JOURNAL

# American Rhododendron Society

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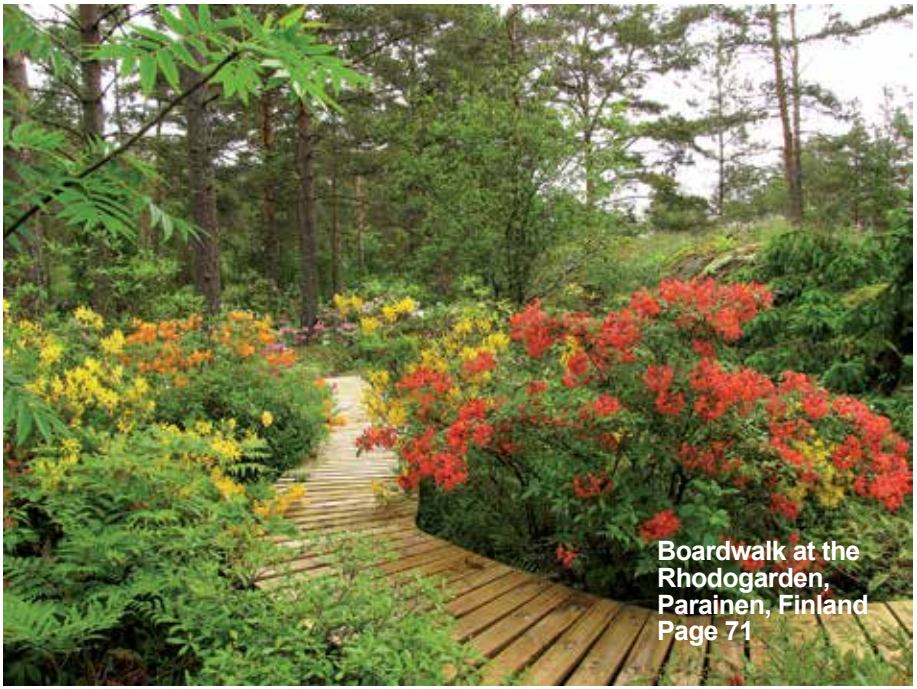

Boardwalk at the Rhodogarden, Parainen, Finland
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# American Rhododendron Society
# A GUIDE TO THE SOCIETY



## ARS Districts & Chapters

**District Director End of Term**
**2017:** District 3, District 6, District 11, District 12
**2018:** District 4, District 5, District 8, District 9
**2019:** District 1, District 2, District 7, District 10

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**Bylaws & Policies:** Gordon Wylie & Bud Gehnrich
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**Digital Publications:** Bob Weissman
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## Society's Purpose

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

## Membership Benefits

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

## To Join the Society

Membership categories:
(January 1 – December 31)

| | |
|---|---|
| Student (include proof if over 18) | $10.00 |
| Regular | $40.00 |
| 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 for chapter contact info) or by sending a check or money order directly to the Office Administrator 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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## Features




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## Publications



## Cover Photo

Boardwalk at the Rhodogarde, Parainen, Finland. Photo by Kristian Theqvist.

## ARS Digital Resources

| |
|---|
| **Website**: www.rhododendron.org |
| **Office**: www.arsoffice.org |
| ***JARS* online:** www.arsoffice.org/protect/login.asp |
| ***JARS* back issues**: http://scholar.lib.vt.edu/ejournals/JARS [to Vol. 59, 2005] |
| **Archives**: www.lib.virginia.edu/small |
| **ARSStore**: www.ARSStore.org |
| **Blog**: www.rhododendron.org/blog/default.asp |
| **Plant Name Registration:** www.rhododendron.org/plantregistry.htm |
| **Rhododendron & Azalea News:** www.rhododendron.org/news/newsindex.htm |

# From the President

Bob MacIntyre
Bandon, Oregon

As I try to write this last of my President's Messages, I'm trying to look back to when we started this journey about three years ago. There are now many new people in many new positions. So much has happened, so much has been rebuilt in our organization!, with the result that the ARS has evolved into a stronger and more flexible functional society. All of this is due to a number of deeply involved and very talented volunteers. I can't say enough about the great work of the members of the Transition Committee: Ann Mangels, Chairperson Ken Webb, Linda Derkach, Bruce Feller and David Banks. This group has worked so well together and we could not have asked for more. Thank you! I also want to thank all those members on the Executive Committee for their time, efforts and solid support, as well as the entire Board of Directors and Committee members for their commitments to the ARS. I especially want to thank the Co-chairs of the Bylaws and Policy Committee, Gordon Wylie and Bud Gehnrich, for the tremendous amount of time and effort they expended to review, renew and rewrite our Policies and Procedures. They have done an outstanding job.

Thanks to each of you for your support and encouragement these past three years.

Concerning the Bylaws and Policies of the Board, all members of the Board of Directors and Executive Committee need to read our revised policies and procedures and become familiar with them, as these documents are the governing rules and regulations of our organization.

I would also like to thank our past Executive Director Laura Grant for her help in assuring a smooth transition for our new Office Administrator, Katherine Sterner, who is doing an outstanding job.

Finally, it has been my honor and privilege to serve as President of the ARS for the past three years. Now my journey has come to an end and it is time to pass the gavel to Ann Mangels. Happy Gardening!

# From the Editor

Glen Jamieson
Parksville, BC
Canada

This winter has been a reversal of the weather in previous years for many of us, with prolonged relatively cold (for us!) weather in the Pacific northwest, and I understand a relatively mild winter in much of eastern North America. For much of the winter, the jet stream has largely passed through northern California instead of central British Columbia, which has given southern areas much needed rain but has pulled Arctic air further south in the more northern areas. The jet stream then looped north in central North America, which pulled north warmer southern air into the continent's more eastern areas. The most interesting thing to me is how relatively stable this weather pattern has been, as it has largely persisted from early December to mid-March. We are actually experiencing snow today (March 9) on Vancouver Island, with recent temperatures about 4-5° C (8-10° F) below the historic average!

While I really appreciate the continued flow of articles and notes from ARS members for JARS, there is one subject area that I am desperately seeking material on. JARS has many articles and descriptions of hybrid rhododendron cultivars, but relatively little material on the desirable garden attributes and culture requirements of rhododendron species. I would very much like to encourage rhododendron species cultivation, and so am looking for relatively short, i.e., one to two page notes including images, on specific rhododendron species that ARS members feel should be more widely propagated. I appreciate that some species will not have suitable culture requirements for all gardens, as the alpine species will do better in cooler climates while the Maddenias prefer warmer conditions, but these attributes can be stated and desirable habitat characteristics, e.g., well-drained soil, high organic content soil, etc., specified. I would like to publish two to three notes on different species in each JARS on-line issue in particular, so I encourage members to send me information on species that do well for them. Thanks.

# In Search of the Elusive Rhododendron Grove: A Botanical Trek in the Himalayas of Sikkim

Randy Sharp
Vancouver, BC, Canada

All photos by the author unless otherwise noted.

## Introduction

Ever since traveling around the world in 80 days with friends in 1979, I had wanted to return to the Himalayas to find "Shangri-La," and to re-experience the rhododendron forest. A distant memory from 1979 while trekking in Nepal, my friend Jake and I discovered a grove of twisted trees resembling our native arbutus (*Arbutus menziesii)*. Tall gnarly trunks had supported a high canopy of brilliant red blossoms. Below, the forest floor was carpeted with fragrant white daphne. Clive Justice (Fig. 1), a long-time member of the Vancouver ARS Chapter, speculated that we might have seen *Rhododendron arboreum*, and the paper daphne, *Daphne bholua.*

Fig. 1a. Clive Justice and Randy Sharp in Vancouver, BC, Canada, in 2016, with *R. thomsonii* in background.

**Background**

Clive Justice also told me stories about the great Scottish plant hunter, J.D. Hooker. Under extreme conditions, Hooker collected wooly *Lactuceae,* gentians, chrysanthemums, saxifrages and miniature rhododendrons at an elevation 18,000 ft (5486 m) in northern Sikkim. He described *Rhododendron nivale* in *Life and Letters of Sir Joseph Dalton Hooker* (Huxley, 1918) as "the loftiest of all shrubs (in altitude)… branches are densely interwoven, very harsh and woody…eminently typical of the arid stern climate it inhabits. The latest to bloom and earliest to mature its seeds, by far the smallest in foliage, and proportionately largest in flower…the most odoriferous… (produced by) the most excessive climate, a scorching sun by day and the keenest frost at night…For eight months of the year it is buried under many feet of snow…(the crimson-purple) flower of this little mountaineer will remain open through days of fog and sleet…attracting bumble-bees as well as the "Blues" and "Fritillaries" species of butter flies" (Hooker, J.D., 1949).

The trials and travels of the plant hunters and collectors were not easy. Hooker continues in his letters to colleagues back at Kew; "In the magical light of a young moon, everything was bathed in beauty and imaginative suggestion, but all pleasure was lost in the headache and giddiness and bodily lassitude brought on by exertion in that thin air [acute mountain sickness]. At this elevation, a few steps under any circumstances is fatiguing, and the glare of the new fallen snow in so rarefied, an atmosphere gives soreness at once to unprotected eyes…(no sunglasses) others hung

Fig. 1b. Clive Justice in 2016 in Vancouver, BC with *R. thomsonii*.

Yaks' tails over their eyes…I have not lost or broken a single instrument during my journey, though I have had 8 thermometers in daily use, 2 barometers, 2 chronometers, 3 compasses, a sextant, an artificial horizon (and) a vasculum full of plants…" (www.new.dli.ernet.in/handle/2015/271275)

The great plant hunters of the Himalayas faced far bigger challenges than the earlier naturalists such as Archibald Menzies, who surveyed the coastal areas of British Columbia in the relative comfort of Her Majesties' ship. Sir Joseph Dalton Hooker, 1817-1911, was also trained both as a naturalist and surgeon in Scotland. He was the first westerner to enter Sikkim, a remote kingdom sandwiched between Nepal, Tibet, India and Bhutan in the eastern Himalayas. The original inhabitants of Sikkim were the Bhoteas and Lepchas, joined later by the Nepalese and Tibetans who immigrated over the mountains to avoid persecution and to find greener pastures. These hardy mountain people of Sikkim live simple lives as farmers and serving as hosts, guides and porters, originally for the plant hunters, and now, for a new generation of adventure seekers.

Clive and members of the American Rhododendron Society first traveled to Sikkim in 1974, during the dying days of the Kingdom of Sikkim. Palden Thondup Namgyal, the last Chogyal (shogun) of the Kingdom of Sikkim, invited Clive's botanical entourage to a lavish dinner and drinks at the royal palace in Gangtok. A year later, after an uprising of the people and a state-wide referendum held in 1975, Sikkim became a state of India and the monarchy was abolished.

Keshab C. Pradhan, author of several books including Th*e Rhododendrons of the Himalayas and Sikkim* (2010), and his associate, P.K. Basnett, Chief Forester, Sikkim, were retained as guides for the 1974 botanical expedition. Leaving Gangtok in a convoy of vintage WW II Jeeps (Fig. 2), the group (Fig. 3) drove to remote villages in the high alpine valleys of the Teesta River watershed near the Tibetan border. Yumthang, the "valley of flowers," is a virtual paradise, carpeted in June with tiny Himalayan flowers including primroses, cinquefoils, louseworts and cobra-lilies. Situated at an altitude of 3564 m (11,693 ft), the Yumthang valley is now the location of the Singba Rhododendron Sanctuary opened in 1984, featuring 24 species of indigenous rhododendron species.

Clive's expedition stayed at Lachung, a former Swedish Missionary station located at an elevation of 2900 m (9600 ft) where the Lachen and Lachung Rivers meet. The Scottish explorer, Joseph Dalton Hooker, described Lachung as the "most picturesque village of Sikkim" in his Himalayan journal. Hooker spent four years mapping and documenting the incredible biodiversity and geology of the Himalayas (see Fig. 7a), as well as collecting its unusual flora and commenting on the mountain inhabitants.

Two of J. D. Hooker's inspirations were the Scottish botanists Archibald Menzies and David Douglas who explored the West Coast collecting the indigenous pink and white rhododendrons. Hooker's greatest achievement, however, was the discovery of 24 new brightly coloured species in pure red, scarlet, crimson, purple, white and yellow.

Fig. 2. 1974 DarjeelingTrek-Jeeps (1940s vintage Land Rovers) at Sandakpu (West Bengal-Nepal frontier). Photo by Clive Justice.

Fig. 3. 1974 Sikkim Trek Camp followers. Subedi (left), now Minister of Env. & Forests, and Dr. Namgyal (right), now an eminent physician, with *R. falconerii.* Photo by Clive Justice.

Many of these Himalayan rhododendrons are parents of the hardy hybrid varieties found in our western gardens. Rhododendron mania swept Britain between 1851 and 1871, and Hooker became the second director of the Royal Botanical Garden at Kew.

Clive returned to Sikkim in 1991, at the invitation of K.C. Pradhan, now the Chief Secretary to the governemt, and P.K. Basnett, Chief Conservator of Forests for the state government. Clive had recently retired from his practice of landscape architecture in Vancouver, and joined the Canadian Executive Services Overseas. CESO recruited retired and semi-retired professional and business people as volunteers to assist government agencies and businesses in under-developed countries.

Clive prepared *An Assessment of Visitor Facilities in Sikkim*. The report recommended improvements to parks, viewpoints, historic sites, hotels and facilities for ecotourism. One of Clive's recommendations was to encourage each and every visitor to Sikkim to plant a rhododendron or a tree. He toured many of the conservation reserves, rhododendron sanctuaries and wildlife refuges that today cover nearly 31 per cent of the total land area of Sikkim. (http://www.sikkimforest.
gov.in/Wildlife.htm)

In 2000, Clive visited Sikkim again with several members of the 1974 American Rhododendron Society botanical tour. The tour was organized as well by Keshab C. Pradhan and his son Sailesh Pradhan, who formed Sikkim Adventure Botanical Tours and Treks at 6th Mile outside of Gangtok. The group revisited several rhododendron protected areas including the Pangolakha Wildlife Sanctuary on the border of Bhutan. Clive was honored for his conservation work by the government of Sikkim at the designated "Clive's Point," a popular destination and panorama viewpoint overlooking spectacular rhododendron forests and distant views of Himalayan mountain ranges.

How sustainable is ecotourism in rural India? Recognized internationally as a "hotspot of bio-diversity," Sikkim's forestry department has set aside 43% of the forests as an interconnected Protected Area Network (Pradhan, 2010). The department has also established programs to create awareness of the natural flora and to facilitate wildlife migration. For every tree cut down anywhere in the state, ten trees have to be planted.

The entire State of Sikkim produces only organic fruit and vegetables, as it has for millennia. Cow manure, ashes, leaves and food compost are plowed back into the fields; nothing on the farm is wasted. The agricultural terraces follow the contours of the steep valleys to conserve moisture and soil. Flood irrigation fills up one terrace and then flows in grass-lined channels down to the next terrace. Footpaths separate the fields and follow the ridgelines up to hillside villages. Sikkim is halfway around the world; however, there is a lot that we can learn by immersing ourselves in the local culture and sharing stories.

**The Adventure**

After months of research and booking online with local travel agencies in India, on April 3, 2015, my wife Carol and I flew to New Delhi by way of Frankfurt. We

Fig. 4. Cherrapunji waterfalls.

Fig. 5. Cherrapunji root bridge, with the author and Carol Smith.

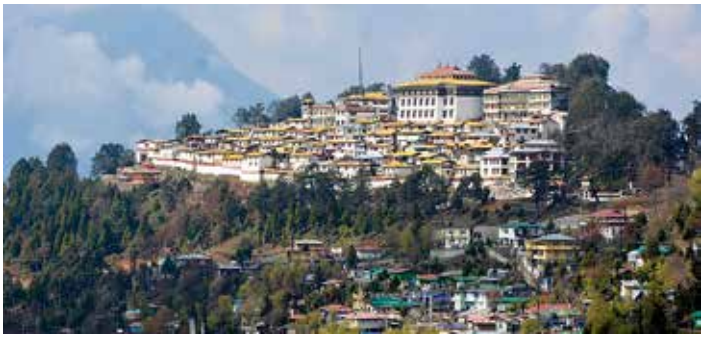

Fig. 6. Tawang monastery.

connected on a local flight to Bagdogra, a former air force base, where we had arranged for a driver to pick us up in a Toyota Innova minivan.

I had this brilliant idea to go to the wettest place on earth, Cherrapunji, in the state of Meghalaya in NE India. Were we crazy? Most vacationers from Vancouver want to dry out in April after a long winter by visiting Palm Springs, Mexico or Hawaii! Monsoons sweep across the lowland plains of Bangladesh and literally drop a wall of water on Cherrapunji complete with spectacular wild lightning displays. Massive waterfalls (Fig. 4) spill over the 1800 m (6000 ft) high escarpment into deep canyons inhabited by former pigmy-like hunters. The local villagers are friendly now and offer tours down deep into the tropical jungle to see Cherrapunji's unusual root bridges (Fig. 5), braided from the air roots of massive fig trees, *Ficus elastica*.


Fig. 7a. Kangchanjunga portion of Hooker's 1849 Sikkim Map.

After getting soaked from the pre-monsoon thunderstorms, Carol and I left Meghalaya and drove to Tawang, elevation 3048 m (10,000 ft), a small district in Arunachal Pradesh near the border of Tibet, home of the second largest Buddhist monastery (Fig. 6) in the world (next to Llasha). After driving three days there, and three days back over likely the worst road in India, and after sleeping in unheated "hotel" rooms with no hot water, we were happy to return to civilization. We passed the tea plantations of Assam en route to the grasslands of West Bengal. At Jaldharpara National Park, we rode elephants in search of the one-horned rhinoceros (we saw many) and the Bengal tiger (they were elusive).

The next day, we arrived in sunny, peaceful Yuksom (Fig. 7b), the end of the road in West Sikkim, to acclimatize for our trek to Kanchenjunga National Park. We were treated like royalty at the Red Palace, a hand crafted timber "eco-lodge" overlooking Buddhist temples and terraced farms that cascade down into deeply incised valleys. Yuksom, the ancient capital of Sikkim, is now a rustic town for eco-tourists. In 1642,

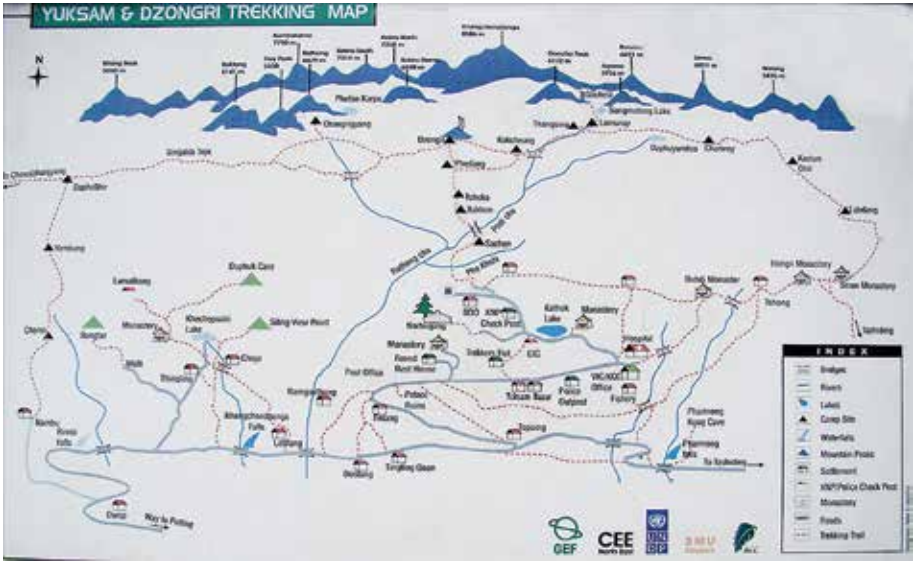


Fig. 7b. Today's Yuksom Goecha Trek map.

Fig. 8. The author with porters and their horses.

