JOURNAL

# American Rhododendron Society

Vol. 72 Number 3 Summer 2018

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# American Rhododendron Society
# A GUIDE TO THE SOCIETY

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## Society's Purpose

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

## Membership Benefits

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

## To Join the Society

Membership categories:
(January 1 – December 31)

| | |
|---|---|
| Student (include proof if over 18) | $10.00 |
| Regular | $40.00 |
| Commercial | $90.00 |
| Sustaining | $75.00 |
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You can join the ARS through your local ARS chapter (check the website www.rhododendron.org for chapter contact info) or by sending a check or money order directly to the 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




SUMMER 2018 VOLUME 72 NUMBER 3
Journal American Rhododendron Society (ISSN: 0745-7839) Copyright © 2018 by the American Rhododendron Society. Published quarterly Jan. 15, April 15, July 15, Oct. 15 by the American Rhododendron Society. Periodicals postage paid at Carnation,WA, and additional mailing offices.

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'Orange Carpet'. Photo by Earl Sommerville

## 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. 62, 2008]

**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

Ann Mangels
Baltimore, Maryland

What a fantastic opportunity the ARS provided for its many members to attend the International Convention of the ARS. Ken Webb, Dave Banks, Steve Henning, and Hartwig Schepker provided the planning and execution of a lifetime experience in Bremen, Germany. As I'm sure many of you have heard, about 175 members came to Bremen for the meeting which attracted members from 20 countries. English was the universal language, so communication was not an issue. Just seeing the broad smiles and hearing the happy voices of so many people, was a sign of the success of this meeting. People power had a huge impact. Of the many things I will not forget were the shared interests we enjoy, each of us with shared stories of success and failure, and often a few pictures to show off from our own gardens!

Of course we were there also for our well-attended Board of Directors meeting. Just before leaving for Germany, we were notified by Brenda Ziegler and Mike Stewart, both from the Portland Chapter, of some challenges with the ownership of the Van Veen Nursery property. The Chapter was bequeathed the nursery and land in Kathy Van Veen's will. As assurance that the nursery will continue to operate as it has for generations of the family ownership, she required that the property be subject to a Conservation Easement. The ARS was asked to be the Grantee of the Easement, an oversight position to enforce the responsibility bequeathed to the Portland Chapter. The ARS would be indemnified by the owner from any claims upon the property and so there will be no costs to the ARS. The owner, the Portland Chapter, will provide a report regularly on activities at the nursery. After thorough discussion the BOD accepted to be the Grantee of the Conservation Easement on the property occupied by the Van Veen Nursery, by unanimous decision. Please note that Van Veen remains open for business, has full-time employees, sells nursery plants and is ready to help with rooting chapter cuttings.

Some other business brought up included: the Hinsdale Garden in Oregon was granted $2919 for upgrading its irrigation system and a popular booklet, "A Guide to Rhododendron Planting and Care," will be updated.

The next Western Vice President will be John Stephens, Portland Chapter, who will take office after Ken Webb becomes president when my term expires.

# From the Editor

Glen Jamieson
Parksville, BC
Canada

I have just returned from a very extensive but greatly enjoyable Danish/Swedish and German pre-tours and the joint ARS/DRG conference in Bremen, Germany, and so this note will focus on some of my experiences and observations. Firstly, thanks to all the organisers of this complex meeting, and in particular to Ken Webb, Steve Henning and Dave Banks in the ARS and to Hartwig Schepker and André-Michael Schultz in the German Rhododendron Society. This was a much bigger meeting than is usually held by the ARS, consisting of three pre tours – roughly week long trips to both The Netherlands and Denmark/Southern Sweden, and a two-day tour to some German events–the Hobbie and Hachmann nurseries and the Westerstede Rhododendron Festival; and a six-day post tour to Finland. The conference itself extended over six days, with a one-day board meeting followed by alternating days of talks and visits to other relatively close huge rhododendron gardens and nurseries.

Dorothy and I attended both the German and Danish/Swedish pre-tours and the conference, and we were rather overwhelmed by both the number and scale of rhododendron gardens and enterprises we saw. In the following, I will just summarise a few of the highlights that I remember. Hans Jensen organised a great Danish/Swedish tour, and three gardens that were particularly impressive were Sweden's Gothenburg Botanical Garden, and in Denmark, Henning and Eva Andersen's extensive species garden and the Zen Garden, with all its ponds and rock creations, created by Jørgen and Jakobine Nielsen. In Germany, we saw the huge rhododendron nurseries of zu Jeddeloh, Bruns and Schröder, where in each we had to be towed on tractor-hauled trailers to see their extensive facilities, and the impressive Hobbie Garden and Bremen Rhododendron Park with their extensive trails and vistas.

The talks were also really interesting, with a mixture of plant exploration presentations and more focused talks, including presentations on rhodos as medicinal plants, landscaping with rhodos in the woodland garden, and a humorous presentation by Ken Cox on rhodos in art, music and daily life! German hospitality was at its usual high standard, with great meals in the Bremen Ratskeller, the Bremen Rhododendron Park's Botanika, and a farewell dinner at Bruns nursery.
In summary, It was quite an event for the first time an ARS conference has been held in Europe, and one that I am glad I did not miss! I encourage all ARS members to attend ARS conferences if they can, wherever they are held, as the meeting of friends and colleagues coupled with great talks and the opportunity to see great gardens makes for unforgettable experiences!

Finally, I would like to welcome Don Smart as the new JARS Associate Editor. He prepared this issue, and I am pleased to be working with him!

# Growing Rhododendrons in Iceland

Kristian Theqvist
Turku, Finland

Photos by author unless otherwise noted

Growing rhododendrons in Iceland has not been well documented and there are not any native *Rhododendron* species growing there.

The eroded volcanic soil is challenging for many plants and high winds limit the sizes of plants as there are not now many trees to give wind shelter. However, the situation is gradually changing because of human activities, and many pine and birch forests have been reestablished during the past decades.

Typical scenery in the lava fields, light colored woolly fringe-moss (*Racomitrium lanuginosum*) and in front crowberry (*Empetrum nigrum*).

People have also established small home gardens and made plantings in the surroundings of their summer cottages. Rhododendrons have been imported from European nurseries and sold in local garden centers or plant shops, but unfortunately there is still a lack of information on how best to grow rhododendrons there. Many of the purchased cultivars did not thrive well and quite a few even died.

