication on the subject, both for its information and for its superb photography.

Joseph Rock taught systematic botany and possibly Chinese at the College (now University) of Hawai'i from 1911 until 1920. The definitive research on his life was done by Stephanie Sutton (1974) for her excellent Rock biography, and most of the material in this article that is not rhododendron-related or is not personal knowledge was taken from her book. Sutton's (1974) *In China's Border Provinces* states that Rock's higher education information lists the University of Vienna in the college catalogs, but notes that he couldn't have gotten a degree there given what he was doing after he graduated from High School and before he appeared in Hawai'i. It is not now surprising to learn that Rock did not have a degree, given that the college was only four years old at the time he joined the faculty and that imposters were still infiltrating the University of Hawai'i system as late as the 1960s. Later in his career, he received an honorary doctorate from Baylor University, Waco, Texas, so he could be referred to as "Dr." legally by the time

ARS members met him. In any case, he was very successful and has left us a lasting, important written and photographic record of the flora of Hawai'i in the early twentieth century.

Rock left the College of Hawai'i after a disagreement over the disposition of the herbarium he had spent so much time assembling. At that point, his dreamed-of career as adventurer in China began and what was perhaps his most important contribution to Hawaiian society was made. Research at the college about the time he decided to leave demonstrated that the oil from the seeds of the Chaulmoogra tree (*Hydnocarpus kurzii*), while very painful when applied, was effective in controlling leprosy. Leprosy was a very serious problem in Hawai'i as is obvious from the well-known Kalaupapa colony on Moloka'i, where Hansen's Disease, as leprosy is also called, sufferers were isolated until the middle of the twentieth century. Rock landed a job with the U. S. Department of Agriculture to search for seeds of the Chaulmoogra tree in Siam, Burma and India (Rock 1922). A magnificent specimen of the Chaulmoogra tree is found today in the Foster Botanical Garden in Honolulu. The oil from these seeds proved to be the only valuable treatment for leprosy until modern antibiotics were developed during World War II, eliminating the practice of needing to isolate patients on Moloka'i's remote Kalaupapa Peninsula.

After the early 1920s, Joseph Rock never called any place but Western China his real home. He settled in Yunnan and spent most of the rest of his life there, though he took frequent breaks to visit his family in Europe and his friends and colleagues in the U.S. and the Territory of Hawai'i. By coincidence, when Rock first arrived in Yunnan, Sun Yat-Sen, the leader of China's republican revolution in the early 1900s, was taking over the country. Sun Yat-Sen had spent his childhood in Hawai'i and graduated from Maui High School. Probably Rock did not know of their Hawaiian connection and certainly



Joseph F. Rock on horseback and in Tibetan dress. Photographer unknown. Photo reprinted from the Arnold Arboretum website.

Sun Yat-Sen didn't know about Joseph Rock at all.

First sent to China by the U.S. Department of Agriculture (USDA), Rock found a new sponsor in the National Geographic Society when government funding ran out. He sent numerous specimens to Washington and wrote ten articles for the magazine between 1922 and 1935 (e.g., Rock 1926). The Society liked his photography but finally got tired of having to edit his work to make it readable and incurring his wrath every time it did so. English was not Rock's first language even though he spoke it with very little accent. His written material is quite painful to read as is clear from reading his correspondence (e.g., Rock 1950) with the ARS in 1948. The National Geographic Society and Rock parted company on terms that were apparently not very amicable.

Rock was also sponsored by a series of institutions in addition to the USDA and National Geographic. Harvard's Arnold Arboretum, the U.S. National Museum and the University of California, Berkeley, were among his other major sponsors during his stays in China. Little by little,

Rock's interests drifted away from botany and toward a fascination with the Nakhi ethnic people [now referred to as Naxi, with about 300,000 in China, mostly centered around Lijiang] in Western Yunnan, and much of his time in China was spent in studying them. He worked at producing major works on their culture and their ancient pictographic language, and saw this work as being more important than botany. As a result, he produced no work on the flora of the area, a shame given the superb botanical work he produced on Hawai'i earlier in his career.

With the onset of World War II, Rock was forced to leave China. He moved himself and his extensive library to the University of Hawai'i, where he had a temporary, tempestuous relationship with the University. Nevertheless, he spent most of the war years in China, becoming an invaluable asset to the United States military there, especially the Army Map Service. In 1944, he flew back to the U.S., sending his Naxi [or Naxi] manuscripts by ship. However, a Japanese torpedo sank the ship and most of his work on the Naxi tribe thus went to the bottom of the ocean and was lost.

Following the war, Rock persuaded Harvard's Yen-ching Institute and Arnold Arboretum to fund another trip to China so he could complete his Naxi research and redo what had been lost, and by the end of 1946, he was back in China. He was witness to and strongly affected by the lawlessness and spiraling inflation that acted against the success of Chiang Kai-shek's government and which helped the communists come to power.

In 1948, Rock suffered a bout of intestinal problems and intense neuralgia in his facial nerves. For cures, he went first to Hong Kong, then Europe and finally ended up in the Massachusetts General Hospital. When he arrived back in China, an ARS letter from George Grace affirming their underwriting of seed collection had arrived. The correspondence from Rock and the italic footnotes in Volume Three of the *ARS Bulletin* make clear that the situation in China was chaotic. Sutton's (1974) biography details enough about Rock's tribulations during that time to make it seem a miracle that any of the seeds the group underwrote ever got back to them in Portland. They did, though, and were planted and grown extensively.



So many excess seeds were received that *Rhododendron*, *Primula* and *Meconopsis* seeds were advertised for sale to the public in the ARS Bulletins for 1949 and 1950 (Grace 1949).

In early August 1949, Rock finally gave up and left China, never to return. He kept hoping things would change and that Westerners would be welcome again, and continued to talk about new expeditions such as the one to Nepal mentioned in Volume Four of the *Bulletin* but was never able to mount another one to his beloved Yunnan (Rock 1950). He lived for a while in both Europe and Washington State, selling the library he had haggled over with the University of Hawai'i and Harvard to the University of Washington. Finally, during the last few years of his life, he returned to Hawai'i, finished his Nahki dictionary and threw himself again into Hawaiian botany. He died in Honolulu in December 1962, at the age of 78 and is buried on Oahu.

Joseph Rock's legacy to the ARS is immense. It is impossible to know at this late date how many plants in both members' and public gardens are from Rock's seeds or from plants descended from them; a multitude, without a doubt. It could be argued that the Portland origin of the ARS might not have succeeded as well as it did without the impetus provided by the challenge of growing Rock's numerous seeds into flowering rhododendrons. His collection numbers listed in the Royal Horticultural Society's *Rhododendron Handbook* are truly astounding (RHS 1998). Between 1923 and 1949, he collected 1423 specimens with RHS numbers. By comparison, George Forrest collected 1435 and Frank Kingdom-Ward 764. That's just the RHS numbers for Rock, who never collected specifically for any British entity. Rock's contributions to Hawaiian botany were particularly impressive and lasting. It's only fitting that in 1969 Dr. Harold St. John, one of the more prolific University of Hawaii's systematic botanists, should have named an endemic lobelia, now surviving only on

Moloka'i's inaccessible cliffs overlooking the Kalaupapa peninsula's leper colony, *Brighamia rockii*. After all, Rock, the collector of Chaulmoogra seeds for the Moloka'i lepers, had recorded seeing one in 1919 on Lana'i in an area so inaccessible he couldn't collect it.

For those interested in learning more about Joseph Rock, Harvard's Arnold Arboretum web site has very interesting information. As a part of its ongoing research of the "Asian Biodiversity Hotspot," beginning well before Joseph Rock and continuing today, many pieces of Rock's personal correspondence and unpublished research as well as 273 of his photographs (Arnold Arboretum 2003) have been digitized. Anyone interested in Joseph Rock can download images of many of Rock's original maps, documents and photos (see sample on page 132). Most of the photographs are not of plants, but about a half dozen show *Rhododendron* and there are many other plant species represented. The photos collectively show clearly that he was indeed a master photographer as well as a thorough, observant researcher and a gutsy explorer.

\* = unregistered.

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*Bruce Palmer is a member of the Eureka Chapter and is Professor Emeritus in the Community College System of the University of Hawaii. He taught various lower division biology courses at Maui Community College (now University of Hawaii Maui College) from 1968 until 1993. He was also Dean of Instruction at the college from 1980-83 and 1990-93.*

# The *Lapponica* Subsection of Section *Rhododendron*

Ian Wallace  
Olinda, Victoria,  
Australia



Norm Brown  
Olinda Victoria,  
Australia



(Modified from the January 2012 Eugene Chapter newsletter)

The subsection *Lapponica* of the section *Rhododendron* contains the largest natural group of truly dwarf alpine rhodo species, rarely exceeding five feet (1.5 m) in height. They have aromatic evergreen leaves with dense scales on both surfaces, making them lepidotes. The flowers are mostly in purple or pink shades with the odd yellow displayed in small terminal trusses or in some cases singly. The flowers themselves are generally funnel-shaped or tubular and not of a very thick texture, which can cause them to be easily damaged by windy wet weather. Most have short flower stalks with the calyx and the seed capsule also quite small.

Their normal distribution covers a large area of Western China down to Tibet and the Eastern Himalayas, and reaching high altitudes which generally makes them cold resistant, but all must have good drainage. There are many worthwhile plants garden plants in the series, most of which will do well in Australia's Dandenongs and foothills, but are very difficult to grow on the lower slopes. One definite plus is that they generally flower as young

plants. If they become leggy or misshapen they can be pruned with electric shears after flowering without causing too much harm.

Many of these plants have been used in hybridizing, particularly with the *Triflorum* subsection, also of the section *Rhododendron*, e.g., *R. augustinii*, to create a wide range of almost blue hybrids. To show the smaller members of the series at their best, and if room permits, it is better to plant them in groups of three or more to achieve the full effect of massed colour.

Some *Lapponica* species that may be available:

- R. chryseum*. Can be cream to yellow with 4-5 flowers in truss and height to two feet (0.6 m). Goes well with purple.

- R. fastigiatum*. Light to dark purple, 4-5 flowers in truss, height to three feet (0.9 m), good glaucous foliage.

- R. hippophaeoides*. Lavender blue flowers, compact truss, height to five feet (1.5 m), likes a moist area, early flowering. 'Haba Shan' is probably the best form.

- R. impeditum*. Commonly grown, small purple flowers vary in colour, true dwarf.

- R. intricatum*. Lavender to mauve flowers in compact truss, height to three feet (0.9 m), one of the best.

- R. lapponicum*. The subsection type. Flowers purple, three to a truss, height to 3 feet (0.9 m). Difficult to grow.

- R. rupicola*. Commonly yellow, but best form plum crimson, outstanding, height to two feet (0.6 m), can be leggy.

- R. russatum*. Flowers reddish to intense violet, 4-6 to a truss, height 2-6 feet (0.6-1.8 m), leaves can be up to 2.5 inches (6.3 cm) long.

- R. polycladum*. Flowers purple rose to royal blue, 2-3 in a truss, height to three feet (0.9 m), tends to be straggly in shade.

- R. websteranum*. Flowers can be purple, but mostly pale blue in Australia.

Height three feet (0.9 m), keep moist.

Some hybrids that may be available:

- Blue Diamond Group, light purple, will not tolerate overhead shade. (*Intrifast* Group × *R. augustinii*).

- Blue Tit Group, nice foliage, pale mauve, average flowers. (*R. impeditum* × *R. augustinii*).

- 'Ilam Violet', one of the best deep violet flowers, can grow tall in time. (*Electra* Group × *R. russatum*).

- Intrifast* Group, good foliage, violet-blue flowers, low compact grower. (*R. intricatum* × *R. fastigiatum*).

- 'Oceanlake', deep blue, early, low dense bush. ('Sapphire' × 'Blue Diamond').

- 'Saint Breward', larger truss, good violet blue with low spreading habit, will grow taller in time, so use shears. (*R. impeditum* × *R. augustinii*).

- 'Saint Merryn', another good dark violet blue with low spreading habit. ('Saint Tudy' × *R. impeditum*).

- 'Chikor', yellow flowers, small leaves which seem very dark for a rhodo. (*R. rupicola* var. *chryseum* × *R. ludlowii*).

- 'Ramapo', bright violet flowers, good grey young foliage, will take sun. (*R. minus* Carolinianum Group × *R. fastigiatum*).

- Russautinii* Group, best forms of deep lavender, only buy this one when in flower [to choose desired colour], taller grower. (*R. russatum* × *R. augustinii*).

*Ian Wallace and Norm Brown are co-leaders of the Rhodo/Camellia group of The Ferny Creek Horticultural Society, and have a dialogue with the Australian Rhododendron Society, Victorian Branch, at Olinda. Olinda is situated in the Dandenong Mountains about 50 miles (80 km) northeast of Melbourne.*



*Ilex verticillata* 'Winter Red' 26 Dec 2010.



*R. maximum* 13 Jan 2011.

# 2011: An Unusual Weather Year in Georgia

Charles Andrews  
Cumming, Georgia



Photos by the author unless otherwise noted



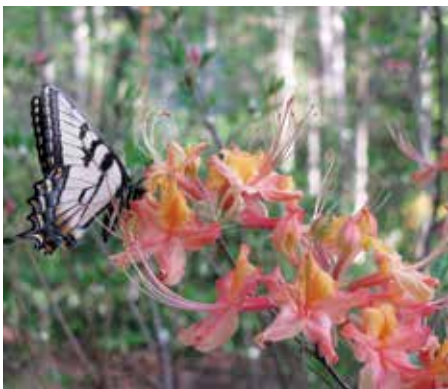
*R. austrinum* 12 Apr 2011.



Like this *R. flammeum* hybrid 12 Apr 2011, some of the early blooms were slightly deformed.

While all of us would like to know when our various rhododendrons and other plants will bloom each year so we can schedule our flower shows and garden tours, we cannot control the variability of Mother Nature.

Individual plants do not always bloom at the same time year after year. An unusually warm or cold beginning to the spring season could rush or delay the peak, and a late March or April hard freeze could even destroy it. Elevation and latitude affect bloom times. For example, plants in Macon, Georgia, near the fall line bloom earlier than the same plants placed in Gainesville, Georgia, at the upper edge of the Piedmont plateau. Richard E. Bir (1992) said that spring generally moves north about 15 miles (24.1 km) per day and up mountains about 100 feet (30.5 m) in elevation per day. For every 1,000 feet (304.8 m) increase in elevation, temperature tends to decrease about 3.5 degrees Fahrenheit (1.9° C).



*R. calendulaceum* hybrid (tested triploid) 13 Apr 2011.



*R. minus* var. *chapmanii* 19 Apr 2011.

In his classic book on azaleas, Fred C. Galle (1987) included a flowering chart showing the average time ranges of bloom for many azalea species and groups based upon data from Callaway Gardens, Pine Mountain, Georgia. Galle provided relative dates for other locations, noting that relative bloom times at Mobile, Alabama, and Charleston, South Carolina, are about 1-2 weeks earlier; Washington,



*R. calendulaceum* hybrid Lumpkin Co., GA 20 Apr 2011. Photo Joe Coleman



*R. prunifolium* Providence Canyon, GA 23 Jul 2011.



DC, 2-3 weeks later; St. Louis, Missouri, 3-4 weeks later; London, England 4 weeks later; Hartford, Connecticut, Seattle, Washington, and Tokyo, Japan, 4-5 weeks later; and Boston, Massachusetts, 5-6 weeks later. While not indicated, Atlanta would be about 1 week later than Callaway Gardens. Of course, there is even a difference between the southern side of metropolitan Atlanta near Fayetteville and the northern side near Cumming. In colder climates, bloom times are typically shorter, and in warmer climates bloom periods are longer. For your geographic location and microclimate, adjust your normal bloom times accordingly.

In the southeastern United States, the year 2011 did not fit the norm. December 2010 had twenty-one days with below freezing temperatures. On December 14, the temperature dropped to 14° F (-10° C). We had an unusual white Christmas for the sunny South; over an inch (2.5 cm) of snow fell that day. January 2011 brought us 4 more inches (10 cm) of snow. Seventeen days in January had freezing temperatures, and on two days the high was below 32 degrees (0° C). January 9 went down to 19 degrees (7.2° C). February was quite cool, with ten days below freezing. The lowest was February 9 at 26 degrees (-3.3° C). Some of us wondered if the cold weather might slow or even the hurt the spring bloom.

Then along came March, wet and mild—not one day of freezing weather. March 7 had the lowest temperature at 35 degrees (1.6° C). Two days reached 82 degrees (27.8° C). Over 9 inches (220 mm) of rain fell in March, 4.25 inches (114 mm) in February, and over 2.5 in (64 mm) in January. April was also frost free—this in an area where light frosts and occasionally hard frosts occur into late April (statistics courtesy of the U.S. National Weather Service for Atlanta, Georgia).

Experts tell us that the normal sequence of bloom times for native azaleas begins with *Rhododendron canescens* and *R. austrinum*, then are soon followed by

*R. perichlymenoides*, *R. vaseyi*, *R. atlanticum*, *R. alabamense*, followed by, *R. flammeum*. Of course, the bloom of all these species mentioned above can overlap. In the Atlanta area, these species normally begin blooming in early April, with *R. flammeum* kicking in about the third or fourth week of April. In our garden north of Atlanta in Forsyth County, the peak bloom normally occurs about April 27.

At the end of April or the first days of May, early forms of *R. calendulaceum* normally begin to bloom. One indicator to distinguish *R. calendulaceum* from *R. flammeum* is bloom time: *R. flammeum* in April; *R. calendulaceum* in May to early June.

The earlier cold weather in 2011 may have had some effect on these first native azaleas to bloom. We noticed some of the early flower blossoms seemed to be slightly deformed and perhaps were a little smaller than usual. Blossoms opening later did not appear to have this problem.

Then, the warm spring sped up the bloom and changed the normal bloom sequence. *R. austrinum* and *canescens* began early in April. Our *R. calendulaceum*, originally from Lumpkin County, Georgia, in the Appalachian foothills, began blooming in our garden on April 18. Some *R. flammeum* and *flammeum* hybrids from Cherokee County were already beginning to fade by that date, but others were only in open bud on April 21. *R. alabamense* and *R. canescens* were not quite open by April 21, but a hybrid seedling from seed collected from Gregory Bald (North Carolina) was in full bloom.

In Lumpkin County where *R. calendulaceum* normally begin their blooming the first week in May, flowers were already opening April 20. Such flowering patterns give opportunity for the pollen from tetraploid *R. calendulaceum* to be naturally carried to diploid *R. canescens* and *R. perichlymenoides*, and the resultant hybrids, which are possibly triploids, can be spectacular.

Continuing throughout the bloom season, flowering in the southeastern U.S.

reached peak bloom ten days to two weeks earlier in 2011. We saw wonderful *R. cumberlandense* on Cheaha Mountain in Alabama on May 18. These are normally late May to June plants. Joe Coleman found Gregory Bald in full bloom on June 13 this year. It was on June 22 in 2010. At Providence Canyon, in southwestern Georgia, peak bloom of *R. prunifolium* is usually around July 31. This year we went on July 23, and peak bloom had past.