Fig. 9. Rathong River valley with terraced slopes.

the coronation of the first Chogyal of Sikkim was officiated by the three venerated Lamas (Singh and Benanav, 2015). Some *Cupressus* seeds were brought from the Province of Kham in Tibet by one of the learned Lamas who crowned the first King, and were sown in 1642 during the coronation. One is still alive and is now a massive tree!

Mingma Tshering Sherpa organized permits and logistics for our trek from his office of "Mountain Tours, Treks and Travels." Two porters, a guide, a cook, a wrangler and five pack horses (Fig. 8) carried fresh food for us, cooking utensils, tea pots, our heavy packs, sleeping bags, tents, a dinner table, and a decorative red portable pop-up toilet and changing tent fit for a queen.

Leaving Yuksom, elevation 1780 m (5840 ft), we started our hike through terraced fields of barley and cardamom (Fig. 9). Cardamom is Sikkim's number one export crop, popular in South Asian dishes, West Coast fusion, and in cardamom cinnamon rolls on

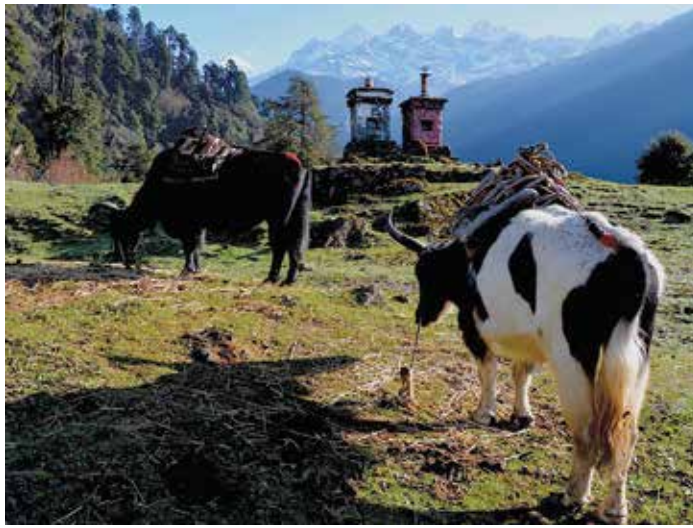

Fig. 10. Dzo at Tsoka with Mt Pandim.

Fig. 11. The trail approaching Bahkim.

Main Street in Vancouver. On the first day, we climbed 1000 m (3280 ft) vertical on an ancient Tibetan highway, originally built for convoys of yaks. These days, the large big horned "dzo" (Fig. 10), pronounced "zoo," a cross between the thick hairy yak and the water buffalo, dominate the trails, so be prepared to step aside quickly!

Nordic hiking poles are essential for extra propulsion in climbing, as well as for stability descending the slippery steps, worn smooth by centuries of use. This is the ultimate "step-master," pure cardio, especially for a person with Parkinson's like myself who needs sustained exercise everyday. The trail is characterized by oversize 60 x 60 cm (2 x 2 ft) and larger "yak" steps, corduroy boardwalks, slippery clay sections, and stepping-stone slabs over wet areas and streams.

After crossing a massive rock landslide at the entrance to the steep Rathong river valley, Carol and I entered a dark sub-tropical, incredibly diverse, forest paradise. We saw rhododendrons, massive *Mahonia, Arisaema* (jack-in-the-pulpits, or cobra lilies), philodendrons, fig trees, ferns, stinging nettles, and *Viburnum* with giant stands of bamboo, maple, oak and cinnamon trees. We crossed a narrow one-track cable suspension high above the Rathong River, and then climbed steeply up through a broad forest with a high canopy of oak trees. I hit the wall (Fig. 11)!

Approaching Tshoka, we regained strength as we entered an amazing "arboretum" of hemlock, fir and rhododendrons in brilliant red (Fig. 12), fuchsia, creamy pink and yellow cream blossoms (Fig. 13). We climbed up through immense moss-covered boulders with a high canopy of *R. arboreum* (Fig. 14), filled with red trusses towering 25 m (80 ft) above, with highlights of white magnolia. Spectacular!

Tshoka was our first campsite on the trek (Fig. 15), the site of a former outpost and village for Tibetan refugees. Our Sherpa hosts prepared a feast for us: chai tea followed by momos (Tibetan dumplings), noodle soup with fresh vegetables, and paneer

Fig. 12. *R. arboreum* at Tshoka.

Fig. 13. *R. falconeri* at Bahkim.

Fig. 14. *R. arboreum* and the distant Singalila Ridge.

makahani (Indian cheese in a creamy garlic-tomato-ginger sauce), as well as fresh fruit, rice pudding and more chai, served on a dinner table complete with white tablecloth.

We woke up the next morning (Fig. 15) to a deep blue sky with towering views of Mt. Pandim and the Singalila Ridge to the west on the border of Nepal. At 10,100 ft (3078 m) we were surrounded by a forest of *R. arboreum*, *R. barbatum, R. grande, R. falconeri* and *R. wightii* topped by gaunt, but spectacular *Abies spectabilis* (now *A. densa*),

Fig. 15. Tibetan flags early in the morning.

the Himalayan silver fir. At 10,500 feet (3200 m) we entered a band of *R. hodgsonii* with its smooth pink and peeling bark, and flowers varying from rose to reddish-purple. Interspersed with the larger trees we saw *R. campylocarpum, R. fulgens* and *R. thomsonii* (Hacking and Muller 1993) (Figs. 16, 17). *R. hodgsonii*, named by J.D. Hooker after his fellow naturalist, Brian Houghton Hodgson, was a thick entanglement of twisted branches, formed by constant wind and heavy snowfalls.

As Carol and I approached Phedang, we encountered thick fog, fresh snow and a slippery eroded trail, overused by the dzo convoy trains. The next morning we awoke to a flooded meadow outside our tent that looked like curry soup, churned up by dozens of dzo and packhorses. The snow turned to sleet. I read *Chasing the Monsoon*, by Alexander Frater, subtitled "A Modern Pilgrimage through India," which included stories about Cherrapunji, the wettest place on earth. How appropriate! After all day in a damp tent, Carol asked "When will this end?"

After passing through Dzongri and camping in a meadow, our guide Pema woke us up at 4 AM to hike up to see the sunrise on Kanchenjunga, the third highest peak in the world at 8586 m (28,169 ft). The clear dark sky with no moon presented a dazzling display of stars, constellations of the Southern Hemisphere and the Milky Way. I ate a Mars bar and put on my headlamp. We clamoured up the steep frozen trail, sometimes on hands and feet to a panoramic viewpoint. As we approached Dzongri Ridge, Kanchenjunga and its satellite peaks started to glow pink in the pre-dawn light followed by the first rays of the golden sun. Eventually, the whole massif was illuminated (Fig.

Fig. 16. Carol hiking by *R. fulgens*.

18) as well as layers of Himalayan mountain ranges in all directions. As the world unfolded around us, we discovered an alpine landscape (Fig. 19) of low spreading *Rhododendron anthopogon*, *R. setosum*, and *R. lepidotum* as well as impenetrable thickets of *R. campanulatum* (Hacking and Muller 1993).

Back at camp, the rest of our crew was packing up our soggy tents for the long two-day return trip down the mountain. It was a knee crusher, stepping down what seemed like 10,000 steps. At the end, we were happy to be back in Yuksom to relax in the relative comfort of the Red Palace.

Based on the frequency of pre-monsoon storms, we decided to cancel our trek

Fig. 17. Tshoka to Phedang, *R. hodgsonii* (pink, left) and *R. thomsonii* (red, right).

to the border of Nepal where we originally hoped to see Mt. Everest. It was a very fortuitous decision because on April 25th at noon, disaster struck the Himalayas. A 7.8 magnitude earthquake centered near Kathmandu in Nepal killed over 3,000 persons when entire villages were buried by landslides and an avalanche decimated the base camp at Everest (http://www.bbc.com/news/world- asia-32475030). Sikkim lies along the same unstable fault zone as Nepal. Luckily, Carol and I had just returned from an overnight hike in the Barsey (also known as Varsey) Rhododendron Sanctuary in southwestern Sikkim (Figs. 20-23). When the earthquake hit, we were fortunate to be standing on solid rock overlooking the sacred Khechuperi Lake. The quake lasted for

Fig. 18. Kanchenjunga at dawn near Dzongri.

Fig. 19. Rhododendrons near Dzongri.

Fig. 20. The Barsey Rhododendron Sanctuary occupies 104 km$^2$ (40 mi$^2$) in the Singalila Range in western Sikkim.

15 seconds, but it seemed like an eternity. Moments before there were birds singing, tourists laughing and hens clucking, and then everything went totally silent. The only sound was the distant rumble of a rockslide high up in the mountains.

Luckily, nobody locally was injured, and landslides did not block any of the roads out of Sikkim. We escaped the next day to Darjeeling, with return stopovers in Delhi and London. We were very happy to return to the comforts of home in Vancouver. Leaving the Himalayas, Carol exclaimed in exasperation "That was too much adventure! For the next trip, we will go on a real holiday, and I will do the booking." Should we go to someplace dry, the desert? Palm Springs? I hear there is great rock climbing at Joshua Tree National Park!

Fig. 21. *R. arboreum* at the Barsey Rhododendron Sanctuary.

Fig. 22. *R. falconeri* at the Barsey Rhododendron Sanctuary.

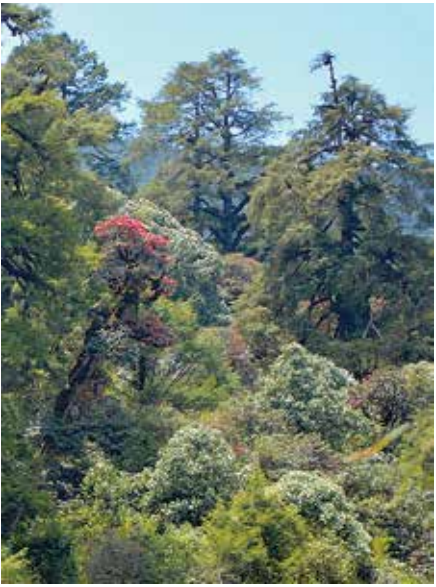

Fig. 23. Rhododendrons at the Barsey Rhododendron Sanctuary.

**References**


Hacking, S.M. and C. Muller, *1993.* Exploring rhododendron sanctuaries in Sikkim. *J. American Rhododendron Soc.* 47(4): http://scholar.lib.vt.edu/ejournals/JARS/ v47n4/v47n4-hacking.htm.

Pradhan, K.C. 2010. *The Rhododendrons of Sikkim*. Sikkim Adventure Botanical Tours and Treks, Sikkim, India: 144 pp.

Singh, S. and M. Benanav. 2015, *Lonely Planet India, 16th ed.*


*Randy Sharp is a Vancouver, BC, landscape architect, and this article modifies two articles published by him in "Sitelines June 2016," an online publication on Landscape Architecture in British Columbia. (http://www.sitelines.org/sites/default/files/sitelines_issues/BCSLA_June2016Web.pdf). He had recently been diagnosed with Parkinson's, a neurological disorder that effects movement. Thus, he felt an urgency to complete this adventure while still capable to do so. As well, after 35 years of practicing landscape architecture, he needed a holiday. The trip arose because, curious about Clive Justice's tartan regalia, his obsession with rhododendrons, and trekking in the Himalayas, Randy confronted him with many questions at a landscape architect's holiday reception. Clive was delighted when Randy told him that he and his wife Carol were planning a trip to the Himalayas in the spring of 2015. Clive then sent Randy his annotated map documenting the route of his travels in Sikkim, and where to find the best rhododendron forests.*

**[Editor's note:** This article, modified from http://www.sitelines.org/sites/default/files/sitelines_issues/sitelines2016_CLJ.pdf, about travels in India was written by a non-ARS member, and I include it in this issue to provide a perspective as to how members of the general public experience some of the plant-hunting trips ARS members frequently engage in. By coincidence, I, along with 17 others on a plant-hunting trip led by Steve Hootman, travelled along much if the same route in Sikkim as described here about three weeks later, with our plant observations described in: Jamieson, G.S. 2016. Exploring Sikkim: Rhodos and Plants of the Day. *J. American Rhododendron Soc.* 2: 62-73.**]**

# Rhododendrons and Drought: Some Things You Can Do

Linda Derkach
Qualicum Beach, BC,
Canada

With 60 collective years of experience gardening on Vancouver Island, I along with ARS members Al Murray and Terry Richmond offer home-grown and time-tested advice on how to keep rhododendrons alive and conserve water in a changing world.

**In Your Established Garden**

If possible, remove larger nearby trees that are demanding too much water, such as the Western red cedar (*Thuja plicata*), aspens and willows.

- Plant more deciduous trees such as maples and magnolias that will provide shade and cooler temperatures in the summer and then drop their leaves in the fall for use as a mulch, thereby allowing in more sunlight during winter.
- Create a good growing medium for your rhododendrons by adding compost, bark fines, chipped bark and branches, loam and/or manure.
- Avoid sandy soil–it drains water away too quickly.

According to Al Murray, mature purple rhododendrons are fairly drought resistant. An example I know of is 'Catawbiense Boursault', a large, mature shrub that self-mulches and shades its own roots. It rarely if ever receives any supplemental water—winter or summer—drought or not.

**Mulch - Mulch - Mulch**

- Allow your trees and shrubs to self-mulch; let the leaves fall to provide winter protection and prevent loss of moisture from the soil; don't be too tidy, and this is good for the worms and birds too!
- Supplement self-mulching with shredded and chipped branches, bark and sea soil.
- 5" to 6" (13-15 cm) of mulch is great but keep mulch away from the stem or trunk.

'Catawbiense Boursault'.

'Linda'.

'Linda' is a *R. williamsianum* hybrid, known for tolerating full sun. The specimen shown here has thrived in a large pot in lots of sun for many years and produces more than 200 blooms in late April, making the foliage difficult to see!

'April Glow' is another sun tolerant *R. williamsianum* cross with great foliage.

**Watering**

- Hand watering is best for a small garden; your plants will get just the water they need and regular watering will ensure they are being continually monitored.

'April Glow'.

'Conroy'.

- To prevent loss of water through evaporation, watering in the early morning is best when plants need it, or late in the day when evening cooling has begun.

**Planting**

We know from the natural habitats of rhododendron species that rhododendrons need moist, well-drained soil. They don't like to dry out and they can't bear to be in water-logged soil if we want them to survive.

For some time, we have been told to plant our rhododendrons high but now Alan

says, "I don't even dig holes anymore. I place the plant on the ground and pile the soil mixture around and mound up." First, be sure that you have teased the fibrous roots apart or even slit the bottom of the root ball so that the roots will have a chance to spread out and flourish. Plants in one gallon (four litre) pots and smaller should ideally be planted in the fall so they can begin to establish more roots over the winter and early spring. It is very risky to plant rhododendrons with relatively small root balls in hot weather, even if they are provided with lots of water.

**Choosing the Best Site**

Not all rhododendrons have the same habitat needs, so do some research on your plants to determine where the best sites to plant a particular rhodo may be. For instance, 'Conroy' is quite susceptible to mildew so give it good air circulation in dappled shade. 'Ginny Gee' with its tiny leaves can take a lot of sun, but 'Cinnamon Bear' will burn in full sun. The *R. williamsianum* crosses and most of the East Coast American hybrids also tend to grow well in sunny locations.

**Pruning**

Generally, hard pruning of a whole shrub is not necessary or desirable. However, if you need to do some hard pruning, the best time in our coastal BC climate with relatively mild winters is in January. You can cut each branch down to one or two nodes above the ground, but to maximise growth, only do about one third of the plant at once, as this will leave sufficient leaves for continued plant growth and some flowering on the rest of the plant. The reason you need to do this so early in the year is that it will take the plant some time to initiate new buds and grow to produce sufficiently strong new foliage to withstand the cold winter weather of next year. Older branches have been relatively inactive and "twiddling their thumbs" perhaps for ten to twenty years, so it takes a little time for them to "wake up" and to develop buds again.

Hard pruning may be needed if your plant has become tall and leggy with blossoms so high you can't see them anymore. Pruning too heavily in the early spring will result in no blooms for the current year.

An alternative is to cut one or two branches back a little, and if you do so immediately after their blooming, some new growth should still occur in the same season

**Fertilizing**

There are many theories on when and if to fertilize rhododendrons. Some folks never fertilize. Some use only organic fertilizer while others use anything off the shelf. If fertilizing, fertilise primarily around the drip line (outer edge) of the plant.

Alan's routine for fertilizing on Vancouver Island is to apply epsom salts (it is a rich source of magnesium, which plants need to remain healthy, and it also contributes sulfur, which plants also require) on March 1 and an organic fertilizer on March 16,

and he now uses much less fertilizer than he once used. A small plant may only need 1-2 tablespoons (14-30 cc) of epsom salts, while a larger plant could take a handful.

Terry likes to use a low nitrogen fertilizer or an organic mix for slow growth. He fertilizes at the end of March with an organic fertilizer consisting of ten parts organic fertilizer, one part epsom salts, one part dolomite lime and one part worm castings mixed in a wheelbarrow. Ensure that your fertilizer mix has a low nitrogen component of 3-5%. You want thick and lush foliage going in to summer, not weak, fast growth that will be damaged by intense summer sun and harsh winter cold.

**Conclusion**

Not every summer brings a drought, but even a few weeks with no rain in the summer can cause a plant to suffer. Utilizing the advice offered by experienced gardeners can help your rhododendrons thrive and bloom another year.

*Linda Derkach is the current President of the Mount Arrowsmith Chapter and Secretary of the ARS. Terry Richmond is also a member of the Mount Arrowsmith Chapter, while Al Murray is a member of the Cowichan Valley Chapter.*

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# The Great Survivor: *Rhododendron maximum* Varies across Gradients in the Southeastern USA

Alix A. Pfennigwerth and
Jennifer A. Schweitzer
Knoxville, Tennessee

The about 1000 species in the genus *Rhododendron* represent a staggering diversity of plant traits and characteristics. The fact that a substantial amount of this variation can be found within a single *Rhododendron* species is often overlooked, yet the variation within a species can impact how plants respond to other species as well as to changing environmental conditions.

A single plant species' range often spans large gradients in environmental factors such as temperature, precipitation or soil nutrient availability, which can in turn drive variation in traits within that species. For example, plants in productive locations that are warmer, wetter and/or richer in soil nutrients, often have faster growth rates, larger leaf, stem and flower structures, thinner leaves and roots, and are taller, than plants in harsher locations that are colder, drier, and/or more resource-limited. Plant traits have been shown to be correlated to contrasting environments and beneficial in those environments by enabling the plant to maximize its growth and seed production while minimizing stress and damage.

Two main biological mechanisms underlie plant trait variation across environmental gradients: genetic change (change in population gene structure over time) and plasticity (an individual's ability to change traits within their lifetime). Both genetic change and plasticity allow plants to persist in changing environments. Genetic change occurs across generations when genes coding for certain traits are successfully passed on to a plant's offspring, while other genes coding for other traits are not. Across environmental gradients, genetic change may be due to different pressures that allow particular individuals with specific traits to survive particular conditions while those with other traits die, but can also be due to other processes such as genetic drift (founder effects) or gene flow (outcrossing that increases genetic variation). Alternatively, plasticity occurs within a single generation and is characterized by the ability of a single genetic

Fig. 1. *R. maximum* individuals dominate the understory along a forest riparian corridor in North Carolina.

individual to produce multiple trait values, depending on environmental conditions (e.g., to grow more when warmer conditions exist). Plasticity can also be beneficial for individuals experiencing environmental change or fluctuating growing conditions by enabling them to adjust their traits to better tolerate or persist in current conditions.