**Where Have the Forests Gone?**

Iceland's climate is the 64° N temperate zone and it is strongly maritime. The

climate should be quite favorable for forests but there are presently few. Based on fossil findings, *Sequoia* (redwoods), *Magnolia*, *Sassafras* and *Pterocarya* (wingnuts) trees were growing there 5–15 million years ago, and at one time *Fagus* (beech) trees were common. 5.3–2.6 million years ago, Iceland's forests consisted of *Pinus* (pine), *Picea* (spruce), *Betula* (birch) and *Alnus* (alder) trees. The number of species present, however, declined during the ice ages. Pine forests disappeared 1.1 million years ago and the last record of alder trees was 500,000 years ago. The only surviving forest tree after the last ice age was *Betula pubescens* (downy birch), and much more rarely, *Sorbus aucuparia* (rowan, or mountain ash) and *Populus tremula* (aspen). These grow nowadays in Iceland as small trees not more than 15 m (49 ft) high. The low growing *Salix phylicifolia* (tea-leaved willow), *S. lanata* (wooly willow), *S. arctica* (arctic willow) and *S. herbacea* (dwarf willow) are common ground cover plants.

At the time of first human settlement almost 1150 years ago, birch forests and woodlands covered 25–40% of Iceland's land area. The settlers cut down birch for their needs and sheep grazing in large fields prevented birch forest regeneration. The forests thus disappeared gradually and only 5% of them now remain. Volcanic eruptions have also had an effect on the decline of forested area, but to a lesser extent.

The situation has changed much in recent decades when people in Iceland began to understand the great importance of forests. Forestation projects have yielded good results and even the natural spreading of trees is now occurring in areas where sheep grazing has been prevented by fencing. The most noteworthy planted species in addition to birch have been spruces (*Picea abies* and *P. sitchensis*), pines (*Pinus sylvestris* and *P. contorta*) and the Siberian larch (*Larix sibirica* var. *sukaczewii*).

**Climate**

Iceland's climate is not very cold, though many may think so, as the Gulf Stream gives warmth! The lowest average minimum winter temperature since 1961 in Reykjavik was in January -3.1° C (26.4° F), and the average maximum was in March at 3.1° C (37.6° F). However, due to its maritime climate, summer temperatures are low, rarely up to 20° C (68° F). The July average temperature is about 12° C (54° F). If you look at summer

Sólveig Jónsdóttir shows her rhododendrons. Vilhjálmur Lúðvíksson discusses with Sólveig's husband in the background.

temperatures and their effect on growth, one can argue that they may be compared to USDA 4-5, so there has been a tendency to select Canadian plants that are hardy at USDA 2-3. However, the USDA zones are based purely on the average annual minimum temperature or a period of 30 (or sometimes 15) years. The system has flaws and one of the major ones is that it does not take into consideration summer temperatures. I think it is therefore quite misleading to use USDA 4–5 (or even 2–3) for Iceland when selecting plants. Of course it would be on the safer side, but it would unnecessarily eliminate numerous potential plants from climates that occur, for example, in the mountains of China or in Japan that also have a maritime climate.

Hjörtur Þorbjörnsson (left), Pálína Sigurðardóttir and Vilhjálmur Lúðvíksson at the Botanical Garden of Reykjavik in front of *R. oreodoxa* var. *fargesii.*

In recent years, both warmer winters and summers have occurred. It rains in Iceland every month of the year, with an annual rainfall ranging from 300 to 700 mm (12 to 28 in) in the north and from 1270 to 2030 mm (50 to 80 in) in the south. Mountain areas are even wetter, so there is enough rain for plants.

**My Invitation to Iceland**

Vilhjálmur Lúðvíksson, a retired Director (CEO) of the Icelandic Research Council and a past president of the Icelandic Horticultural Society from 2007–2013, emailed me in August 2016 and told me that a small group in their garden society had started to be interested in rhododendrons. He expressed his hope that I could come to Iceland and give them information on how to best grow rhododendrons there. He is very active in the Horticultural Society of Iceland (Garðyrkjufélag Íslands) and has imported a lot of plants to Iceland, mainly various trees and shrubs. He has especially imported many roses, some from Finland, and had also ordered rhododendron plants and seed from Arboretum Mustila, Finland. Since the beginning of the 1960s, Vilhjálmur Lúðvíksson has been reforesting 17 ha (42 acres) of land close to Reykjavik.

Vilhjálmur wanted to know what species and cultivars would be worthwhile to cultivate in Iceland and how they could amend Icelandic soil to suit rhododendrons better. When they promised to pay the cost of my trip and and other expenses,

I easily accepted their invitation. I had never before been in Iceland and I saw this as a good opportunity both to see Iceland and simultaneously to convey useful information on rhododendron culture. In addition to a three-hour presentation, I was asked to give a one-day practical demonstration in sowing, planting, fertilizing and other activities related to the cultivation of rhododendrons.

**Day One, May 17**

I arrived in Reykjavik on an Icelandair flight on Wednesday afternoon, May 17, 2017, where I met Vilhjálmur Lúðvíksson at the airport. After having a tea break at the terminal, we went to the office of the Horticultural Society, where I checked that the video projector was compatible with my laptop. I donated to Erna Rós Aðalsteinsdóttir, the chairwoman of the Evergreens Group, a thick seed envelope, consisting of 214 seed packets from 35 batches, to be used in rhododendron sowings by the members of the Society. Most of the seeds were from my crosses and some were species seeds from the seed bank of Arboretum Mustila. The seeds were gladly received. In the evening we went to visit Sólveig Jónsdóttir's home garden. She had been interested in rhododendrons for several years and had a beautiful small city garden, consisting mostly of rhododendrons accompanied by coniferous plants. The plants received good shelter from buildings and trees against high winds, and the largest rhododendrons were 1.5 m (5 ft) high, although most were still under a meter (3 ft) high. Sólveig's hobby had started small but it had overpowered her, and she was now planning to plant many rhododendrons in the area surrounding their summer cottage in the countryside.

*R. oreodoxa* var. *fargesii* was flowering beautifully in Sólveig's garden and the flower buds of 'Great Dane' were just opening. Sólveig had imported rhododendrons from the Schröder Nursery in Germany, and as a planting soil, she had used Kekkilä's peat (imported from Finland) to which she had added pine needles. She fertilizes her rhododendrons in the spring with rhododendron fertilizer and during the summer once or twice with liquid flower fertilizer.

Her rhododendrons looked healthy, and in just a few older rhododendrons I noticed some chlorosis in the leaves, which may be indicating some soil problem for her first plantings in the garden. Sólveig had started her first sowing of rhododendron seeds the previous winter, and the potted plants in her conservatory looked great.

In the evening, Vilhjálmur took me to his home, furnished in style with a great number of Icelandic artworks. It was a pleasure for me to stay at his home and

everything went really well. Daffodils were flowering in Vilhjálmur's garden, tulips were starting to open, and the birches had small, new leaves. Spring had arrived there and was at roughly the same stage as in southern Finland. Night temperatures were 3 to 4° C (37 to 39° F) and daytime temperatures were 8 to 10° C (46 to 50° F). On open areas close to the seashore, the wind was typically blowing so hard that I had to use force to get the car door open!