In late 2011, December had a few cold days. After both cool and warm days with much good rain in January, but nothing extremely cold or snowy, Kirk Mellish, the long-time Atlanta WSB Radio meteorologist who developed the simple Mellish meter (a one to ten ranking) to indicate how foul or nice that day's weather will be, now says that February and March 2012 may have unseasonably warm weather alternating with unseasonably cold weather. As we write in mid-February, we have had temperatures in February as high as 70 degrees (21° C) and as low as 19 degrees (-7.2° C). If plants can remain dormant into March, we may yet have a more normal spring for 2012, with *R. austrinum*, *R. canescens*, and *R. vaseyi* holding off in our garden until the third week in April before blooming and *R. calendulaceum* waiting until early May. We will soon know.

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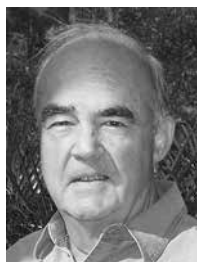
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*Charles Andrews is a lover of plants, especially native American azaleas. He is fortunate to live in the epicenter of these natives at the southern end of the Appalachian Mountains. With the exception of R. canadense, R. prinophyllum, and R. occidentale, all American native species grow well in his north Georgia area. He is a member of the Azalea Chapter.*

# Rhododendron Passage:

## A 'Transplanted' Chicagoan's Experience Growing 'Rhodies' in Northern Michigan

Roger Dunlap  
Traverse City,  
Michigan



Photos by the author

Upon retirement in the summer of 2006, I moved to my present home nestled between a hardwood forest and a beach along the west side of the Old Mission Peninsula near Traverse City, Michigan. This is a region that has long been recognized by agricultural interests for its extended, stable growing season. The Old Mission Peninsula, best known for a robust tart cherry industry, also touts a world-renowned wine producing “appellation” as well.

Having been an avid rhody collector since the early '90s, I brought my “rhodies” north with hopeful expectations. One quarter of the moving van was reserved for my precious cargo, much to my wife’s dismay! As it turned out, the transfer of the plants was the easy part; getting over certain pre-conceived notions about rhody culture specific to the Chicago area and upper Midwest was another. Those who still reside in the Chicago area and upper Midwest can attest to the “harsh hand” dealt by Mother Nature: a wind-swept hardness Zone 4-5, clay soil, and hot-humid summers, just to name a few cultural obstacles. It didn’t take long to realize that I was actually situated in a more benign climate 300 miles (483 km) northeast of Chicago and close to the 45<sup>th</sup> N Parallel. To this day, my rhody compatriots continue to razz me about “Banana Belt North,” which in horticultural circles is more properly termed USDA Zone 6B.

I have a preference for and have achieved the most success growing *elepidotes*, and I am fortunate in that this



unique micro-climate/location is ideal for growing *elepidote* rhododendrons. I have amassed a collection of well over 250 plants during the past 20 years. It turns out that the combination of the northern latitude and proximity to Lake Michigan is conducive to growing rhodies less bud hardy than the locally grown “ironclads” typically recommended for our area. The nearby presence of Grand Traverse Bay has a moderating/stabilizing influence on temperature and humidity throughout the year. As a consequence, I have been successful in growing “west coast” hybrids with a bud hardness rating of  $-5^{\circ}\text{F}$  ( $-20.5^{\circ}\text{C}$ ) ranging all the way up to Midwest hardy “Ironclads” ( $-20$  to  $-25^{\circ}\text{F}$ ;  $-29$  to  $-32^{\circ}\text{C}$ ). All that being said, my experience most certainly would not apply to those Michigan rhody growers living just five miles (eight km) or more inland.

In our area rhodies can be grown in nearly full sun, provided some shelter is given from the prevailing winds and the

late-mid afternoon sun in winter. My plants are set back from the beach in the shelter of an open hardwood forest with a minimum of 10 ft (3 m) spacing between plants. It took a few years to realize that the sparse rhody bloom was due in large part to insufficient sunlight. The opening up of the forest canopy by limbing up some trees and thinning out of others has indeed increased the sunlight. Peak season for rhododendron bloom in my garden is generally in the first ten days of June.

In response to the high sand content and to counteract the alkaline pH in the soil (around 8), a fine textured pine bark and ground sulfur is used during the planting process. I have experimented with several time-release fertilizers. Lately I have found that a generous application of Holly-tone® (an organic fertilizer) deepens the leaf color and increases the overall vigor of the plant while minimizing the risk of “burning” roots. I am lucky in that insect damage has been negligible. I have been



'Besse Howells'.



'Casanova'.



'Dexter's Victoria'.



'Hachmann's Charmant'.

able to limit intermittent deer browsing by the application of bird netting particularly on the few plants "preferred" by deer (*R. fortunei* hybrids).

Here is a partial list of some of the rhododendron cultivars familiar to most "rhody" growers that I have successfully grown:

**A.** The "ironclads" (bud hardy to -25° F; -32° C): 'Casanova', 'English Roseum', 'Henry's Red', 'Joe Paterno\*', 'Maxecat', 'Nepal', 'Purple Passion', 'Rio', 'Roseum

Elegans', and 'White Peter'.

**B.** Next hardiness group (bud hardiness range from -20 to -15° F; -29 to -26° C): 'Besse Howells', 'Blue Peter', 'Dexter's Champagne', 'Dexter's Victoria', 'Firestorm', 'Fantastica', 'Goldkrone', 'Hachmann's Charmant', 'Independence Day', 'Janet Blair', 'Mary Belle', 'Mrs Furnival', 'Peter Alan\*', 'Roslyn', 'Sandwich Appleblossom', 'Scintillation', and *R. degroianum* ssp. *yakushimanum* 'Ken Janeck'.

**C.** The "exotics" (bud hardiness range -15 to -5° F; -26 to -21° C) – these varieties are either "tender" or recent introductions to our area): 'Belkanto', 'Cape White', 'Chapeau # 251\*', 'Nancy Evans', 'Pleasant Dream', 'Sapporo', 'Tamarindos', 'Taurus', and 'Virginia Richards'.

\* = not registered.

*Roger Dunlap is a member of the Midwest ARS Chapter.*

**More photos on next page.**





'Maxecat'.



'Peter Alan'.



'Belkanto'.



'Pleasant Dream'.



'Scintillation'.



'White Peter'.

# The Case of the Mysterious Gaultheria

Steve Hootman  
Federal Way,  
Washington



(Reprinted from [http://www.rhodygarden.org/steves\\_blog\\_1/2011/10](http://www.rhodygarden.org/steves_blog_1/2011/10))

One of the primary non-rhododendron collections that we focus upon and feature in the RSBG is the *Gaultheria* collection. The gaultherias or “wintergreens” are a widespread group of plants related to rhododendrons. They are called wintergreen because the species native in eastern North America, *Gaultheria procumbens*, was one of the few evergreens found growing in the forests that greeted the first colonists upon their arrival in New England. This species is the most commonly cultivated wintergreen due to its hardiness, its use as a dwarf evergreen groundcover and its large red berries. It is also the original source for the flavor wintergreen. On the Pacific Coast of North America, the most commonly encountered species is the much larger-growing, often ubiquitous, *Gaultheria shallon*, salal. It is also a fine ornamental but can be a bit of a thug in a smaller garden. We have two other much smaller-growing species of *Gaultheria* in the west, *ovatifolia* and *humifusa*, neither of which is commonly cultivated. There is a fifth North American species, native to the bogs and moist forests of the far north, *Gaultheria hispida*, which is often included in the genus *Chiogenes*. I have killed it many times over the years.

The genus *Gaultheria* is one that has long intrigued me, being plants of interesting habitats and lands, much like our rhododendrons. I have been very

fortunate to have had the opportunity to observe and collect many different species of *Gaultheria* while traipsing about the Sino-Himalaya. In that region of Asia, the genus is quite diverse with many different species, the majority of them, like our North American natives, fine ornamental shrubs or groundcovers. Among the species that I have introduced from this part of the world are *G. pseudonotabilis*, with long soft red bristles on the stems and red flowers; *G. hypochlora*, a small alpine, evergreen ground-covering species with large turquoise fruit; *G. praticola*, with hairy, deeply veined leaves; *G. wardii*, with softly hairy stems and light blue fruit; *G. dumicola*, with large, leathery and smooth leaves with curving impressed veins; *G. trigonoclada*, a very large species with beautiful foliage and unique “wings” on the stems and many, many others.

One of the most intriguing of my introductions was from a small plant (SEH#1510) that I found growing in deep shade in a forest of *Rhododendron protistum* and *R. sinogrande*. It had the appearance of the widespread and common *G. nummularioides* that I had observed and collected in many different regions. This one was “different” however and growing in a very unusual habitat for a species that is normally found above tree-line creeping amongst the rocks and dwarf alpine rhododendrons. It was completely prostrate on the ground with perfectly round leaves about three-quarters of an inch long in pairs along the slowly creeping stems. I named it *Gaultheria* aff. *nummularioides*.

In the garden, this has turned into a fine, small-scale ornamental groundcover that we use quite extensively in the RSBG. As is our nature, we took cuttings for a several years and were growing on numerous stock plants and even sold a few through the catalog and on site plant sales. Three years ago, the first of our “freakish” three winters in a row (and still counting I

am afraid) took place and the SEH#1510 plants were all killed in their containers, along with a great deal of other material. Fortunately, the plants in the garden were fine and continue to thrive. Among the dozens of pots with now dead *Gaultheria* SEH#1510, one container stood out. In it we noticed one small green plant—still alive. It was a *Gaultheria* but it was not **the** *Gaultheria*; it looked very similar but yet “different.” True, this mystery plant was growing in a pot in which SEH#1510 had been growing and it did have rounded leaves, but it was “different” and it was alive. There was no sign of any other life in that batch of rooted cuttings. I pulled it aside and kept an eye on my “mystery *Gaultheria*”.

In due course, Dennis took cuttings of our small mystery plant and we eventually had a nice little supply in gallon containers. This past September, while pulling plants for a plant sale in Seattle, I noticed a row of my mystery *Gaultheria* and was delighted to see the clusters of strikingly white flowers that stood proudly forth from the mass of dark green foliage in each container. It was finally blooming and it was definitely different. I took a pot home that night to try and work out my mystery. Very exciting as you can imagine. I’m sure you wish you could have been there.

As expected, it did not key out in the *Flora of China* and did not fit the description of any known species. It was definitely something new as was my original plant (SEH#1510) that I had also collected for comparison purposes and to finally make a determination as to its proper name. The original collection was indeed close to *nummularioides* but had the wrong hairs and very different flowers although they were arranged singly in the axils of the leaves as expected in *nummularioides* and were similar in color, a sort of pink-green. These facts, in combination with its very different

and distinct woodland habitat, indicated to me that this was an undescribed, new species. In contrast, the mystery plant had much more tightly urceolate flowers of pure white that were borne in small racemes from the tips of the branches—very different indeed. It also had a much more upright, although still quite low and prostrate habit. I thought about this for quite some time. It looked familiar in some way but I could not quite pull it out (I find that a wee dram of scotch often facilitates the sparking of my somewhat senescent synapses in these situations).

Then it hit me. The flowers were similar to those of an alpine dwarf species from the high Himalaya, *Gaultheria pyrolifolia*. This perfectly hardy species had been growing in the same hoop house as the *G. aff. nummularioides* (now *species nova* SEH#1510) before the latter had been killed. The two had obviously crossed and my collection was the mother plant. The seed had germinated in the container under the parent plant and had survived the frozen demise of its mother thanks to the hardiness passed along to it by its high mountain father *G. pyrolifolia*.

I had solved the mystery of the magic *Gaultheria*—we had a “natural” garden-origin hybrid! We are stepping up production of this fine plant and hope to release it within a year or two under its own cultivar name.

I can't believe they pay me for this.

*Steve Hootman is the Executive Director and Curator of the Rhododendron Species Foundation and Rhododendron Species Botanical Garden in Federal Way, Washington.*

## “Life’s Chosen Few”

*Last year, a group of Victoria Chapters volunteers, led by their president, Calvin Parsons, collected 74 articles written by Norman Todd, and had a book titled The Complete Wit and Wisdom of Norman Todd printed. It is a 228 page, soft-covered book and sells for \$12 to members of any Rhododendron Society member. The following is an article that shows Norm at his most thoughtful and amusing.*

Norman Todd  
Victoria, BC  
Canada



Do you recall your years in high school and your sometime strivings for academic and social success? In my recollection, at any rate, it seems that one or two of my contemporaries managed to take everything in stride; they understood the tricks of trigonometry intuitively, could recite Shakespeare's sonnets after one scanning and never double faulted at tennis. These people, perhaps you were one of them, were destined, it seemed, to be leaders, to flourish,

and live beautiful lives.

There are a few rhododendrons that seem to have these same secrets to happy survival stamped into their genetic code. They grow and bloom and look contented and well composed year after year. 'Nancy Evans' is one such happy camper. She is a good looker and although of modest stature, wins beauty contests at all the shows. She is consistent in her performance and manages on an every day diet, being neither bulimic nor anorexic. She is at home in almost any garden in these parts. Her equanimity assures her acceptance by the rest of the rhododendron group. Her comportment equates to harmony; a harmony that extends to her being one of the most prolific and nurturing parents in the rhododendron community.

I would also place 'Rosamundi' in this easygoing, congenial group. 'Rosamundi' will not be the garden's valedictorian, or medal winner, but will shine in her season and move on smoothly from year to year. I would guess that because she starts to bloom so early in the season and is so popular and ubiquitous, she gets more notice than almost any other rhododendron. I have observed that even visitors to our part of the world who come from inhospitable places (in a horticultural sense I mean)—

like Ottawa or Flin Flon—want to know who is this modest but radiant beauty, blooming in January. Furthermore, she enjoys blooming so much that she does it for three or four months. She is always modestly unassuming and unobtrusive but thoroughly reliable.

I also recall from schooldays the new arrival bursting onto the scene and taking the place by storm. A big and brassy and invincible sports jock idolized by half and feared by the rest. You could certainly claim that 'Point Defiance' and 'Horizon Monarch' fit this caricature. If they were human they would be sent for drug testing. Their stature and strength are suspiciously enhanced. By what? They ask for no special favours. Compare the behaviours of, say, *R. oreodoxa* var. *fargessi*. *R. oreodoxa* var. *fargessi* whimpers at the slightest threat of thirst, rolling its leaves in premature pique. It can barely bear to breed as it may die if its swelling seedpods are not removed. I have noticed the same defect in 'Chief Paulina'. If the seed capsules are not detached—difficult procedures with the Chief as she is particularly loathe to part with them—it is probable that the twig bearing the pods will die. It has to  
Continued on page 143.)



# In Defense of *Rhododendron* Subgenus *Vireya*



G. Argent  
Royal Botanic  
Garden Edinburgh,  
Scotland



A. Twyford  
Royal Botanic  
Garden Edinburgh,  
Scotland



*Rhododendron javanicum* type species of subgenus *Vireya*. Photo taken at the type locality Gunung Salak, Java, with Pak Tukirin.

The name *Vireya* (Blume)Benn. [i.e., Bennett] was preceded at sectional level by *Schistanthe* Schltr. (Craven 2010, Craven *et al.* 2011) and, as The International Code of Botanical Nomenclature (McNeill *et al.* 2006) presently stands, although *Vireya* is well established it cannot be maintained at sectional level. However, it is still available at the level of subgenus based on C.B. Clarke's use in the Flora of British India (1882) with *R. javanicum* (Blume)Benn. as the type. Although *Schistanthe* must be the name used at sectional level, it is still a question of choice whether to recognise the group at sectional or subgeneric level. Cullen (2005) elegantly explains the openness and choice available to all users of taxonomy. "The fact the process is entirely unmoderated—comes as a great surprise to most gardeners, who tend to think that there is some authority which rules."

The level of subgenus was selected for the monograph of vireyas (Argent 2006) partly for practical reasons but also because the group is well defined morphologically. Traditionally, vireyas have been defined on their seeds, which have tails

at each end and lack the marginal flange that many other rhododendrons possess. Additionally, anatomically they are unique in having large idioblasts in the leaves (Nilson 2003 Nilson & Scheckler 2003). Palser (1991) demonstrated that characters of the ovary, ovule and gametophyte are much more distinct in vireyas than any other group of rhododendrons. Spethman (1980, 1987) working with flavonoid and carotenoid pigments also suggested that subgenus was the appropriate level for the group. They have a unique biogeography and for the most part are geographically isolated from other *Rhododendron* species. They have undergone their unique evolutionary trajectory in the complex island system of Southeast Asia. Evidence from low-copy nuclear (Goetsch *et al.* 2005; Twyford *et al.*, unpublished), nuclear ribosomal (Brown *et al.*, 2006a) and chloroplast regions (Brown *et al.*, 2006b) suggest they are a distinct monophyletic group

nested within the other scaly rhododendrons. Only *R. santapau* Sastry *et al.* appears outside the vireya group (Goetsch *et al.*, submitted).

There is ample precedent for retaining useful plant names for recognisable groups nested within others. Within the family *Ericaceae*, *Agapetes* D. Don *ex* G. Don is nested within *Vaccinium* L. (Kron *et al.* 2002) and *Diphycosia* Blume in *Gaultheria* L. (Powell & Kron 2001), but the acceptance of these genera as distinct is widely supported. Part of the problem of acceptance or rejection of names is the fact that taxonomy is not a purely academic subject but has important practical applications. End users can form a powerful lobby to accept or reject names so long as they don't violate the international codes covering plant naming. The use of DNA sequencing and molecular phylogenetics has revolutionised plant systematics. It is a fast moving scientific field which



has increased our understanding of the evolutionary relationships in the genus *Rhododendron*. Although the International Code of Nomenclature lays down many rules for nomenclature which are almost universally accepted, [i.e., the Code has no legal force] there is still a great deal of choice in plant naming. As Cullen (2005) says regarding this choice, “It is often a shock at first, though most find it ultimately liberating.” So sect. *Schistanthe* or subg. *Vireya*—botanically the choice is still yours.

### Acknowledgements.

The authors would like to thank Professor John McNeal for very helpful advice on the nomenclatural aspects surrounding this problem.

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### “Life’s Chosen Few”

(Continued from page 141.)

be admitted that our super heroes ‘Point Defiance’ and ‘Horizon Monarch’ also have the rachis pretty well secured to the end of the branch but a quick snap at the right spot removes the spent blossom and I’m sure it does not hurt all that much. These two giants will grow more than a foot a year and once they start to get hair on their chins they blossom pro-

fusely every year. I could speculate that the breeders of corn will be looking at how to use their genes to give metre-long corn-cobs. But perhaps the cobs would be on five metre corn plants and therefore hard to harvest.

Another, get-it-right-first-time, shiner is ‘Blaney’s Blue’. He could be the show-off of the class. What a power bloomer! I don’t think that in my garden “Blaney” will ever be deadheaded. It’s a life’s career

to tackle a full deadhead. But it doesn’t make any difference. There is that old chestnut about an English gardener, Lord “So-and-So,” observing that dead-heading is a foolish practice—it just makes the job more onerous the next year. This does not apply to ‘Blaney’s Blue’. The creature will carry on showing off with thousands of blossoms no matter how it is neglected. Also, have you (Continued on page 145.)