To understand the extent and patterns of trait variation within a species and how changing conditions impact that species, we conducted field observations along elevational gradients and a common garden trial of *R. maximum* (rosebay rhododendron), a common, evergreen species that dominates forest understories throughout the eastern US (Fig. 1). We sampled ten leaf and stem traits of 90 *R. maximum* individuals along elevational gradients on three mountains, one each in North Carolina, Tennessee and Virginia (matched for soil type, aspect and surrounding vegetation; Fig. 2). Each elevational gradient represents, on average, 580 meters of elevation change and about 2˚C change in mean annual temperature, 20 cm change in annual precipitation, and differences in soil pH and nitrogen fertility. Because these elevational gradients contain variation in multiple environmental variables important to *R. maximum* growth, we expected to see corresponding trait variation along each gradient. Indeed, we found that several traits varied across elevation, but only on certain mountains. For example, stem internode length and shoot length (estimates of growth) were three- and five-fold

Fig. 2. Field researcher Alix Pfennigwerth samples stem traits on a *R. maximum* individual along a mountain elevational gradient in North Carolina.

shorter and leaves about 20% lighter at the highest elevations relative to the lowest elevations, but only on the North Carolina mountain. Additionally, leaves were about 30% and 15% smaller at the highest elevations relative to the lowest elevations on the Virginia and North Carolina mountains, but not on the Tennessee mountain. These results indicate that traits can vary significantly across environmental gradients in *R. maximum*, but that the extent of this variation depends on location.

Next, to evaluate whether trait variation that we observed in natural field populations was due to genetic change, trait plasticity or a combination of the two, we established a common garden trial at the University of Tennessee, Knoxville, TN, containing replicated cuttings from each of the 90 *R. maximum* individuals we sampled in the field (Fig. 3). By transplanting individuals from diverse environments into a single, common location, we effectively removed the variation in growing conditions that

those individuals experienced in nature, and therefore were able to examine the genetic component of trait variation observed in nature. We grew over 500 *R. maximum* cuttings, representing the 90 field-sampled individuals, for sixteen months in a common garden, and then re-sampled leaf and stem traits on new growth to identify the genetic basis for traits. We found that for the majority of traits, the significant effect of elevation or mountain location on trait variation was removed, indicating that strong trait plasticity underlies the trait diversity we observed in the field. These results suggest that trait plasticity may play a key role in the capacity of *R. maximum* and related species to respond to environmental changes, including those projected to occur with future climate change.

Fig. 3. *R. maximum* genetic common garden trials at the University of Tennessee, Knoxville.

The results of this study demonstrate that the diversity of traits and characteristics within the genus *Rhododendron* is distributed not just among species, but also within individual species. We have shown variation in multiple stem and leaf traits in natural populations of *R. maximum,* a dominant understory component in eastern forests, along three elevational gradients in North Carolina, Tennessee, and Virginia. We did not, however, detect consistent variation along elevation at the three locations, indicating that the influence of environmental gradients along elevation is context dependent. Finally, through our common garden trial, we did not detect a significant genetic basis to the variation we observed in the field, indicating that *R. maximum* responds to elevational gradients through plasticity more than genetic change and may continue to respond plastically to future environmental disturbances including climate change.

*Alix Pfenningwerth is presently completing a M.Sc. in Ecology & Evolutionary Biology at the University of Tennessee, Knoxville.*

[**Editor's note**: This is a summary of research that was supported by an ARS grant titled "Linking plants to soils: are novel soils contributing to native *Rhododendron* persistence and spread under environmental change?" Full manuscripts of the research are being submitted to academic journals, and citations and links for the articles once published will be reported in JARS.]

# The Beginning of Vireya Culture in Europe with Special Consideration of James Veitch & Sons Nurseries in Chelsea - Part 2

Martin Monthofer
Bremen, Germany

Following my earlier article on the first introduction of vireyas into Europe (Monthofer 2016), I now discuss how the cultivation of vireyas evolved during the 19th century. At that time, greenhouses were changing from their relatively simple construction of the 18th century to the more modern greenhouses of the 19th and 20th centuries. Brick walls with windows were replaced by supports and glass, with the supporting structure reduced to make way for a greater glass surface. The first modern greenhouses were built with wood, and later replaced with iron that provided better

Fig. 1. Ground beds in an Victorian greenhouse. Picture by Mike Gilmore (2016) from "Winsford Walled Garden."

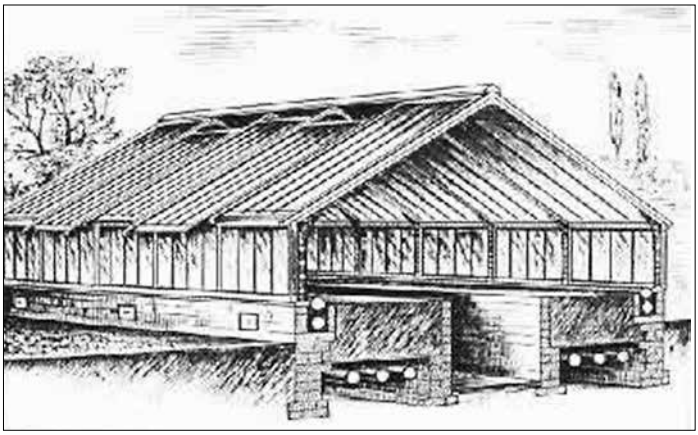

Fig. 2. Groundheating system in a hot-house. Picture by Mike Gilmore (2016) from "Winsford Walled Garden."

support because it bridged larger spans and lasted longer. Thus, greenhouses at the end of the 19th century looked more like the modern greenhouses we know today. These changes and the culture experiences achieved with botanical gardens and nurseries then made way for today's modern horticultural production.

This 19th century of imperialism was also the time of significant botanical culture change. The large greenhouses in botanical gardens and the luxurious greenhouses of the aristocrats were a symbol of European power, and the tropical plants they contained were fascinating to visitors. Their greenhouses were for the demonstration of possession, and their owners set a high value on beauty and esthetics. The first imported plants shown there were planted in ground landscapes (Fig. 1), but their cultural success was limited because little was known then about the culture of many of the plants being grown. The first greenhouses were known as "ovens" because they were very warm with a high humidity, but many of the vireyas being cultured died under these conditions. As the gardeners learned more about vireya culture demands, they found out that these plants needed a humiditiy of about 80% to be successful in cultivation, but at a lower temperature. While they came from the tropics, most were found at higher elevations under more temperate climate conditions.

In response, greenhouse landscaping gave way to plant display and culture on tables. Progression in the development of greenhouse technologies also optimised cultivation techniques. Pipe heating on the north face of the old brick walls gave way for better heaters and pipe heating in the floor (Figs. 2, 3). Initially, heated air was pumped through pipes, but the result was that greenhouse air became too dry. Steam was then used, which was also more efficient because only one boiler (Fig. 4) was needed instead of up to the 14 required with heated air. Finally, floor heating made it possible to

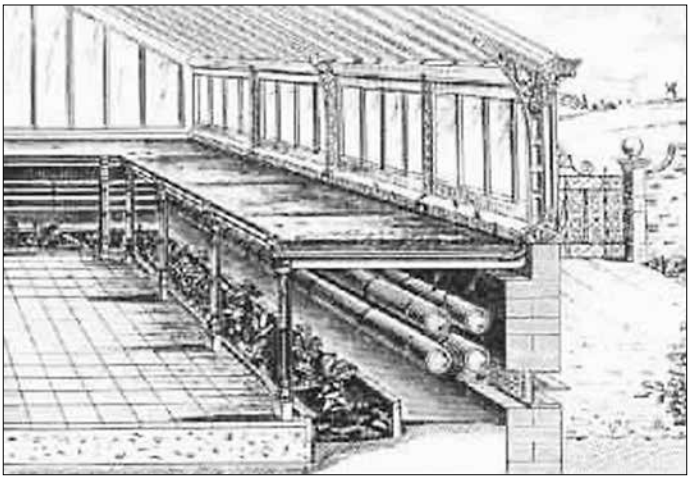

Fig. 3. Heating system under the cultivation table at a wall. Picture by Mike Gilmore (2016) from "Winsford Walled Garden."

make walls out of glass instead of bricks, which optimised culture and resulted in more vigorous, flowering plants.

After the lowering of glass taxes in England in 1848 (previously, glass was taxed as a luxury good), hand-made glass production changed to machine production. Glass became cheaper, and glass production became more profitable and a boom in greenhouse construction resulted. The typical measure of greenhouse glass panes during this time was 1 x 2 m (3.3 x 6.6 ft), and roof ventilation consisted of a flap over the whole roof length. To improve ventilation and air exchange into the greenhouse, flaps were

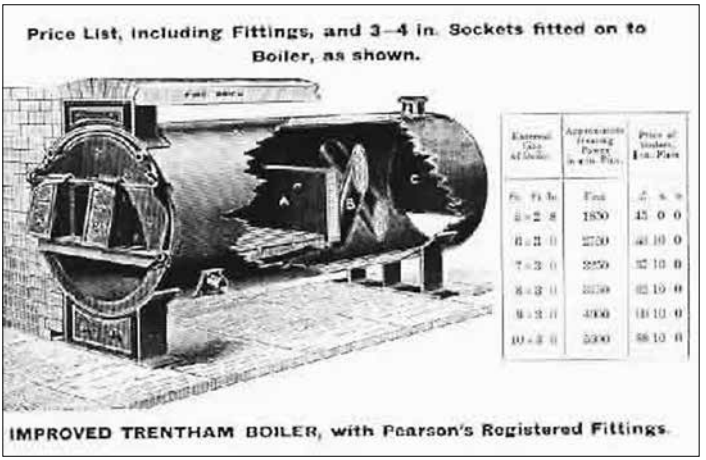


Fig. 4. A Trentham oven. Picture by Mike Gilmore (2016) from "Winsford Walled Garden."

Fig. 5. Greenouse roof shading. Photo by the author.

also built on side walls close to the ground. To shade greenhouses, different methods and materials were used: white oil paint, chalk milk, oily paper, burlap, canvas, reed mats, wooden slats, coco fibre mats, and shading mats out of round or flat plant stalks, not identified, but likely of wood or bamboo (Fig. 5). It was never described which material was used but I would guess mostly wood. It was well known then what to do to optimise vireya culture. To get a better growth and higher flower bud production, day temperature was maintained at 20° C (68° F) and the night temperature was lowered to 15° C (59° F). Different greenhouse climate zones (cold, temperate and warm house) were also developed at this time (Figs. 6, 7 and 8). It was also well known that in addition to sufficient air humidity, the amount of water given to the plants was also important. In the beginning, plants were hand watered with a watering can, and later, a watering cart in which the potted plants were soaked was used. Finally, at the end of the 19th century, plants were watered with irrigation systems.

Rain, river or lake water was used for watering, and at the end of the 19th century a rain-fed irrigation system was developed that was used on hot summer days to cool a greenhouse down about 4° C (7° F) below ambient. Air humidity was raised either by using standing water basins, which collected the water that ran off after watering, or sprinklers.

Fig. 6. The Palm Tree House, Royal Botanical Garden Kew, finished in 1848. Photo by the author.

Prefabricated greenhouse were now being built for the masses, e.g., by Paxton, as earlier, possession of a greenhouse was considered a luxury. The Paxton prefabricated greenhouse was affordable and was like a tent made of wood and glass. The company's slogan was "houses for the million".

**Vireya Culture Practices**

Cultural advice for vireyas provided by the James Veitch & Sons 1890 catalog for "*Rhododendrons. Javanico-Jasminiflorum Group of Hybrids"* stated:

> These require an intermediate temperature, that is to say, a temperature not lower than 10° to 15° C. (50° to 60° F.) in winter, with a moist atmosphere at all seasons.

The lowest temperature in the greenhouse should be 10° C (50° F) for optimal culture, while the maximum temperature should be 21° C (70° F). There was always a recommendation for vireya culture to be in the temperate area of the greenhouse. Vireyas could be grown in the cold and warm areas of a greenhouse, but there was better vigour, growth and flower bud production in the temperate area of the greenhouse, which allowed plants to flower throughout the whole year.

The greenhouse should be shaded between March and September [in the UK], and there was a recommendation to have rolling shading. Ventilation windows were to be closed at 3 PM, and the greenhouse then cooled by sprinkling the plants and paths with water. It was advised that the sun should never shine directly on vireya pots because they don't grow well if their roots are too hot. It was discovered that vireyas needed

Fig. 7. The Temperate Palm House, Royal Botanical Garden Edinburgh, opened to the public in 1858.

plenty of light for growth and flower bud development, so there was only need to shade them when there was a danger of sunburn and too much heat.

It was also recommended to have a constant air humidity of about 80%.If humidity was low, it could be raised by sprinkling paths and brick walls with water. On hot summer days, it might also be necessary to mist the plants early in the morning. Room temperature could be 10° C (18° F) higher in summer, but there was still often a need to cool a greenhouse down.

Watering should be adapted to the season, with less in the winter and more during the growing season. Chalky water, i.e., from limestone areas and thus of higher pH, was not ideal for watering, so gardeners in such areas were advised to use rain water. Watering could be over either the roots only or over the whole plant, and there should be a constant moisture in the substrate. However, a wet substrate is detrimental for the vigour and health of the plant. Watering should be reduced when the new growth begins to harden, and when the weather is cold and cloudy.

**Culture Challenges**

Optimised culture practices help protect plants from pests and diseases. Fungal diseases such as *Exobasidium japonicum*, *E. rhododendri* and *Chrysomyxa rhododendri* may interrupt the metabolism of vireyas and weaken them. If the plants were cultivated

Fig. 8. The Temperate House, Royal Botanical Garden Kew, finished in 1898.

too dry and the humidity is low, thrips (Order *Thysanoptera*) may attack the plants, but they can be controlled by raising the humidity by sprinkling plants with water two or three times a day. Mealybugs (insects in the family *Pseudococcidae*) may also be a problem with low humidity, but they can be controlled with methylated spirits on a brush. Too much heat for too long a time can kill vireyas, as they are temperate climate plants.

*The Garden,* July, 22nd 1899, stated:

> …another point in favour of [vireya] rhododendrons is the fact that they are little, if at all, affected by that bane of the plant grower around London, i.e., the heavy sulphur-laden fogs, which play havoe with so many plants...a good proof is given by their ability to withstand London fogs.

**Culture Media**

Good drainage was considered to be important, and the use of clay pot shards was suggested to improve drainage. Plants grew better, were healthier and showed more vigour when cultivated in smaller pots with a limited amount of substrate. A list of substrates suggested in those days in Britain was:

- rough peat compost with 20% good leaf litter compost or even good well-frozen marshy ground with a small amount of river sand or quartz sand, with little pieces of charcoal and bricks;

– fibrous, strong heath or peat compost with plenty of sand (quartz sand or silversand [sharp sand]);
– sandy loam;
– fine peat mixed with sand;
– sand with fine peat;
– good fibrous peat broken in pieces mixed with plenty of sand and little pieces of charcoal;
– loam and peat;
– 2 parts peat, 1 part loam, and 1 part sand; and
– 4 parts fibrous peat and 1 part fine yellow loam.

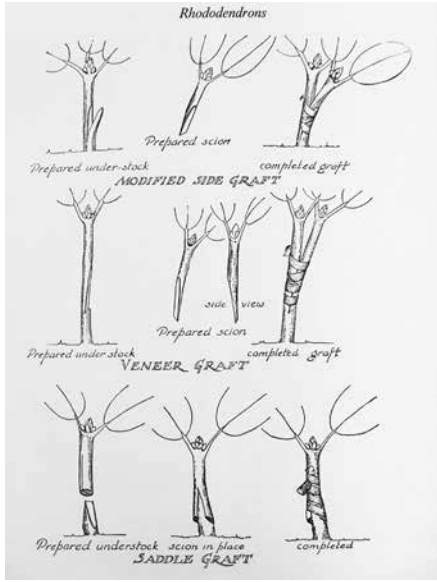


Fig. 9. Rhododendron cutting. Image from Leach (1961).

It is noticeable that there was no listing of recommended fertilizers, and it was only mentioned that vireyas use nutrients provided by the rotting substrate. Periodic repotting in fresh substrate was desired for strong growth and a brilliant flower colour. Aeration of the substrate was improved by the use of broken charcoal.

Repotting was best done before the growing season, mostly in February, but could also be done until the beginning of July. "Overpotting" was strongly discouraged and only one pot size larger than currently being used was recommended, at most five cm (two in) larger in diameter than the old pot was. Pots used needed to have good drainage, such as with pot shards or gravel in the bottom of the pot. During repotting, the culture media should be pressed firmly around the roots, but not too heavily, because then there wouldn't be good aeration. Repotting should be done every two or three years.

Young plants were often planted in prepared ground to strengthen them. This planting was done in mid-March in a 75 cm (2.5 ft) manure box filled up to 30 cm (one foot) with dry leaves, covered by a 20 cm (eight in) layer of rough and sandy heath compost, mixed with well-frozen marshy ground and 20% old leaf litter. The box with ventilation windows was then closed after planting, with the plants watered during mild weather conditions. When the plants started growing and had become established, there is more need for better aeration and shading, so that the temperature didn't rise over 22° C (72° F). Ventilation windows were removed at the end of May or the beginning of June, but shading was left in place until the end of July, after which the plants were exposed to full sunlight.

At the beginnning of September, the young vireyas were potted in small pots with

heath compost and were put in a closed bed, where they could be shaded and watered if necessary. Ventilation began after 14 days, and the plants were brought into the greenhouse in late autumn. Larger plants were potted in larger pots of an appropriate pot size. Plant size, including the size of the root sytem, was used in determining pot size, and because of the slow root growth of larger plants, it was preferable not to increase their pot size rapidly.

For vireyas planted in manure boxes, they will show great new growth but won't produce flower buds, while those in pot culture typically have both flowers and new growth on one plant. It was also mentioned that plants shouldn't be moved from one place to another too frequently, because they needed time to establish at a place.

When young plants are cultivated in a greenhouse for two winters, they should spend the summer months outside, but there, pots may need sun protection and adequate watering. To achieve this, pots were either sunk in sandy beds in full sun and shaded, or unburied pots were protected by coal sacks. Direct sun on the plants from late summer on is required for good growth and flower bud production. The latter can be achieved if cultivated under cool conditions outside, but then there won't be much new growth.

At the beginning of autumn, vireyas shold be moved to a light and dry place in a cold house until the temperature drops to about 5° C (41° F). Vireyas should then be taken into a temperate house, where they will be cultivated at 10° to 15° C (50-59° F) from October to March. They will start growing slowly in the spring in the greenhouse and should be left there until the beginning of June. They should be given more and more aeration and light before they are then taken outside into a protected location. Conditions in the greenhouse should always be between temperate and cold and have always to be monitored by the gardener.

**Vireya Propagation**

There were three well-known propagation methods used historically: seed sowing, rooting cuttings and graftings.

1. **Seed sowing:**

The pots should be prepared before sowing and should have good drainage. The pot should be filled nearly to the top with loose, sandy peat, and then, watered carefully. Sow the seed on the surface of the substrate while the substrate was still moist. Pots should then be placed in a closed propagation centre until germination started, and then be placed in the temperate greenhouse.

*The Gardener's Chronicle* from May 7th, 1910, p. 299, stated:

> …The seeds of the javanese epiphyte, *Rhododendron javanicum,* are incapable of germinating in the dark, but since this is true also for other non epiphytic species the peculiarity is not to be regarded as an adaption to an epiphytic mode of life.

When the seedlings are large enough to handle, they should be transplated to achieve

faster growth. This is often the case after about twelve months. The pots should not get direct sunlight and should be shaded, and seedlings grow faster when cultivated under hothouse conditions when there is a constant moisture in the substrate. The first flower will usually appear after about five years.

**2. Cuttings:**

Propagation from cuttings was and is still the easiest and fastest way for vireya propagation. Cuttings can be taken at every season of the year because vireya rhododendrons are always growing. Although they are normally taken in autumn, rooting is often better in the spring. A half-ripened terminal growth with leaves is a good cutting material.

Only absolutely clean pots should be used with the cuttings. The following media mixtures, softly pressed into the pot, can be used:

– peat-silversand mixture in equal parts.
– washed sand,
– riddled [holey] peat-silver sand mixture.
– coconut fibre [coir], or
– peaty sand with sand only on the surface.

Pot drainage can be to ¼ of the pot with clay potsherds, ½ with rough sandy heath compost mixed with fine riddled heath compost, or ¼ filled with quarzite sand mixed with fine charcoal.

After inserting cuttings into the substrate, the substrate and cuttings should be watered softly. Pots should then be placed in a closed propagation unit with bottom heat, with watering only when necessary. To get more warmth in the pot, it can be sunk into the heated sand. If there is too much moisture present, it can be reduced by increased ventilation. Rooting starts after after a few weeks, after two months at the latest. Cuttings should be shaded if the sun shines directly on them. When they have a good root system, they should be potted seperately in the same mixture as used with larger plants.