**Day Two, May 18**

On the morning of the second day, we drove to the Botanical Garden of Reykjavik (Grasagarður Reykjavíkur, http://grasagardur.is/), founded in 1961. About 5000 plant species are planted there, and Hjörtur Þorbjörnsson, the director of the Botanical Garden, and Pálína Sigurðardóttir, the gardener, welcomed us and showed us the garden's rhododendrons. Other plants got less of our attention because of our busy schedule, and in general, the Botanical Garden looked like a beautiful park where the citizens of Reykjavik could spend their leisure time.

*R. oreodoxa* var. f*argesii* plants were also flowering well at the Botanical Garden, some already in their late stage, while the flower buds of other rhododendrons were still tightly closed. The origin of the rhododendrons was from open-pollinated seeds received from other botanical gardens, so the authenticity of some species was questionable. The collection was not very large and no special attention had een paid to the soil. However, I saw pine needles on the soil of a handsome leaved *R. brachycarpum*. Also, the yak hybrid 'Dreamland' and the lepidotes *R. ferrugineum* and 'Blumiria' looked healthy. In contrast, *R. brachycarpum* subsp. *tigerstedtii* (now referred to as *R. brachycarpum* subsp. *brachycarpum*), *R. smirnowii* and *R. adenogynum* were suffering badly from a nutrient deficiency, possibly because of too alkaline soil.

A handsome *R. brachycarpum* at the Botanical Garden of Reykjavik.

The unpaved road fords the river to Vilhjálmur Lúðvíksson's summer cottage.

The latest attempt to grow seedlings in the nursery of the Botanical Garden had failed totally and only a few plants were still alive. I grabbed one miserable-looking lepidote that had only a few leaves left, and it came out of the ground without any roots. The gardener was aware of a soil problem, and she was thankful for receiving advice on what constituted a proper soil for rhododendrons.

We then drove to Vilhjálmur Lúðvíksson's summer place, located about 20 km (12 miles) from Reykjavik at Lake Hafravatn along the Seljadalsá River. Vilhjálmur's parents-in-law had purchased 4.5 ha (11 acres) of land in 1958 and later he rented an additional 12.5 ha (31 acres), from both sides of the Seljadalsá River. Sheep and cattle had in the past destroyed the vegetation, and erosion of wind and water had further depleted the earth. Tree plantations were started there in 1959 and an area of 17 ha (42 acres) is now fully reforested.

Various species of *Pinus*, *Picea*, *Abies*, *Populus* and *Betula* now grew there, along with many Himalayan and Chinese *Sorbus*, *Syringa*, *Acer* and even a few *Quercus*. Vilhjálmur has raised most of his trees from seeds or cuttings. He has participated in the reforestation projects of Iceland and has also collected material from his travels, for example from eastern Russia. In addition, he has imported fruit trees from Finland and a large number of roses. Rhododendrons belong to his latest plantings. The road to Vilhjálmur's summer home passed through a planted forest and across a river where there was no bridge, and the four-wheel drive car forded through the river to the other side.

Kristian warns about the dangers of fabric on rhododendrons. Photo by Vilhjálmur Lúðvíksson.

Vilhjálmur Lúðvíksson shows his rhododendron seedlings.

Vilhjálmur showed me his rhododendron seedlings in his greenhouse. Some seedlings were really good looking, but many had died because of too wet soil. He told me he is still learning about the needs of rhododendrons. Rhododendrons planted in the vicinity of his cottage seemed to be suffering from a nutrient deficiency, apparently caused by soil that was too alkaline. Vilhjálmur had mixed into the local fine erosion-based silt soil with both horse manure and one quarter volcanic sand, which in my later measurements proved to be strongly alkaline.

Vilhjálmur had recently begun to use woven landscape fabric in his rhododendron plantings and he had sliced openings in the fabric for the plants. I warned him of the dangers of such fabric as it can gradually create a closed, almost impenetrable barrier, influences water supply and temperature, and inhibits the future mixing of organic materials into the soil. As an example, I told about the usage of that kind of fabric at the Kumpula Botanic Garden in Helsinki. Major rework had to be done to remove the fabric that had caused serious problems. I advised Vilhjálmur to use natural mulching, as it more easily allows the passage of air, water and nutrients.

We were supposed to visit some garden centers that afternoon, but we decided to leave them off our schedule as Vilhjálmur told me that the plant assortments there were mainly imported from the Netherlands and Germany. The owner of the nursery we did visit had asked me to visit and to see what could be done to revitalize the numerous unsold rhododendrons from the last season. Some plants were suffering as a thick layer of alkaline garden soil had been added to the pots, and some rhododendrons had yellowish autumn growth or dead branches. I recommended that she remove the alkaline soil topping, apply some rhodo fertilizer and remove the dead or bad-looking branches.

In the nursery, there was no peat or any proper soil for acid plants for sale, and the seller could not advise on how to plant rhododendrons. Information was clearly missing. This situation will hopefully become better over time if members of the Horticultural Society provide information to nursery staff and publish information on their own cultivation experiences in articles in Icelandic magazines and gardening forums.

We then stopped by for coffee at Þorsteinn Tómasson's home. He has a great passion for the breeding of red-leaved birches and he had from his crosses numerous birches with various shades of red leaves in his garden and thegreenhouse. He hoped to get pollen next spring from *Betula pubescens f. rubra*, a red birch from Finland.(Þorsteinn Tómasson has an article on red birches inGarðyrkjuritið 2017, the Yearbook of the Horticultural Society of Iceland.)

In the evening I gave my talk to the members of the Horticultural Society. Several dozen members of the society were present, and during and after the talk there were a lot of questions asked.

Ólafur Njálsson tells Kristian about his methods to culture rhododendrons. Photo by Vilhjálmur Lúðvíksson.

Only a few members had any experience or knowledge of rhododendrons. I was told that several garden centers sell rhododendrons but they do not give proper advice and they do not sell peat or acidic soil. As an exception, Bauhaus, a German originated garden center, sells rhodo soil "Rhododendronjord" in expensive sacks. The substance seemed to have good texture but the pH was extremely low, 4.5 – 5.2. Aluminum in the soil starts to affect rhododendrons negatively at about pH 5.0, and growth gets weaker. The Bauhaus rhodo soil should ot be used alone but rather be mixed, for example, with the local silt. I gave permission to give the pdf-file of my talk to all who had come to the event, so that they would get a comprehensive information package for the cultivation of rhododendrons in Iceland.

**Day 3, May 19**

On the morning of the third day we headed east of Reykjavik to visit Nátthagi, a special plants nursery in the countryside at Ölfus, a small municipality 45 km (28 miles) away. Along the way we stopped by at the mixing site of a garden soil production company for use, among other places, in the city parks of Reykjavik. The most common product was a mixture of silt, volcanic sand, peat from ancient birch forests and horse manure. The purpose of the volcanic sand was to give better airiness and to increase the pH, but this made this soil mixture

unsuitable for acid-loving plants such as rhododendrons.