# When Is a Grouping a “Group”?

Donald H. Voss  
Vienna, Virginia



The grouping of plants is an essential element of botanical and horticultural plant classification, identification, and nomenclature. For situations in which breeding between species produces viable progeny, the International Code of Botanical Nomenclature (ICBN)—soon to appear in a new edition as the International Code of Nomenclature for algae, fungi, and plants—provides the rank of nothospecies (hybrid species). A nothospecies may be identified by a hybrid formula (e.g., *R. selense* × *R. wardii*) or by a nothospecific name (e.g., *R. ×erythrocalyx*). The epithet in such a name applies to all hybrids between the named parents (including filial generations and backcrosses), irrespective of which is the seed parent. With few exceptions, the scientific names of plant taxa are based on classification decisions documented by published descriptions and by type specimens deposited in a herbarium. With respect to cultivated plants, however, the names of a great many cultivars are not supported by serious documentation. While there are roughly 1,000 recognized species names in *Rhododendron*, there are an estimated 25,000 names (registered and unregistered) for cultivars in the genus.

Until the 1995 edition of the International Code of Nomenclature for Cultivated Plants (ICNCP), the term most commonly used for a grouping of closely related cultivars was the grex. The Latin word grex means flock, herd, drove, or swarm. Grex names in *Rhododendron* were always based on parentage, but until the second half of the last century little was

done to prevent creation of different grex names for different breeders' plants from a given hybrid combination—or, indeed, to require publication of an adequate description for a grex. In contrast, from a very early period the grex concept and related nomenclatural practice in the *Orchidaceae* were refined and limited to documented details of the parentage of hybrids.

Today, the Group (always with an initial capital G; abbrev. Gp) has displaced older collective epithets in the ICNCP. Except for grexes (greges) in the *Orchidaceae*, the Group is now the only nomenclatural option for a formal collective grouping of individual plants and/or cultivars. The Group “may comprise cultivars, individual plants, or combinations thereof on the basis of defined character-based similarity” (not parentage- or originator-based). All members of a Group must share the defining character(s). The criteria for defining the characters may vary according to the needs of users and may include a defined range of variation in a character. Examples in the ICNCP include the *Primula* Border Auricula Group for cultivars that are “best cultivated under similar outdoor conditions”; the *Iris* Dutch Group of early flowering cultivars arising mainly from a particular set of species; and three Groups in *Festuca rubra* based on ploidy and creeping or non-creeping habit. Where earlier authors included designations such as “sort,” “type,” “selections,” or “hybrids” in forming terms equivalent to Group epithets (based on defined similarity), these words must now be replaced by “Group.” If a Group epithet is formed from a grex epithet (based on parentage) established before 2004, the word “Group” is to be substituted for “grex” in the epithet.

The IRRC also provides the option of Group status for taxa that are no longer recognized botanically at specific

or infraspecific rank but which have utility in agricultural, horticultural, or silvicultural classification. For example, a rhododendron of outstanding beauty was named by J. D. Hooker in 1849 as *R. roylei*; Hutchinson in 1930 considered this to be a variety of *R. cinnabarinum*; and in 1980, Cullen (in the Edinburgh revision) treated *R. roylei* as a synonym of *R. cinnabarinum* subsp. *cinnabarinum*. Hooker's *R. roylei* is now botanically *R. cinnabarinum* subsp. *cinnabarinum* and horticulturally *R. Roylei* Group.

For the genus *Rhododendron*, character-based similarity is usually based on morphological characters. In general, this translates to the similar appearance of a number of individual plants and/or cultivars as being the criterion for establishment of a new Group. Thus since 1995 and presumably into the future, a new Group in *Rhododendron* is to be based on a criterion different from that underlying the parentage-based assemblages named in the past century or more.

In compiling the 2004 International Rhododendron Register and Checklist (IRRC), the International Registrar for *Rhododendron* was faced with the question of how to treat the existing grex epithets once the term grex was no longer permitted for use in *Rhododendron*. At issue were about 1,000 collective epithets, many of which appeared in the 1958 Rhododendron Register. In the 2004 IRRC, all of the old grex epithets—based primarily on parentage—were entered as Groups in the interest of not disrupting long-established usage in the horticultural community. These entries were accompanied by descriptive information when this was available, but there is a tacit assumption that the plants in such Groups will exhibit a mixture of characters based on those of the parents. A familiar example is the Loderi Group, which commemorates the horticultural

achievements of Sir Edmund Loder. This Group originally comprised hybrids of *R. fortunei* × *R. griffithianum* raised by Sir Edmund in the early 1900s. There are now 34 cultivars in the Loderi Group: all hybrids from *R. fortunei* × *R. griffithianum*, including filial generations and backcrosses (24 by Sir Edmund and 10 by others).

The Introduction to the IRRC mentions the names of a number of informal groupings for azaleas. These names are appended to descriptions of azalea cultivars in recognition of the past association of many azaleas under collective names such as Gable, Glenn Dale, Kaempferi, and Satsuki. These are *not*, however, formal Group names but often represent large and more diverse aggregations of plants that may be defined in a variety of ways.

It is likely that a great many horticulturists, nurserymen, and gardeners are unaware of the provisions of the ICNCP and may readily equate “group” (lower case g, dictionary meaning) with

“Group.” Because of the probability of confusion, it is suggested that authors consider alternatives to use of the word “group” in discussing assemblages of cultivars based on criteria other than the defined character-based similarity prescribed by the ICNCP. Phrasing such as “Gable’s hybrids,” “the Glenn Dale azaleas,” or “Kaempferi selections” is acceptable and provides a useful means of satisfying a need to distinguish an assemblage of plants on a basis other than defined character-based similarity without naming a new collective taxon.

#### Acknowledgment

The author is deeply indebted to Dr Alan C. Leslie for his detailed responses to a number of queries and for generously devoting time to comment on the draft of this note and to suggest emendations. Mr. William C. Miller III made helpful comments on the draft. The author is fully responsible for any errors or infelicities in

this note.

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#### “Life’s Chosen Few”

(Continued from page 143.)

noticed that often when someone is not very gifted academically she will be at the top of the heap by having a keen sense of humour? “In her attire doth show her wit, it doth so well become her.” I am thinking of ‘Paprika Spiced’. Here is a seriously freckled blond who stops her audience by evoking simultaneously, mirth and sympathy. She may even elicit a therapeutic response, as she appears to have an advanced case of chickenpox. ‘Paprika Spiced’ is surely a comic but she is also a cunning commercial success.

Being born with a deformity can be exploited to advantage if it is not too debilitating to one’s health. ‘Linearifolium’ is among the most admired and all because of her genes being really messed up. I suppose some of her popularity could be due to her striking similarity to marijuana and resulting hop headed

response of rhododendron illiterates. ‘Linearifolium’s’ flower is not at all striking; it has been described as strappy. The message here, I suppose, is to use what God-given features one has to the full advantage and bask demurely in the attention generated.

Some of us react very negatively to another’s BO; especially so when squeezed in a crowd, shoulder to shoulder, or more accurately, armpit to armpit. However, this is the way I like to grow my rhododendrons and in particular the ones that exude smells. I personally like the BO of almost all rhododendrons and we should remember it is there because it gives some evolutionary advantage. Stripping the leaves of *R. russatum* when doing cuttings releases an odor that I hope will be present in the afterworld. *R. charitopes* has a fruity sweet aroma; it will please the nose of an oenophile. I used to have a plant of *R. kongboense* (now on the

most wanted list) and it was fun to ask little ones to crush a leaf and tell what it smelled of. “Toothpaste,” “Bubblegum,” “Kool Aid” were some of the responses.

Most of us, of course, are not endowed with film star looks or stratospheric IQs. Rhododendrons, as with people, are unable to defy the laws of statistics. Most are right in the middle of the great giant bell curve. So the ‘Anna Kruschkes’ and the ‘Percy Wisemans’ and the ‘Dora Amateis’ will survive, as will we, contributing our two bits and being content to be among the great silent majority of the populace, paying our taxes and keeping out of trouble. We are with honour but not singularly honoured. We cut the mustard but don’t leave a burning sensation. I think O. Henry had it right when he wrote: “I’m not headlined in the bills but I’m the mustard in the salad just the same.

## ARS Gold and Silver Medal Awards

### Gold Medal Award: Donald W. Hyatt

You are a Renaissance man. You have had a love of rhododendrons and native azaleas since childhood. You hybridize, distribute seed, photograph, paint, and share your rhododendron knowledge through your successful website and as a much-sought-after international speaker.

You are a contributor to the ARS Journal, *The Azalean*, and chapter newsletters. You have served the Society and your chapter in many capacities, including Chapter President and District Director. You have been instrumental in publicizing the plight of the azalea collection at the National Arboretum, where a generous grant was put in place to save the azalea collection.

For your valuable and endless contributions, the American Rhododendron Society is pleased to present the Gold Medal to Donald W. Hyatt. Asheville, North Carolina. May 5, 2012.



Don Hyatt, Don Smart and Ann Mangels.

### Silver Medal Award: Shirley and Allan Anderson

For well over forty years, you have researched the development of hybrids that are hardy for the Northeastern region of the United States. Your work has resulted in twenty registered crosses to date and identified a promising candidate for your goal of a hardy yellow.

Your willingness to hold offices, donate plants and seeds, lecture, publish articles, judge flower shows, open your garden to tours, and collaborate with and encourage colleagues has contributed to the viability and growth of the Tappan Zee Chapter. Your efforts have benefitted other Regional Chapters and added to the body of knowledge shared with your fellow hybridizers.

In recognition of your distinctive contributions to the genus *Rhododendron*, the American Rhododendron Society is proud to award the Silver Medal to Shirley and Allan Anderson. May 5, 2012



Don Smart, Shirley Anderson and Allan Anderson.

### Silver Medal Award: James S. Brant

For over a decade, you have focused your determined leadership on projects to protect and enhance the value of exceptional groups of North American azalea species in the Southern Appalachian Highlands. Your efforts helped obtain an aerial photograph of Gregory Bald for use in future comparisons and a mower for restoration of that bald, with spectacular results.

You coordinated groups of ARS members and others to protect special azaleas found on Hooper Bald from competing vegetation. You also organized planting of nearby Huckleberry Bald with seedlings of exceptional forms of native azalea species. You have taken the botanical exploration a step further into conservation and preservation of these fascinating plants and made them more accessible to future visitors.

For your outstanding contributions, the American Rhododendron Society is pleased to present the Silver Medal to James S. Brant. Asheville, North Carolina. May 5, 2012.



James Brant, Don Smart and Ann Mangels.

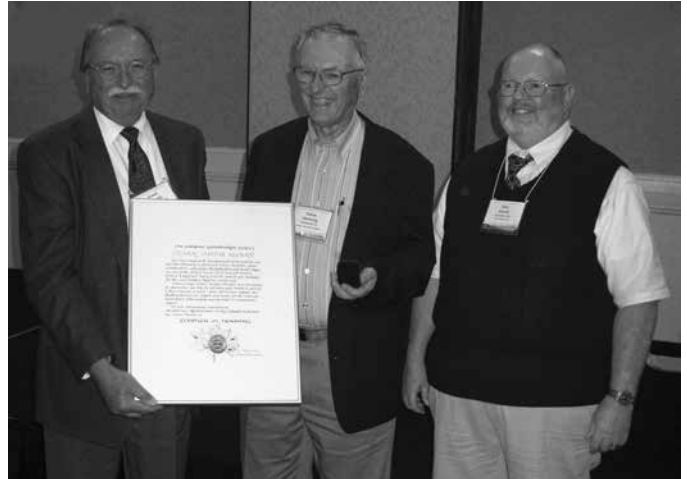


## Silver Medal Award: Stephen M. Henning

You have mastered the development of internet websites and used them effectively to inform and instruct the public about rhododendrons. Henning's Rhododendron and Azalea Pages was one of the earliest sources of on-line information. District 8 benefitted hugely from the website you developed for the 2009 Eastern Regional Conference.

When a major historic azalea collection was announced for destruction, you took the initiative and created a website to focus activities to save it. Your efforts have stopped the pending destruction, helped raise monies for the continued preservation of the azaleas, and attracted U.S. Congressional support.

For your outstanding contributions, the American Rhododendron Society is pleased to present the Silver Medal to Stephen M Henning. Asheville, North Carolina. May 5, 2012



Karel Bernady, Stephen Henning and Don Smart.

## ARS Chapter Awards

### EUREKA CHAPTER

#### Bronze Medal: Paula Trinoskey

Since you joined the Eureka Chapter of the American Rhododendron Society, you have been an inspiration to all members. You have served as a board member, vice president, president and as past president. You have provided housing for our annual truss show judges and served as hostess for their post-show garden tours and lunches. You are there as part of the set-up crew for the annual truss show and always return at the end to help with take down and clean-up chores. You're also a consistent exhibitor for the show, have judged other chapters' flower shows and have given excellent programs both at Eureka Chapter and at other chapters. For your dedicated and selfless service, the Eureka Chapter is proud to award the Bronze Medal to Paula Trinoskey.

#### Bronze Medal: Verne Trinoskey

As a "dragee" to the Eureka Chapter of the American Rhododendron Society, you have been an important part of the chapter's activities. You have provided housing for our annual truss show judges and served as host and chef for their post-show lunches and garden tours. You are there as part of the set-up crew for the annual truss show and always return at the end to help with take down and clean-up chores. You have welcomed members into your garden during many of our annual garden tours and allowed us to hold plant sales in your front yard. For your dedicated and selfless service,

the Eureka Chapter is proud to award the Bronze Medal to Verne Trinoskey.

### MASSACHUSETTS CHAPTER

#### Bronze Medal: Douglas Harding

Volunteer organizations are dependent upon the goodwill and generosity of its members. They are also dependent upon those members for leadership during hard times. Hard times can have many definitions. In 2006, after two years without a vice-president and the end of George Silverman's two years as president, the Chapter indeed faced hard times. And to our rescue came not one member, but two (though admittedly they were in a relationship). Susan and Doug Harding came forward and volunteered to serve as co-presidents. And serve they have, not just for two years, but for five! In 2004 you were asked to complete Jim Phillip's term as director. The following year you were elected to the Board on your own virtues. After only two years of experience you became—in the eyes of the Commonwealth of Massachusetts—president. It is difficult to define your individual contributions because, as advertised, all five years were indeed a co-presidency handled with joint effort, good cheer, and smooth coordination. The Chapter is indeed fortunate to have you as a member, and is pleased to present you with its highest award, the Bronze Medal of the Society.

#### Bronze Medal: Susan Harding

You have been the voice of the presidency,

chairing both Board and Chapter meetings, serving as liaison to National, Mass. Hort., and our speakers. You have served on the Program Committee, the Honors Committee, represented the Chapter at the Home Gardeners' Night and New England Grows, arranged tours, and participated in Plants for Members. Where ever and whenever you were needed, you stepped in. You have truly done more than expected in your five long years in office. You have worked tirelessly for the good of the Chapter, not only filling the role of co-president with grace, good humor, and unflagging energy, but adding the additional chore of hospitality queen to your duties. When the Waltham Field Station closed its doors for meetings, you volunteered your home to a most grateful (and more comfortable) Board for all of its meetings, complete with refreshments. You overcame the adversity of having no storage for Chapter supplies and ensured that the Chapter was always provided with beverages and a well-set table at Chapter meetings. You fed the workers at the Truss Show and you opened your home to visiting speakers looking for a place to stay. The Chapter is honored to present you its highest award, the Bronze Medal of the Society.

#### Citation for Service: C. Russell de Burlo, Jr.

In 2004 the Chapter awarded you its highest honor, the ARS Bronze Medal. Rather than resting on your laurels, you (Awards continued on next page.)

## ARS Chapter Awards

(Continued from page 147.)

have continued to serve the Chapter drawing from both your professional skills, and your personal love of rhododendrons and desire to share that regard with others. You have done a superb job of managing our assets for twelve years despite the peculiar government restrictions placed on not-for-profit organizations. As if that were not enough, your generosity in endowing the de Burlo Speaker Fund has allowed many others to take advantage of the knowledge of some of the top speakers in their horticultural fields. In recognition of your continued contributions to the Chapter and your quiet, steadfast friendship, we are honored to present you with the A.R.S. Citation for Service.

### **Citation for Service: Willard P. Hunnewell**

You have been a member of the Massachusetts Chapter since 1987—a feat of note by itself! Although you have not been actively involved with the day-to-day activities of the Chapter in some time, the Chapter has remained in your sights and you have continued to make a contribution without which one of our most popular events could not occur. We have all benefited from your great generosity in making your barn available for the Van Veen distribution year after year. And this year, before we had the opportunity to come begging once again, you reached out to us! We are truly in your debt. The ARS, Massachusetts Chapter, takes great pleasure in presenting you with the American Rhododendron Society Citation for Service in recognition of your continued generosity to the Chapter.

### **MIDDLE ATLANTIC CHAPTER Certificate of Appreciation: Duke Rankin**

For your ever willingness, helpful enthusiasm and leadership in the Hooper Bald Project, we recognize you with this Certificate of Appreciation. You worked tirelessly with us through many phases of the endeavor, especially coordinating the various government agencies that were involved. Our project was successful because of the liaisons you created. We were always able to count on your guidance, wisdom and sweat equity.

### **NEW YORK CHAPTER Bronze Medal: Alice Ford**

The New York Chapter is pleased to award

the Bronze Medal to Alice Ford. Alice has been an active member of the New York Chapter for many years. She has served and continues to serve as a member of the Board of Directors. As a board member she took on the responsibility of sending notices to the media announcing our meetings and other activities in an effort to attract new members. She was also corresponding secretary for several years. As a participant in the Garden Tours Programs Alice often cheerfully opens her home garden to the Chapter, sharing her knowledge and cuttings with anyone who asks for them.

She regularly enters specimens from her garden in the flower shows and has always been a willing helper at our plant sales. Alice was also an active participant in the regular activities of the Species Study Groups. We honor Alice today with this Bronze award for her many years of service.

### **RSC ATLANTIC CHAPTER Bronze Medal: John Weagle**

The Atlantic Chapter of ARS is proud to honour John Weagle with the ARS Bronze Medal, the highest commendation a local Chapter can award. John is a consummate plantsman and a life member of the Atlantic Chapter of the Rhododendron Society of Canada. For more than thirty years, he has been instrumental in introducing a diverse range of new plant materials to Atlantic Canadian gardeners.

John is well known and respected, both across North America, and in Europe and beyond, for his hybridizing work, and for the many excellent talks he has presented over the years. He is currently also a member of the ARS Seed Exchange Committee.

John's contributions to our local Chapter have been immeasurable, ranging across all of our activities. Chapter members at every level, from beginner to more experienced, continue to benefit from the enthusiasm and generosity with which John shares his immense expertise. In addition to all that he has personally contributed, he has also been indefatigable in bringing in outside experts from around the world, with a consequent influx of new ideas and new horticultural potential for our region. In recognition and appreciation of all John's contributions, and for the willingness with which he shares with others his knowledge and enthusiasm for the genus *Rhododendron* and its congeners, this Bronze Medal is a token of our appre-

ciation.