**3. Grafting**

'Princess Royal' and 'Princess Alexandra' are suitable as rootstocks for graftings because they are strong growers. In the UK, if there are none of these available, *R. ponticum* can also be used. There were three different grafting methods used historically: the rarest was the modified side graft [now often called whip grafting: the stock is cut through on one side only at a shallow angle with a sharp knife. The scion is similarly sliced through at an equal angle. A notch is cut downwards into the sliced face of the stock and a similar cut upwards into the face of the scion cut. These act as the tongues and it requires some skill to make the cuts so that the scion and the stock marry up neatly. The elongated "Z" shape adds strength.]. If there were strong-growing hybrids like 'Taylori' or 'The Queen', it was possible to make the copulation graft [now often called cleft

grafting: The branch or stock s split carefully down the middle to form a cleft about 3 cm (1.2 in) deep. The end of the scion should be cut cleanly to a long shallow wedge, preferably with a single cut for each wedge surface, and not whittled. Slide the wedge into the cleft so that it is at the edge of the stock and the centre of the wedge faces are against the cambium layer between the bark and the wood.], but the most often used was the veneer graft [Clefts are made of the same size as the scion on the side of the branch, not on top].

**Pruning and Shaping Plants**

The flowering season of most vireyas is from late autumn until April, but they sometimes flower through the year, especially if temperatures are low, because there are always potentially flower buds, flowers and new growth on a plant. Only well ripened wood will produce good flowers.

The plants should be pinched and pruned regularly, which is easily done with vireyas. If they become too large, it is possible to do a hard pruning. If this is done in the spring, it is possible that the plant will flower again in the autumn and through the winter months but if it is done later in the year, flowering will come later. Some plants can reach a total height of 2 m (6.6 ft).

Vireyas can be grown in little greenhouses, because they are mostly cultivated in pots. They were the most impressive greenhouse plants in 1888, won many awards with the improvements in their cultivation, and were sometimes being introduced into gardens.

*The Garden* from March, 19th, 1887, p. 257 stated:

> …one of the features which these hybrid Rhododendrons possess is the unusual range of colour present in them, which even exceeds that of the now numberless varieties of greenhouse Azaleas.

*The Garden* from June, 4th, 1887, p. 514 stated:

> ...Azaleas are noted for their attractive flowers, but these rhododendrons [vireyas] are far in advance of the best of the azaleas in the beauty of their chaste and gorgeous blossoms, and the delicious fragrance of many of the Rhododendron flowers is not excelled by any other flower in the garden.

Bowers wrote in 1936:

> …They are valuable greenhouse plants, some variety being in bloom at any season of the year and are probably better adapted for conservatory use than for the commercial florist...Some of the species and particularly the hybrids are of great beauty, but it is questionable if they are adapted for any kind of commercial production as florists' flowers or plants. This is a point, however, that calls for further investigation.

After this period of popularity, vireyas were largely forgotten until after WW II. The publication of Dr. Hermann Sleumer's (1960) species descriptions increased the interest

in vireyas again. There are a few hundred of vireya folks around the world today who love and cultivate them, but it can be said that there is also a shortage of new growers.

So, what will happen to vireyas when the present, older vireya culturists largely disappear and vireyas only exist in a few collections as in the past? Will it take some time until they become more available again or will they largely be silently gone? We are in a similar situation today as were the gardeners after WW I. Bowers asked in 1936 if they were suitable as pot plants and the answer was "Yes," but then there were cultural limitations. Most of the plants were then grown in botanical gardens or in private collections in Europe, which were able to pay for this then expensive hobby.

Today, vireyas are used for landscaping in semi-tropical areas outside Europe, such as in Australia, New Zealand, California, and Hawaii. The number of vireya lovers is larger in these regions, and so we have to hope that these wonderful plants won't be largely forgotten in Europe or other areas of North America again. But there is one long term possiblity left, that climate change will be sufficient to allow many of us to ultimately plant vireyas in gardens. There was an interesting advertisement in the Journal of the American Rhododendron Society 20 years ago: "Prepare for global warming, buy Vireyas." Today, it is perhaps even more relevant.

This is surely something to contemplate and to discuss and I would appreciate critical feedback.

**Acknowledgements**

I would like to thank the following persons and institutions for their friendly help and support: Simon Begg, Chris Callard, Marc Colombel, Frederic Danet, Annelie Dau, Caradoc Doy, Robert Hatcher, Axel Oehler, Hendrik Van Oost, Richard Reuter, Wolfgang Spethmann, Hartwig Schepker, Walter Schmalscheidt, The Biodiversity Heritage Library, Deutsche Rhododendron Gesellschaft, Onno Kasteelen (Library of the University of Wageningen), the Royal Botanic Garden Kew, and the National Arboreum of Westonbirt.

If you are interested in obtaining a list of the references that were used in the writing of this document, please contact Martin Monthofer at european-vireya-world.MM@web.de.

**References**

Gilmore, M. 2016. Winsford Walled Garden, Devon. http://gardens-guide.com/gardenpages/_0559.htm"

Monthofer, M. 2016. The Beginning of Vireya Culture in Europe with Special Consideration of James Veitch & Sons Nurseries in Chelsea - Part 1. *J. American Rhododendron Soc.* 70 (3): 120-130.

Leach, D.G. 1961. Rhododendrons of the World. Charles Scribner's Sons, NY: 544 pp.

Sleumer, H. 1960. Florae Malesianae precursores XXIII: The genus Rhododendron in Malaysia. *Reinwardtia* 5: 45–231.

For the complete list of research material considered in the writing of this paper, please contact the author at european-vireya-world.MM@web.de."

# You Too Can Hybridize: A Primer on the Rhodos and the Bees

Don Hyatt
McLean, Virginia

*(Originally in the May 2012 Potomac Valley Chapter newsletter, this article was modified by Michael Mills in the Spring 2016 Greater Philadelphia "RhodoGravure")*

How do new rhododendron crosses come into being? The bees have no trouble making crosses, but since that is not their goal (getting nectar is), they keep no records of what pollen they may be spreading around. When a breeder wants to create a new hybrid, hand-pollinated crosses where both parents are known are the rule.

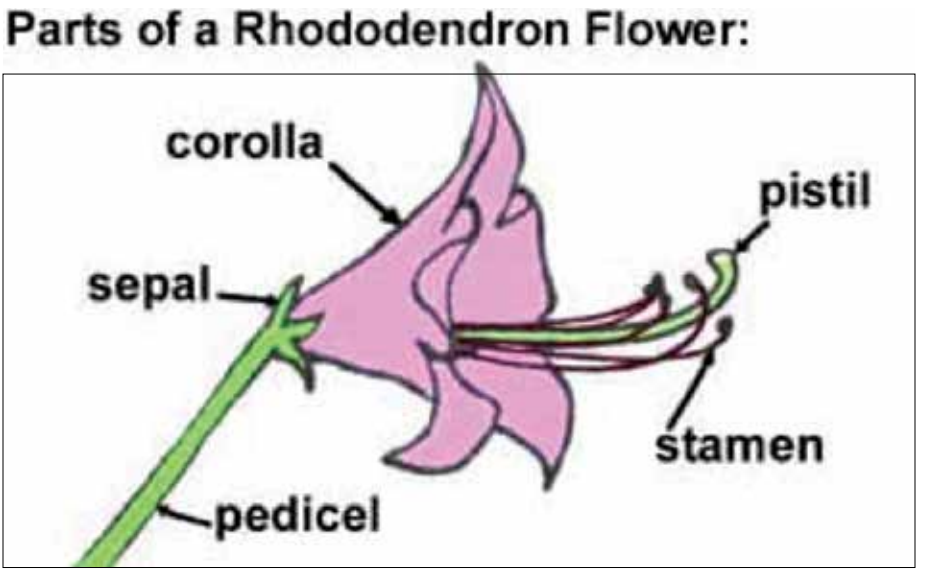


Fig. 1. Parts of a rhododendron flower.

A typical flower is composed of a number of basic parts. Protruding from the center of the flower are the important parts needed for hybridization. The female part of a rhododendron blossom is a solitary structure called the pistil. Typically, it is a little longer and thicker than the male parts of the flower, which are the stamens. At the far end of the pistil is a sticky surface called the stigma. This is where pollen must be placed in order to make a cross. At the other end where the pistil adjoins the flower is the ovary. This will later become the seedpod. The portion between the ovary and the stigma is called the style.

Most rhododendrons and azaleas have from five to ten stamens and each stamen has an obvious pollen sac at the end called the anther. With some rhododendrons like *R. fortunei*, the anthers contain so much pollen that it drools from the holes at the end and hangs in long strands. Pollen seems to exude from the anthers more readily when the stamens are jostled or twirled as when visited by a bee. With other rhododendrons, the pollen is not easily accessed and sometimes the anthers must be cut open to get to the grains. I prefer to use "promiscuous parents" with gobs of pollen.

The process of making a cross is rather simple. Just remove a couple of stamens from one flower and dab the pollen on the stigma of another blossom. Pollination is done! Within a day or two, the minute pollen grains on the stigma will germinate and send tiny tubes down the style to fertilize the undeveloped seeds in the ovary. By midsummer, the ovary should be much larger than it was when the flower was first pollinated, and the rest of the pistil will have withered and turned brown. As the seedpod dries out in late fall, it will split open to release the tiny seeds inside. At that time, the seeds can be planted but they can also be saved for future years. Seed viability does diminish with time, so if they are not planted during that first year, it is best to store them in a refrigerator in order to keep germination rates high.

There are some procedures that hybridizers use to ensure a "pure" cross with no possibility of contamination. If you simply place pollen on a stigma and do nothing else, the bees may still come seeking nectar and leaving who-knows-what pollen, often from the adjacent flower; the bee pollen may end up joining your pollen in the fertilization process. When someone has a hybridizing goal in mind, why waste time raising stray seedlings that don't meet goals of the desired cross? However, hybridizers will admit that some of the best things often come from those chance seedlings.

Personally, I like to force budded plants in my greenhouse so I can make crosses in late winter where there will not be a problem with rain, wind, or bees bringing in stray pollen from another flower.

When making crosses outside, it is best to remove the corolla (petals) and stamens from unopened buds of the proposed seed parent prior to making a cross (this is known as emasculation, since the pollen bearing stamens are the male component). That way, insects will not be attracted to the flower and without stamens there will be less chance of self-pollination.

Fig. 2. A bee pollinating the flower.

Fig. 3. Petals removed in first stage of emasculation.

Fig. 4. Stigma is protected with plastic cover.

Fig. 5. Seed pods.

Because the flower parts were removed in the bud stage it is not easy to tell when the flower would be open and thus ready for pollination. The stigma should be watched carefully to see when it becomes moist and sticky, since that is when it is ready to accept pollen. After pollen is applied, many hybridizers protect the stigma with a small piece

of aluminum foil crimped over the tip or even a plastic bag covering the entire flower truss.

I usually try to pollinate at least half the flowers in rhododendron truss. That way if I see big seed pods develop on flowers where I made a cross, and only undeveloped ovaries elsewhere, I feel certain the cross is good. It also provides extra seed to share. Always label the cross so it is easy to find later and there is no confusion as to the parentage. By convention, the seed parent is listed first and the pollen parent is listed second.

When the seedpods are just mature (turning from green to brown) in late summer or early fall, collect them, store in envelopes with complete information of the seed and pollen parents and date of crossing, and store in the refrigerator until sowing indoors in early winter.

**Newsletter Editor's addendum:** While hand-pollination can be carried out with any rhododendron cultivars, sometimes with marvelous serendipitous results, thoughtful selection of seed and pollen parents is recommended. To create hybrids that will survive in the Philadelphia area, at least one of the parents should be cold hardy and heat tolerant, or one of each.

Over the years, the ARS Journal has published articles in which accomplished hybridizers articulate their tactics and preferred parent plants for achieving particular goals, such as a red flower without blue tone or a hardy yellow. Their near scientific approach can be daunting for a first-timer.

One way to piggyback on their success is to study parentage data of quality cultivars, both in books and in the compilation of newly registered plants in the Journal. Look for plants hybridized in this region. Identify those that you like and determine whether you have access to their parent plants. You could repeat the crosses or go for variations on a theme. Remember that pollen can come someone else's garden, or an arboretum (or, if you have the moxie, a nursery). If you examine the data on enough hybrids, you'll begin to notice that certain parent plants show up with a degree of frequency, usually because they are relatively reliable at passing on their good genes.

It's interesting to note that intentional hybridization of flowers is not that old a practice and that in the pre-Darwin era the earliest forays were considered a sensation – and not in the positive sense of the word. Thomas Fairchild is credited with the first human-made plant hybrid, *Dianthus caryophyllus* X *D. barbatus*, in 1717. Many regarded it as an act of blasphemy!

*Don Hyatt is a member of the Potomac Valley Chapter.*

# Society News

## 2017 ARS Photo Contest Instructions

The Contest is open only to ARS members in good standing as of the contest closing date. Judges and their immediate family (spouse, parents, siblings, and children) and household members are not eligible. By participating in the Contest, each entrant fully and unconditionally agrees to and accepts these Official Rules and the decisions of the Judges, which are final and binding in all matters related to the Contest. There are no prizes except bragging rights, and the Editor of *JARS* has the right to publish runner up and winning entries.

All photos submitted must have been taken between August 1, 2016, to July 31, 2017. Entries must be received by midnight PST, July 31, 2017. All entries should prominently feature either rhododendrons, azaleas and/or vireyas in the composition. Competition categories: 1) Flower, truss or spray; 2) Plant in bloom; 3) Landscape or plants in the wild or in gardens; 4) Foliage; 5) People, Insects, or Animals; and 6) Other, for creative or artistic effects of any kind that involves these plants. This could involve the use of software products like PhotoShop.

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

## How to Access the Online JARS

Go to www.arsoffice.org and in the box Journal American Rhododendron Society Electronic Editions, choose either registered or not registered. If you do not have a password yet, you will have to set it up once only. Enter your information including your membership number.

We find many members do not remember their membership number, so we print the membership number on the mailing label. The membership chairs of each chapter have the membership numbers and can always supply them to members that need them.

Our webmaster keeps the information on current members, supplied by our office. If the members do not renew their membership for next year, their password will not work any more. When they renew the membership, their membership number stays the same, but they have to set-up a new password since the old one is no longer valid.

To stop the paper copy, just inform your chapter membership chair and he/she will let the ARS office know.

# Society News

## Awards

### NORTH ISLAND CHAPTER

### Bronze Medal: Jake and Claudia Ellis

It is with great pleasure, on behalf of the club, to present Jake and Claudia Ellis with the American Rhododendron Society Bronze Medal for outstanding contributions to the NIRS. The Bronze Medal is the highest commendation that can be awarded by a local Chapter.

Jake first joined the North Island Chapter in 1986 before leaving for work in Kamloops in 1988. Returning in 2005, Jake and Claudia re-joined and began actively participating in club activities and events.

Claudia served as our "Sunshine Lady" for several years making sure that members were recognized by the club when needed. As a team, Claudia and Jake ably looked after the social responsibilities for our meetings and at Chapter events. Claudia is currently on the Executive serving as our Treasurer. Her organizational skills and level-headedness, along with her warm manner and sense of humour, are true assets to the club.

As Vice President and then President, Jake has been an outstanding leader, keeping the club on track and running efficiently. In addition to his administration skills, Jake added a special touch of humour that encouraged participation and a positive social context at the meetings and club functions. In his role on the Executive, Jake attended the District One President's meetings, acted as the NIRS representative for the development of the species garden at Milner Gardens in Qualicum, and was one of two NIRS representatives on the 2015 Sidney Conference Planning Committee. Over the last year Jake was also editor the club Newsletter, and brought to it his unique humour and writing style.

Both are regular workers at the Comox Valley Rhododendron Garden, participate and assist with our fundraising Garden Tour and Rhodo Sale, are energetic members of the newly formed Propagation Group, and attend club activities and events. For their extensive contributions and support, we are pleased to award Claudia and Jake Ellis with the ARS Bronze Medal.

## In Memoriam

### *Kenneth McDonald, Jr.*

Kenneth McDonald, Jr., of Hampton, Virginia, passed away January 31, 2017, after a long illness.

He was born in Elizabeth City County, Virginia, to Kenneth McDonald and Helen Morris McDonald on February 5, 1935. He graduated from Hampton High School in 1952, and then attended Virginia Military Institute, where he participated in cross country and swimming. He graduated in 1956 with a bachelor of science in civil engineering and later became a licensed civil engineer. After graduating from VMI, he entered the Army as a 2nd lieutenant. Ken was stationed at Fort Bliss in Texas, Fort Sill in Oklahoma, and Hanau, Germany. He retired from the Army as a Captain in 1963 and went to work

## In Memoriam continued from previous page

with his father at Le-Mac Nurseries, Inc., in Hampton. Le-Mac Nurseries was founded in 1927 by Ken's father and a Frenchman, Jacques Legendre. The nursery at first grew general nursery stock and later specialized in growing evergreen azaleas to be shipped throughout the eastern U.S. to nurseries, garden centers, and florists. Ken took over management of Le-Mac in 1965 when his father died and continued there until his own retirement in 2004. The nursery name was changed to Le-Mac Azaleas in its later years, as its specialty was azaleas and rhododendrons.

Ken enjoyed travel and hiking in the Great Smoky Mountains and other mountainous areas in the Southeast with his wife, Sandra, and other ARS members, observing the native azaleas. He and Sandra received the Bronze Medal in 1981 and he in his name alone in 1984. He was active in many local and national associations including the Virginia Nurserymen's Association (past president), VMI Alumni Peninsula Chapter, American Rhododendron Society (District Director), and was also active at the local level in the Middle Atlantic Chapter ARS as president and longtime board member. He was a member of the Colonial Virginia Chapter of the Holly Society of America (past chapter president and board member), Hampton Roads Horticultural Society (past president and board member), the Exchange Club, and served on the Hampton Roads Sanitation District Commission. Gardens of special interest are the Sandra and Kenneth McDonald Azalea and Rhododendron Garden at James Madison University's Edith J. Carrier Arboretum in Harrisonburg, VA, and the McDonald Hybrid Azaleas area at the Norfolk Botanical Garden in Norfolk.

Ken is survived by his wife of 42 years, Sandra Kibbee McDonald, Ph.D., children Kenneth Allen McDonald (Cheryl) of Smithfield; Amy McDonald Blow (Wes) of Newport News; Leslie Margot Gerber (John) of Berthoud, Colorado; Brian Neil McDonald (Margaret) of Memphis, Tennessee; Scott Douglas Gerber, Ph.D. of Ada, Ohio; granddaughter Isabel Alessandra McDonald, Tennessee; sister Marjorie McDonald Gordon (Bruce), Hawaii.

## *Alma Manenica*

Alma Manenica, dearly beloved mother of Jim Manenica, grandmother of Alexandra Galatis and great grandmother of Thea Galatis, passed away of natural causes on November 12 at her home in Central Park, WA. Her husband Vic preceded her in death in 2000, her son Tim in 1995 and also her brother John Powell and sister Betty Watkins.

Alma was famous for her huge homemade cheesecakes and her gardens of hybrid and species rhododendrons and magnolias. Alma had friends all over the world and attended many rhododendron and magnolia conferences. On her travels she was pleased to see her own named hybrid rhododendron 'Hearts Delight' in New Zealand, Australia and Italy, and in Holland, Belgium, the UK and Ireland. The October 2016 Western Regional rhododendron conference in Newport, OR, was her most recent conference to see friends and buy more plants.

Alma's big smile and great knowledge about special plants will be missed by many of us.

Jenny Velinty

# Society News

## In Memoriam continued from previous page

### *Theodore S. Stecki*

The rhododendron world lost one of its most dedicated participants in late 2016 with the death of Theodore S. Stecki, at the age of 80. Ted hooked up with the ARS in 1972 by joining the Philadelphia Chapter, and he rose all the way to the top, serving as the ARS president from 2009-2011.