Ólafur Njálsson welcomed us to his Nátthagi (https://natthagi.is/) nursery, where he had a large selection of rhododendrons, along with other plants, imported from Denmark. Ólafur had in his small arboretum many good-looking rhododendrons, both species and cultivars, all planted in Icelandic silt. There were several choice species, including *R. roxieanum* var. *oreonastes*, *R. bureavii, R. pachysanthum*, *R. degronianum* subsp. *yakushimanum* and *R. brachycarpum* subsp. b*rachycarpum* (previously referred to as subsp. t*igerstedtii).*

He was proud, for good reason, of his rhododendrons and his unique method of growing them. The surface of the earth at his site was hard, totally impenetrable to my fingers, and yet the rhododendrons seemed to thrive excellently! This was contrary to my knowledge, but Ólafur told me that he fertilized the rhododendrons with diluted urine and at the time of planting, added horse manure. He layered in the planting hole silt and horse manure, without mixing them. There was no sign of chlorosis on the leaves. In his view, the reason for the success was the very high iron content of his silt. I was suspicious, but lately I have come upon experimental results that show that adding ferrous sulphate (sulphate of iron) helps when the root system is not capable of taking enough nutrients from the soil. (Ólafur Njálsson has an article on cultivation of rhododendrons in Garðyrkjuritið 2017, the Yearbook of the Horticultural Society of Iceland.)

Next, we drove to the summer place of Pétur Jonasson, the current president of the Horticultural Society. His property, named Klumba, was located on the shore of Lake Þingvallavatn, about a 60 km (37 mile) drive from Reykjavik. Pétur had prepared a tasty lunch for us of oven-baked speckled blunt-nosed fish (unknown to me, but likely the Spotted Ocean Catfish (Anarhichas minor)). After lunch, we took a stroll in his arboretum on his 3.5 ha (8.6 acre) property.

Pétur started the reforesting of his place in 1989, and I would call it an arboretum as he grew a wide selection of species of *Abies*, *Picea*, *Sorbus* and many other taxa, all clearly labeled. Rhododendrons were missing but Pétur asked me for advice on a suitable place to grow them close to the firs. The soil was strongly volcanic, dryish and prone to erosion, very challenging for growing trees, but Pétur's secret of good results was an abundant supply of sheep manure from the farm of his brother.

I avoided common tourist attractions during my travel, as there was not much extra time, but we stopped briefly at Þingvellir (anglicized as Thingvellir), the old national parliament of Iceland. It is also geologically a significant attraction, as the separation of the Eurasian and North American continental plates can be seen in the vertical ruptures of the cliffs.

Then came the biggest surprise of the day. We visited Jónas Snæbjörnsson's

Pétur Jonasson introduces to Kristian his arboretum on the shore of lake Þingvallavatn. Photo by Vilhjálmur Lúðvíksson.

arboretum that was established by Jónas's father in the 1960s on a steep slope, on the shore of Hvalfjörður Fjord. No one had managed the arboretum for the latest 20 years and it was heavily overgrown. The trees were mostly the same species as seen elsewhere but what amazed me was that there were about twenty different rhododendron species present, all healthy looking. I saw *R. brachycarpum*, *R. brachycarpum* var. f*auriei*, *R. mirnowii*, *R. fortunei* Lu Shan form, *R. degronianum* subsp. *yakushimanum*, *R. concinnum, R. augustinii, R. wardii, R. wallichii, R. przewalskii, R. vernicosum, R. uvarifolium, R. aureum, R. traillianum* and *R. caucasicum*. Who had said that Iceland is too difficult for rhododendrons! Jónas's father Snaebjörn Jonasson had planted the rhododendrons in the 1970s and 1980s, and the plants had all grown with no one to take care of them. I could not identify all the rhododendrons, especially the lepidotes with no flowers, but the species seemed to be real and not hybrids.

The soil in his arboretum was pure silt, running water from the above hill kept the soil very moist, and winter temperatures had rarely been below -15° C (5° F) on his well-sheltered property. Jónas asked me to plant a new rhododendron in

the arboretum, a 'Nova Zembla' cultivar, and it was an easy task as there was a small hole in the ground and the soil mixture and a bucket of water were waiting for me on the slope. (Jónas Snæbjörnsson has an article on the rhododendrons of his arboretum in Garðyrkjuritið 2002, the Yearbook of the Horticultural Society of Iceland.)

Trying to identify rhododendron species in Jónas Snæbjörnsson's arboretum. Photo by Vilhjálmur Lúðvíksson.

The day ended with a dinner with Pétur Jónasson and Vilhjálmur Lúðvíksson. Past lunches and dinners had been fish, but now I was served a delicious Icelandic lamb meal. After dinner, Vilhjálmur showed me his collection of 100 roses in a park outside the Botanical Garden. Roses are Vilhjálmur's passion and he had just received a big shipment of roses from Finland the day before.

**Day 4, May 20**

I woke up early on Saturday morning (5:30 AM Icelandic time) and we left at dawn to visit Vilhjálmur's summer cottage, where we made preparations for a demonstration course on rhododendron culture. Initial preparations included measuring the acidity of the materials available with a pH test kit, with the following results:

- Light brown fine graded silt, the common soil all over Iceland, formed from the erosion of volcanic soils. I measured the pH to be 6.5, i.e., slightly acidic.
- Black volcanic gravel, pH 7.5 - 8.0. Being alkaline, this material is not suitable for rhododendrons but it is commonly used in mixtures for lawns and garden plants.
- Red volcanic gravel, pH 8.0, alkaline. Erna Rós Aðalsteinsdóttir told me that she uses the gravel for her Sedum plants to give good drainage.
- Kekkilä's Professional peat for forestation, pH 4.5 - 5.0. This material alone is too acid for rhododendrons and it is also very poor in nutrients.
- Bauhaus rhodo soil 'Rhododendronjord', specified pH 4.5 - 5.2. Measured pH 5.5 with a measurement accuracy of+/-0.5.
- Horse manure, three-years old, measured pH 6.0.
- Compost from restaurants of Reykjavik, containing some spoons, five years old, measured pH 6.5.
- Wood chips, composted for five years, measured pH 6.5.
- Pine needles of Pinus contorta, pH not measured, assumed to be acidic.

The following mulches were available.

- *Pinus contorta* needles from the forests of Danielslundur and Heiðmörk.
- Wood chips, composted for five years.
- Tussocks of Ericaceae plants (*Calluna vulgaris, Vaccinium uliginosum, and Empetrum nigrum*) and of *Ajuga reptans* 'Atropurpurea'.
- Volcanic gravel. This was left unused because of its strong alkalinity.

Demonstration on growing seedlings. Photo by Vilhjálmur Lúðvíksson.

More than 20 people had arrived by 9:00 AM for the demonstration course, in which I showed how to grow rhododendrons from seed, nurture seedlings and to propagate from cuttings. I also made soil mixtures that we later used to plant rhododendrons.