### **Bronze Medal: Bob Pettipas**

It is with great pleasure that the Atlantic Chapter awards the ARS Bronze Medal, to Bob Pettipas. For more than 20 years, Bob has been instrumental to the success of our Chapter. He was involved from the earliest days in tissue culture plant sales, and still plays a key role behind the scenes today. He was also for many years the organizer of the Society's annual flower show. Bob has been a consistent promoter of the genus *Rhododendron*, and of the importance of keeping records of successful plant introductions to our region. As the current manager of our website, he has contributed much valuable information for all to share. In recognition and appreciation of Bob's contributions in so many areas, and for the readiness with which he shares with others his knowledge and enthusiasm for the genus *Rhododendron*, the Atlantic Chapter presents him with the highest honour that a local ARS Chapter can bestow on one of its members.

### **SUSQUEHANNA VALLEY CHAPTER**

#### **Bronze Medal: Maryann Billet**

Mary Ann, in the time you have been a member of the Susquehanna Valley Chapter, you have been very active in making this chapter a better chapter. You joined us in 2006 and were elected Chapter Secretary in 2007, an office in which you continue to serve. You began as chair of the Hospitality Committee in 2009 and assumed chairmanship of the membership committee in 2010. You have been a dependable and enthusiastic promoter of the genus *Rhododendron*, the ARS and this Chapter. You were instrumental in establishing the Chapter web site in 2011, through which information about the Chapter and its activities are available to the whole world on demand. At your home you have hosted board and committee meetings. You have participated in chapter meetings, auctions, picnics and many other events while a member. In recognition and appreciation, the Chapter is proud to present this medal, the chapter's highest award on this 24th day of March, 2012.

### **TUALATIN VALLEY CHAPTER**

#### **Bronze Medal: Ginny Mapes**

In the many years she has been active in the Tualatin Valley Chapter of the American Rhododendron Society, she has served (Awards continued on page 151.)

## ARS Chapter Awards

(Continued from page 148.)

faithfully in many capacities. She is a past President of the Chapter, Chairman of the Cecil and Molly Smith Rhododendron Garden, Chapter newsletter Editor, and Chairman of the Chapter's annual Truss Show.

She has brought her computer skills to the service of the Chapter by developing an email version of our newsletter, developing and maintaining a Chapter web site along with a web site for the Cecil and Molly Smith Garden.

For her devotion to rhododendrons,

her unstinting and invaluable service to the ongoing success of our Chapter, and for fostering interest in the genus *Rhododendron*, the Tualatin Valley Chapter is proud to award the Bronze Medal to Ginny Mapes, May 14, 2012.

### Bronze Medal Award: Helen Hiatt

Since joining the Chapter, she has been a dedicated member and active worker in our Jenkins Estate Rhododendron Garden doing weeding, spraying, planting and propagation. In recent years, she has taken on responsibility as Chairman of our Garden Committee and member of the

advisory board of the Jenkins Estate for the Tualatin Valley Parks Department. In addition, she has served faithfully as our Secretary for many years and brightened the day with cards and notes for those of us taken ill.

Her sweetest aspect, besides her personality, is her proficiency as a pastry chef and generous sharing of her talents with garden crew and chapter members at monthly meetings.

For her unflagging faithfulness and dedication, the Tualatin Valley Chapter is proud to award the Bronze Medal to Helen Hiatt, May 14, 2012.

## Online Access to ARS Membership Roster

Current ARS members who opt to do so can access on-line ARS member contact information at the OARS web site. In the Fall 2010 Journal issue, an article was published with instructions on how to select a personal login and how to access the membership roster. It seems appropriate to inform members more than once about the on-line ARS roster. Thus we are republishing a brief notification on how to do this, but please refer to the Fall 2010 article if you would like more details.

The ARS Board of Directors has approved allowing members to access all member contact information online. For those who want to sign up for this capability, you will need to register on the ARS website ([www.arsoffice.org](http://www.arsoffice.org)) for both a personal ID and password to allow you to log-in securely. Your personal login is similar to that typically used either to access an account at a financial institution, make an online purchase, or open an online email account.

Firstly, only ARS members can register to utilize the online membership roster. Non-members are blocked from viewing ARS member information. Secondly, members can opt to keep their phone, fax, and email address "Confidential," and only allow a street address to be included in either printed or Internet (online) rosters.

### Instructions to register for online access to the ARS member roster:

1. Open your Internet browser and go to web page <http://www.arsoffice.org/protect/login.asp>
2. Click on the "Register Now" button.
3. Fill in the required fields in the registration form. Provide your name, a working email address, a username (minimum of four characters), password (case-sensitive, and a minimum of four characters), your ARS member number and ARS

chapter. Note: Your member number can be found on the ARS Journal mailing label printed on the paper wrapper of published issues, beginning with Volume 64, Number 1, Winter 2010, or it can be obtained from your Chapter membership chair/treasurer.

4. Type in the four characters requested in the colored human verification box. This provides security against bogus registration forms being submitted by spammers.
5. Read and accept the "terms and conditions of use" by checking the box provided. Please note that ARS roster information is not for commercial use, and should not be disclosed to non-members.
6. Click the "Register" button.
7. You will receive an email message with the subject "American Rhododendron Society On-Line Registration." Open the message and click on the link in the message body. You must complete the email confirmation step in order to verify your registration. Note: some email systems may mistakenly place the message in a spam folder, so you may need to look for it in this folder if it is not quickly delivered to your in-box. After activation of your account via the email message, the registration process is completed and the online roster can then be accessed.

### Instructions to login to the online ARS membership roster:

1. Open your Internet browser and go to web page: <http://www.arsoffice.org/protect/login.asp>. (Suggestion: save this web address in your "Favorites" list.)
2. Click on the "Login" button.
3. In the ARS login form, type in your username and password. The password is "upper/lower case-sensitive," for example, if you choose your password to be "Rover" then, for example, "rover," "ROVER" or "roveR" are not acceptable. If you forget your username or password see the section below.
4. Click

5. On successful login, the User Area page is displayed. From this page one can (1) access the ARS member roster, (2) **edit your personal log-in account information (name, email address, password, and ARS Chapter if necessary)**, and (3) log-out. To retrieve roster information click the blue-colored "Access the ARS Member Roster" button.
6. Next a form to search the roster database is displayed. One can search the roster list by last name, city, country, chapter or district or any combination of these parameters. Type/select the desired search parameters.
7. Select whether you want to view the search result as on the web (HTML) or download the results in a Microsoft Excel file (MS Excel). HTML is the default.
8. Click the "Search" button.
9. Search results are then provided. For protection of personal information member data is transmitted over the web using strong encryption.
10. Search results for more than twelve people are displayed on multiple web pages. Use the "Prev Page | Next Page" links located at the page top, right to move between the different pages. Microsoft Excel must be available on your computer to use the MS Excel option. Save the Excel file with the search results locally to an appropriate folder on your computer.

### Yearly Re-registration Required

To ensure that only valid ARS members can access the online roster, everyone will be asked to renew their log-in registration every year. All existing logins expire on April 30 of each year. Only members in good standing on or after April 30th can renew their registration and continue to access the online roster.

## ARS Chapter Newsletter Contest Rules

The purpose of the Chapter Newsletter Contest is to foster quality newsletters for the purpose of providing information to the chapter membership. Certain types of information have been identified as desirable for inclusion in a chapter newsletter.

Newsletter editors, you are invited to enter a current (2012) newsletter in the competition. Send your entry via e-mail in a .pdf file format to samnjerryrock@frontier.com no later than Dec 31<sup>st</sup>, 2012, with "ARS Newsletter Contest Entry" in the subject line. Your entry will be judged by a select committee using the following criteria:

### Meeting information

- Date, time, location
- Program description
- Photos of speaker, topic, etc.

### Technical information

- Monthly horticulture (what to do that month with regard to storm damage, fertilizer, pruning, planting, etc.)
- Special programs or workshops (e.g. cuttings, grafting, DNA, etc.)
- Truss or plant spotlighting

### Membership and chapter specifics

- Biography or recognition of members
- Chapter issues to consider
- Calendar of events

- Chapter officer contact information
- ARS promotion
- Articles and information regarding conventions and conferences

### Overall appearance and timeliness of the newsletter

What do you win? You will earn recognition by your peers. Your entry will help to establish the standard for other chapter newsletter editors.

## Research Foundation Update

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

At its meeting on May 4, 2012, in Asheville, North Carolina, the Board of Directors of the ARS approved the reappointment of Jean Beaudry as Trustee for a three year term.

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. Jean Beaudry, Treasurer of the Research Foundation, for term ending May 2015
4. Harold Sweetman, Chairman of the Research Committee, for term ending May 2013

5. H.C. (Bud) Gehnrich, for term ending May 2013
6. Don Smart, President of ARS, *ex officio*, for term ending 2013

Karel F. Bernady, Chairman  
May 8, 2011

## Letter to the Editor

Editor:

One observation from disastrous personal experience re "Vining Covers," P. 100, Spring 2012. *Akebia quinata* is at least as bad as those listed as "notorious offenders." It will travel horizontally in the ground a good forty feet [12.1 m]; the runners are small and weak, so that when one tries to pull the weed, it breaks off, leaving the runner in the ground to sprout again. Perhaps it would be safe in a concrete planter if carefully watched to prevent escape!

Don Voss  
Vienna, Virginia

## Special Event:

*The Rhododendron Red List: Establishing Priorities and Action*  
Saturday 20th & Sunday 21st April, 2013

The Royal Botanic Garden, Edinburgh and the Rhododendron Species Conservation Group are planning to jointly host a two-day Conference with key-note speakers on Saturday 20th & Sunday 21st April, 2013, in the Lecture Theatre of the R.B.G.E., to discuss the contents and impact of The Rhododendron Red List and will work towards answering the question: Where do we go from here in terms of conservation priorities and actions?

This is advance notice of dates for the diaries of A.R.S. members and a detailed Conference Programme and Registration Form will be available in the early-Autumn, when information will appear in a future issue of the Journal, ARS.

John M. Hammond

See a list of DVDs  
in the Program Library  
on page 170

## Rhododendron Calendar

- 2012** ARS Western Regional Conference, Nanaimo Chapter, British Columbia, Canada. Rhodos In Paradise, Destination Vancouver Island. Coast Bastion Inn, Sept. 21-23, Nanaimo, BC. Board meeting
- 2013** ARS Annual Convention, Olympia, WA/Tacoma, WA area. May 1-5. Board meeting.
- 2013** ARS Eastern Regional Conference, RSC Atlantic Region, Oct. 4-6, Dartmouth, NS Canada
- 2014** ARS Annual Convention, Cleveland, Ohio, May 16-18. Board meeting.
- 2014** ARS Western Regional Conference, District 2, Everett, WA Oct. 3-5.



## May 4, 2012 Board Meeting Summary, Asheville, NC

Several actions and decisions, made at the recent ARS Board meeting in Asheville, will affect chapters and members in positive ways. The Board is looking at ways to reduce meeting costs by utilizing electronic meeting technologies. The goal is to have one electronic board meeting in 2014. Before that time, however, look for some small trials that will help familiarize members to some of the online information sharing and decision making tools and techniques. For instance, a "Survey Monkey" poll was used recently to collect input on the electronic journal process. Utilizing new technologies requires learning and selecting tools that fit, and helping end users get familiar with new tools. Reducing travel costs is particularly desirable because some District Directors and Committee leads receive no assistance on the travel costs from their District constituents.

Look for continued collaboration with the Azalea Society of America (ASA). The joint convention was well received by members, particularly the fabulous plant sale and tours. There are already talks regarding future potential activities and opportunities.

There are several Director and Committee Chair vacancies that offer some wonderful opportunities for members to get involved. **Michael Mills**, for instance, will be filling in as Alternate District Director (District 8) for outgoing **Harold Sweetman**. He has also already begun transitioning behind **Jay Murray**, Registrar. Other vacancies include Directors for District 3, leads for the Program Library\*, Membership, and Fund Raising Committees (previously known as the Resource Development Committee). Getting involved with a committee does not require travel, although attendance at the Board meeting is welcome. Committee leads are asked to provide two status reports per year documenting planned and accomplished actions.

**Shirley Rock** is beginning the transition out of the Membership lead position. She will continue to provide some support during this time until a replacement is found. One of the exciting new developments in membership is a student discount program. Details are being finalized but students will be offered a deeply discounted membership (\$10) that includes electronic copies of the journal and their local chapter newsletter. The collected fee will be split between the Chapter and the Society. The 2012 printed membership

rosters will be available soon. Members may purchase them from **Laura Grant** for \$10.

One of the most dynamic areas for membership growth has been in Europe with significant growth in Germany, Sweden, and Denmark. Opportunities for helping to support this development were discussed (such as potentially holding a future Board meeting in Europe).

**Questions, questions and more questions!** Many questions are pouring into the ARS Office via email and a process for how best to respond to them is being researched. This may be a combination of developing additional information for the website, developing a mailing list, tapping into the ARS BLOG, or other ideas. **Bob Weissman** is looking into options. Bob has also been adding other information onto the website including all ARS Gold and Silver Medal award citations, and other new features.

**On the business side**, the Board discussed the accounting process, budgets, investments, and endowments. Some of this involves normal personnel transitions, budgets, and fund use. There are also ongoing updates and refinements to the Policies of the Board. The Long Range Planning Committee was also asked to look into ways to improve the financial condition of the Society.

Several new grants were awarded from the endowment income to benefit the Norfolk Botanical Garden, the Georgia Mountain Fair Inc., the Holden Arboretum, the Bayard Cutting Arboretum, and the Cloud Forest Rhododendron Species Garden. This popular and successful grant program has been used to support a wide variety of programs and activities worldwide.

**There's fun in them there hills!** Many Districts described fun activities to increase their memberships such as having shows, sales, speakers, tours, and activities involving students, such as kids with shovels and lots of mud. There were also descriptions of how partnerships—short and long, great and small—are being leveraged for increasing educational opportunities and to support community events. They have proven to be a great way to get more people involved, get things done, and have FUN! Strategies for sharing speakers, and local fund raising were also discussed, along with the need to increase member awareness of what services and activities are provided at the

Society level. Look for additional Journal articles.

Depending on where you live, a mild winter and early spring has sparked plant sales and gardeners to action. One Chapter sold all available plants in the first hour. Some are offering advanced sale to members only. Many Chapters are distributing plants to new members and as rewards for member services.

Some Districts are having a difficult time getting members involved in activities, finding volunteers, and attracting new members. Ideas for attracting new members and getting people excited were shared. Director **Tim Walsh** from District 5 shared his secret—"Pizza works," he said, and indicated that they have at least three potlucks each year which are well attended. Some Chapters are providing new membership packets that include things like a welcome letter, meeting list, how-to guides, coupons, membership cards (for discounts at local nurseries and free admission to sponsored gardens) and other goodies. Look for future Journal articles on these ideas as well. Other Chapters are looking at the day and time that they meet and shifting to Sunday afternoons in some cases to make meetings more accessible.

The Speaker Bureau program (available through the ARS website) includes a number of western North American speakers. Additional speakers on the East Coast are desired and people are encouraged to sign up.

The seed exchange program continues skyrocketing success due to the efforts of **Norm** and **Jean Beaudry** who also help with the Research Foundation (Jean was re-elected for a second term).

**Glen Jamison**, Journal editor, is always looking for article ideas that would be of interest to members. Chapters are encouraged to include him on their distribution list. Several assignments for article development were made at this meeting. He has also spear-headed the research into providing the journal in an optional electronic format. While an electronic format may not be of great interest to some members, it could be very enticing to others who are comfortable with computers. Comments on the beta test included "fantastic" and praises for the ability to quickly search for key words across years of issues.

The Internet provides many opportunities for expanding information available. (Continued on next page.)

## May 4, 2012 Board Meeting

(Continued from page 153.)

ability and services. **Bob Weissman** has been busy coordinating the conversion of older Journal issues to our online archives at Virginia Tech which are also searchable as well. One service that was briefly discussed is potentially developing an online store similar to other plant societies. An online store might provide an ongoing, modest funding stream for the Society. Volunteers for an *ad hoc* subcommittee will be established to review this idea.

More information regarding the **photo contest** and **newsletter contest** will be coming out in the Journal. The ARS website has more information about rhododen-

drons and azaleas including **R&A News**, which is a compilation of articles from Chapter newsletters, and new articles posted on the ARS Blog. Comments on articles in the Blog can be added; however, it is not the best place for question and answer dialogs. Better ways to support this activity are being researched.

Finally, there are several conventions and meetings that you will want to note on your calendar. The registration for the September 21-23 meeting in Nanaimo, British Columbia, is open and space is limited. Flyers for the 2013 Annual Convention to be held May 1-5 in Olympia,

Washington, are already being circulated. Watch for more details and register early!

If you are interested in more details about agreements, decisions, and discussions at the Board meeting you can download the meeting minutes and prework from the ARS website. See you at the next meeting!

**Kath Collier, Secretary**

**\*Editor's note:** Since the Board meeting, Marvin Fisher has agreed to chair the Program Library Committee.

## Digital Version of the Journal of the American Rhododendron Society

Glen Jamieson  
Parksville, BC, Canada

For the past year or so, at the request of the ARS Board, a small committee consisting of Sonja Nelson, Kath Collier, Bob Weissman and myself have been exploring how best to produce a digital version of each issue of *JARS*. The logic behind this exploration was that with the rapid development of new computer technologies, of both software and hardware, the practicality of achieving and distributing an acceptable digital *JARS* product is now realizable. The reality is also that many, if not most, publications, be they reading books, newspapers and magazines, are moving towards a digital format, generally in addition to their printed formats. More and more people, and particularly younger people, find that a digital product is a convenient and cost-effective way to keep in touch with events and activities that interest them. I should emphasize that this will not affect the continued delivery of a printed copy to any ARS member who desires to receive one, although if some members ultimately only desire a digital copy, it may reduce the cost of producing *JARS* and hence ARS operating costs.

With this in mind, and with the support of both the Board and its Editorial Committee, our ad-hoc committee have been assessing both the most practical format for a digital product and how best it might be conveniently accessed by ARS members. To maintain continuity, a digital format had to have the same content as the printed version, but we soon realized that we would need to change the format. The printed version has three columns of text

per page to minimize the distance one's eye has to move horizontally, but this did not work with a digital format. To make the font size large enough for comfortable reading, three columns would not fit on a computer screen "page," which necessitated a considerable amount of scrolling up and down to read the all the content that was on a printed page. We evaluated a number of formats, and found that that a single column of text was easily read, and that while it could be wider than was on a printed page, the best digital format consisted of two "digital pages" for every single "printed page."