En route to the presidency, he had a hand in many of the society's activities at the local and national levels. He was a Greater Philadelphia officer and director, co-founder and nine-year president of the Pine Barrens Chapter, and, for 18 years, chair of the ARS budget and finance committee, a remarkable commitment. He received the Greater Philadelphia Chapter's Bronze Medal in 1985. According to his daughter Suzanne, Ted got into rhododendrons and azaleas because little else would do well in the acidic soil of his home in the Jersey Pinelands. That bit of serendipity led to a homestead billowing with specimens of the genus, and a nursery that specialized in them and their propagation.

Through his friendship with hybridizer Al Reid, Ted's Hillhouse Nursery was key in the dissemination of Reid's Linwood Hardy Azaleas. Among them is 'Theodore S. Stecki', registered in the 1980s.

To Philadelphia-area ARS members, the utterly indispensable Ted Stecki legacy was his role in the chapter's exhibits at the Philadelphia Flower Show. He utterly mastered all the arcane steps that the Pennsylvania Horticultural Society requires of exhibitors. More critical was Ted's role in forcing plants into bloom at his nursery. This is no simple matter, with tricks and nuances that fluctuate with the weather and the various cultivars. Perhaps he had things written down, but to those who worked on exhibits with Ted, he seemed to just know it all. The result was an annual display of luscious flowers. To have such expertise at the chapter's disposal was an immeasurable boon.

Many an older garden in the region has plants that Ted touched, for he was a key figure in the Plants for Members program and in the plant sale. An under-noticed talent was his skill in caring for forced Flower Show plants after the exhibit. He understood the stress the plants had been through, as well as their special needs. Pruned and coddled and flush with new branching, they would go on sale later in the year, instead of being tossed in a compost pile. This was all avocation.

Ted Stecki's engineering tech career followed degrees from Clemson and Rutgers Universities and included stints at RCA and Lockheed- Martin. He was also an amateur musician (accordion). He is survived by his wife, Joan, and children Suzanne, Michael, Stephen and Jeffrey.

### *Peter Guertler*

Our club is feeling a profound sense of loss with the passing on January 14th, 2017, of long time North Island Rhododendron Society member, and friend to all, Peter Guertler. Peter's dream to move from the Bavarian area of Germany to the Comox Valley was to come true in 1993, when he and Antje finally arrived in Canada.

Peter worked with T-Mar Industries on Campbell River, a logging equipment design, manufacturing and repair company, until a work related injury eight years ago sidelined

## In Memoriam continued from previous page

him. After two surgeries on his shoulder, he was unable to go back to work and went into early retirement. It was around this time that Peter decided to keep our Rhodo club in good Bavarian-style baked goods at most of our regular meetings, picnics or gatherings. He was actually given a special "Baker's Award" of a glass serving platter at our June picnic in 2010 for all his delicious contributions to the Social Committee for meetings and special events.

Peter and Antje joined NIRS in April 2006 and were very active in most club activities. They have been very visible and helpful at the Comox Valley Rhododendron Garden, Plant Sales, Garden Tours and most recently with the club's Propagation Group. They had their garden on our Mother's Day Garden Tour several times and also on special visitors' and club tours.

Peter and Antje travelled extensively and went on Rhododendron themed and organized garden tours in the UK and Europe, as well as to conferences in BC and the US. They also hosted and participated in our ongoing Whidbey Island Chapter member visits.

Peter gave a presentation to our club last February, "The Royal Horticultural Society Chelsea Flower Show, and 15 National Trust and private gardens of England," based on garden tours they went on in May of 2015.

Peter is survived by his wife Antje, and extended family in Germany. We will miss him greatly.

## Election of District Directors

A new District Director and District Director Alternate have been elected for District 12 by the membership of the Atlantic Chapter. (District 12 Chapters take turns holding these positions). They are John Brett as District Director and Bob Howard as District Director Alternate. They will begin their terms following the ARS Board meeting in Eureka, CA, in April 2017. (In the winter 2017 issue of JARS, it had been stated that the incumbent Director and Alternate would be carried over to the next term; that was not correct.)

In accordance with Article IX, Section E, of the Bylaws, the chapter presidents in ARS Districts 3, 6, 11 and 12 are to serve as their Disticts' nominating committees for District Directors and Alternates for a 3-year term beginning in 2017 at the end of the spring annual ARS board meeting.

# Society News

## Middle Atlantic Chapter Hosts ARS 2017 Fall Conference in Richmond, VA

The Middle Atlantic Chapter (MAC) will be hosting the ARS Fall Conference during the October 20-22, 2017 weekend. As the program is finalized, you will get further information from MAC. You will receive info for the summer JARS which will include listing of all activities, speakers, and registration for members.

It will be held over the weekend of October 19-21, 2017. The BOD meeting will be held on Friday from 9 a.m. to 5:00 p.m.

Speakers for the fall meeting are Steve Krebs, Eastern VP, who will talk about Leach rhodies and the Holden Arboretum generally and its blue bird study; and Ken Webb, Western VP, who will speak in an interactive, informal talk about his beautiful garden in Sydney, BC and propagation. Ken will also preview the 2018 Convention.

The Hilton Garden Inn at Richmond Airport will be the location for lodging and activities. Room rates will be $119/night. Shuttle buses will be available directly to the hotel from the airport. .

For those driving, there is no charge for parking. The hotel is located right off I 64. Dinners and speakers will provide enter-tainment on both Friday and Saturday nights.

Book and plant sales will be offered during the conference.

## Rhododendron Calendar

| | |
|---|---|
| **2017** | ARS Annual Convention, Eureka, California. Board Meeting. April 27–30. |
| **2017** | ARS Fall Conference, Richmond, Virginia, Board Meeting. Oct.19–21. |
| **2018** | ARS Annual Convention, Bremen, Germany. Board Meeting on May 21st. Convention May 7–31 (including pre-convention and post-convention tours). Website: ars2018.org. |
| **2019** | ARS Annual Convention, Philadelphia, Pennsylvania. Board Meeting. Dates to be announced. |
| **2019** | ARS Fall conference, Parksville, BC, Canada, Board Meeting. Sept. 27-29. |
| **2020** | ARS 75th Anniversary Convention, Portland, Oregon. Board Meeting. Dates to be announced. |

# ARS Research Foundation Funds Two Projects in 2016

The following research proposals were funded by The Research Foundation of the ARS in 2016:

**#16-1 Back to the Future: Field Evaluations of Rhododendron Rootstocks for Lime Tolerance**

Dr. Stephen Krebs
David G. Leach Research Station
The Holden Arboretum
Kirkland, OH 44094
(funding in the amount of $4,100)

Summary of proposal:

This research will test the higher pH tolerance claims of a proprietary German rhododendron rootstock, INKARHO®, in a field trial where pH is manipulated from a 4.5 to 7.5. Rhododendrons are popular plants, but difficult to grow and prone to failure in some home landscapes partly due to soil conditions. The use of vigorous and adaptable rootstocks could solve many of the soil-related cultural problems confronting rhododendrons and greatly increase growing success generally and into more regions of the US. Specific cultivars including many classic Ironclads will be grown with and without INKARHO rootstock and plant health evaluated for chlorosis by laboratory chlorophyll analysis.

**#16-2 Foliar Idioblasts in Rhododendron: Are They a Unique attribute to Subgenus Vireya?**
(funding in the amount of $5,000)

Dr. Erik Nilsen
Virginia Teck
Blacksburg, VA 24061

Summary of proposal:

Previous work by this researcher studied the structural and functional characteristics of leaves and stems of many different Vireya species. Unusually large and morphologically unique cells called idoblasts were discovered which has led to many questions as to their function. Vireyas will be studied at the Royal Botanical Garden, Edinburgh, Scotland and the Rhododendron Species Foundation and Botanical Garden, Federal Way, Washington. This research will test one trait, the presence of idioblasts, to see if it may unify all species of Vireya. Further understanding of idioblast diversity and evolution may shed light on the evolutionary relationships of Rhododendron particularly related to Vireya.

## Research Foundation continued from previous page

The Research Committee reviewed the proposals and assigned ranking based on several established criteria. The Research Committee recommended funding in 2016 from the Research Foundation of the ARS of two proposals. The Trustees of the Foundation approved funding based on the Committee recommendations.

The Research Committee members are: Harold Sweetman (Chair), Karel Bernady (Vice-chair), Robert Stamper, Sandra McDonald, Ben Hall, and Robert MacIntyre (President, ARS).

On behalf of members of the Research Committee, I would like to give an important thank you to the Trustees of the Research Foundation for their stewardship of the Trust which has allowed for uninterrupted research funding over these many years.

Respectfully submitted,
Harold E. Sweetman, Ph.D.
Chair, Research Committee
Trustee, The Research Foundation of the American Rhododendron Society

# Individual Donations from 1/1/16 through 2/15/17

## Donations to the ARS General Fund

**$500–999**
Mike & Maria Stewart

**$150–499**
William & Sandra Bennett
Glenn R. & Maria C Davies
Douglas G. Crane

**Under $150**
Mr. & Mrs. Hank Helm
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Jerry Neff
William Anderson
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Marty Carson

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**$150–499**
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Mike & Maria Stewart
Jane Konrad MD
John C. Bryer

# Society News

## Donations to the ARS Research Foundation from Individuals, Chapters and Districts 1/1/16 through 12/31/16

**$10,000+**
Anonymous

**$1,000-9,999**
Portland Chapter in honor of Karel Bernady

**$500-999**
Valley Forge Chapter

**$150 – 499**
Middle Atlantic Chapter
Princeton Chapter in honor of Karel Bernady
Carrie Queenan in memory of Russ and Gloria Gilkey
Greater Phila. Chapter in honor of Jerry O'Dell
Middle Atlantic Chapter Proceeds from Dist. 8 Cutting and Auction

**Under $150**
Mass. Chapter – Chigas, Harding, O'Neill, Paine
John Warn
Tom Lloyd
Mr./Mrs. Chrystal IMO Russ Gilkey
Linda Hartnett
Karel Bernady
Paul Silcehnstedt
James Fry
Dr. and Mrs. Murray Weiback
Potomac Valley Chapter in memory of Donald Voss
Dr. William Norris
Olympia Chapter
Harold and Christine Sweetman
Jenkins Arboretum
Jerry O'Dell
Juan de Fuca Chapter
Elizabeth Hutton
Mr. and Mrs. Fred Knapp
Margaret Rue
David and Jean Taylor
William Anderson

### *Create a Legacy with the ARS Endowment Fund*

You have great opportunity to give back to the rhododendron community and be part of the incredible difference that can be made through your support! A tax deductible gift will help strengthen the society by increasing the financial capacity of the Endowment Fund to support projects that broaden the interests, curiosity and knowledge of future generations attracted to rhododendrons and azaleas.

It is the income and growth from the Endowment Fund that provide grants to worthwhile projects and funds special activities in accordance with the Society's mission. With your endowment gift you can honor a special person or event or memorialize a friend or loved one. By combining your respect for that special person with your passion for rhododendrons you can enhance your legacy and help the Society at the same time. Whether you make your gift now or as part of your estate, you are helping the Society share its mission now and in the future.

# The ARS 2018 Convention Post-tour of Gardens in Finland

Kristian Theqvist
Turku, Finland

Jaakko Saarinen
Elimäki, Finland

Kristian Theqvist

Jaakko Saarinen

The Finnish Rhododendron Society and the Finnish Chapter are both participating in the organisation of a three-day post convention tour after the ARS Convention in Bremen, Germany in May 2018 and are inviting ARS members to visit Finnish gardens, parks and arboreta. Finland is one of the northernmost countries in Europe, situated between latitudes 60° and 70° N, corresponding in latitude in Alaska from Anchorage to Prudhoe Bay. However, the climate in Finland is distinctly warmer and more favorable for the growing rhododendrons than is northern Alaska.


Fig. 1. Locations of post-tour Finnish gardens.

Azaleas in Haaga Rhododendron Park, Helsinki. Photo by Satu Tegel.

Growing rhododendrons and azaleas in Finland has increased significantly over recent decades. Development of hardy Finnish rhododendron cultivars, free trade within the European Union and the large number of garden centers with a good plant assortment have given gardeners many options to create beautiful gardens with rhododendrons and azaleas. The Finnish Rhododendron Society, with close to 300 members, has played an important role in educating the public about the genus *Rhododendron*.

The most famous place to admire rhododendrons and azaleas in Finland is at the Arboretum Mustila in Elimäki. Other great places to enjoy rhododendrons or azaleas are the Haaga Rhododendron Park in Helsinki, the Sapokka Water Garden and Fuksinpuisto Park in Kotka, the Arboretum Yltöinen in Piikkiö and the Raisio Rhododendron Park in Raisio. A full list and map of public rhododendron and azalea collections in Finland is available at http://tinyurl.com/htj98x5 (in Finnish). There are also many great private gardens and arboreta established by members of the Finnish Rhododendron Society.

**The Haaga Rhododendron Park, Helsinki**

The Haaga Rhododendron Park is a unique city park in which to admire huge rhododendrons and beautiful azaleas. Its grounds serve as both a public park and a university research garden and consist of two parts: evergreen rhododendrons grow in the southern section, while azaleas grow in the northern section. The oldest rhododendrons were planted in 1975, when a research garden for the University of Helsinki's plant breeding program was established. The grounds are on a natural bog

Platform in Haaga Rhododendron Park, Helsinki. Photo by Vladimir Pohtokari.

with an acidic soil that is ideal for rhododendrons. *Rhododendron tomentosum* grows naturally along the edges of the Rhododendron Park.

The University of Helsinki and the City of Helsinki originally planted 3000 rhododendron hybrids for research purposes. The plants were from a hybridizing program titled "Breeding of Winter Hardy Rhododendrons," which was started in 1973 by Peter M.A. Tigerstedt. Eight of the original hardy Finnish cultivars still grow in the park: 'Haaga', 'Helsinki University', 'St. Michel', 'P.M.A. Tigerstedt', 'Axel Tigerstedt', 'Pekka', 'Eino' and 'Mauritz'.

In 1996, the plantings were expanded by thousands of rhododendrons and azaleas, with the azaleas from the hybridizing program titled "Breeding of Winter Hardy Deciduous Azaleas." About 1500 azaleas now grow in the azalea section and since 2009, four hardy azalea cultivars from this program have been named and released for production: 'Adalmina', 'Illusia', 'Onnimanni' and 'Tarleena'.

The peak blooming period in the park for both Finnish rhododendrons and azaleas is from late May to mid June. Pine trees create an overhead canopy, there are wide paths and boardwalks that are fully accessible by wheelchair, and two viewing platforms make it possible to admire the view out over the rhododendrons and azaleas. Thousands of Helsinki residents and gardening enthusiasts visit the park each year to witness this great spectacle.

**The Arboretum Mustila, Elimäki**

The Arboretum Mustila, located in southeastern Finland, is the oldest and largest true arboretum in Finland, being established in 1902 by A.F. Tigerstedt, the then owner of the Mustila Manor and estate. Instead of an ordinary manor-house park, he created an arboretum on the hill of Kotikunnas west of the manor house "to get variation pleasing for the eyes and to do something perhaps useful." Tigerstedt's main interest was in establishing a large-scale conifer plantation of known provenance from climates similar to that of southern Finland. His aim was not only to grow ornamental trees but also to evaluate the survival and growth of both exotics and native trees in order to find potential new forestry species. His early understanding of the importance of provenance in extreme climates was the key for success, and many of the early forest plantations still remain in excellent condition, e.g., Pacific silver fir (*Abies amabilis*), balsam fir (*A. balsamea*), Siberian fir (*A. sibirica*), Sakhalin fir (*A. sachalinensis*), Yeddo spruce (*Picea jezoënsis*), Serbian spruce (*P. omorica*), Macedonian pine (*Pinus peuce*) and Douglas fir (*Pseudotsuga menziesii*). The large scale and woodland character of these plantations gives Mustila its peculiar character, and the visitor will not find himself in a neatly trimmed park but in woodlands of mature trees in a semi-natural condition.

Most of the soil in the arboretum is glacial moraine with little organic material. This

Azaleas in the Arboretum Mustila, Elimäki. Photo by Kristian Theqvist.

Cafeteria at the Arboretum Mustila, Elimäki. Photo by Jukka Reinikainen

was another reason for placing emphasis on conifers. However there are also favorable valleys and slopes with richer and moister soil, able to support more demanding broad-leaved trees. C.G. Tigerstedt, who from early on helped his father and later continued his work, gave more emphasis to horticulture. In his experimental woodland garden areas, exotic trees, shrubs and perennials grow side by side with their native Finnish counterparts. Through his close collaboration with the newly established Finnish Forest Research Institute, he came to acquire fine Japanese and Korean plants that were newly introduced in the early 1930s, i.e., Korean fir (*A. koreana*), Kuriles larch (*Larix gmelinii* var. *japonica*), Japanese hemlock (*Tsuga diversifolia*), Ussurian maple (*Acer barbinerve*), Korean maple (*A. pseudosieboldianum*), three-flowered maple (*A. triflorum*) and Korean arborvitae (*Thuja koraiensis*).

The granite-based soil of Kotikunnas, enriched with peat, suits ericaceous plants well. The first rhododendron plantations of Mustila were already well established by 1917 and in the famous Rhododendron Valley, originally planted in the 1920s and 1930s, hundreds of rhododendrons flourish under a canopy of spectacular 150–200 year old native Scots Pines (*Pinus sylvestris*). The climate places severe limitations for the selection of rhododendrons applicable for Mustila. The following evergreen species have proven to be fully hardy in Mustila: *R. brachycarpum*, *R. catawbiense*, *R. dauricum*, *R. degronianum*, *R. ferrugineum*, *R. rufum* and *R. smirnowii*, and these species have been involved in nearly all of the diverse hybrids now grown in Mustila.

Rhododendron Valley at the Arboretum Mustila, Elimäki. Photo by Jukka Reinikainen.

Conspicuous in the landscape of the Rhododendron Valley are the large plants of Korean *R. brachycarpum* introduced in 1931 from seeds collected in the previous autumn in Hozan (now Pungsan, North Korea). C.G. Tigerstedt early on noticed these Korean *R. brachycarpum* were larger in all aspects than the ones the Japanese had been cultivating, and extremely cold tolerant. In 1970 it was formally described as *R. brachycarpum* subsp. *tigerstedtii* by the Swedish botanist Tor Nitzelius. The subspecies status was discarded by Chamberlain in his 1982 revision. Nevertheless, it is this very accession from Korea that became the cornerstone in the hybridizing of cold hardy rhododendrons in Finland.

Mustila also possesses a variable collection of Korean *R. schlippenbachii* from the Nordic Arboretum Committee's 1976 expedition to South Korea. Other azalea species hardy in Mustila include *R. albrechtii*, *R. canadense*, *R. molle* subsp. *japonicum*, *R. luteum*, *R. prinophyllum* and *R. vaseyi*. Most of the azaleas grown in Mustila's Azalea Slope are hybrids planted in the early 1990s when selection of cold-hardy cultivars began.

The arboretum currently consists of 120 hectares (300 acres), approximately half of which is planted with exotic species. The rest of the area remains dominated by native Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*). Since 1984, the arboretum has been maintained by the Arboretum Mustila Foundation, a non-profit organization established both to preserve and develop the arboretum and to promote dendrological

research and education. Seed collecting from cold regions of the world still remains the leading plant source in the introduction of new plants to the arboretum.

Arboretum Mustila is open to the public throughout the year, and attracts about 20,000 visitors annually. Most of the Finnish visitors are drawn to the peak flowering period of rhododendrons in early June. Visitors in May are sparse, but they will be delighted by the colors of other spring plants, including the earliest rhododendrons. Internationally, Mustila is still best known for its conifers, which include the tallest and thickest measured examples of Pacific silver fir (*Abies amabilis* 34 m (112 ft)), balsam fir (*A. balsamea*, 33 m (108 ft)) and Korean fir (*A. koreana*, 27 m (89 ft)) in Europe. A native silver birch (*Betula pendula*) ranks third in size in the same list, with a height of 35.5 m (116 ft).