The following Icelandic soil mixtures mixed from available materials were in my opinion the best suited for rhododendrons:

- 50% local silt, 50% Bauhaus rhodo soil "Rhododendronjord",
- 40% local silt, 40% horse manure, 20 % pine needles, and
- 35% local silt, 35% Kekkilä peat, 30% horse manure.

The texture of all the mixtures felt good by "hand" and their scents seemed right.

The demonstration lasted a total of six hours and at the end, we planted three rhododendrons in the above-mentioned soil mixtures. For mulch, we used pine needles, wood chips and tussocks of Ericaceous plants, as mentioned above. Vilhjálmur has promised to report on the growth of the rhododendrons to me, and to write an article on progress for the Yearbook of the Horticultural Society.

In the evening, we went for a "tourist drive" in the middle of Iceland's lava fields and caldera, on rough driving tracks for which access by regular cars was prohibited.

The landscapes were awesome and we stopped many times to study various plants. Woolly fringe-moss (*Racomitrium lanuginosum*) covered large areas and crowberry (*Empetrum nigrum*) seemed to be the most common of the Ericaceous plants.

Demonstration on how to open the roots. Photo by Vilhjálmur Lúðvíksson.

**Short summary**

The trip was memorable and I believe I gave a good boost to the culture of rhododendrons in Iceland, and possibly there may in the future be Icelandic ARS members? After seeing Snaebjörn Jónasson's old rhododendrons and Ólafur Njálsson's fine collection of rhododendrons, I do not doubt that it would be possible to grow most of the temperate zone rhododendrons in Iceland if they are provided with proper wind shelter.

A breathtaking view to the valley while having a coffee break

Web sites for information on the flora and vegetation in Iceland:
https://www.nat.is/travelguideeng/flora_iceland.htm
http://en.ni.is/botany/vegetation/vegetation-types/

*Kristian Theqvist is the president of the Finnish Chapter of the American Rhododendron Society.*

# Enchanting Japanese Garden Styles

Paula and Verne Trinoskey
Eureka, CA

There is something about a Japanese garden that enchants us, andjust because you do not always see rhododendrons in these gardens doesnot mean that you can't have both. Being rhodophiles and smitten with Japanese gardens, we have indulged ourselves with both for the last 50 years.

The author's first garden in Michigan 50 years ago.

Paula's brother sent us a picture this spring of her first garden with Van Veen rhododendrons. They, as well as the pond, bridge and gate, have all survived 50 years in Michigan!

A few pointers on the basics of Japanese garden design may encourage you to create your own special place.

**The Garden Beyond the Wall**

The Japanese aesthetic built on embracing nature is quite the opposite of Western culture, which is to wall us off from and bring nature under our control. The Japanese respect for nature has given us some of the most beautiful and inspiring gardens in the world. Perhaps it is a sign of the times because of today's multitude of complex demands that Japanese gardens with their condensed version of nature and the tranquility they inspire are so appreciated and admired. Japanese gardens typically try to incorporate extensions of other spaces, and so, for example, there is a welcoming temple gate in Kanazawa, Japan, that invites us to enter and embrace the scene of a tranquil garden in the midst of a busy city.

The Japanese have studied nature and its relationship to man for well over a thousand years, and the resulting wisdom is most evident in their gardens. We have traveled often to Asia and have incorporated many of the features of Japanese gardens into our Eureka, CA, garden. We have found that rhododendrons and azaleas easily fit into and enhance a Japanese garden. There are many aspects of Japanese garden design that can be incorporated into any garden. Following are some landscape design principles that may inspire you.

Welcoming temple gate in Kanazawa, Japan.

Ground cover can be used instead of smooth rocks.

**Rocks and Stones**

Japan is a mountainous country with rocks a dominant natural feature, so it is natural that rocks are a distinguishing feature of a Japanese garden and form the "bones" of their gardens.

Nature gives us two basic tenets. First, sharp and newer rocks are at higher elevations, while weathered rocks at lower elevations become smoother and finally end up as pebbles and sand. Secondly, rocks should be combined as they would be found in nature (granites, for example, would not be found with limestone, etc.).

Few of us are blessed with naturally aving the correct rocks in the right place but you would never know that looking at many Japanese gardens. If you do not have the "appropriate" rocks, mounding plants can represent cliffs and rugged rocks. Similarly, ground covers can be used in lieu of smooth rocks. In Japan, azaleas often represent clouds or hills.

There are certain rock compositions that are very effective. The first is the sentinel rock—a large rock guarding an entrance or path. If a large rock is not feasible, a large post or a specific plant may be substituted for the rock.

Rocks as would be found in nature.

A sentinel rock guarding an entrance.

Unlike many western gardens based on the principle of symmetry, a Japanese garden is one of asymmetry. This is illustrated by the second composition, the Buddhist Triad. The placement of three rocks, one tall (heaven), one low (earth) and in between heaven and earth, a medium size rock (man) leaning toward heaven. By leaning the middle rock toward the large rock, you connect the three together. If this is not feasible, you may provide a connection by using plants. Pruned azaleas would be a good choice. It is important to set rocks into the ground so they look stable and appear to have been placed there by nature.

As mentioned before, rocks should be selected for compatibility of type and age [weathering], as otherwise, the scene looks contrived and creates an unsettling atmosphere. This is true of all rocks and stones placed in the garden. This simple trick will ensure that a serene garden is created.

Moving and positioning large rocks can be a challenge. We once saw a Japanese landscape architect sitting on a stool. In each hand he had a baton and on each side a crane with a sling holding a large rock, while he experimented with optional placements. Few of us are that fortunate to have such resources. An alternative to a crane is the boom used to place septic tanks. Using these booms may be more versatile and cost effective than hiring a crane. Gwen and Rollie Mayne of Oakland, CA, are experts at moving large rocks, and using a tripod and pulleys, when they were using 80s!

Making connections in group of rocks.

Como Park, St. Paul, MN.

Mt. Fuji inspiration in Silver Pavilion in Kyoto

The ultimate weathering creates sand. The dry gardens in Japan do not use beach sand as that will not hold its shape. Here in the North America, "turkey grit" or decomposed granite is more effective in holding the desired shape.

Mount Fuji serves as the inspiration for a dry garden feature at the Silver Pavilion in Kyoto.

**Water Bodies**

Water has been a feature in Japanese gardens for over 1000 years. Ponds, waterfalls, and streams are all inspired by nature and are enhanced under the hands of Japanese landscape designers. Lucky for current gardeners, in the last few years there have been many improvements in available materials and equipment for construction and maintenance of water features.