There was also a major layout advantage with a digital format. In the printed text, to keep production costs down, only half the "signatures" are in colour. Each *JARS* issues consists of four "signatures," with a "signature" of paper comprising four sheets of paper. Because each sheet is stapled in its middle, each paper sheet represents four pages. Some of you may have noticed that in each *JARS* issue, the first and last four pages (including the covers) are in colour, the next four pages from

the front and back are not in colour, the next four pages from the front and back are again in colour, and the eight centre pages are never in colour! The colour pages comprise two signatures, and the black and white pages two additional signatures. As editor, this always creates logistic layout challenges with a printed format, as I have restrictions on how many images can be in colour, and where these images can be located!

Neither of this issues are a problem with a digital format, as any page can be in colour! This allow images to be placed more closely to where they are referenced in the text, and allows more flexibility in their relative sizes. Because the digital content is identical to the printed content, it does not allow more pictures, but it does help with layout constraints!

We are still exploring the most convenient way to have ARS members access a digital *JARS* version, and details on how this might best be achieved will be discussed in the next *JARS* issue. We anticipate having the *JARS* Fall 2012 issue as the first accessible digital issue.

**Do you need a speaker for your chapter meetings  
or an ARS convention?**

**The ARS Speakers' Bureau is designed to help.**

Log onto [www.arsoffice.org](http://www.arsoffice.org), select "Speakers' Bureau Database."

You will need to enter your chapter user name and password.

Then you can search the database or add your name.

Try it! It is just that easy!

**American Rhododendron Society**  
**Statement of Financial Position**  
**August 31, 2011 and 2010**

| <b>Assets:</b>                                      | <u>2011</u>                   | <u>2010</u>                  |
|---|-------------------------------|------------------------------|
| Cash in Checking                                    | \$ 22,587.                    | \$ 36,023.                   |
| Money Market  | <u>209,879.</u>               | <u>318,735.</u>              |
| <b>Total Cash &amp; Cash Equivalents</b>            | <b>232,466.</b>               | <b>354,758.</b>              |
| Accounts Receivable/Chapter Balances                | 3,684.                        | 4,713.                       |
| Prepaid expenses                                    | 250.                          | 0.                           |
| Inventories   | 2,117.                        | 1,955.                       |
| Investment in Bonds and Mutual Funds                | 640,111.                      | 201,665.                     |
| Investment in Stocks                                | 0.                            | 307,414.                     |
| Equipment net of \$13,778 and \$12,234 depreciation | <u>1,461.</u>                 | <u>3,005.</u>                |
| <b>Total Assets:</b>                                | <b><u>\$ 880,089.</u></b>     | <b><u>\$ 873,510.</u></b>    |
| <br><b>Liabilities and Net Assets:</b>              |                               |                              |
| <b>Liabilities:</b>                                 |                               |                              |
| Accounts payable                                    | \$ 1,159.                     | \$ 1,159.                    |
| Prepaid Dues – 2010                                 | 0.                            | 34,119.                      |
| Prepaid Dues – 2011                                 | 32,443.                       | 5,458.                       |
| Prepaid Dues – 2012                                 | 4,275.                        | 996.                         |
| Prepaid Dues – 2013                                 | 883.                          | 674.                         |
| Prepaid Dues – 2014                                 | 255.                          | 120.                         |
| Prepaid Dues – 2015 to 2020                         | <u>364.</u>                   | <u>369.</u>                  |
| <b>Total Prepaid Dues</b>                           | <b><u>38,220.</u></b>         | <b><u>41,736.</u></b>        |
| <b>Total Liabilities</b>                            | <b><u>\$ 39,379.</u></b>      | <b><u>\$ 42,895.</u></b>     |
| <br><b>Net Assets:</b>                              |                               |                              |
| Unrestricted-Undesignated-General Fund              | 10,807                        | 43,919                       |
| Unrestricted-Designated-Life Member Fund            | 104,858                       | 99,941                       |
| Unrestricted-Designated-Endowment Fund              | 494,100                       | 462,435                      |
| Unrestricted-Designated-Seed Exchange Fund          | <u>25,364</u>                 | <u>23,175</u>                |
| <b>Total Unrestricted Net Assets</b>                | <b>635,129.</b>               | <b>629,470</b>               |
| Temporarily Restricted- RDC Start-Up Fund           | <u>7,117</u>                  | <u>7,117</u>                 |
| <b>Total Temporarily Restricted Net Assets</b>      | <b>7,117.</b>                 | <b>7,117</b>                 |
| Permanently Restricted-Endow Publications           | 102,417                       | 102,417                      |
| Permanently Restricted-Endow Other                  | <u>96,047</u>                 | <u>91,611</u>                |
| <b>Total Permanently Restricted Net Assets</b>      | <b><u>198,464.</u></b>        | <b><u>194,028</u></b>        |
| <b>Total Net Assets</b>                             | <b><u>840,710.</u></b>        | <b><u>830,615</u></b>        |
| <br><b>Total Liabilities and Net Assets</b>         | <br><b><u>\$ 880,089.</u></b> | <br><b><u>\$ 873,510</u></b> |

# The Word: Photosynthesis

Bruce Palmer  
Cutten, California



Past issues of “The Word” in *JARS* have talked about **photosynthesis** but have not explained the process and its importance in detail. It’s summer and our rhododendron plants are generating resources for the next year, so this is a good time to tackle the term for this issue.

I’ll try to do it in lay terms, the avowed purpose of “The Word.”

**Photosynthesis** derives from three Greek words: *photos*, light, *syn*, together, and *tithenai*, to place. The word describes perfectly what a plant does to rework carbon dioxide and water into usable molecules using light. The shorthand chemical formula used to describe the process is  $\text{CO}_2 + \text{H}_2\text{O} \Rightarrow \text{CH}_2\text{O} + \text{O}_2$ . Plants use carbon dioxide and water, trapping sunlight for energy to produce usable organic molecules ( $\text{CH}_2\text{O}$  is a common shorthand for carbohydrate). The formula appears to show that the oxygen is derived from carbon dioxide, but it is not. The oxygen we breathe is derived from water, which is far more abundant than carbon dioxide. The scientifically savvy will recognize that the formula cannot be quite this simple (and that not all organisms use sunlight or water), but it works to illustrate the process for us. The point is that the energy of sunlight is trapped by green plants and some important bacteria to produce energy-containing organic molecules and oxygen molecules that can be used by plants and by all animals.

Why are plants green and not some other color? Chlorophyll (Greek: *chloros*, green and *phyllon*, leaf), the primary molecule that traps the energy of sunlight,

absorbs more visible energy in the violet, blue and red parts of the spectrum and less in the green and yellow. What we see is the light that was not absorbed by the molecules that assist in photosynthesis. An interesting aside is that the active parts of chlorophyll in plants and hemoglobin in animals have quite similar structures. The active element in chlorophyll is magnesium. In hemoglobin it is iron, but the two similar molecules serve quite different purposes.

The leaves we see today in our rhododendrons are constructed to take best advantage of sunlight, as was described in the Summer, 2011, issue of this column (P. 166). These leaves are the current result of a long series of alterations over vast stretches of time. Life arose on the earth more than three billion years ago. At that time the atmosphere was far different from what it is today. There was no oxygen in the atmosphere. Oxygen would have been highly toxic to all organisms present on the early earth; in fact it still is to many bacteria. The atmosphere we know and depend on today with nearly twenty percent oxygen was created by photosynthetic organisms. A bit more than two billion years ago, what is sometimes called the great oxidation event shows up in rocks. The iron in rocks of this age is rusted. *Science Magazine* published a very good summary of this process in 2009. The only reasonable explanation for this is that organisms were giving off free oxygen molecules that had previously been attached to something other than iron. It turns out to be water. Cyanobacteria (Greek *kyanos*, blue-green and *bakterion*, little rod), better known as bluegreen algae, or something similar, had “discovered” how to use the abundant water molecules in the trapping of energy from sunlight, to build organic molecules and how to detoxify oxygen. The photosynthesis byproducts from these organisms produced the atmosphere we have today. The final step towards achiev-

ing the leaves of rhododendrons and other flowering plants seen today was sneaky. It appears that some of the blue-green algae cells invaded larger cells long before flowering plants appeared on the scene and began to carry on photosynthesis in this more protected environment. The best evidence for this is that the internal structures of blue-green algae and chloroplasts (Greek: *kloro*, green and *plastos*, formed), the structures inside plant cells that carry on photosynthesis, are nearly the same, and that chloroplasts have their own DNA that reproduces independently of the cells they inhabit.

To sum it up, the photosynthesis we observe today in our rhododendron leaves is the result of a long series of events in the history of life on earth. The historic cells of plants were “invaded” by other, more primitive cells that actually trap the sunlight to produce molecules that can be used by rhododendrons and other plants that now depend on photosynthesis, and this has affected most other life on earth. It gives us a new view of our rhododendrons and all other plants—we wouldn’t be around today without them.

*Bruce Palmer is a member of the Eureka Chapter and is Professor Emeritus in the Community College System of the University of Hawaii. He taught various lower division biology courses at Maui Community College (now University of Hawaii Maui College) from 1968 until 1993. He was also Dean of Instruction at the college from 1980-83 and 1990-93.*



# A Novel Propagation Unit for Rooting Rhododendron Cuttings

Marc Colombel  
Fouesnant (Brittany)  
France



Photos by the author

For a long time, many people have asked me how they can root rhododendron cuttings and each time I answered, “You need bottom heat for good results.” I was able to see their disappointed faces, and I knew they would never try. I have since looked for equipment that could make this easy, and by the questions asked, the propagation unit should be cheap, automatic in operation and easy to build.

It took me several years to develop a suitable “system”, which uses water as “central heating”; I suggest that it is not an evolution but a revolution in propagation!

## Components of the Unit

- 1) Water,
- 2) Insulated box,
- 3) Heaters and pump,
- 4) Small balls of extruded polystyrene that float on the water, and a
- 5) Propagation container for the cuttings.

## Insulated Box

According to your need, you can use either a large or a small container, so long as the sides and the bottom are insulated.

## Aquarium Heater

The submersible heaters used in aquariums are well known and their reliability is unquestionable. Their main advantage is that they have a thermostat. That is all you need to build a propagation unit (Fig. 1) that I call my “aquarium for cuttings.”

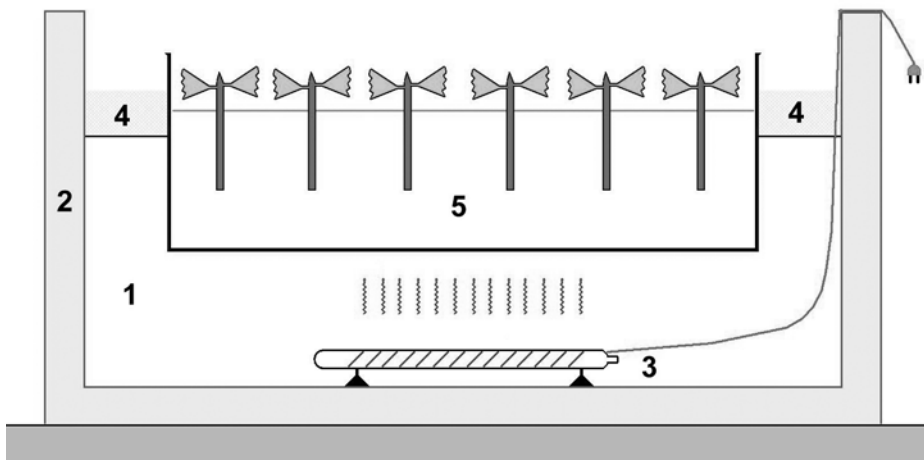


Fig. 1.



Fig. 2.



Fig. 3.

I used an old fisherman's insulated cooler as the tank (Fig. 2), and two submersible 200 W aquarium heaters (each about \$20) with a small pump (4.5 W, about \$15) to circulate the water (Fig. 3). The buttons are the thermostats. The heaters work best if located on the bottom near the pump.

I put a digital temperature sensor on the bottom of the propagation container that floats or is suspended in the water in the cooler, as the heater thermostats need to be adjusted so as to achieve a water temperature of 22° C (72° F).

Finally, I float small balls of extruded polystyrene in a moderately thick layer all over the water surface to reduce heat loss, and as this also keeps out light, there is no algal growth in the water. Two flexible plastic tubes support a plastic sheet (Fig. 4) that is needed to seal the whole cooler to maintain a high humidity in the propagation box (Fig. 5) and avoid water loss.

With the help of a hygrometer (about \$10) you can determine when to water the rooting medium so it doesn't get too dry, and the results should be exactly the same as those obtained with a more sophisticated and expensive propagation unit.

I suggest that this concept may be the perfect solution (Fig. 6 shows potted rooted cuttings) for every amateur who has only a few cuttings to do, but the principle can be adopted for larger units with a few modifications that are cheap and above all are within everybody's budget. I used two heaters just in case one failed, regardless, the electricity consumption is not double and the pump consumes only 4.5 w.

If you follow up on this approach, please, send me your pictures and results, as feedback is welcome.

*Marc Colombel is a member of the ARS Scottish Chapter. He founded Société Bretonne du Rhododendron (a separate French rhododendron society) and was its President for 14 years."*



Fig. 4.



Fig. 5.



Fig. 6.

# A Breeding Program for Zone 6 Big Leaf Rhododendrons

Bruce Clyburn  
New Waterford, NS,  
Canada

Photos by the author.

In the summer of 1985, an article entitled “Forget the Flowers—Breed for Leaves” by a fellow Nova Scotian [now a British Columbian] appeared in the *Journal of the American Rhododendron Society*. Dr. Joe Harvey, the author, is a man who is passionate about indumented leaves and that was the message he brought. This article has a different spin. I’m an advocate of hardier tree rhododendrons with big luxuriant leaves 30 cm (one foot) or more long that make a bold statement in the garden, even as flowers are but a memory—the type of rhododendrons that are best for woodland gardens, not foundation plantings.



Fig. 1. The author with ‘Spellbinder’.



Fig. 2. ‘Spellbinder’.



Fig. 3. ‘Babylon’.



## Culture Location and Conditions

New Waterford is located on the eastern shore of Cape Breton Island, Nova Scotia, Canada. Annual precipitation is 1500 mm (60 inches). The lowest temperature experienced in the garden was -28° C (-18° F) in January, 1994. At this time of year, cold air masses of Arctic origin, a.k.a. the Siberian Express, periodically come to visit. For 2–3 days in the summer, temperatures usually peak around 30° C (86° F) but overall, summers tend to be cool and damp.

## Beginnings

The first rhododendrons were planted in 1989, familiar Catawba hybrids: 'Nova Zembla', 'Catawbiense Album', and 'Roseum Elegans'—the holy trinity of red, white and blue ironclads. Dexter's *R. fortunei* hybrids came next, some Gable's, *R. brachycarpum* ssp. *brachycarpum* [note: formerly ssp. *tigerstedtii*] crosses and yak forms/yak hybrids. The first rhododendrons that might be considered large leaf (>20 cm or 8") were planted in 1991. These were seed grown *R. maximum* and a Leach hybrid 'Summer Snow'. 'Summer Snow' is a late flowering cross of *R. maximum* × (*R. ungerii* × *R. auriculatum*), a vigorous plant with leaves to 28 cm (11") long.

The garden was exposed back then waiting for the newly planted pine trees to mature and afford some protection from strong North Easterly winter winds. When the following spring came, both of these rhododendrons had not a leaf left. This was not the encouragement I was hoping for. Little stubs of remaining petioles gave them a porcupine appearance.

'Summer Snow' was relocated to a wind protected spot and has done well since that move. Two big leaf species that appeared to be worth attempting to establish based on the literature were *R. calophytum* and *R. sutchuenense*. *R. calophytum* was started from seed and specimens are now about 1.2-1.5 m (4-5') tall and have yet to flower. Several different forms of *R. sutchuenense* were

acquired through mail order nurseries; they have bloomed sparingly but not with full trusses. Both species appear plant hardy but are likely beyond their northern limit to grow luxuriantly. The leaves have not developed here to their full potential dimensions so far.

In the decades that followed hedge rows of white and Austrian pine grew to 9.1 m (30') high and the garden became a micro climate more conducive to protecting evergreen rhododendrons.

## Four Commercially Available Good Performers

Over the past 20 years, four hybrids have shown good cold and wind resistance. They are recommended candidates for northern gardens:

**'Spellbinder'** (Figs. 1 and 2) - Another Dave Leach plant, 'Russell Harmon'\* × Robin Hood Group, or written long hand, (*R. maximum* × *R. catawbiense*) × (*R. calophytum* × *R. sutchuenense*). It's very hardy with leaves up to 33 cm (13") long and tall frosty pink domed trusses at an early season. Leach found this rhododendron very difficult to propagate from cuttings. A combination of grafting cuttings onto an unrooted under stock of 'County of York' has worked well here. The long leaves bleach easily in full sun so locate it in dappled shade. Crosses of 'Russell Harmon'\* × *R. calophytum* were done and the young plants have a character of their own. Leaves are flatter than 'Spellbinder' and more lanceolate without the curled edges. Three separate hybridizers seemed to have had the same thought when they decided at different times to backcross *R. calophytum* on to 'Spellbinder'. In theory this should yield the perfect "*calophytum* facsimile" with good cold hardiness. So far the first two crosses seem to have no merits over the original Leach hybrid that I can see.

**'Babylon'** (Fig. 3) - Parentage is *R. calophytum* × *R. praevernium* from G. Reuthe Ltd.; this plant is a surrogate for *calophytum* in colder gardens, and has rigid red stems, large lustrous leaves and huge

satin white flowers with a burgundy blotch. A cross of 'Babylon' × *R. sutchuenense* (Fig. 6) has given me one plant out of a group of siblings that appears to meet all standards set for my breeding program. Maybe the flowers will be so awful I will have to remove them each year to avoid this rhododendron's embarrassment but I hardly think so.

***R. maximum* × *R. calophytum*** - The third rhododendron has not been named yet; the cross has been done several times. We have the Augie Kehr form by this well known plantsman from Hendersonville, NC. Growers report it gains stature rapidly after 1.5 m (5'). Flowers open slightly pink then mature to white with a bold maroon blotch.

**'Hardy Giant'** (Fig. 4) - This hybrid we have grown outside for several winters now; its reputation is exemplary. The parents are hardy *R. fortunei* × *R. rex* ssp. *fictolacteum*. This hybrid has potential for N.S. gardens. Our plant came to us as a rooted cutting from the Norman and Jean Beaudry garden in Bethesda, MD, Zone 6b. Norman reports the average leaf is 8.9 x 27.9 cm (3.5" x 11") on his mature plant but he has seen lower, shaded leaves at maybe 1.5 times this size.

The original 'Hardy Giant' grows in Mr. and Mrs. John F. Knippenberg's "Laurelwood Gardens," (Zone 6a) in Wayne, NJ. The cross was made by Don Hardgrove who gave four plants to Guy Nearing, and Guy Nearing gave this sibling to the Knippenbergs. As a young plant it withstood -27° C, (-16° F) one winter, with no plant damage but it lost its buds that one occasion, as did many of their Ironclads. The Beaudrys received cuttings from Mrs. Knippenberg in the late 1980's.