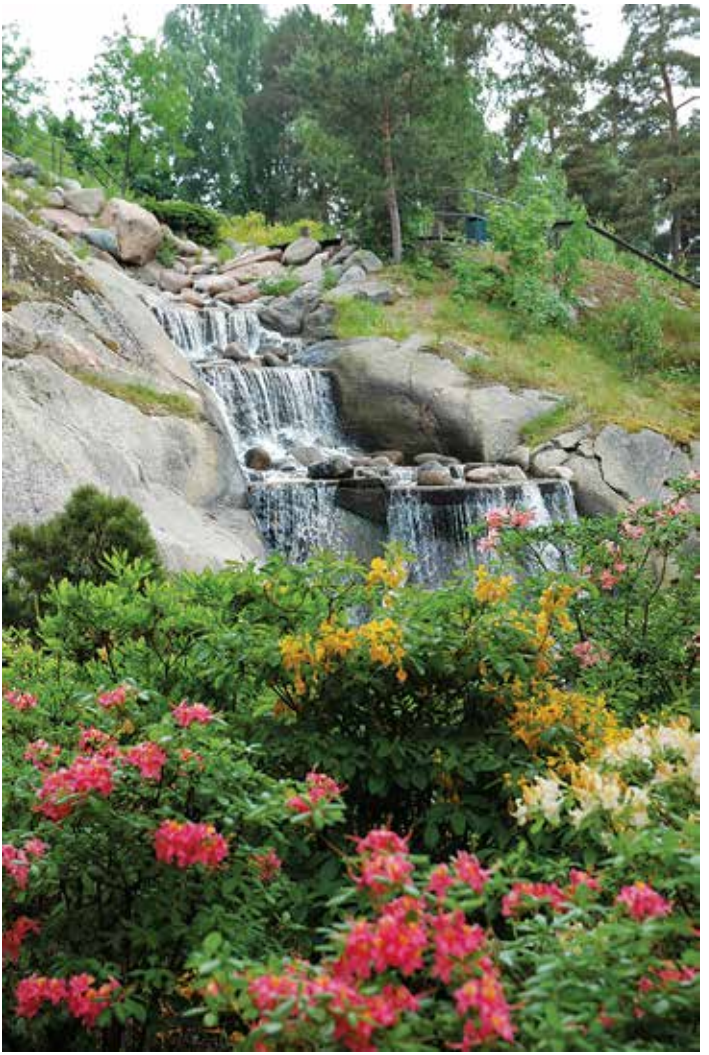
Azaleas at Fuksinpuisto Park, Kotka. Photo by Anne Vilkki-Lanu.

Azaleas at Fuksinpuisto Park, Kotka. Photo by Anne Vilkki-Lanu.

**The Sapokka Water Garden and Fuksinpuisto Park, Kotka**

The City of Kotka is located on the coast of the Gulf of Finland about 130 km (80 miles) east of Helsinki. There are several beautiful parks created by the city's gardener Heikki Laaksonen, and the most interesting for us rhododendron and azalea lovers are the Sapokka Water Garden and Fuksinpuisto Park.

In the 1980s, the Sapokanlahti Bay had become fouled with sludge, was badly polluted, and had occasional odour problems. Although it was even proposed that the bay should be filled in, a decision was made instead to thoroughly clean it and restore



Azaleas at Sapokka Water Garden, Kotka. Photo by Anne Vilkki-Lanu.

it to an ecologically sustainable level. Renovation of the area commenced in 1990, and a result was the Sapokka Water Garden, largely completed within four years. The Sapokka Water Garden has now become a significant tourist attraction, whilst also inspiring garden professionals and enthusiasts. Vegetation, water, rock and lighting are the primary elements of the park, and the park has been awarded several design awards. The objective was to create interesting features and varying viewscapes that would attract people over and over again. In terms of vegetation and structures, the park varies considerably, but even with variety, a harmonious overall impression has been created.

Rhododendrons and azaleas form a small but important element in the vegetation of the Sapokka Water Garden. The rhododendrons consist mostly of named Finnish cultivars and the azaleas are cultivars from the azalea hybridizing program at the University of Helsinki, including the four above-named Finnish cultivars.

Fuksinpuisto Park was established in 1995 as a test planting area for azaleas from the Finnish azalea hybridizing program. Later the plantings were diversified with other plants. The park contains many groundcover plants; berry bushes; apple, pear, cherry and plum trees; and numerous varieties of clematis. The groups of plants are provided with name labels and include perennials such as irises, cranesbills (*Geranium*), daylilies (*Hemerocallis*), peonies, hostas, leopard plants (*Ligularia*), and perennial climbing plants. The park is exceptionally beautiful in the beginning of the summer when the azaleas bloom.

Conifers at Sapokka Water Garden, Kotka. Photo by Anne Vilkki-Lanu.

Roses at Sapokka Water Garden, Kotka. Photo by Leena Härkönen.

**Ilola Arboretum, Salo**

The private Ilola Arboretum in the countryside of Salo demonstrates the ultimate in landscaping design, enhancing the diversified natural Finnish landscape in an extraordinary arboretum. Development of the arboretum has been a one man's project, and it still continues. The gardener Ari Laakso sowed the first rhododendron seeds and other woody plants in 1989, and by 1993, he had 500 rhododendrons to plant. The seed source was open-pollinated seeds from Arboretum Mustila and presently, only about 20 of the estimated 2000 rhododendrons and azaleas in the arboretum are named cultivars. Ari is by nature more a landscape architect than a plantsman, and he does not have a name list for his thousands of plants, but all his plantings are done with care and attention.

Ari began to add ponds to his property in 1997, as about half of his ten hectares (25 acres) was peat bog. A large pond was dug in the bog, where peat had been harvested 60 years earlier, and since few plants grow in a wet bog, he added a one meter (three feet) layer of sand in areas he wanted to plant.

The arboretum now consists of several "rooms," including a one hectare (2.5 acre) rock garden, separated with natural pine forest. The pathways are generous and well manicured for easy access and movement. Ari keeps on expanding the arboretum and future plans include a wider variety of plants. He has a small nursery and 95% of the plants in the arboretum are from his own propagation.

Conical conifers at Ilola Arboretum, Salo. Photo by Kajo Haapalainen.

Winding paths at Ilola Arboretum, Salo.  Photo by Kajo Haapalainen.

In Salo, the winter temperature commonly drops below -30° C (-22° F), and the region does not get much snow, so the plants have poor snow cover. There are often heavy rains in January, followed by a -20° C (-4° F) freeze on bare soil, which can be quite destructive for nursery plants. However, these problems are forgotten when spring and summer comes and people enjoy walking in this magnificent arboretum.

**Arboretum Apaskeri**, **Kustavi**

Osmo Jussila, the founding member of the Finnish Rhododendron Society in 1995, has been one of the most distinguished persons over the latest 20 years in promoting the culture of *Rhododendron* in Finland and was a co-writer with Anu Väinölä in writing the book "Alppiruusut" ("Rhododendrons" in Finnish) in 2002. Osmo has a spectacular garden at his home in Naantali but after years of gardening, his home garden has become overcrowded with rhododendrons and other plants. After acquiring a partnership in 2003 in an old fisherman's estate located in the municipality of Kustavi in a southwestern Finnish archipelago (there are over 2,000 isles within the municipal area), he built a summer home and began to transfer his plants to the beautiful surroundings of Arboretum Apaskeri. The property is pine forest with rocky shores overlooking a gleaming sea, with flourishing copses of hazel and other deciduous trees. Being a private arboretum, visits are only possible by appointment.

Rhododendrons and conifers at the Arboretum Apaskeri, Kustavi. Photo by Osmo Jussila.

Osmo has planted hundreds of rhododendrons and other trees and shrubs in the forest and along the shores of Arboretum Apaskeri. Its ten hectares (25 acres) include rhododendron species and cultivars, but also many of Osmo's own hybrids. He has been hybridizing rhododendrons since 1994 and he has made about 200 elepidote crosses, mainly with the hardy species *R. brachycarpum* and *R. smirnowii* and some hardy cultivars. Many of Osmo's hybrids are now coming to an age of first flowering and we hope to see some new exciting combinations of colors on hardy hybrids.

Sea view at the Arboretum Apaskeri, Kustavi. Photo by Osmo Jussila.

*R. dauricum* at the Arboretum Apaskeri, Kustavi. Photo by Osmo Jussila.

The relatively favorable maritime climate of Arboretum Apaskeri in Kustavi enables the growing of many deciduous trees and bushes that are too tender for the Finnish mainland. Winter temperatures rarely go below -20° C (-4° F) but summers tend to be cool and short, with the highest temperature usually below 25° C (77° F). This Arboretum's climate is thus Finnish Zone 1a, which is roughly equivalent with USDA Zones 5B or 6A.

**Rhodogarden, Parainen**

About 30 years ago, Kristian Theqvist was walking with his wife among shoreline forests on an island in the Turku Archipelago off Finland's southwest coast seeking a place for a summer home. They were amazed to find in the woods a huge blooming rhododendron, a very old 'Catawbiense Grandiflorum.' Kristian's grandmother, who lived on the island, told him that they had found the old summer place of Nobel Prize winner Ragnar Granit. Granit's mother (born 1878) had been a keen gardener and had ordered plants from both the UK and Germany in the early 1900s. There were no signs left of the old garden in the forest except the one huge rhododendron that had flourished! That was the inspiration for Kristian to start growing rhododendrons on another property that they later bought on the same island.

Kristian started to plant his rhodo-dendrons and azaleas in great numbers in his arboretum Rhodogarden in valleys surrounded by high rocks that are close to a hidden bay. Water flowed from the rocks and neighboring marshes to the valley, and the most common plant on the edges of marshes and on bogs was *R. tomentosum*! The soil was black peat with a pH close to 5.5, perfect for rhododendrons. The microclimate was almost windless as the surrounding high rocks shielded the garden from storms and the rocks radiated heat stored from sunshine. This was a paradise for his family and his rhododendrons!

Azaleas and boardwalk at the Rhodogarden, Parainen. Photo by Kristian Theqvist.

Azaleas and log gazebo at the Rhodogarden, Parainen.  Photo by Kristian Theqvist.

Rhododendrons and bridge at the Rhodogarden, Parainen. Photo by Kristian Theqvist.

Rhodogarden consists of two properties, Juniper Slope and Dendro Valley, totaling 3.6 hectares (8.9 acres), and there are over 1000 rhododendrons and azaleas now planted below a canopy of pines. The garden is divided in sections, a display garden with well blooming rhododendron cultivars, azaleas along the boardwalks, the new slope garden with rhododendrons and azaleas, and a species garden showing beautiful

leaves but less spectacular flowers. Kristian has also planted rhododendrons on the rock slopes by making small garden water beds with peat blocks, a log and a piece of plastic where there previously was not naturally much soil.

Kristian is a keen hybridizer and since 2002 has made over 500 crosses. The seedlings spend their first winter in cold frames, are then put in plant boxes in the woods and finally, are planted in rows in fields. Finally the plants are either scrapped, given to friends or planted in test areas in the arboretum for further evaluation. The best ones go into micropropagation, get their names registered and hopefully find their way into further propagation and into commercial production.

As an arboretum, Rhodogarden has hundreds of planted trees and shrubs that have either been acquired from nurseries or grown from seed. Growing trees from seed takes years and the arboretum is still too young to have achieved its full potential. Several years ago moose and deer caused substantial damage to the trees and shrubs and many years of growth was lost. Now Rhodogarden is surrounded by a fence and the only small problem is caused by mountain hares (*Lepus timidus*) that get through the fence. Growing rhododendrons has been Kristian's hobby, but now retired, he is able to concentrate totally on rhododendrons, other plants and gardening. Rhodogarden is a private garden that is normally closed to visitors, but it will be opened for the ARS 2018 Convention post-tour.

**References:**

Chamberlain, D.F. 1982: A revision of *Rhododendron*. II Subgenus Hymenanthes. *Notes from the Royal Botanic Garden Edinburgh*, 39(2), 209–486.

Nitzelius, T. 1970: *Rhododendron brachycarpum* D. Don ex Don ssp. *tigerstedtii* eine neue Unterart. *Deutsche Baumschule* 22(7): 207–212.

**Web sites for more information**

Haaga Rhododendron Park: http://www.vihreatsylit.fi/en/?p=930
Arboretum Mustila: www.mustila.fi/en
Sapokka Water Garden: http://tinyurl.com/j8d2oab
Fuksinpuisto Park: http://tinyurl.com/h89q62j
Ilola Arboretum: https://www.facebook.com/Ilolanarboretum
Arboretum Kustavi: http://tinyurl.com/hg9ywgs

*Kristian Theqvist is the president of the Finnish Rhododendron Society, President of the Finnish Chapter of the American Rhododendron Society and a Board Member of the Friends of Arboretum Mustila.*
email: kristian.theqvist@rhodogarden.com

*Jaakko Saarinen is a dendrologist at the Arboretum Mustila and Vice President of the Finnish Chapter of the American Rhododendron Society.*
email: jaakko.saarinen@mustila.fi

# Glendoick Nepal Earthquake Appeal

Ken Cox
Glendoick,
Glencarse, Perth,
Scotland

## How This Appeal Came About

I was invited to lecture at the 2015 ARS convention in Sidney, British Columbia, Canada. A few days before the conference, on Saturday April 25, 2015, a serious earthquake hit Nepal destroying buildings across a large swath of the centre and eastern parts of the country. The death toll soon passed 6000, and many thousands were unaccounted for. Thousands of villages were with up to 90% of clinics and schools in some districts rendered unusable.

At the conference, I used the opportunity to start a fundraising appeal to help people affected in the areas of Nepal where rhododendrons are particularly common. Lalugiras, or rhododendrons, are the National Flower of Nepal and many Nepalese species and hybrids bred from their native species are widely grown in Europe, North


Map of Nepal showing district location of the new school.


School opening in the Milke Danda Region of Nepal. Photo by Mingma Sherpa.

America, Australia and New Zealand. Two of the main trekking areas in Nepal where tourists go to see Nepal's rhododendrons are Milke Danda and Langtang. Langtang village was completely destroyed in the earthquake and may not be rebuilt.

This calamity has presented an opportunity for the whole rhododendron world to help Nepal by getting together and raising funds to recover.

The aim was to raise as much as possible through a Nepal Earthquake Disaster Appeal by encouraging rhododendron societies, nurseries and garden centres to donate some of the proceeds of their rhododendron sales or other fund-raising activities. The idea was supported by rhododendron societies and specialist rhododendron nurseries and retailers in the UK, Canada, Europe, Australia and New Zealand (see below).

Luckily I had some good contacts in Nepal to ask for advice on how raised funds could best be utilized. From 1995-2000, I led treks to southeast Tibet using a Nepali team of expert Sherpas, mountain guides and cooks using the team of Exodus Expeditions. Karma Lama ran the operations from Katmandu (son of one of Chris Bonnigton's team of Sherpas who made the first ascent of Everest's North Face in 1975) and Mingma Sherpa was one of our team in the field. I turned to them to see how we could help and Mingma Sherpa organized a project for his village in the Milke Dande region in the far east of Nepal near Mount Kanchenjunga and the Sikkim border.

School opening on Dec. 11, 2016. Photo by Mingma Sherpa.

**Nepal Appeal Results to Date**

As of December, 2016, I'm delighted to report that a new school in the Milke Danda Region of Nepal, funded by contributions from rhododendron societies around the world, has now been built and children are using it. There are several classrooms for three class levels from nursery upwards, and there are currently five teachers at the school. Mingma should be congratulated for managing the project, since getting to this area has been very challenging since the earthquake, which negatively affected roads, travel and otherwise devastated the economy.

However, funding for the teachers is not secure, and additional funds are needed to ensure the school can operate at full capacity. This is now the main concern, and where additional funds raised will be spent. Educating children in the area is a priority, as an educated and stable community will help ensure that rhododendron conservation is achieved and that this resource will remain for the benefit of all.

**Location of the School**

The school is at Hangdewa near Taplejung airport in northeastern Nepal, in the Milke Dande Region of Taplejung, which the Tamor River flows through. The area

Peter Hutchison on the Milke Danda. Photo by Peter Cox.

is famous for its proximity to Mount Kanchenjunga (see p. 66, Fig. 18), the third highest mountain in the world at 8586 m (28,169 ft). Taplejung is one of the most beautiful areas in eastern Nepal, with a spectacular landscape, Himalayan peaks to heights above 7000 meters (22,966 ft) and a wide range of flora and fauna.

*R. cinnabarinum* on the Milke Danda.

**The Region**

Nepal has around 35 native rhododendron species, and these include *R. arboreum, R. thomsonii* and *R. campylocarpum,* which have provided some of the finest garden plants and their genes have given rise to hundreds of hybrids. Almost every rhododendron collection will have examples of Nepalese rhododendrons and their offspring. In

*R. thomsonii* on the Milke Danda.

addition, many rhododendron lovers will have trekked in Nepal on the Annapurna circuit and other routes, all of which have been damaged by the earthquake. The tourism infrastructure has also been greatly impacted in a country that is desperately poor and needs as many tourists as it can get.

Trekking in this region offers impressive view of the mountains all the way to the Milke Danda on a long high forest ridge that divides the Arun and Tamur Valleys in eastern Nepal. From here there are spectacular views of Mts. Makalu, Kanchanjanga and other peaks. The Milke Danda trek is also called the "rhododendron trek." My father Peter Cox completed this trek in the 1980s, and if anyone wants to go trekking in this region, there are several companies, e.g., Exodus Treks, offering treks there, especially in the spring. There are much fewer tourists there than around Mt. Annapurna and you can see lots of plants and some of the world's highest mountains.

**Ideas on How to Raise More Funds**

Rhododendron sellers and garden centres can be asked to set aside a number of plants to sell to customers and then donate the whole or a part of the price received to the Nepal Appeal. Individual rhododendron societies or chapters can designate a portion of their fund-raising activities, raffles, etc. for this appeal, or even have special activities to raise funds. We hope that other rhododendron societies and/or their chapters will

decide to join those that have already participated in this worthwhile endeavor.

Participating groups to date have been:

- The Scottish Rhododendron Society, Rhododendron Species Conservation Group, & Matt Heasman
- Glendoick Gardens and Garden Centre
- Mount Arrowsmith Rhododendron Society, ARS (Vancouver Island, BC, Canada)
- Nanaimo Rhododendron Society, ARS (Vancouver Island, BC, Canada)
- German Rhododendron Society
- The Rhododendron, Magnolia & Camellia Group (UK)
- New Zealand Rhododendron Association
- Norwegian Rhododendron Society
- Societé Bretagne de Rhododendron
- Australian Rhododendron Society

**How Long will this Appeal Run?**

The devastation in Nepal will take at least ten years to repair, so we should take a long term view to support this and similar projects that will make a real difference to the villagers in the rhododendron growing areas. As indicated above, the new school is now open but supporting teacher's salaries remains a struggle. Please email me at Glendoick and let me know that you wish to make a donation or if you are planning to conduct an activity that connects rhododendrons and Nepal. All who love rhododendrons are encouraged to do something to help this magnificent country. Thanks for considering this appeal.

*Ken Cox, from Glendoick, Scotland, grows and hybridises rhododendrons and writes books about plants.*

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*We come from the earth. We return to the earth. And in between we garden.*

Author Unknown

# 2017 Rhododendron of the Year Selections

Linda Derkach and Bob Weissman
ARS Plant Awards Committee

**GREAT LAKES REGION**

**Elepidote: 'Wyandanch Pink'**: Flower purplish-pink with deep pink spotting on upper lobe, openly funnel-shaped, wavy edges, 3½" across. Upper lobe fades to white and spots age to greenish-yellow. Dome-shaped truss has 10-14 flowers. Blooms midseason. Leaves elliptic, convex, broadly acute apex, cuneate-oblique base, 7" long, olive green, retained 3 years. Upright, spreading, dense habit. Grows to a typical height of 6 ft. in 10 years. Cold hardy to -15°F (-26°C). Hybridized by Dexter.

'Wyandanch Pink'. Photo by H. Greer.

**Lepidote: 'Floda':** Flower purplish-pink edged lighter, fading to white with pink stripes and with a light orange-yellow blotch, openly funnel-shaped, 2" across. Flattened, ball-shaped truss has 3 to 8 flowers. Blooms very early. Leaves elliptic, flat, acute apex, cuneate base, 1½" long, glossy, retained 1 year. Spreading plant habit. Autumn foliage red-colored. Reaches a height of 3 ft. in 10 years. Cold hardy to -25°F (-32°C). Hybridized by Waldman.