As in the placement of all rocks, the principle of new to old prevails in water features. Waterfalls should adhere to this principle, but because water may appear with older weathered rocks, it is acceptable to use rounder rocks around pool edges, but do not mix the "new" rocks with "old" ones. A bridge of stepping stones is most easily installed during pond construction and care must be used to set them level and secure. When placed in a pond or stream, they should be set closer together than when set in the ground. You should not have to stretch your walking step but rather "mince" along, to create assurance that you would not fall in. It thus stands to reason that the stones should provide a flat and smooth place to step.

Concrete slab produces an interesting bridge.

Rather than installing stones to walk on, it may be easier to install a separate bridge such as a single slab of rock positioned on other rocks that appear to have tumbled into the pond. These are often accompanied by a sentinel rock guarding the bridge.

If a rock slab is unavailable, a cast off concrete slab can produce an interesting bridge. Of course where weight or cost is a factor, wood can also be used.

**Dry Gardens**

The ultimate weathering creates sand. As mentioned above, the dry gardens in Japan do not actually use sand as it will not hold its shape. In many situations, creating a dry pond or stream is less complicated and can be a substitute for the

Wood can be used if weight or cost is a concern.

Chion-in garden in Kyoto makes great use of water.

Chion-in also uses dry gardens.

A dry water fall can be created with sand and rocks.

Elements of oceans and islands using sand and rocks.

A path across “water”.

real thing, i.e., actually using water. The gardens at Chion-in in Kyoto make great use of both water and dry gardens.

Additionally, a dry waterfall can also be created to enhance the look and feel of a dry stream.

Even the elements of oceans and islands can be created with sand and rocks of different sizes and shapes.

**Paths**

Stones are the best material for paths as they best duplicate a natural scene. The walkway above left uses foliage to represent a hillside, with smoother rocks tumbling onto the smooth pebbles of the walk. Rhododendrons and azaleas would be a good substitute for the plants, providing year around foliage and seasonal color.

A straight pathway is used for emphasis and a quick journey. Otherwise, curved paths are used to slow you down so you can take in the view from different positions.

Walkway utilizing foliage to create a hillside.

Using the same design of elements in a very small space.

In the top right photo on the previous page, we see a great use of a path across "water." The path follows a gentle meander that signifies a stroll, not a race. [Note: Laying out a garden hose is a good tool to assist in creating the shape of an easy curve, as the path should not be too straight nor turn too sharply.] Large stepping stonesmake one hesitate and take in the view, while subsequent pavers become smaller giving the illusion of a greater distance [use of perspective]. The rise to run is compatible with a gentle slope.

Where there are steps, the longer the run, the shorter the rise should be. Also, walk your path at the pace you want people to use and determine where to place your stepping stones. There should be a smooth flow so that you don't have to take a half step before stepping up a rise. Also, if it is a main path, make sure that it is wide enough for two people to walk along side-by-side.

**Size and Scale**

You may have seen a few large and ambitious gardens but a Japanese

garden does not need to be large or utilize your entire space to create a desired effect. An example of a very small water garden that is only 2 feet x 2 feet (0.6 m x 0.6 m) adjacent to a sidewalk, a tiny garden that still creates a large impact can be seen in the bottom left on the previous page.

**Borrowed Scenery and Perspective**

Japanese gardens often used borrowed scenery to give the illusion of greater space, to produce a contemplative mood or to enhance the overall effect. There is a tendency to place larger objects in the back, but placing them in front will give an illusion of greater distance. A great example of the use of borrowed scenery and perspective is at Butchart Gardens in Victoria, B.C. You will find a viewing spot where you glimpse through the foliage (borrowed scenery) a boat tied to the shore. If you walk down to the boat, you will find that it is a scale model and what you thought was a large distance was in fact very close.

Plants

The signature plant in a Japanese garden is the pine, which is pruned to represent the best of nature. The loose character and peeling bark of the rhododendron *R. veitchianum* [previously *R. cubitii*] and its ilk is a good replacement for a pine. In Japan, scaffolding and other devices are not hidden but play a prominent role, revealing man's interaction with nature.

Japanese gardens are not devoid of color or contrast. In fact, color is celebrated with festivals and viewings. The first is the spring bloom of azaleas, followed by cherry blossoms and finally the fall colors of maples. What better way to celebrate your rhododendrons than to have a viewing party when they are in their full glory. Rhododendrons, although not a major feature in current Japanese gardens, were more popular in the past.

Pine is a signature plant in Japan. Scaffolding and other devices are also not hidden.

Japanese maples provide contrasting texture and provide a blaze of color in the fall.

Larger rhododendrons can be very effective as background, path hiders, islands and even standing in for a sentinel rock. Azaleas hold a prominent place in Japanese gardens and smaller leaf rhododendrons can be substituted for them to provide spring color and great foliage the rest of the year.

The authors' garden started as a barren lot in 2001 and was a featured tour during the 2017 Eureka ARS convention.

Japanese grasses are a great addition to any garden and are abundantly used in Japan. Although often used for their texture, they can also provide natural color .

Japanese maples work well with rhododendrons providing contrasting texture and color, and they provide a blaze of color in the fall complementing the spring bloom.

Your terrain, rocks, and plants will present unique challenges and opportunities as you create or modify your own garden. The one rule is to follow nature's example as your model. If you try to literally copy a specific design, it will not work. This is why it is not practical to try to create a "real Japanese garden" outside Japan. The ambience, culture and setting are simply not present elsewhere, but that does not mean that you cannot use the elements of a Japanese garden to create a unique, amazing effect! You must bring yourself and your interpretation of nature to the project, and as an example, we'll now discuss and illustrate how we have done this in our own garden in Eureka, CA.

Our garden in northern California was started in 2001 from a barren lot. Now there are over 150 rhododendrons and azaleas that give a great display in the spring and are an occasion for viewing parties. Later, Japanese iris, oriental lilies, fuchsias, begonias and pots of lobelias welcome summer. The fall brings a splash of color from the 40 plus Japanese maples, but all year the variety of foliage gives depth and color to the garden. By incorporating elements of Japanese garden design we have created a tranquil setting despite the abundance of statuary, plants, etc. Rhododendrons invite you to our garden on a path made from pieces of an old patio, and soon they will be large enough to screen the house next door.

Having fought off the raccoons, herons, and egrets from our koi pond in Oakland, CA, Verne said to Paula's disappointment "no more water." Hence we have adapted the Japanese use of stone for water throughout the garden. We do not have a pure Japanese garden as we are verdant travelers and collectors and use our garden to display and remind us of our travels. Rhododendrons form the background in many places in our garden, and a borrowed view of redwoods leads your eyes to the rhododendrons forming the backdrop of a dry pond.

Like any good garden path, it has diversions and hidden corners and will accommodate two people walking abreast. The path was laid out with a garden hose and created from both cement blocks and pavers.

On the next page the walkway serves as a "bridge" crossing a small stream of "white rock" originating from a dry "waterfall".

Rhododendrons invite you into the authors' garden on a pathway made of pieces of an old patio.

A dry pond with maple islands in authors' garden.