The success and the attractiveness of these four fuelled my enthusiasm to grow more such rhododendrons. The availability of hardy big leaf plants is limited so the logical alternative seemed to be developing new ones. I decided I would go about this in three ways:

1. Obtain seed of these types of crosses



- as offered in Society Seed Exchanges;
2. Ask hybridizer friends to make such crosses in their gardens on my behalf; and
  3. Carry out crosses myself using pollen from my garden, the Rhododendron Species Botanical Garden and friends' plants.

## Potential New Big Leaf Hybrids

**Category I - Glabrous Leaves:** Note: My own crosses below are designated with a +. Technically some of these plants have indumentum associated with the new growth; others retain a light covering on maturity. Unless they have persistent, thick indumentum I assign them to this group. For now I have listed the cross and I hope to expand on the information specific to each hybrid as they grow and flowering begins:

- (*R. fictolacteum* × *R. degronianum* var. *yakushmanum*) × 'Hardy Giant'  
*R. brachycarpum* ssp. *brachycarpum* × *R. sinofalconeri*  
 'Pekka' × *R. grande*  
 'Bellfontaine' × *R. rex* ssp. *fictolacteum* + 'Calsap' × *R. calophytum* + ('Calsap' × *R. calophytum*) × 'Hardy Giant' +  
 'Calsap' × *R. rex* ssp. *rex* + (Fig. 5)  
 'Catalglá' × *R. rex* ssp. *fictolacteum* + *R. catawbiense* U. Paim × *R. rex* ssp. *rex* +  
 'Haaga' × *R. kesangiae*  
 'Hardy Giant' × 'Spellbinder'  
 'Helsinki University' × *R. calophytum*  
 'Normandy' × *R. calophytum*  
 'Pekka' × *R. calophytum*  
 'Perfect Pink' × 'Spellbinder'  
 'Red River' × 'Babylon' +  
 'Red River' × 'Hardy Giant' +  
 'Russell Harmon'\* × *R. calophytum* 2005 +  
 'Russell Harmon'\* × *R. calophytum* 2009 +  
 'Russell Harmon'\* × 'Hardy Giant' +  
 'Sandra Hinton' Sibling × *R. basilicum* +  
 'Sandra Hinton' Sib. × *R. falconeri* ssp. *eximium* +  
 'Sandra Hinton' Sib. × *R. macabeumum* +

- 'Sandra Hinton' Sib. × *R. rothschildii* +  
 'Sandra Hinton' Sib. × *R. sinogrande* +  
 'Spellbinder' × 'Babylon' +  
 'Spellbinder' × *R. calophytum* (#1)  
 'Spellbinder' × *R. calophytum* (#2)  
 'Spellbinder' × *R. calophytum* (#3)  
 'Spellbinder' × 'Hardy Giant'  
 'Tony Law' × *R. montroseanum*

It amazes me that a hybrid having genes of *R. sinogrande* has come through the past three winters without a blemish here. Granted the leaves don't approach the 0.9 m (3') dimensions of the sire but each year as the root system expands, the leaves are noticeably larger. Whether it will winter a flower bud in the future is anybody's guess.

**Category II - Indumented Leaves:** All of these plants have persistent, thick indumentum. Best results were when *R. rex* ssp. *rex* or *R. rex* ssp. *fictolacteum* were in the parentage.

- (*R. smirnowii* × *R. rex* ssp. *rex*) × *R. rex* ssp. *rex*  
 (*R. degronianum* var. *yakushmanum* × *R. bureavii*) × *R. rex* ssp. *rex* +  
 'Great Dane'\* × *R. rex* ssp. *rex* (Fig. 8)  
 'Mikkeli' (syn. of 'Saint Michel') × *R. rex* ssp. *fictolacteum*  
*R. rex* ssp. *rex* × 'Great Dane'\*  
 'Sandra Hinton' sib. × *R. rex* ssp. *rex* +  
 'Sandra Hinton' × *R. rex* ssp. *rex* +  
*R. smirnowii* × *fictolacteum*  
*R. smirnowii* × *R. rex* ssp. *rex*  
 (*R. smirnowii* × *R. degronianum* var. *yakushmanum*) × *R. rex* ssp. *rex* + (Fig. 7)

**Category III - Glabrous, Late Flowering Crosses:** This category has only recently been targeted as a group of unique big leaf plants in their own right, some with scented flowers. Plans are made to focus hybridizing efforts along these lines in the next few years. Some forms of *R. auriculatum* have 30 cm (12") leaves; the species has been tested here in the past and failed on two accounts. The buds were blasted in the winter and the current year's growth that comes very late in summer was cut back by the first fall frost. Plants went into a downward spiral

and eventually expired.

- 'Summer Snow'  
 (*R. brachycarpum* ssp. *brachycarpum* × *R. auriculatum*) × ('Babylon' × *R. auriculatum*)  
 (*R. brachycarpum* ssp. *brachycarpum* × *R. auriculatum*) × (*R. auriculatum* × *R. fortunei*)  
 'Sandra Hinton' × *R. auriculatum*

There are also crosses that were made by hybridizers at my special request (thank you!) in their gardens. Some crosses by others were sent to the ARS Seed Exchange or our Chapter Seed Exchange; I obtained the seed from those sources.

Anybody wishing to add a hardy big leaf rhododendron hybrid to their garden would be well advised to seek out a plant of 'Holden's Spring Herald'. Briggs has only recently put it into tissue culture and begun distributing plants in good numbers. Dave Leach grew on four siblings from the 1975 cross 'Catalglá' × *R. rex* ssp. *fictolacteum*. They are all fairly similar, which is to say quite stunning. They bloom about the same time as 'Spellbinder'. Leaves are larger with a thin attractive buff colored layer of indumentum. Bud hardy to -23° C (-10° F), they have grown to large statured plants (about 4.3 m (14') tall in 35 years at the David G. Leach Research Station, Ohio.

A similar cross was made here in 2001 here using 'Catalglá' and pollen of *R. rex* ssp. *rex* 76/181 (Fig. 9). It produced plant leaves with a distinctive obovate shape and rugulose texture.

\* = not registered.

*Bruce Clyburn is a member of the Maine ARS Chapter.*

**More photos on next page**



Fig. 4. 'Hardy Giant'.



Fig. 5. 'Calsap' X *R. rex* ssp. *rex* +.



Fig. 6. 'Babylon' X *R. sutchuenense*.



Fig. 7. (*R. smirnowii* X *R. degranianum* var. *yakushimanum*) X *R. rex* ssp. *rex* +.



Fig. 8. 'Great Dane' X *R. rex* ssp. *rex*.



Fig. 9. Cross of 'Catalgla' and pollen of *R. rex* ssp. *rex* 76/181.



# Rhododendron Leaf Spot (several pathogens)

Dan Gillman  
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(Modified from the Nov 2011 Willamette Chapter Newsletter)

The fungi *Cercospora handelii* (*Cercospora* leaf spot), *Colletotrichum azaleae* (anthracnose), and *Pestalotiopsis sydowniana* (*Pestalotiopsis* gray blight) are fungi that can cause leaf spots on rhododendrons and azaleas. In addition, winter desiccation can cause marginal spot/blotch symptoms.

## Description:

Small, lop-sided to round tan-brown spots with yellow margins appear throughout the year on leaves infected with *Cercospora handelii*. Heavily infected leaves drop prematurely. The lesions caused by *Colletotrichum azaleae* appear on azalea leaves. They are round brown areas visible on both the upper and lower surfaces of infected leaves.

*Pestalotiopsis* gray blight begins as brown lesions that coalesce causing large portions of the leaf to have a gray cast. Defoliation often follows extensive leaf discoloration. Leaf blotch and marginal browning symptoms caused by winter desiccation begin to appear in late winter, although the full extent of the damage is often not apparent until early April.

## Disease cycle:

Knowledge of the life cycles of leaf spot fungi that commonly infect rhododendron and azalea foliage is incomplete. Infections by *Cercospora handelii* and *Colletotrichum azaleae* usually begin on immature foliage in the spring even though symptoms may not appear until the next winter and spring on one-year-old leaves. During wet springs,

fruiting structures of *Cercospora* leaf spot form in the leaf spots on attached one-year old leaves, while the fruiting structures of azalea anthracnose form only on leaves that have fallen during the spring. Spores blow and splash onto nearby foliage. If the leaf is wet for several hours, the spores germinate and penetrate immature leaves. At least two months pass between infection and the appearance of leaf spot symptoms.

*Pestalotiopsis sydowniana* causes gray blight, which infects injured wet leaves and worsens damage beyond what would normally happen by the injury alone. Damage may be caused by winter sunscald, dehydration damage, and physical wounds. Fruiting structures of the gray blight fungus develop under the surface of dead portions of infected leaves and release spores all through the growing season during cool, wet periods, which are spread by wind and rain spread to nearby foliage.

## Management strategies:

Rhododendron leaf spots seldom cause significant damage to the health of infected plants unless they are young or weakened by other harmful agents. Maintaining plant vitality with proper fertilization, irrigation during dry periods, mulching, and attention to soil pH levels is the best way to minimize these diseases. Prune plants to promote, sunlight penetration, air circulation and rapid drying of foliage. Also, minimize leaf wetness by irrigating before midday so that the leaves dry rapidly in the afternoon. Removal of infected fallen leaves reduces the amount of the inoculum present for new infections. Rhododendron leaf spot diseases are usually more severe after wet springs, but they



Fig. 1. *Cercospora* leaf spot. Photo by the author.



Fig. 2. Anthracnose on azalea leaves. Photo by R.K. Jones.

rarely warrant fungicide controls. When used, fungicide sprays protect the new green shoots and leaves. Begin spraying as the buds swell and reapply two to three more times at label intervals to maintain protection during vulnerable periods.

*Daniel Gillman is an Extension plant pathologist at the University of Massachusetts Plant Diagnostic Lab.*

# Weeds: What They Tell Us

Dr. Mark Konrad  
Sewickley,  
Pennsylvania



In the grand scheme of things, weeds have much to tell us. For instance, they tell us that the soil is acid or alkaline. In the former you will find sorrel (*Rumex acetosa*), corn marigold (*Glebionis segetum*), spurrey (*Spergula* spp.), the scentless mayweed (*Tripleurospermum inodorum*), bracken (*Pteridium* spp.), sow thistle (*Sonchus* spp.), coltsfoot (*Tussilago farfara*), nettles (*Urtica* spp.) and wild pansy (*Viola tricolor*; syn. hearts-ease).

In the latter you will find wild mignonette (*Reseda luteola*), white mustard (*Sinapis alba*), musk thistle (*Carduus nutans*), wild carrot (*Daucus carota*) and henbane (*Hyoscyamus niger*).

If the soil is waterlogged, you will find moisture-loving weeds such as horsetail (*Equisetum* spp.), fitches (*Hemizonia fitchii*), mares tails (*Hippuris vulgaris*), redshank (*Persicaria maculosa*) and the cotton grasses (*Eriophorum* spp.).

If the soil is heavy, you will find creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum officinale*), creeping bentgrass (*Agrostis stolonifera*) and coltsfoot (*Tussilago farfara*).

If the soil is light, you might find small nettle (*Urtica urens*) and perhaps couch (*Elymus repens*; syn. twitch).

Lots of vetches (*Vicia* spp.) together with kidney vetch (*Anthyllis vulneraria*) indicate nitrogen deficiency.

Weeds have other functions. They can be described as silent miners. Chicory (*Cichorium intybus*) has surprisingly long roots that effect tunneling. As the roots swell, they move the soil while helping to increase

its warmth. At the same time it lets in air and helps with drainage. Dandelion is another deep rooter, often boring into the subsoil, helping to break it up while cultivating and aerating. Yarrow (*Achillea millefolium*) has roots that creep just below the surface as well as many tap roots. These plants are valuable agents for promoting water absorption and warmth.

Weeds can also act as indicators. Some weeds have a particular ability to accumulate some definite mineral substance or substances, which may be deficient or lacking in the very soil in which they grow. This is not understood, but it may be that because many elements occur naturally in the environment, they are able to collect certain elements from the air very much in the same way that peas and beans and other members of the Leguminosae family are able to fix nitrogen from the air.

Bracken may indicate the soil is lacking in potash, but it has the power of concentrating potash in potash-deficient land. The nettle, on the other hand, somehow manages to extract lime (calcium) from an acid soil, while lupines (*Lupinus* spp.) have the power of gathering zinc. They do this by searching out these elements over a wide area. Consequently, they can be valuable on a compost heap.

It can be said that weeds have a practical value in that they provide the traces of mineral foods that plants definitely require. Other weeds have a role to play in alkaline soils. Henbane is very common. Though the soil may be rich in lime, the henbane contains very little lime at all but is rich in phosphorus.

Rich, well-cultivated gardens usually abound in groundsel (*Senecio* spp.), chickweed (*Stellaria media*) and small nettles. Their function seems to be to gather silicic acid, a food that tends to

become deficient in gardens that have been worked for many years. Sorrel always grows in acid soil but, in fact, is rich in calcium.

There are other weeds rich in lime that are given the name of calcium-efficiency plants. These include the plantains (*Plantago major*), spurrey and wild pansy. On acidic garden lawns will be found dandelions and daisies in addition to plantains, all of which will indicate acidity and yet contain calcium.

Weeds such as vetch, rape (*Brassica napus*) and clover (*Trifolium* spp.) always indicate that the soil is deficient in nitrogen and yet they themselves will be rich in plant food. Weeds such as yarrow and chamomile (*Matricaria recutita* and *Anthemis nobilis*) containing potash indicate potassium deficiency in the soil. The yellow dock is rich in iron and so is chicory. The wild marigold contains sulphur and the wild strawberry (*Fragaria vesca*) calcium and phosphorus.

In summary, it is easy to see why weeds should be placed on the compost heap. By learning weed recognition it is possible to judge the condition of the soil and how to deal with it.

## Reference

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*Dr. Konrad is a member of the Great Lakes Chapter.*



# My Experience with Rhododendron Grafting

Herb Spady  
Silverton, Oregon



Photos by the author

It has been a long time since I first tried grafting rhododendrons, so I do not now have a good recollection of why I first attempted it. Since I had previously been successful grafting apples and pears, it was a natural step to move on to rhododendrons. I don't recall exactly how I heard that Willard Thompson was grafting rhododendrons. Perhaps he gave a program or wrote an article, so when I received a single cutting of *R. degronianum* 'Gerald Loder' from Wakehurst, I decided to graft it. Willard described using 'Anna Rose Whitney' as rootstock, so that was what I used. That was when I had my first lesson. I was encouraged by the success of the graft, and so it was planted in the nursery field. It did fine until winter when the understock froze and bark split and the scion died. **Lesson:** Use hardy rootstock.

Subsequently, I have always used 'Cunningham's White'. When I obtained a single cutting of *R. prunum* at a Portland Chapter cutting exchange, I grafted it because Frank Mossman had written on the bag "Should be grafted." That was also a success. Continuing to use this rootstock, I recall successfully doing the following grafts: *R. decorum* ssp. *diaprepes* 'Gargantua', 'Crest', 'Naomi Exbury\*', *R. wiltonii*, *R. traillianum* var. *dictyotum* 'Katmandu\*', 'Glowing Embers', *R. tsariense*, *R. wiltonii*, and 'Pink Impression\*'. I have never attempted a graft with evergreen or deciduous azaleas. I have also grafted *R. kongboense* on one of the easier grown plants in *Section Pogonanthum*.

At the time of my first efforts at grafting, we had facilities for doing

cuttings. The humidity in any cutting system provides an ideal environment for the healing of a graft, and such humidity must be provided until the cambium layers of rootstock and scion have healed. Currently I have no facility for doing cuttings, but I am able to graft, as I will show you below.

## Reasons to Graft

There are five main reasons to graft:

- Poor root system on cutting rooted plant.
- Plant in decline or damaged
- No available rooting facility
- Only one cutting available
- Difficult to root

1. *Poor Root System:* In our field plantings, we noticed that many species and some hybrids developed poor root systems on plants grown from cuttings. I mentioned this to Ken Cox and he concurred that it seemed to be true. The question in my mind was, "Would they do better grafted?" My experience has been that they do, and two examples are *R. tsariense* and *kongboense*.

2. *Plant in Decline or Damaged:* In the Smith Garden in Oregon, I encounter plants that were in trouble or damaged. I was able to graft and salvage some of those plants.

The original plant of *R. traillianum* (Fig. 1) had probably suffered bark split from freezing or physical damage with resulting rotting of the structural part of the stem. Other plants in the Smith garden showed this identical problem. Their fate would be to ultimately break. If the damage were to be from bark splitting, the same damage may later recur on the grafted plant because grafting does not increase the hardiness of the scion. Fig. 2 shows the grafted scion.

In addition, some other plants needed replacing because they had grown in poor light or under generally poor cultural

conditions.

3. *No available rooting facility:* Because I do not have a rooting facility, I have devised a method of grafting plants without one. Anyone can graft to obtain a few desirable plants from a cutting or two.

4. *Only One Cutting Available:* It is my feeling that there is less risk of losing a single well done graft than rooting a cutting. However, this depends on the rooting skill and experience of the person doing the grafting.

5. *Difficult to Root:* Yellow flowered rhododendrons are notoriously difficult to root. The current "Crest" in the Smith Garden is a plant I had grafted.

## Scion Wood and Rootstock

Ideal rootstock is seldom available. If possible it should be the same diameter as the scion and about the size of a standard cutting and in good health, if possible.

In my experience *R. "Cunningham's White"* (*R. caucasicum* × *ponticum* var. *album*) is the most satisfactory rootstock. It is very hardy, has a large aggressive root system, roots easily and seldom suckers. The rootstock will frequently provide better nutrition and growth to the scion than the plant's original roots, but remember, it does not change other characteristics of the scion such as flower color, hardiness or other features that are intrinsic to the scion. The classic rootstock used in the early years was what was considered *R. ponticum*, perhaps the rhododendron weed invading the UK. It has now been shown to be a *R. ponticum* × *R. catawbiense* hybrid. Fig. 3 shows a result of using that rootstock. It will usually completely overtake the graft if not vigorously pruned off.

## Grafting Supplies and Techniques

The main tools required are a sharp knife and grafting rubbers to secure the scion to the rootstock. I use beeswax to seal the graft site.



Fig. 1. *R. traillianum* problem (damaged trunk).



Fig. 2. Two healed *R. traillianum* grafts.



Fig. 3. A grafted classic "ponticum" rootstock, showing a sucker's flowers.



Fig. 4: Knife and Stone.



Fig. 5: Rubber bands, brush and beeswax.



Fig. 9: Scion.



Fig. 10: Scion preparation.



(Figs. 6 (top), 7 (center) and 8 (bottom): Untrimmed and trimmed rootstock. Center bud removed.



Fig. 11: Two methods of securing the scion.



Fig. 12A: Wire frame.



Fig. 12B: Covered grafted plant..

### Preparation of the Scion and Rootstock for Grafting

First, trim off all branches and buds on the rootstock below where the scion will be placed. Then, where the scion is to be grafted, and with a sharp knife, split the “trunk” in its middle downwards about 1-1.5 inches (3-5 cm)—this I call a “central cut.” Although a central cut on the rootstock is ideal for a scion of the same diameter as the rootstock, alternatives are necessary for scions of different diameters and for the placement of several grafts on the same rootstock. In such cases, the cut should be from one side to about the middle of the rootstock on about a 30° angle downwards—this I call an “angled cut,” which makes a lateral graft.