'Floda'. Photo by S. & J. Perkins.

**Evergreen Azalea: 'Rosebud'**: Flower strong purplish-pink, flushed with slight veining of deep purplish pink, broadly funnel-shaped, double, hose-in hose, 1⅛" across. Blooms midseason. Leaves elliptic, 1" to 1½" long, glossy, mid green. Spreading, dense habit. Grows to a height

'Rosebud'. Photo by H. Greer.

of 4 ft. in 10 years. Hardy to -10°F (-23°C). Received the ARS Award of Merit in 1972 and the First Class Certificate in 1975 from the Royal Horticultural Society. Hybridized by Gable.

**Deciduous Azalea: 'Old Gold'**: Flower pale orange buff flushed and overlaid with rose and with an orange blotch, opens widely "butterfly" shaped, 2⅛" to 2¾" across. Round, compact trusses have 7-15 flowers. Deciduous. Open, broad, irregular habit. Typical height: 4 ft. in 10 yrs. Cold hardy to -25° F (-32° C). Raised and introduced by Edmund de Rothschild.

'Old Gold'. Photo by H. Greer.

**MID ATLANTIC REGION**

**Elepidote: 'Gilbert Myers'**: Flower white with distinct purple margins inside and out, and with a yellowish green dorsal blotch, broadly funnel-shaped, frilly-edged lobes, about 3" across. Ball-shaped truss holds 11 flowers. Blooms midseason. Leaves narrowly elliptic, flat, rounded base, broadly acute apex, 7" long, semi-glossy, dark green, retained 2 years. Dense growth habit. Height: 5 ft. in 10 years. Plant is bud hardy to -10°F (-23°C). Open-pollinated plant was selected by Myers.

'Gilbert Myers'. Photo by D. Hyatt.

**Lepidote: 'Blaney's Blue'**: Flower inside light purple, outside strong violet, unmarked, funnel-shaped, wavy-edged lobes, 1½" across. Lax truss holds 3 flowers. Blooms midseason. Leaves elliptic, acute apex, rounded base, 1" long, flat margins, glossy, dark yellowish green, changing to a bronze tone in winter. Grows to a typical height of 5 ft. in 10 years. Plant and bud hardy to at least -5°F (-21°C). Hybridized by Blaney.

'Blaney's Blue'. Photo by D. Hyatt.

**Evergreen Azalea: 'Ben Morrison'**: Flower deep yellowish-pink with red spotting and irregular white margins, openly funnel-shaped, wavy edges, 2¾" across. Blooms midseason. Leaves elliptic, flat, acute apex, cuneate base, 1¾" long, discrete, colorless hairs above and below on midribs and at margins. Spreading, dense habit. Grows 2x wide as tall. Grows to a typical height of about 2 ft. in 10 yrs. Hardy to 0°F (-18°C). Hybridized by Morrison.

Ben Morrison'. Photo by D. Hyatt.

**Deciduous Azalea: *R. canescens:*** Flower pale to deep pink, rarely white, tube often deeper colored than the lobes, tubular funnel-shaped, fragrant. Inflorescence 6-19 flowers. Blooms early midseason. Leaves ovate or obovate to elliptic, up to 3½" long, deciduous. Grows to 5 ft. tall in 10 years. Cold hardy to -5°F (-21°C). Native species found in the eastern United States coastal plains from Carolina to Florida.

*R. canescens.* Photo by D. Hyatt.

**NORTHEASTERN REGION**

**Elepidote: *R. smirnowii*:** Flower pink to rose-purple, spotted yellow to brown, funnel-campanulate shaped. Truss holds 6-15 flowers. Blooms late midseason. Leaves oblanceolate to elliptic, up to 7" long, margins recurved, pale fawn to pale brown indumentum. Compact growing shrub, more upright in shade. Grows to a typical height of 4 ft. in 10 yrs. Cold hardy to -15°F (-26°C). Native to northeastern Turkey and adjacent Georgia. In the Caucasus Mountains it is found growing at 1500-2300 m, often at the edge of spruce forests or just above the tree line.

*R. smirnowii.* Photo by H. Greer.

**Lepidote Rhododendron: 'Pioneer Silvery Pink'**: Flower purplish-pink in bud, opening pale purplish-pink, lightly spotted purplish red, outside slightly darker along midribs, openly funnel-shaped, wavy edges, 2" across. Flowers in multi-bud, ball-shaped trusses of 17. Blooms early midseason. Leaves elliptic, flat, acute apex, cuneate base, about 2½" long, semi-glossy, moderate olive green, fall foliage often red-colored, retained 2 years. Upright plant habit. Heat tolerant. Typical height: 6 ft. in 10 years. Plant is hardy to -20°F (-29°C). Raised to first flower by Hoogendorn Nurseries.

'Pioneer Silvery Pink'. Photo by H. Greer.

**Evergreen Azalea: 'Girard's Fuchsia'**: Flower moderate to deep purplish-red with moderate purplish-red spots, reverse deep purplish-pink, broadly funnel-shaped, wavy lobes, 2½" to 3" across. Inflorescence 3 flowered. Blooms midseason. Leaves narrowly obovate to elliptic, apiculate apex, narrowly cuneate base, 1¾" long, glossy, moderate yellowish olive green. Broad plant habit. Grows to a typical height of 4 ft. in 10 years. Cold hardy to -15°F (-26°C). Hybridized by Girard.

'Girard's Fuchsia'. Photo by H. Greer.

**Deciduous Azalea: *R. prinophyllum*:** Flower deep to rose-pink, rarely white, about 1" across, tubular funnel-shaped, spicy-scented fragrance. Stamens exserted, the filaments arched upward. Inflorescence 4-12 flowered. Blooms midseason. Leaves obovate to elliptic, up to 3½" long, lower surface usually pubescent, deciduous. Leaves tend to cluster near the branch tips. Grows to about 5 ft. tall in 10 years. Hardy to -25°F (-32°C). Found in the

*R. prinophyllum*. Photo by H. Greer.

wild in eastern North America (Quebec, New England to Virginia and west to Oklahoma).

**NORTHWESTERN REGION**

**Elepidote: 'True Blue'**: Flower inside light purple, with dark purple dorsal lobe spotting and white stamens; outside vivid purple, funnel-campanulate, wavy-edged, 2¼" across. Conical-shaped truss holds 21-25 flowers. Blooms early midseason to midseason. Leaves ovate, broadly acute apex, rounded base, 6" long, glossy, moderate olive green. Dense plant habit. Grows to a typical height of about 5 ft. in 10 yrs. Cold hardy to 10°F (-12°C). Hybridized by Bones.

'True Blue'. Photo by H. Greer.

**Lepidote: 'Razorbill'**: Flower near pale purplish-pink, with variable darker pink overtones, tubular-shaped, about ½" across. Held in conical-shaped trusses with 6-12 flowers. Blooms early midseason. Leaves ovate, ¾" to 2" long, ciliate, dull, dark green. Grows wider than tall. Typical height of about 2 ft. in 10 years. Plant is cold hardy to 0°F (-18°C). Hybridized by Cox. Received the Award of Garden Merit and the First Class Certificate from the Royal Horticultural Society.

'Razorbill'. Photo by H. Greer.

**Evergreen Azalea: 'Schneeperle' (syn. 'Snow Pearl')**: Flower white with strong/light yellow-green spotting on dorsal lobe, funnel-shaped, double, slightly wavy edged, 1⅜"-1¾" across. Two buds at shoot tips. A midseason bloomer. Leaves ovate, rounded to acute apex, cuneate base, about 1" long, glossy, dark green. Dense, semi-prostrate plant habit. Grows to a height of

'Schneeperle' (syn. 'Snow Pearl'). Hirsutum. Photo by H. Boerrigter.

about 2 ft. in 10 years. Cold hardy to -10°F (-23°C). Hybridized by Hachmann.

**Deciduous Azalea: 'Totally Awesome':** Flower brilliant and light yellow with vivid reddish-orange edges and vivid yellow dorsal blotch, reverse deep yellowish-pink, openly funnel-shaped, wavy lobes, 4" across. Some flowers with petal-like stamens. Dome-shaped truss with 7 flowers. A midseason bloomer. Leaves narrower than narrowly elliptic, acute apex, narrowly cuneate base, 2¾" to 3¼" long, concave, glossy, dark yellowish-green. Upright, well-branched plant. Grows to a height of about 4 ft. in 10 yrs. Cold hardy to -5°F (-21°C). Hybridized by Bunnell.

'Totally Awesome'. Photo by H. Greer.

**SOUTH CENTRAL REGION**

**Elepidote: 'Cynosure'**: Flower purplish pink at margins, shading to a very pale purple center with an orange speckled flare, openly funnel-shaped, wavy edges, 3" to 3¾" across, slightly fragrant. Held in dome-shaped truss of 10 flowers. Blooms late midseason. Leaves narrowly elliptic, broadly acute apex, cuneate base, 5" to 6" long, slightly convex, retained 2-3 years. Dense, spreading shrub. Typical height: 3 ft. in 10 years. Plant is cold hardy to -15°F (-26°C). Hybridized by Shapiro.

'Cynosure'. Hirsutum. Photo by D. Fischer.

**Lepidote: 'Shorty':** Flower white with pink mottling at edges both inside and on reverse, tubular funnel-shaped to widely funnel-shaped, wavy lobes, ¾"-1" across. Flowers fade to light pink or white. Held in terminal clusters of multiple buds each with 3 - 5 flowers. A midseason bloomer. Leaves elliptic, acute apex, cuneate base,

'Shorty'. Hirsutum. Photo by P. Norris.

1¼" long, dark matte green, retained 2 - 3 years. Some reddening of leaves in winter. Compact, very dense growth habit. Grows to an approximate height of 3 ft. in 10 years. Cold hardy to -10°F (-23°C). Hybridized by Delp.

**Evergreen Azalea: 'Fashion'**: Flower deep pink with a purplish-red blotch, single, 2" across, hose-in-hose, dark red anthers. Inflorescence 2-4 flowered. Blooms early midseason. Leaves elliptic, about ¾" long, acute apex, cuneate base. Upright habit. Grows to a typical height of 6 ft. in 10 years. Cold hardy to -5°F (-21°C). Raised to first flower by Morrison.

**Deciduous Azalea: 'Golden Oriole'**: Flower brilliant yellow with a deep orange blotch, single, funnel-shaped, 2⅓" across. Ball-shaped truss has 8-15 flowers. Blooms early midseason. Leaves elliptic to obovate, acute apex, cuneate base, mid green, bronze-colored when young and in fall, deciduous. Upright growth habit. Grows to a typical height of 8 ft. in 10 years. Cold hardy to -15°F (-26°C). Raised by the Waterers at Knap Hill, Surrey, England.

## SOUTHEASTERN REGION

**Elepidote: *R. degronianum* ssp. *heptamerum*:** Flower white to pink, occasionally striped deeper pink, funnel-campanulate, with 5 to 9 lobes. Truss has 6-15 flowers. Blooms early midseason to midseason. Leaves elliptic to oblanceolate, up to 5½" long, thin to velvety indumentum. Compact and rounded plant habit. Grows to a height of about 3 ft. in 10 years. Plant is cold hardy to

'Fashion'. Photo by H. Greer.

'Golden Oriole'. Hirsutum. Photo by M. Saar.

*R. degronianum* subsp. *heptamerum*. Photo by H. Greer.

-15°F (-26°C). Species found in the wild in southern Japan.

**Lepidote: 'Balta'**: Flower opens yellowish-white to very pale purple and ages to white. Held in dome-shaped truss of about 9 flowers. Blooms early. Leaves elliptic, acute apex, cuneate base, 1½" long, down curved edges, semi-glossy, dark green, retained 1 year. Upright, dense plant habit. Grows to a typical height of 3 ft. in 10 years. Plant and bud hardy to at least -20°F (-29°C). Hybridized by Mezitt.

'Balta'. Photo by H. Greer.

**Evergreen Azalea: 'Girard's Fuchsia':** Flower moderate to deep purplish-red with moderate purplish-red spots, reverse deep purplish-pink, broadly funnel-shaped, wavy lobes, 2½" to 3" across. Inflorescence 3 flowered. Blooms midseason. Leaves narrowly obovate to elliptic, apiculate apex, narrowly cuneate base, 1¾" long, glossy, moderate yellowish olive green. Broad plant habit. Grows to a typical height of 4 ft. in 10 yrs. Cold hardy to -15°F (-26°C). Hybridized by Girard.

'Girard's Fuchsia'. Photo by H. Greer.

**Deciduous Azalea: *R. weyrichii:*** Flower salmon pink to brick red, spotted darker, openly funnel-campanulate, 1½"-2½" across. Inflorescence 2-4 flowered. Blooms early midseason to midseason. Leaves broadly rhombic, up to 3" long, borne in threes at tips of branches, deciduous. Shrub grows to 5 ft. or more in 10 years. Hardy to at least -10°F (-23°C). Native species found in the wild in Honshu, Shikoku, Kyushu in Japan and Cheju Island in Korea.

*R. weyrichii.* Photo by H. Greer.

**SOUTHWESTERN REGION**

**Elepidote: 'Anah Kruschke'**: Flower strong reddish purple with a deep purplish red blotch, 3" across, widely funnel-shaped. Held in ball-shaped trusses of 10-12 flowers. Blooms late midseason. Leaves elliptic, acute apex, cuneate base, 4½" long, glossy, yellow-green, retained 3 years. Rounded habit. Heat & sun tolerant. Typical height: 5 ft. in 10 years. Plant is hardy to -15°F (-26°C). Hybridized by Kruschke.

'Anah Kruschke'. Photo by D. McKiver.

**Lepidote: 'Patricia Marie'**: Flower light yellow becoming white, with a pale yellow blotch inside and a purplish red line running from base of tube to tip of each lobe, tubular-campanulate, fragrant, 4½" long. Held in flat trusses of 5-6 flowers. Blooms early. Leaves oblong, down curved margins, acuminate apex, cuneate base, 5½" long, prominent veins, greenish-yellow, dark brown scales on bottoms. Leaves retained 2 years. Open, upright habit. Grows to a typical height of 4 ft. in 10 years. Hardy to 20°F (-7°C). Hybridized by Granston.

'Patricia Marie'. Photo by H. Greer.

**Evergreen Azalea: 'Nuccio's Happy Days'**: Flower light purple, unmarked, funnel-shaped, double, hose-in-hose, 2½" across. Inflorescence 2 flowered. Blooms early midseason. Long blooming period. Leaves obovate, broadly acute to obtuse apex, cuneate base, about 1" long, dark green. Broad, rounded plant habit. Grows to a typical height of 4 ft. in 10 years. Cold hardy to 15°F (-9°C). Hybridized by Nuccio's Nurseries.

'Nuccio's Happy Days'. Courtesy Nuccio Nurseries.

**Deciduous Azalea: 'Cannon's Double'**: Flower pale yellow with deep pink veins and outer petals, reverse pink, tubular funnel-

shaped, wavy edges, double, 2½" across, slightly fragrant. Dome-shaped truss has 7 - 8 flowers. Blooms late midseason. Leaves narrowly obovate to oblanceolate, flat, mucronate apex, cuneate base, 4¼" long, deciduous, matte green, bullate. Open growth habit. Grows to a height of 6 - 7 ft. in 10 years. Hardy to -15°F (-26°C). Hybridized by Cannon.

**SOUTHERN CALIFORNIA/HAWAII REGION**

**Vireya Rhododendron: 'Veronica Maureen'**: Flower inside yellowish white shading to pale yellow in throat and to vivid reddish orange at edges, outside pale yellow-green, tubular funnel-shaped, 2½" across. Flat truss has 7 flowers. Blooms in the spring months. Leaves obovate, flat, 2¾" long. Grows to about 2 feet in 10 years. Hardy to 25°F (-4°C). Hybridized by Clancy.

'Cannon's Double'. Photo by H. Greer.

'Veronica Maureen'. Photo by S. Bertelmann.

# Beyond Solid Green: Cultivars with Variegated Leaves

Philip Waldman
Boynton Beach,
Florida

*(Modified from the Greater Philadelphia newsletter* Rhodo Gravure, *which reprinted it from the New York Chapter newsletter.)*

One of the most beautiful plants to brighten a shady corner of the garden with variegated leaves is the rhododendron. Among the best rhododendrons that show variegation in their foliage, adding tremendously to their year round ornamentality, is 'Claydian Variegated'*, a tissue culture sport of 'Madame Masson' from Clay Nurseries in British Columbia. Its leaves have a distinct white border enclosing a green center and its white flowers are touched by a golden flare bloom in May. It is a well shaped plant and hardy to -15° F (-26° C), but is a slow grower.

'Goldflimmer,'* a German introduction with splashes of sunny yellow in the center of the leaf, is probably a *Rhododendron ponticum* sport with rather non-descript lavender flowers in May. It is an excellent grower, rather vigorous, and propagates easily. The plant is well shaped, and it is hardy to -15° F (-26° C). There is a slight tendency for reversion to all green shoots, which should be removed. Similar plants include 'Sunsplash,'* which was found in Malcolm Whipple's garden on Long Island, and a large unknown plant growing at Weston Nurseries in Hopkinton, Mass. [In 2009, 'Superflimmer,'

*R.* 'Goldflimmer'. Hirsutum photo by Susan Lightburn.

a sport from 'Goldflimmer'* was registered.]

'Variegatum,' sometimes known as 'Ponticum Variegatum', is a popular variety with long dark green leaves enhanced by a white margin. It is an upright vigorous grower, hardy to -15° F (-26° C), and has reddish-purple flowers in spring. It roots well and grows easily. 'President Roosevelt' is a variety with a golden yellow variegation in the middle of the green leaf and a picotee flower of a red edge fading to a white center. This plant was discovered in Holland in the 1920s and is not very popular. It has limited hardiness and a propensity toward a poor root system. It has acquired the derogatory nickname of "Tumbling Teddy" due to its weak stems and their tendency to break off easily from the root ball.

*R.* 'Variegatum'. Hirsutum photo by Garth Wedemire.

A 'Yaku Princess' sport is a new variety that offers excellent possibilities. It has a distinct gold center in the leaf, contrasting well with the dark green margin. It has light pink flowers and appears to be stable.

'Don's Variegated Austrinum'. * Azalea Society of America photos at pbase.com. Courtesy Mike Creel.

Other sports have been observed in gardens and collections, but, due to difficulties in propagating them or their excessively slow growth, they are not suited for commercial production. There were very few variegated azaleas available in the United States until recently, but with the public interest in new and unusual varieties, more are becoming available. Originally there were only a few variegated Satsuki varieties:

- 'Keigetsu'*. One of the earliest blooming Satsukis with light pink flowers and a red margin. The green leaves are flecked with white on a low spreading plant.

'Brianne'. Courtesy Blue Sterling Nursery.

'Silver Sword'. Hirsutum photo by A.J. Laros.

- 'Uki-nishiki'*. White flowers with many variegations of stripes, flecks, etc. of a dark purple. The leaves are flecked with yellow.

- 'Shira-fuji'*. The flowers are variable, generally white with purple variations. The leaves have an attractive distinct white margin on a dwarf plant. This is a newer introduction and a worthwhile plant.

- 'Shinyo-no-tsuki'* sport. Very large white flowers with crimson blotches bloom in June. The leaves sport cream stripes longitudinally throughout.

'Girard's Variegated Hot Shot'. Hirsutum photo by Han Boerrigter.

- 'Fuji-no-mine'. A dwarf cultivar admired for its unusual foliage—the leaves are variegated with many flecks of yellow. Pink flowers with a darker circle bloom in June.

American growers began introducing variegated azaleas in the late 1980s and early 1990s. One of the most popular and now widely available is 'Silver Sword', a sport of 'Girard's Rose' with a distinct white margin bordering a dark green leaf. It is a vigorous grower, and the leaves have a beautiful reddish color in winter. Other Girard plants with white margined foliage included 'Girard's Variegated Gem'*, a sport of pink-flowered 'Girard's Border Gem'*, and 'Hot Shot Variegated'* with bright orange-red flowers. These varieties tend to have a lighter green color in their leaves.