A little pond, filled with marbles attracts a pair of metal cranes. Cranes represent fidelity and long life, which we need to have as no garden is ever finished. Our local ravens keep stealing the marbles, and finding them elsewhere in the garden is like a treasure hunt.

As stated before, our garden is not devoted to one style of garden but encompasses our extensive travel experiences. However, the underlying principles of Japanese garden design will always work, and when the garden gets chaotic, we turn to these principles to bring back tranquility. A Chinese gate leads from the patio to a Chinese-style garden, and the characters for tranquility in the stone mosaic are a reminder of another trip.

Early Japanese gardens were based on Chinese gardens, and carried over is the representation of nature, but on a much more visceral sense in Japan. In the creative process it is helpful to create a story to aid in visualizing a design. We were stuck with a big rock in our garden that wasn't going any place, so it became a "whale in a sea of gravel". When we point it out, everyone sees the whale and are amused, although perhaps a bit concerned of our sanity! The whale acts as our sentry, as big and massive, he always makes people hesitate.

In summary, we hope you will not hesitate to use some of these ideas and thoughts in your own garden!

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Walkway "bridges" a dry stream coming from a waterfall.

A little pond attracts a pair of metal cranes.

A Chinese gate leads from the patio to a Chinese-style garden.

Early Japanese gardens were based on Chinese gardens, and carried over is the representation of nature.

A big rock in our garden that wasn't going any place, so it became a "whale in a sea of gravel."

*Paula and Verne Trinoskey are members of the Eureka Chapter, and their garden was a highlight on a tour at the recent 2017 ARS Convention in Eureka, CA.*

# Incorporating Sound into Your Presentations

Kath Collier
Bandon, OR

**Can you imagine watching television with the sound turned off?** The programs would not be nearly as entertaining, interesting, or memorable. Yet so many of our automated presentations do not include any sound. A well-polished presentation is like an orchestra. Sound is just one of the instruments in the band, which when integrated with other instruments (such as images, automation, transitions, etc.) can create a beautiful presentation more understandable, memorable, and portable.

In theory, every element in a presentation, be it a sound, image, etc., should support and enhance a presentation rather than create an annoying distraction. Just like any other tool, sound can create memorable, and terribly unfortunate, presentations (such as if a gunshot sound clip were to be played at the start of a controversial public meeting).

**Sound Function Availability**

Sound functions are a normal part of most automated presentation software such as Microsoft Powerpoint, Corel Presentations, or OpenOffice.org Impress. While the required steps, i.e., keystrokes, terminology, and software capabilities vary from product to product, the core functions are similar. However, additional soft/hardware beyond the basics is often required to create a desired effect. This might include headphones, microphone, webcam, sound cards, speakers,sound editing programs, or additional graphical and system processing capabilities. Fortunately, some of these items may be available for minimal cost or even be free (like sound editing software).

Many cameras can capture sound and movie clips, along with images. Not all of these elements need to be original. You may have a musician in the family that has an original score that would work great for the background. Sound clips are also available for downloading from the Internet. Look for clips that are in the public domain, are royalty free, or those that require a minimal creative attribute (this license usually requires that the source/author is attributed somewhere in the program, such as on the cover

or with a link of some kind).

**Ways for Incorporating Sound**

There are several opportunities for incorporating sound into a presentation. This usually includes:

- Short sound clips, like a "swoosh," bird song, or car horn. These short clips are great for emphasizing a key point. A short sound clip can also be used as a transitional sound to separate topics for instance or alert the viewer that the frame just changed.
- Background music, which might play throughout an entire program or intermittently, or be linked to an image (like listening to a bird song while viewing an image of the bird). A change in background music can also be used to alert the audience of a transition (like a big finish is about to come!).
- Narration can be created in short or longer clips that might play while viewing a specific frame, or help tie in concepts displayed over several frames.
- Many movie clips include sounds and those clips can also be in-corporated into a presentation. There are software applications for converting a Microsoft Pow-erpoint into a movie (which of-ten makes the finished product significantly more compact).

**Online Tutorials**

There are several online tutorials available that will guide you step-by-step through the process of adding a sound or narration for your specific program and system. Tutorial programs are customized for specific software releases, and include links to other resources such as sound and image libraries. Most software programs include a very small sampling of sounds, images, movies, etc. These samples are perfect for learning and practicing, but may not work for your specific program.

**Let's talk...**

There is a value to incorporating narration into programs. This could create autonomous programs that anyone could use. Narrating can be a little tricky. Let's face it, most of us are not voice actors or script writers. Like professional athletes who make a sport look easy, folks in the movie business also make it look easy. It may take months to get up to speed in learning how to use the narration software, creating the script, gathering and editing the images, creating background music, and finally basically putting a short program together.

**Here are a few tips to make your journey shorter:**

1. Create a target—what do you re-ally want? Can you describe the project parameters (like time, number of frames, amount of sound and automation, etc.)? Creating a simple presentation is not the same as a 30-minute made for TV movie.
2. Prepare crib notes or a script first. Think about what you want to say on every frame, what needs to be said, and the target number of frames. Aim for two to three sentences a frame, or more with a bulleted list.
3. Watch a television commercial and count the number of image changes; you may find that a new frame appears every four to six seconds. Faster frame changes elicit action.
4. Some frames need more time than other frames. The amount of time needed should give the audience time to look at each face, or read the text at normal speed twice, or accommodate the narration.
5. Some information can be displayed and not be read out loud. For instance, a clearly visible text box could display a plant name. Consider color and size of type font selected.
6. Consider recording several smaller sound clips, rather than one long narration that might cover several frames. This will make the process significantly faster and easier (to edit and rearrange things).
7. Make sure to keep track of each sound clip filename so that it is later possible to link it with the correct frame.
8. A sound clip may need to be recorded several times before it is perfect. Speak with energy, clearly enunciate, and use correct grammar.
9. Think about timing and pace. Sometimes people will talk fast if they become nervous. Brief pauses in speech can allow for a audience giggle or shift the attention to an image.
10. Review the narration clip right away and determine if it is worth saving. I save the top three best versions (i.e., f01v001, ...2, ...3 or frame 01, version 001) and review and compare them to identify the best one.
11. Save all files related to a particular presentation in a single folder. This will facilitate embedding the narration clips into the file program (highly recommended as it creates one file with everything in it).
12. Think about volume both for the background and for the narration. Loud background music can make it very difficult to hear narration. Reduce or eliminate background sound when narrating.
13. Set animation or screen transitions so that there is enough time to accommodate everything (transitions, automation, text movement, etc.) that will occur in the frame.
14. Finally, give yourself time to learn and practice. This process is significantly

more complicated than preparing a slide show of old. However, look at it this way: the slides never fall out of the carousel like in the "old days."

Technology available today can provide you with a plethora of tools that can be used to create an interesting and entertaining program that can be shared with a number of interested audiences for a very long time.