Ideally the rootstock and scion should be trimmed so that the cut edges are smooth and fit snugly together. Skilled grafters may be able to do that in one cut. I have found that careful revisions may often be necessary.

### The Importance of Cambium Contact

When grafting, it is absolutely essential that the cambium of the scion be directly in contact with the cambium of the rootstock. Healing will not jump across large open spaces or across woody parts of the stem. If perfect contact is not possible on both sides, be sure that contact is made on at least one side. Diagrammatically the

options are shown below.

These are the two options for grafting a small scion on a large rootstock stem. They both can work, but the angled cut in Fig. 14B is probably the best. The lateral graft cut is made by cutting from the side of the stem and proceeding toward the center until the desired width is obtained to match the scion width. If the cut goes past the centre of the rootstock though, there is danger that this will weaken the strength of the rootstock stem sufficiently to cause it to break, as the weight of the scion has to be supported by the uncut rootstock.

### Securing the Scion

Although I have had success simply using a cloths pin, I prefer the more secure method of wrapping the union tightly with a grafting rubber and covering that with bee’s wax. This provides a very stable fixation. The bee’s wax prevents dehydration of the wounded tissues. Success when using a clothespin is best achieved in a humid environment such as in an enclosed cutting bench.

### The Healing Environment

Finally, it is necessary to provide a suitable environment for the healing of the graft. If you have a rooting bench with a high humidity environment, you can just put the grafted rootstock there. It will

heal while cuttings are rooting. I do not have such a facility, so what I have done is create a wire frame over a gallon pot (Fig. 12A). The frame is to keep plastic away from the leaves to prevent mold. The frame supports a transparent plastic bag (Fig. 12B) that will surround the pot and grafted rootstock, thus keeping the humidity high. This plastic cover must be tightly sealed.

This covered pot should be stored outside in an area devoid of direct sunlight. As direct sunlight will fry the contents. I store the pots in a canopy that receives no direct sunlight.

Do not be impatient. The graft will take several months to heal. The best sign for healing is growth of the scion. After you see it beginning to make growth, give it a little more time before removing the cover and placing the pot in a shady place. Here again, not too much direct sunlight until good vigorous growth of the graft is apparent.

\* = not registered

*Herb Spady is a Past President of the ARS and a member of the Willamette Chapter.*

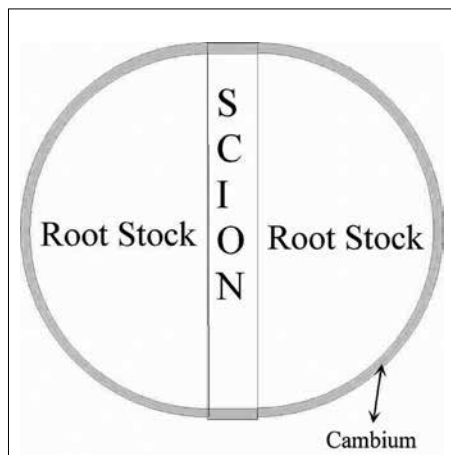
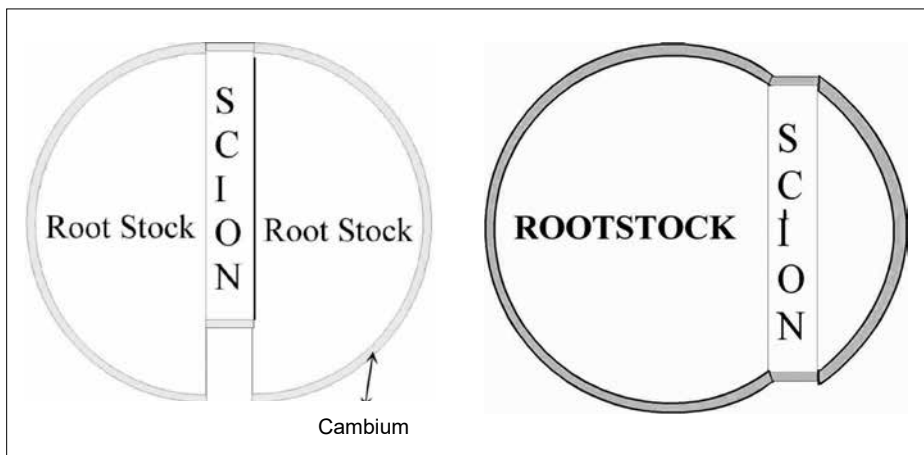


Fig. 13: Center cut graft cross-section, showing the relationship of the scion to the rootstock.



Figs. 14: A. Center cut graft cross-section with a scion of smaller diameter than the rootstock, and B. the relationship of the scion to the rootstock with an angled cut (lateral graft).

# Lilac, *Syringa vulgaris*

(Modified from Azalea Blooms, the May 2012 newsletter of the Azalea Chapter)

Carol Hanak  
Marietta, Georgia



Walt Whitman wrote,  
“With many a pointed blossom,  
rising, delicate, with the perfume  
strong I love,  
With every leaf a miracle...”

I have a fondness for scented flowering plants and shrubs so when I moved to Atlanta from South Florida many years ago, I started planting scented, flowering plants of the South. The heavenly lilac, to my disappointment, is not southern and not fond of Atlanta’s mild winter climate. I was not to be deterred. After years of reading gardening articles and searching through nursery catalogs, I found that there are a few cultivars that will form buds in our mild winters. I bravely purchased ‘Lavender Lady’ in the late nineties and while it took her a few years to grow and gain strength, she gave us a few blooms after only three years. I kept her trimmed as a small tree and eventually she grew to almost seven feet (2.1 m) tall and each spring would provide about three dozen intoxicatingly scented blooms.

Lilacs are members of the olive family, *Oleaceae*. They were introduced into European gardens at the end of the 16th century from Ottoman gardens. Europeans brought them to the new world. Lilacs like well-drained slightly alkaline soil enhanced with organic compost and deep watering. You should fertilize lilacs in late winter with organic fertilizer such as blood and bone meal. They need sun and lots of space because crowding reduces air circulation and can make some cultivars prone to powdery mildew.

The first low-chill lilac (‘Lavender Lady’) was introduced in 1953 by Walter Lammerts, a researcher and hybridizer with Rancho del Descanso in Southern California. Unlike the old lilac favorites that need cold winters to bloom, these varieties thrive without winter chill. Over the years, the staff of this former wholesale nursery has introduced many new hybrids from the descendants of Lammerts’ original plantings.

One of the most popular lilacs in the south is ‘Miss Kim’ which is originally a native of Korea. It can tolerate a variety of soil conditions and has a compact and upright rounded form. It may grow up to 6 or 7 feet (1.8-2.1 m) tall with a spread of 5 or 6 feet (1.5-1.8 m). This lilac is extremely fragrant with light lavender blooms. It prefers full sun but will tolerate some shade however it will have fewer blooms.

There is a lot of buzz presently about a recent introduction from Proven Winners called ‘Bloomerang® Purple’ (*Syringa* ‘Penda’ ppaf). Those blooms just keep coming back, all summer into fall, so the producer’s say. This is a compact, mounding lilac that will only get about 4 to 5 feet (1.2-1.5 m) tall. It is a perfect size for smaller gardens or gardens that barely have room for one more plant. The blooms are purple-lilac in color with the first flush appearing in the spring, then continuing throughout the summer and into fall, although it will take a rest in the hottest part of summer. I have very little self-control when it comes to flowering plants, so I now have ‘Bloomerang Purple’ in the garden. We shall see if this one lives up to the hype.

*Carol Hanak Is a member of the Azalea Chapter.*

**Editor’s Note: This article intrigued me, and in checking the web, I found the following by Tim Wood, Product Development Manager at Spring Meadow Nursery, Grand Haven, MI (<http://plant-quest.blogspot.ca/2010/04/bloomerang-lilac-starts-controversy.html>), who was responding to controversy about how much plant modification is appropriate. Given all the hybridizing with rhododendrons, this seems to me to be a mute point, but apparently not for some other plant traditionalists!**

‘Bloomerang Lilac’ is not the first reblooming lilac. In 1917 Charles Sargent of the Arnold Arboretum noted that *Syringa microphylla* (*S. pubescens* subsp. *microphylla* var. *microphylla*) “... if it keeps up its habit of flowering a second time in autumn it will be at least interesting even if other lilacs are more beautiful.” In her 1928 book *Lilacs*, Susan McKelvey noted that *S. microphylla* has “...the curious habit of blooming twice in one season.” *Syringa* ‘Josee’ (syn. MORjos 06F), a small leafed, pale pink flowered cultivar introduced in 1974 by Minier Nursery of France, is another noted remontant lilac. ‘Josee’ is a complex cross (*Syringa pubescens* ssp. *microphylla* × *Syringa pubescens* ssp. *patula* (syn *S. velutina*) × *Syringa meyeri* ssp. *meyeri*) developed by Georges Morel. More recently, Frank and Sara Moro of Select Plus International Nurseries in Quebec, Canada, introduced several reblooming cultivars. So why all the fuss about Bloomerang lilac? [First, *Slate* magazine came out with an article entitled “Gilding the Lilac: A new hybrid could kill the nostalgia...” and then *MaCleans* magazine follows up with an Internet article titled the “Ever-blooming Lilac Wars.” It seems that some people feel a lilac should bloom only once and only in the spring.]



There are a number of things that have put Bloomerang in the spotlight. From my observations (and a good many of the 400 garden writers that trialed the plant), it is the most consistent and prolific remontant lilac to date. The initial bloom is heavy and appears in mid-May. It goes through a rest in June and then begins to rebloom in July and continues on until frost. While the summer and fall panicles are not as large as those in the spring, it puts on a very good show. Every single branch bears flowers (not just an occasional flower). One of the reasons for its propensity to flower is its strong growth. As long as it continues to grow it continues to produce new flowers. You don't have to prune it get it to rebloom,

however, a light shearing after the initial bloom results in a fuller plant with more branches and thus more blooms.

...Lilacs offer many fine attributes that make them popular. Most notably lilacs bloom in the spring when people are in the garden center, they offer excellent hardiness, they're well recognized by consumers, they're very colorful in bloom and they offer fragrance. On the other hand lilacs typically offer only one season of interest and are susceptible to powdery mildew and *Pseudomonas*. Bloomerang addresses all of these issues...

Still, I'm not sure why Bloomerang or any other reblooming lilac is so controversial. ...It's strange to read comments like "of all the things

that plant hybridizers could be focusing on, this type of indulgence is a waste of creativity..." (GardenRant.com, August 9, 2009, "How much plant improvement can we stand?").

I bravely purchased 'Lavender Lady' in the late nineties and while it took her a few years to grow and gain strength, she gave us a few blooms after only three years. I kept her trimmed as a small tree and eventually she grew to almost seven feet (2.1 m) tall and each spring would provide about three dozen intoxicatingly scented blooms.

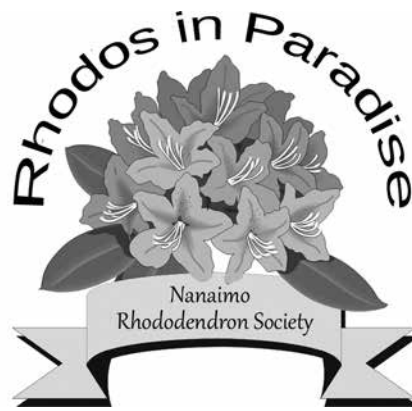
How can I respond except to say go ahead and call me indulgent and blame me for ruining the joy of lilacs. It will only sell more plants and beautify more yards.

## ARS Western Regional Conference, Nanaimo, BC, Canada, Sept 21-23, 2012

Are you ready to come to our rhododendron paradise, Vancouver Island, British Columbia? From September 21-23, 2012, the Nanaimo Chapter of the ARS with the support of many of the other District 1 chapters invites you to attend the 2012 ARS Western Regional Fall Conference in the beautiful port of Nanaimo, B.C., Canada!

We will be providing you with an extraordinary experience of exploration, fun, camaraderie and learning. Stay at our conference hotel, the newly renovated, Coast Bastion Hotel with views of the scenic Nanaimo waterfront from every room. Taste some of the best of what west coast cuisine has to offer with our specially prepared catered meals and at the many nearby restaurants.

Learn from a stellar slate of presenters who will entertain, educate, and stimulate you through a wide range of topics. Our Friday night keynote speaker, Garth Wedemire (a board member of the Rhododendron Species Foundation), an outstanding photographer, starts us off with the presentation titled, "Paradise Found: How



a personal passion for plants has transformed five Vancouver Island properties." On Saturday, we have some excellent Canadian presenters lined up who will help educate us about Vancouver Island and its rich history of rhododendron culture. Our good friend and world-renowned plantsman Steve Hootman of the Rhododendron Species Foundation will deliver a much anticipated keynote on Saturday evening.

Have a chance to tour some exquisite gardens both local and up island on Saturday afternoon. On the final day of the conference visit and lunch at the famous Milner Gardens and join Steve Hoot-

man for a guided tour of some of the intriguing plants found in that beautiful world class garden and woodland. Definitely not to be missed! The ARS board meeting; a hybridizer round table; and an open forum discussion with our Executive Director Laura Grant will of course be integral components as well as an opportunity to buy some unique plants, participate in a silent auction, purchase some exquisite antique floral prints, and participate in the ever-popular photo contest.

We are eager to share our gardening paradise with you. Reserve the dates of September 21-23, 2012, for this opportunity to network with other keen plants persons! The registration form is on pages 149-150 in this issue. Check out our outstanding website which includes the program, and registration information at: <http://ars-nanaimo2012.ca>. To qualify for early registration, your forms must be post-marked by August 1st. Registration closes on Friday, September 14, 2012. We're looking forward to seeing many of you in Nanaimo in September!

# ARS Program Library

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

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

The DVDs currently available are listed in the box on this page.



## Lendonwood Garden

DVD produced by Oklahoma State University Cooperative Extension Service, featuring Len Miller's Lendonwood Garden in Grove, Oklahoma. This informative program includes Len Miller's demonstration for planting a rhododendron. To order: Copies of Oklahoma Gardening episodes are available on VHS and DVD for \$15 each. For ordering information call (405) 744-4081. Ask for Episode 3238. Lendonwood Garden.

### ARS Program Library DVD Titles Available as of Dec 2011

- PL.002 Garden Walks 2006**  
Several gardens visited during the Joint Convention of the American Rhododendron Society and the Azalea Society of America in Rockville, Maryland, May 2006. Includes Ed and Mary Reiley Garden. Running time 37 minutes.
- PL.003 Frank Fujioka's Program May 2006 Societe Bretonne Du Rhododendron**  
Program presented to the Societe Bretonne Du Rhododendron in France. The program is about Frank's garden, hybrids, his hybridizing program, and more. Modified with English translation as needed. Running time 37 minutes
- PL.004 Elepidote Hybrids in Central New Jersey Selected by the Princeton Chapter Study Group**  
This DVD program is about elepidote rhododendron hybrids that are proven good-doers in Central New Jersey selected by the Princeton Chapter Study Group. Descriptions written by members of the Study Group and narrated by Jerry van de Sande. Photography by members of the group. Hands-on information. Printout text including supplement data for meeting handouts. Running time 52 minutes.
- PL.005 India, Ron's Trip, Arunachal Pradesh**  
Program based on Ron Rabideau's experiences when he joined an outstanding international group of plant explorers to Arunachal Pradesh in search of rhododendron species. The program consists of photos and videos from members of the expedition and also personal observations of the people and the culture there. Narration by Ron Rabideau. Running time 52 minutes.
- PL.006 The Zurich Garden**  
This DVD program was created by ARSPL with Dr. William M. Zurich, Jr., who also did the narration. Bill shared his personal thoughts and design approach in the development of his rhododendron garden. Kenneth Cox, after viewing the Zurich garden, rated this as one of the finest private gardens in the East Coast. DVD record of a superb mature garden. Running time is 30 minutes,
- PL.007 Rhododendrons at the Golden Gate (2007 ARS Annual Convention, SF, CA)**  
Here are rhododendrons growing amidst palms with cycads, orchids, oranges! Rhododendrons grow amongst contemporary art, metal sculptures and pagodas. This DVD features 1. San Francisco's famed Golden Gate Park, Conservatory of Flowers, Japanese Tea Garden, and the S. F. Botanical Garden at Strybing Arboretum. 2. Filoli House and Garden. 3. Bee and Paul Brown's garden. 4. The Tim Durant garden. 5. Dr. Burt and Belinda Brent's Scottish country garden. 6. Tom Jackson and Kathy Grant garden 7. The Webber-Kessler garden. 8. Sonoma Horticultural Nursery 9. The Chateau St Jean Vineyard. With narration. Running time 39 minutes.
- PL.008 Rhododendrons in the Wild West (2008 ARS Annual Convention, Tulsa, OK)**  
All narration recorded live on location, resulting in a spontaneous convention tour DVD. Gilcrease Museum Gardens and Rock Garden. Len Miller narrates at Lendonwood Garden, Elk Ridge, and the Tulsa Garden Center. Barry Fugatt, Director of Horticulture, guided the tour at Linnaeus Teaching Center. Breniss O'Neal talks about her "Forest Hollow Estate". Jim Baily narrates as the tour visited his garden. The Philbrook Museum of Art with its 16th century Italian Renaissance gardens. Two adjacent gardens of Jim and Madeline Osborne and Ronald and Annette Williams at the water's edge of Grand Lake. Running time 58 minutes
- PL.009 A Spring Walk in Walters' Woods** is a personal tour with Spike and Kay Walters in their natural woodland garden in Western Pennsylvania. This DVD is spiked with humor and interesting observations by Spike, who narrated and conducted the tour with Kay. The Walters are members of the Great Lakes Chapter. Running time 29 minutes.
- PL.010 Nepal: Our Ultimate Rhodo Flowering Experience!** This DVD was developed via the internet with Ian Chalk from down under. Ian is a member of the Emu Valley Rhododendron Society and the Emu Valley Rhododendron Garden, Burnie, Tasmania, Australia. Ian and his wife Jenny share their experiences while trekking through the world's largest rhododendron forest in Nepal. Ian narrates with insight and personal impressions. Summing this up is WOW! Running time 21 minutes.
- PL.011 Oban, Scotland ARS 1996 Convention Revisited** Win and Anne Howe, of the Valley Forge Chapter, take us back to an extraordinary convention which attracted hundreds of attendees from all over the world. One of the best photo-documented garden tours: Stonefield Castle, Achamore House, Ardkinglas Woodland Garden, Mount Stuart House, Stirling Castle. After the convention Win takes us on a tour of Glendoick Gardens and Nursery, home of Peter and Kenneth Cox. All this in one DVD. Running time 36 minutes.
- PL.012 Charles Feryok on Pruning**  
Proper techniques of plant Pruning

# American Rhododendron Society

## Register of Plant Names and Checklist—Summer 2012

### Supplement

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

Questions from **North Americans** concerning name registration, the availability of particular names, and requests for forms (no fee) should be directed to the Regional Registrar, **Jay W. Murray**. Forms also may be downloaded from the ARS web site: <http://www.rhododendron.org> or by REG = registered by; dates are enclosed in parentheses immediately following the to J.W. Murray. **Non-North Americans** should direct questions to the International Rhododendron Registrar **Dr A.C. Leslie**.