Two recent introductions which are sports of 'Girard's Rose' and similar to 'Silver Sword' are 'Brianne'*, which is a Blue Sterling Nursery introduction and is supposed to be hardier and has a much thinner and longer green leaf with the white margin, and 'The Robe'*, a Buds & Bloom introduction that is almost identical to 'Silver Sword'.

Two southern varieties of the white-margined types discovered in the 1980s are 'Southern Belle'*, a sport of 'Pink Ruffles', and 'Red Ruffles Variegated'*. Another lovely choice is 'Silver Streak', a Greenwood hybrid with white-margined foliage and purple flowers; it is a sport of 'Deep Purple'. There are very few variegated deciduous azaleas. Among them are two species, a white margined *R. canescens*, which was found in Florida, and *R. austrinum* 'Don's Variegated'*. Both have bright green leaves with creamy marbled flecks.

* = not registered.

*Philip Waldman, formerly of the New York ARS Chapter, now lives in Florida.*

# Newly Registered Cultivar Names

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

The following rhododendron and azalea names were approved and added to the International Rhododendron Register before February 6, 2017, by the Royal Horticultural Society, which serves as the International Cultivar Registration Authority for the genus *Rhododendron*. (Information on the registration process follows the descriptions of cultivars.)

**Key**
(a) – deciduous or evergreen azalea
(r) – elepidote or lepidote rhododendron
(v) – vireya rhododendron
(z) – azaleodendron
X – primary cross
(s) – seed parent of cross, if known
x – cross of an unnamed parent
* – not registered
H – hybridized by

G – grown to first flower by
R – raised by
S – selected by
N – named by
I – introduced commercially by
REG – registered by
Royal Horticultural Society color numbers in parentheses, unless another system is noted

**(r) 'Amber Gold'**

'Amber Gold'. Photo by Jim Barlup.

Elepidote rhododendron: 'Lemon Prelude' (s) X 'Trina'. H (2005), G (2010), N (2014), REG (2017): Jim Barlup, Bellevue, WA. Flrs 15/ dome truss, broad funnel, 1.8 inches (47mm) long x 2.75 inches (70mm) wide with 5 rounded lobes, wavy margins. Bud: strong red (53B). Inside: light yellow (11B) at center shading to pale yellow (11C) with strong red (53B) twin flares and spots on upper lobe. Outside: pale yellow (11C). Calyx: 0.4 inch (9mm) long, light yellow (11B) with strong red flare (53B). Yellow filaments and style, reddish brown anthers and stigma. Truss 4 inches (102mm) high x 5 inches (127mm) wide. Lvs 4.5 x 2 inches (114 x 51mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A), matte. Shrub 3 feet

(0.9m) high x 4 feet (1.2m) wide in 10 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering midseason (late April in Seattle area).

**(r) 'Best of Times'**

'Best of Times'. Photo by Jim Barlup.

Elepidote rhododendron: 'Light Years' (s) X 'Frosted Plum'. H (1994), G (1999), N (2015), REG (2017): Jim Barlup, Bellevue, WA. Flrs 17/ball truss, broad funnel, 2 inches (51mm) long x 3 inches (76mm) wide with 5 rounded lobes, wavy margins. Bud: strong red (51A). Inside: pale purplish pink (55D) shading to light purplish pink (55C) at margins, pale yellow (11D) at base, with 28mm prominent deep red (53A) blotch on upper lobe. Outside: pale yellow (11D) at base shading to pale purplish pink (55D), with light yellow (11B) midveins. Calyx: 0.75 inch (19mm) long, pale yellow (11D) with deep red (53A) spotting. Truss 4.5 inches (114mm) high x 5 inches (127mm) wide. Lvs 4.25 x 1.75 inches (108 x 44mm), elliptic, rounded base, broadly

acute apex, flat margins, moderate olive green (147A), matte. Shrub 3 x 3 feet (0.9 x 0.9m) in 9 years; intermediate habit. Hardy to 0°F (-18°C). Flowering midseason (early May in Seattle area).

**(a) 'Bill Miller'**

'Bill Miller'. Photo by Carolyn Beck.

Evergreen azalea: 'CB-11'* (s) X 'Quakeress'. H (1998), G (2002), N (2011), REG (2017): Robert Stewart, Springfield, VA. Flrs 2-3/ terminal cluster, funnel, irregular semidouble, 2-2.25 inches (51-57mm) long x 3 inches (76mm) wide with 5 rounded lobes, some with broadly acute apex; wavy margins. Bud: deep pink (48B) to strong pink (48C-D) with cream midveins and occasional cream at margins. Inside and outside: blend of strong pink (48D), moderate pink (49B) and light pink (49C); irregular areas of cream; strong yellow green (144C) blotch on interior dorsal lobe, spreading to adjacent lobes. Variable petalody of stamens from flower to flower; true stamens variable pink tones; reddish style. Calyx: 0.25 inch (6mm) long, strong to moderate yellow green (145A-146D). Lvs 1.75 x 1-1.2 inches (44 x 25-30mm), elliptic, cuneate base, broadly acute apex, flat margins, moderate olive green (146A), semiglossy. Shrub 3 x 3 feet (0.9 x 0.9m) in 10-15 years; intermediate habit, floriferous. Hardy to 0°F (-18°C). Flowering midseason (mid-May in Washington, DC, area). Etymology of name: After Bill Miller of Bethesda,

Maryland, friend of the hybridizer and prominent figure in the Azalea Society of America. Synonym: 'RBS83' (minimal propagation).

* 'CB-11' – not registered. The cultivar was among seedlings discarded by the University of Maryland's breeding program in the 1990s, acquired by William "Cliff" Brown and shared with registrant, who assigned the number.

**(r) 'First Blush'**

Elepidote rhododendron: uncertain parentage (see note). S (2004), N (2004), I (2009), REG (2017): Rhododendron Species Botanical Garden, Federal Way, WA; G (unknown): Wakehurst Place Garden, West Sussex, England. Flrs 20/ball truss, funnel campanulate, 2.25 inches (57mm) long x 2.25 inches (57mm) wide with 5 emarginate lobes, wavy margins. Bud: deep purplish pink (55A). Inside: strong purplish pink (55B) shading to pale purplish pink (55D) at base, with red nectar pouches. Outside: strong purplish pink (55B). Calyx: 0.1inch (2mm) long, pale purplish pink (56C). Style and filaments pinkish white, anthers reddish brown, stigma pink. Truss 5 x 5 inches (127 x 127mm). Lvs 4.75 x 1.5 inches (121

'First Blush'. Photo by Steve Hootman.

x 38mm), elliptic, rounded base, acuminate apex, flat margins, dark yellowish green (139A), matte. Indumentum: hairs, underside but not on midrib; pale beige maturing to light beige. Shrub 4 x 4 feet (1.2 x 1.2m) in 10 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering early season (mid-March in Pacific Northwest). Etymology of name: An expression of the embarrassment felt by the registrant, which sold the cultivar for many years as a species; as well, it blooms at the first blush of spring. Note: Cultivar was obtained by registrant from Wakehurst Place Garden in 1975 as *R. tanastylum* and was sold as such for many years. In the 1990s, Steve Hootman, executive director and curator of the RSBG, determined that it was a hybrid, perhaps *R. barbatum* X *R. arboretum*.

**(a) 'Judith Quarrington'**

Evergreen azalea: ('Desiree' x 'CB-1'*) (s) X 'Florence Waldman'. H (1994), G (1997), REG (2017): Robert Stewart, Springfield, VA; N (2013): Joseph E. Gutierrez, McLean, VA. Flrs 3/terminal cluster, broad funnel, semidouble hose-in-hose, 2.25-2.5 inches (57-64mm) long x 3.75-4 inches (95-102mm) wide with 5-15 (5+5+5) rounded lobes, wavy margins. Bud: white. Inside: white with light yellow green (145C) throat and blotch on dorsal lobe. Outside: white. Most stamens petaloid. Lvs

'Judith Quarrington'. Photo by Carolyn Beck.

1.5-2.25 x 0.75-1 inches (38-57 x 19-25mm), elliptic, slightly concave, cuneate base, broadly acute apex, flat margins, moderate yellow green (146B), semiglossy. Shrub 3 feet (0.9m) high x 4 feet (1.2m) wide in 10-15 years; intermediate habit. Hardy to 0°F (-18°C). Flowering midseason (early May in Washington, DC, area). Etymology of name: for Judith Quarrington of York, PA, a friend of the nominant, who acquired naming rights in 2013 via the Northern Virginia Chapter of the Azalea Society of America. Synonym: breeder's code 'RBS25' (minimal propagation); breeder's cross no. 11-1994-04.

* 'CB-1' – not registered. The cultivar was among seedlings discarded by the University of Maryland's breeding program in the 1990s, acquired by William "Cliff" Brown and shared with registrant, who assigned the number. The seed parent of this registration is an unnamed cross by the registrant, No. 08-1990-07.

**(r) 'Little Vixen'**

Elepidote rhododendron: selection of *R. chamaethomsonii*. S (2005), G (late 1990s), N (2005), I (2009), REG (2017): Rhododendron Species Botanical Garden, Federal Way, WA. Flrs 4-5/lax truss, campanulate, 1.5 inches (38mm) long x 2 inches (51mm) wide with 5 rounded lobes, wavy margins. Bud: strong red (51A). Inside, outside and calyx: strong purplish red (54A). Calyx: 0.1 inch (2mm) long. Lvs

'Little Vixen'. Photo by Steve Hootman.

1.75 x 1 inches (44 x 25mm), elliptic, rounded base, broadly acute apex, flat margins, dark green (136A), glossy, above; reddish purple below, pedicel pink. Shrub 1x1 foot (0.3 x 0.3m) in 10 years; intermediate habit, lvs held 2 growing seasons. Hardy to -5F°F (-21°C). Flowering early season (March in Pacific Northwest). Etymology of name: a play on words meant to represent the promiscuity of *R. forrestii*, the name under which the seed was collected in the wild. Collection number EGM#227, collected in 1992 by Ted Millais at 13,000 feet, Mekong-Salween Divide, Dinga La, Yunnan, China.

**(r) 'Mellow Sun'**

'Mellow Sun'. Photo by Jim Barlup.

Elepidote rhododendron: 'Maverick' (s) X 'Tia'. H (2006), G (2013), N (2015), REG (2017): Jim Barlup, Bellevue, WA. Flrs 15/ball truss, broad funnel, 1.75 inches (44mm) long x 3 inches (76mm) wide with 5 rounded lobes, slightly wavy margins. Bud: strong red (50A). Inside and outside: pale yellow green (4D) shading to light greenish yellow (4B) in dorsal area, with moderate red (180C) 0.75 inch (19mm) interior basal blotch corresponding to dorsal lobe, surmounted by moderate red (180C) spots. Calyx: 0.75 inch (19mm) long, pale yellow green (4D) with moderate red (180C) flare. Truss 4 inches (102mm) high x 4.5 inches (114mm) wide. Lvs 4.25 x 1.5 inches (108 x 38mm), elliptic, rounded base, broadly acute apex, flat margins,

moderate olive green (147A), semiglossy. Shrub 2 feet (0.6m) high x 3 feet (0.9m) wide in 9 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering midseason (late April in Seattle area).

**(r) 'Raspberry Spirit'**

'Raspberry Spirit'. Photo by Jim Barlup.

Elepidote rhododendron: 'Jonathan Shaw' (s) X 'Violet Mist'. H (1999), G (2004), N (2015), REG (2017): Jim Barlup, Bellevue, WA. Flrs 26/ball truss, open funnel, 1.5 inches (38mm) long x 2.75 inches (70mm) wide with 5 rounded lobes, wavy margins. Bud: deep purplish red (71A). Inside and outside: vivid reddish purple (78A) shading to strong purplish red (72A) toward margins, with 0.75 inch (19mm) moderate brown (200C) interior dorsal blotch. Whitish anthers. Truss 3.75 inches (95mm) high x 5 inches (127mm) wide. Lvs 5.25 x 1.75 inches (133 x 44mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A), matte. Shrub 4 x 4 feet (1.2 x 1.2m) in 15 years; intermediate habit, lvs held 2 growing seasons. Hardy to 0°F (-18°C). Flowering midseason (late May in Seattle area).

**(r) 'Simply Sunny'**

'Simply Sunny'. Photo by Jim Barlup.

Elepidote rhododendron: 'Trina' (s) X 'Grand Recital'. H (2007), G (2014), N (2016), REG (2017): Jim Barlup, Bellevue, WA. Flrs 19/ball truss, broad funnel, 2 inches (51mm) long x 3.25 inches (83mm) wide with 7 rounded lobes, wavy margins. Bud: light greenish yellow (4C). Inside: light greenish yellow (4C) blending to light greenish yellow (4B) on upper lobes, with moderate red (180C) dorsal throat blotch blending to brilliant greenish yellow (151D) on sides, surmounted by strong yellow (153D) spots. Outside: light greenish yellow (4C) blending to light greenish yellow (4B) on upper lobes, with brilliant greenish yellow (151D) midvein. Calyx: 0.75 inch (19mm) long, light greenish yellow (4C) with moderate red (180C) spots. Yellow filaments and style, brown anthers, green stigma. Truss 5 inches (127mm) high x 6 inches (152mm) wide. Lvs 4 x 1.5 inches (102 x 38mm), elliptic, rounded base, broadly acute apex, downcurved margins, moderate olive green (147A), matte. Shrub 2 feet (0.6m) high x 3 feet (0.9m) wide in 8 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering midseason (late April in Seattle area).

**(r) 'Sunset Dancer'**

'Sunset Dancer'. Photo by Jim Barlup.

Elepidote rhododendron: 'Dazzler' (s) X 'Hill's Low Red'. H (2006), G (2012), N (2015), REG (2017): Jim Barlup, Bellevue, WA. Flrs 15/dome truss, funnel, 2.25 inches (57mm) long x 3 inches (76mm) wide with 5 rounded lobes, slightly wavy margins. Bud: strong red (46A). Inside and outside: deep yellowish pink (44D) blending to moderate red (47A) at margins, with deep red (53A) midveins and deep red (53A) in throat becoming spotted flare into dorsal lobe. Calyx: 0.75 inch (19mm) long, deep yellowish pink (44D) with deep red (53A) flare. Red pistil and filaments, red-brown anthers. Truss 5 inches (127mm) high x 6 inches (152mm) wide. Lvs 4.5 x 1.9 inches (114 x 48mm), elliptic, rounded base, broadly acute apex, flat margins, moderate olive green (147A), matte. Shrub 3 feet (0.9m) high x 4 feet (1.2m) wide in 9 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering midseason (late April in Seattle area).

**(r) 'Velvet Dreams'**

Elepidote rhododendron: ('Hotei' x 'Tropicana') (s) X 'Hill's Low Red'. H (1990), G (1997), N (2016), REG (2017): Jim Barlup, Bellevue, WA. Flrs 15/dome truss, broad funnel, 2.25 inches (57mm) long x 3.25 inches (83mm) wide with 5 rounded lobes,

wavy margins. Bud: strong red (46A). Inside, outside and calyx: light yellow (11B) shading to light yellowish pink (37D) at margins, with deep red (53A) interior nectar pouches. Calyx 1.8 inch (47mm) long. Brown anthers, green stigma. Truss 4.5 inches (114mm) high x 5 inches (127mm) wide. Lvs 4 x 1.75 inches (102 x 44mm), elliptic, rounded base, broadly acute apex, flat margins, slightly upangled from midvein, moderate olive green (147A), semiglossy. Shrub 3 feet (0.9m) high x 4.5 feet (1.4m) wide in 12 years; intermediate habit, lvs held 2 growing seasons. Hardy to 5°F (-15°C). Flowering midseason (early May in Seattle area).

'Velvet Dreams'. Photo by Jim Barlup.

**References**

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

**To register a rhododendron or azalea name**

North Americans: Electronic registration may be submitted at www.rhododendron.org/plantregistry.htm. The site also provides instructions and forms for downloading and completing manually. Those submitting paper applications should use only the current form (revised 2015). The quickest way to obtain paper forms is to ask a friend with Internet access to go to the ARS website and print the form and instructions. Questions, completed paper forms, all photographs and requests for paper forms should be directed to Michael Martin Mills, North American Registrar, arsregistrar@gmail.com. There is no fee.

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

# Deceased Members from 11/2/16 through 2/15/17

Bissell, Lynn
Carlhian, Elizabeth M.
Crosby, Robert
Guertler, Peter
Hagner, Samuel B.
Hartman, Bob
Manenica, Alma
MacDonald, Bea
McDonald, Jr., Kenneth
McKenzie, Kathryn
Reynolds, Jerry
Seeds, Louis F.
Stecki, Ted
Thomas, Paul
Ziegler, Vivian

# Chapter/District/Special Donations

## from 11/2/16 through 2/15/17

| Donor | Amount | Source |
|---|---|---|
| **General Fund** | | |
| **Connecticut Chapter** | **$600.00** | **Chapter donation** |
| **Endowment Fund** | | |
| Bill & Ann Mangels | $50.00 | In memory of Don Voss |
| Barbara Smith | $300.00 | In memory of Thomas E. Smith |
| Susquehanna Valley Chapter | $150.00 | In honor of Donald Hyatt |
| Mason Dixon Chapter | $100.00 | In memory of Don Voss |
| Brigitte & Donald Paine | $50.00 | In memory of Betty Carlhian |
| Jane Konrad MD | $100.00 | In memory of Mark G. Konrad MD |
| John C. Bryer | $50.00 | In memory of Winfield Howe |
| Linda & Marvin Fisher | $100.00 | In memory of Frances Muller |
| Valley Forge Chapter | $843.00 | Chapter Donation |
| Dorothy Seeds | $200.00 | In memory of Louis F. Seeds |
| Middle Atlantic Chapter | $100.00 | In memory of Kenneth McDonald |
| Heriford & Heriford Family Dentistry | $50.00 | In memory of Kenneth McDonald |
| Thomas L. Mullen, P.E. | $75.00 | In memory of Kenneth McDonald |
| Ronald & Carolyn Rodina | $25.00 | In memory of Kenneth McDonald |
| Wayne Siegert, Kathleen Warfel | $25.00 | In memory of Kenneth McDonald |
| Bill & Ann Mangels | $50.00 | In Memory of Kenneth McDonald |
| Sonja Nelson | $25.00 | In Memory of Kenneth McDonald |

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**CONNECTICUT**
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Rose Magdanz
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Anders Ritter Bockhahn

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**FINNISH**
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**FRASER SOUTH**
Margaret & Jim Cadwalader

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Arturas Razinkovas-Baziukas

**NORTH ISLAND**
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Diane Van Oostdam
Shawna Buchanan
Cody Chadwick
Cameron Dykes
Madeline Goertz
Curtis Havekotte
Dan MacMillan
Phillip Marchand, Maddy Cornish
Brody Pearson
Graham Tinsley
AnneMarie Toste

## New Members continued from previous page

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Zelda Zuniga
**OLYMPIA**
Robert Dundas
**PENINSULA**
David Delmendo
**PILCHUCK**
Brenda & Tom Mueller
**PORTLAND**
Heidi Barth
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Jake McMorrow
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## Errata

In Don Wallace's article on *R. occidentale* in the online JARS Winter 2017, Vol. 71, p. 5, he stated that "It has been found that *R. occidentale* has 78 chromosomes, while all other American deciduous azaleas only have 26-54, depending on the cultivar." This statement was based on Mossman's visual counting of chromosomes, which now appears to have been inaccurate. Modern flow cytometry ploidy studies consistently confirm that *occidentale* is diploid (2n=26), although at least one cultivar has been shown to be tetraploid (2n=52), i.e., 'Double Dig Twelve', but it is an exception. Multiple proof of *R. occidentale* being diploid can be found in the results of John and Sally Perkins' ploidy and hybridization research with João Loureiro and his team at the University of Coimbra in Portugal, at http://rosebayblog.blogspot.com/2011/10/weighing-in-discovering-ploidy-of.html and at http://rosebayblog.blogspot.com/2009/12/rules-of-engagement.html, as well as in other references.

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