**Introduction:** The following rhododendron and azalea names were approved and added to the International Rhododendron Register prior to May 15, 2012 by the Royal Horticultural Society, International Cultivar Registration Authority for the genus *Rhododendron*. The North American Registrar assisted the RHS by providing data for plants originating in North America.

**References:** Names conform to the rules and recommendations of the *International Code of Nomenclature for Cultivated Plants – 7<sup>th</sup> Edition* (2004). Color numbers refer to the RHS Colour Chart unless noted otherwise. Accompanying color names are taken from *A Contribution toward Standardization of Color Names in Horticulture*, R.D. Huse and K.L. Kelly, edited by D.H. Voss (ARS, 1984). **Format:** Parentage lists the seed parent first, followed by an "(s)" if the direction of the cross is known; this is followed by

an upper case "X" and then the name of the pollen parent. If either parent is itself a cross, the individual components within that cross are separated by a lower case "x". Parentheses are used only in describing the more complex crosses. Abbreviations are used where appropriate: (a) = azalea, (r) = rhododendron, (v) = vireya rhododendron, (z) = azaleodendron; H = hybridized by, G = grown to first flower by, R = raised by, S = selected by, N = named by, I = introduced commercially by, REG = registered by; dates are enclosed in parentheses immediately following the activity. Metric conversions of dimensions are reported in 5mm (0.2") increments for dimensions greater than 1" (25mm).

#### **ATTENTION: Non-North American Members of ARS**

The International Rhododendron Registrar, Dr A.C. Leslie, accepts registration applications from all areas of the world. Where there is a Regional Registrar, applications may be preprocessed locally and then forwarded to the IRR. ARS members living outside North America who register directly with the IRR, or through other Regional Registrars may have their

registrations published by the ARS if they notify the North American Regional Registrar of the plant name and the official registration date. The entry will appear in an early Supplement in the *JARS*.

#### **(r) 'Cherries and Merlot'**

Elepidote rhododendron: ('Pretty Baby' \*x *R. pachysanthum*) (s) X 'Whid Bee'. H (2001), G (2005), N (2012), and REG (2012): Frank Fujioka, Freeland, WA. Flowers 18/dome truss, funnel-campanulate, 2" (50mm) long x 2" (50mm) wide, with 5 wavy-edged lobes. Color moderate red (47A) in bud, opening inside vivid red (45A) with two elongated clusters of small, discrete black spots on dorsal lobe; outside moderate red (47A) to vivid red (46B). Calyx lobes <0.1" (1.5mm) long, deep purplish red (71A). Truss 3.5" (90mm) high x 5" (125mm) wide. Leaves held 2-3 years; 3.5" x 1.5" (90 x 40mm), elliptic, broadly acute apex, rounded base, downcurved margins; semi-glossy and dark green (136A) above; deep purplish red, close to (71A) below. Initially hairs on underside of leaves are moderate purplish red (59C) and become dark red (59A) with age, Shrub 2.9' (0.9m) high x



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2.6' (0.8m) wide in 10 years; dense habit.  
Plant and bud hardy to at least 10°F  
(-12°C). Flowering late April.

\* Name not registered; Hybridizer  
unknown. Parentage; (*R.*  
*yakushimanum* x 'Cornibia').

### 'Cheryl's Choice'

Elepidote rhododendron: Parentage un-  
known. H (1960s): John C. Cowles,  
Stow, MA; G (1970s) and REG (2012):  
Heritage Museums & Gardens, Sand-  
wich, MA; N (2011) Cheryl Lilly, Fal-  
mouth, MA, Fls 7-8/lax truss, broadly  
funnel-shaped, 2.2" (55mm) long x 3.6"  
(90mm) wide, with 6-7 wavy-edged lobes.  
Color deep purplish pink (66C) in bud,  
opening inside very pale purple (75D)  
with green throat (146D) and light pur-  
plish pink (63D) margins; outside light  
purplish pink (63D); large moderate pur-  
plish pink (74D) petaloid stamens. Truss  
5.6" (140mm) high x 5.6" (140mm)  
wide. Lvs 4.5" x 2" (115 x 50mm), el-  
liptic, broadly acute apex, oblique base.  
Shrub 4' (1.2m) high x 4' (1.2m) wide in  
10 years; open habit. Plant hardy to at least  
-10°F (-23°C); bud, hardy to 0°F (-18°C).  
Flowering mid May.

### (r) 'Golden Rhapsody'

Elepidote rhododendron. 'Golden Star'  
X ('Fort Cream'\* x *R. vernicosum* (Rock  
18139). H, G, and N: William L. Rhein,  
Mechanicsburg, PA., dates unknown;  
REG (2012): Rhein Registration  
Committee, Susquehanna Valley Chapter,  
ARS. Fls 8-12/dome truss, 2"-2.2" (50-  
55mm) wide x 3.6"-3.8" (90 x 95mm)  
long broadly funnel-shaped, with 7 wavy-  
edged lobes. Color pale yellow (11C) in  
bud, opening inside pale greenish yellow  
(13D), with a small, brilliant yellow (13C),  
speckled blotch on the dorsal lobe; outside  
pale yellow (11C); prominent dark red  
anthers. Truss 6" (150mm) wide x 4.5"  
(115mm) high. Lvs held 3 years; 4.5"-  
6" (115-150mm) x 2.5"-3" (65-75mm);  
oblong, broadly acute apex, rounded base,  
slightly downcurved margins; semi-glossy



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and moderate olive green (147A) above. Shrub 4' (1.2m) high x 4.2' (1.3m) wide in 5 years; intermediate habit. Plant hardy to at least -25°F (-32°C); buds, -15°F (-26°C). Flowering mid May.

\* Not registered (no data available)

**(r) 'Joan Marie'**

Elepidote rhododendron: Parentage unknown. H (1960s): John C. Cowles, Stow, MA; G (c1970) and REG (2012): Heritage Museums & Gardens, Sandwich, MA; N (2011) Joan O'Connor, Osterville, MA, , Fls 14/ball truss, broadly funnel-shaped, 2.3" (58mm) long x 4" (100mm) wide, with 6 wavy-edged lobes. Color Strong purplish red (60 c-d) in bud, opening inside light reddish purple (74C) to moderate purplish pink (74D), unmarked; outside strong purplish red (71C-D). Truss 6" (150mm) high x 6" (150mm) wide. Lvs 4.5" x 1.8" (115 x 45mm), elliptic, broadly acute apex, oblique base, wavy margins. Shrub 8' (2.8m) high x 6' (1.8m) wide in 20 years; intermediate habit. Plant and bud hardy to at least -10°F (-23°C). Flowering mid May.

**(r) 'Lavender Haze'**

Elepidote rhododendron. 'Minnetonka' (s) X 'Smokey'. H (2006). G (2010), N (2011) and REG (2012): John Doppel. Lenhartsville, PA. Fls 8/ball truss, broadly funnel-shaped, 1.6" (40mm) long x 2.6" (65mm) wide, with wavy-edged lobes. Color strong purplish red (71B) in bud, opening inside very light purple (76B), with a solid pale yellow green (149D) blotch on the dorsal lobe; outside light reddish purple (74C). Truss 4" (100mm) high x 4" (100mm) wide. Lvs held 2 years, 4" x 1.5" (100 x 40mm); elliptic, broadly acute apex, rounded base, down-curved margins; semi-glossy and olive green above; hairless. Shrub 1.7' (0.5m) high x 2' (0.6m) wide in 5 years; dense habit. Plant and bud hardy to at least -10°F (-23°C). Flowering mid May.

**(r) 'Misty Memory'**

Elepidote rhododendron. 'Casanova' (s) X Goldsworth Orange'. H (1994): C. Trautmann, Florence, OR; G (2010), N (2011) and REG (2012): John Doppel. Lenhartsville, PA. Fls 7/dome truss, broadly funnel-shaped, 1.6" (40mm) long x 2.8" (70mm) wide, with 5 flat-edged lobes. Color deep pink (52B) in bud, opening inside pale purplish pink (56A), fading to pale yellow green (4D), with strong red (53C) dorsal spots fading to light yellow (160B); outside deep purplish pink (68C) and pale purplish pink (56B). Truss 4" (100mm) high x 4.6" (115mm) wide. Lvs 4.6" x 1.5" (115 x 40mm); elliptic, broadly acute apex, rounded base, downcurved margins; semi-glossy and medium green above; hairless. Shrub 2' (0.6m) high x 2.6' (0.8m) wide in 5 years; dense habit. Plant and bud hardy to at least -10°F (-23°C). Flowering early May.

**(r) 'White Marsh'**

Elepidote rhododendron. Parentage unknown. H (2006), G (2010), N (2011) and REG (2012): John Doppel. Lenhartsville, PA. Fls 9/ball truss, openly funnel-shaped, 3.6" (90mm) long x 3" (75mm) wide, with 5 wavy-edged lobes. Color vivid purplish red (57D) in bud, opening inside pale purplish pink (56A) shading to white, lightly spotted purplish red (57D), changing to moderate orange

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Norman Beaudry, Chairman

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yellow (168D) on lower half of dorsal lobe;  
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intermediate habit. Plant and bud hardy  
to at least -12°F (-24°C). Flowering mid  
May.

### Non North American Registrations

Applications for the following recent  
introductions to the International Register  
were processed by Dr.A.C. Leslie who  
wrote the plant descriptions. These names  
were submitted for registration by H Van  
Oost, an ARS member living in Belgium.

#### (v) 'Hendrik's Kanarie'

cv. *Lepidote rhododendron* ('Satan's Gift'  
x 'Flamenco Dancer' (s) ) X '*Vladimir  
Bukovsky*'. H: H. Van Oost (2002), G:  
H. Van Oost (2004), N: H. Van Oost  
(2011), I: H. Van Oost (2011), REG: H.  
Van Oost (2011). Fls 5-8/domed truss,  
tubular funnel-shaped, 82 x 65mm, with  
5 wavy-edged lobes, buds yellow, opening  
with lobes deep yellow inside and out,  
throat and tube deep orange-yellow inside  
and out; unmarked; stigma pale green;  
anthers dark. Calyx vestigial. Lvs elliptic,  
90 x 36mm, acute at apex, cuneate at  
base, with wavy edges, glossy green above,  
with silvery scales above and below. Slow-  
growing shrub, 0.7 x 0.5m in 10 years.  
March to June.

(Nomenclatural standard: colour print  
of an electronic image provided by the  
registrant (WSY). Etymology: the epithet  
combines the registrant's first name,  
combined with an allusion to the flower  
colour )

#### (v) 'Vuurdoop'

cv. *Lepidote rhododendron* : '*Apassionata*'  
(vireya) (s) x '*Leonore Frances*'. H: H.  
Van Oost (2002), G: H. Van Oost (2004),  
(Continued on page 176.)

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N: H. Van Oost (2010), I: H. Van Oost (2011), REG: H. Van Oost (2011). Fls 4-7/domed truss, tubular funnel-shaped, 85 x 56-60mm, with 5 flat-edged lobes, lobes broadly margined orange inside and out, centre of lobes and the whole of the tube yellow both inside and out, unmarked; stigma green; anthers dark. Calyx vestigial. Lvs elliptic, 90 x 40mm, cuneate at base, obtuse and apiculate at apex, margins flat, matt green and with silvery scales above, with greenish brown

scales below. Shrub 0.8 x 0.8m in 10 years. Flowering mostly in spring and autumn, but occasionally in winter and summer.

(Resembles 'Anatta Gold' in colour but with smaller corollas and with a plant habit that is more compact and upright growing. Nomenclatural standard: colour print of an electronic image provided by the registrant (WSY). Etymology: the epithet means "baptism of fire" and refers to the colour).

**See photos on page 179**

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## Hybridizing for Foliage II - Color

Frank Fujioka  
Freeland, Washington



Glen Jamieson  
Parksville, BC  
Canada



This article is the second in a series on the rhododendron hybridization efforts of Frank Fujioka who for many years has been trying to produce elepidote rhododendron cultivars that offer both exceptional foliage and flowers. Together we have produced this text to illustrate some of his efforts that are focused more on foliage and plant shape than flower characteristics.

To reach his desired goal of creating interesting leaves, hybrids were combined directly with a species, or two or more hybrids each with desirable foliage were combined. Later generational *R. degronianum* ssp. *yakushmanum*

hybrids were used extensively to achieve compactness, darker leaves, and indumentum and tomentum.

The main foliage features being selected for are leaf shape, color, and texture; plant (and hence leaf) size; and leaf indumentum and tomentum. Progress in achieving each of these characteristics is being sequentially illustrated in a series of articles, with this second article focusing on Leaf Color. Plants with various shades of green that are used in a landscape become especially valuable in the winter where contrasting colors create interesting patterns.

### Leaf Color

Species with particularly attractive colored leaves that he is using in hybridizing include those species mentioned in our previous article on leaf shape in *JARS* 66(2), namely *R. degronianum* ssp. *yakushmanum*, *R. bureavioides*, *R. pachysanthum*, *R. pseudochrysanthum*, *R. roxieanum*, *R. macabeanum*, *R. floribundum*, *R. rex* ssp. *fictolacteum*, *R. floribundum*, *R. bureavii*, *R. arboreum* ssp. *zeylanicum* and *R. rex* ssp. *rex*; plus *R. neriiflorum* (Fig. 1). When one looks at the leaf characteristics of these plants, it becomes easy to see why these species are particularly attractive!

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

### Example crosses:

Cross #1. Parent species: *R. yakushmanum*, *R. rex*, *R. bureavii*, and *R. pseudochrysanthum*. The dark slightly blueish green is probably from *R. yakushmanum* and *R. rex*. The flower color was predictable because all the species have various pink hues.

Cross #2. Parent species: *R. yakushmanum*, *R. bureavii*, *R. zeylanicum* and *R. rex*. The apple-green leaves are a combination of other hybrids used in this cross. The glossy leaves comes from the combination of *R. yakushmanum* and *R. bureavii*. The flowers come from a parentage of heavy yellow hybrids.

Cross #3. Parent species: *R. yakushmanum*, *R. pachysanthum*, *R. zeylanicum* and *R. neriiflorum*. The purple underside of the leaves comes from *R. neriiflorum*. The red flowers are from *R. zeylanicum* and *R. neriiflorum*.

Cross #4. Two hybrids (c. 1922 and 1930) were used whose parent species are not fully known. The species origin of the colorful new growth cannot therefore be determined.

**Photos on next page**

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## The Species

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Fig. 1. The species used in the crosses include *R. degronianum* ssp. *yakushmanum*, *R. bureavioides*, *R. pachysanthum*, *R. pseudochrysanthum*, *R. roxieanum*, *R. macabeanum*, *R. floribundum*, *R. rex* ssp. *fictolacteum*, *R. floribundum*, *R. bureavii*, *R. arboreum* ssp. *zeylanicum* and *R. rex* ssp. *rex*; plus *R. neriflorum* pictured here.

---

## Cross #1

---



Fig. 2. Cross #1. Parent species: *R. degronianum* ssp. *yakushmanum*, *R. rex*, *R. bureavii*, and *R. pseudochrysanthum*. The dark slightly blueish green is probably from *R. degronianum* ssp. *yakushmanum* and *R. rex*. The flower color was predictable because all the species have various pink hues.

---

## Cross #2

---



Fig. 3. Cross #2. Parent species: *R. degronianum* ssp. *yakushmanum*, *R. bureavii*, *R. arboreum* ssp. *zeylanicum* and *R. rex*. The apple-green leaves are a combination of other hybrids used in this cross. The glossy leaves comes from the combination of *R. degronianum* ssp. *yakushmanum* and *R. bureavii*. The flowers come from a parentage of heavy yellow hybrids.





### Cross #3



**Fig. 4.** Cross #3. 'Cherries and Merlot'. Parent species: *R. degonianum* ssp. *yakushmanum*, *R. pachysanthum*, *R. arboreum* ssp. *zeylanicum* and *R. neriflorum*. The purple underside of the leaves comes from *R. neriflorum*. The red flowers are from *R. arboreum* ssp. *zeylanicum* and *R. neriflorum*. Newly registered name. See page 171.

### Cross #4



**Fig. 5.** Cross #4. Two hybrids (c. 1922 and 1930) were used whose parent species are not fully known. The species origin of the colorful new growth cannot therefore be determined.

## Register of Plant Names - Newly Registered



'Cheryl's Choice'. Description on page 172. Photo by John and Donna Delano.



'Golden Rhapsody'. Description on page 172. Photo by Rhein Study Group.



'Hendrik's Kanarie'. Description on page 174. Photo by Hendrik van Oost.

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**Errata:** JARS 66(2): P. 75-76, the correct spelling is 'Orange Ruffy'; P 76: the hybrid name 'Marshall Stilwell' should be in single quotes, as shown here; P. 78: photo captions should read *R. kendrickii*; on; P. 97: correct personal names are Ernest Wilson, Peter Tigerstedt, and Isaac Bayley Balfour; P. 98, *R. strugillosum* should be *R. strigillosum*; and on P. 117: *R. saxiragoides* should be *R. saxifragoides*.



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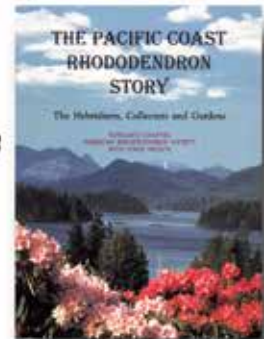
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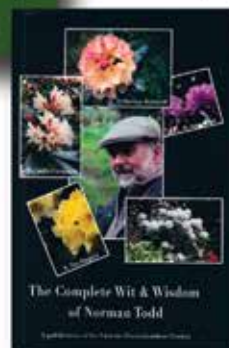
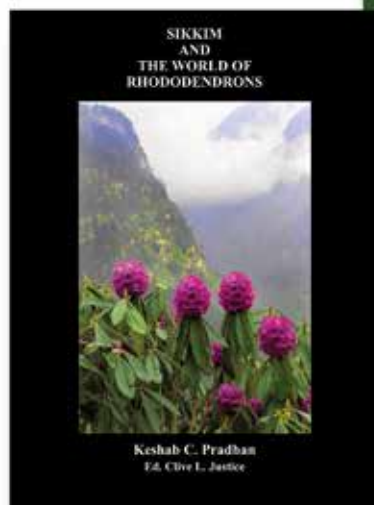
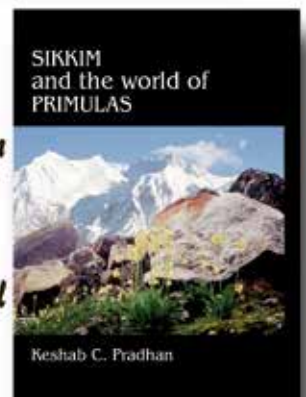
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