*Tips and Pitfalls*

*--Typically, newer presentation soft-ware offers more capabilities. There are free sound editing programs available that can help you create a number of special effects (such as fade in/out).*

*--Most packages provide a way to save presentations in different non-automated formats (such as to a PDF, or portable document format). Some will store frame notes separately that can be printed or converted to a text file. Check the "SAVE AS" features of your software for options.*

*--Try out the "SAVE AS/Conversion" options and make sure that the special features that you have incorporated (like sound) are included during conversion. Some special features may get dropped out!*

*--Each presentation software package creates its own unique format that cannot be edited by a different software package (a Powerpoint presentation, for instance, cannot be edited in Corel Presentations). There is no universal format.*

*--Some software will save a presentation into an "executable format." This file will include additional code so that it can be played on another computer without the presentation software. This type of file is usually larger because of the additional code.*

*--Any one frame can incorporate any combination and number of options. Generally, the more options used in a presentation, the larger the end file becomes.*

*-It is possible to make a presentation that is too large, which is typically when it cannot be transported or when it bogs down during editing or saving. Too many bells and whistles can slow downloading and playing a presentation. If that happens, consider using a different software package, condensing the images, removing some of the special effects, or simplifying the presentation.*

*Kath Collier is a member of the Southwestern Oregon Chapter and served as ARS Secretary for several years.*

# Society News

## Awards (Photos by Glen Jamieson)

### ARS Gold Medal: June Walsh

For more than 25 years you have been an active member of the American Rhododendron Society, always exhibiting a warm, welcoming attitude and a willingness to serve. Your contributions to the Society have been stellar.

You have been an important factor in the growth and success of the Eureka Chapter, serving as treasurer, Membership Chair and Newsletter Editor. At the international level, you have served as Secretary to the Society's Board of Directors and you chaired or co-chaired two Western Regional Conferences. You co-chaired the national convention in 2007 and chaired the annual convention in 2017. You currently serve as national Membership Chair.

For these and other significant, lasting contributions, the American Rhododendron Society is proud to present the Gold Medal to June Walsh, May 25, 2018, Bremen, Germany.

Mike Stewart, June Walsh, and Ann Mangels.

### ARS Gold Medal: Dr. Hartwig Schepker

You are universally admired as an ambassador for the genus Rhododendron. You have shared your enthusiasm and expertise through keynote addresses at international conferences. You have hosted innovative and highly successful rhododendron conventions in Germany.

Your guidance as Director of the Rhododendron-Park Bremen has been exemplary. You have rejuvenated and expanded garden collections. You have promoted education and awareness of rhododendron diversity through the botanika Science Center, the German Rhododendron Gene Bank project, and your role as Secretary of the Deutsch Rhododendron-Gesellschaft. All are lasting legacies. You are a research scientist, a plant explorer, a prolific author, and an honored friend.

For your many outstanding achievements, the American Rhododendron Society is proud to award the Gold Medal to Dr. Hartwig Schepker, May 25, 2018, Bremen, Germany.

Steve Hootman, Hartwig Schepker, and Ann Mangels.

# Society News

## Awards continued

### ARS Gold Medal: Dave Banks

Your tireless efforts on behalf of the American Rhododendron Society at Chapter, District and Society levels have been an inspiration to those having had the pleasure to work with you. You have served as District 9 Director and functioned simultaneously as Chair of the Society's Budget and Finance Committee and ARS Treasurer.

You played a major role in the search effort for an Executive Director replacement and the restructuring of those duties; the training of a replacement and your continued role as her prime mentor.

You have committed tremendous time and effort to the organization of this international Convention, developing creative and efficient solutions to a myriad of challenges. Your commitment to the continued viability of the ARS has materially strengthened the Society.

For your outstanding service, the American Rhododendron Society is proud to award the Gold Medal to Dave Banks, May 25, 2018, Bremen, Germany.

Bill Meyers, Dave Banks, and Ann Mangels.

### ARS Gold Medal: Hans Rudolf Lytchoff Eiberg

You are the founder of the Danish Rhododendron Society's homepage, a site that serves as a reference and is visited by rhododendron enthusiasts around the world. You have been an active member of the Danish Chapter of the American Rhododendron Society for many years. You have also travelled to China on plant hunting trips and with your knowledge have been able to quickly help identify and put the proper species name on plants of interest.

Your professional work as a scientist has included analysis of DNA samples to find human genetic differences. You have taken your DNA knowledge and applied it to the rhododendron world to identify relations between species and subspecies. Your fascinating work has given you opportunities to share your knowledge as an invited speaker in conferences held in Denmark and abroad.

For your outstanding accomplishments and fascinating work that benefits all Rhododendron society members, the American Rhododendron Society is proud to award the Gold Medal to Hans Rudolf Lytchoff Eiberg, May 25, 2018, Bremen, Germany.

Hans Rudolf Lytchoff Eiberg, Hans Jenson, and Ann Mangels.

# Society News

## ARS Silver Medal: Kristian Theqvist

For the past two decades you have been an active member of the Finnish Rhododendron Society and a talented writer and photographer in the Finnish Rhododendron Journal. You have been President of the Finnish Rhododendron Society since 2010 and have greatly improved the quality of its Journal.

You initiated the effort to establish the Finnish Chapter of the American Rhododendron Society and encouraged Finnish membership. You have been President of the Finnish Chapter since 2012. You succeeded in increasing the knowledge and connections between these two Rhododendron organisations.

You are a revered speaker on issues of the genus Rhododendron. You interact with scientists and have contributed to the ploidy level research on species and hybrids from subsection Ledum. You also made more than 500 crosses in the past 15 years, and registered nine of your Rhododendron cultivars.

For your outstanding contributions, the American Rhododendron Society is pleased to award the Silver Medal to Kristian Theqvist, May 25, 2018, Bremen, Germany.

Kristian Theqvist, Peter Tigerstedt, and Ann Mangels.

## ARS Pioneer Achievement Award: Jim Barlup

"I DWELL IN POSSIBILITIES." In every human there is a need to know. The questions of who, what, why and how are instinctive and are a force within our very existence. What makes one person search half their lifetime to answer these questions and then to excel in their chosen field of interest?

A very special human has taken these questions and created a plethora of answers. Your research is groundbreaking, making way for further study. Your body of work speaks for itself. Your benevolence is most admirable. Your friends are worldwide. You have created an example of a cross-border, cross-country, cross-nation legacy by donating the majority of your creations to the Victoria Rhododendron Society.

You have demonstrated an example of what others can do and follow. Your gift of graciousness knows no bounds.

The American Rhododendron Society is pleased to present the Pioneer Achievement Award to Jim Barlup, May 26, 2018.

Judy and Jim Barlup

# Fall ARS Conference Preview, Chattanooga, Tennessee, October 19-21, 2018

Hale Booth
Signal Mountain, TN

Dolan Garden on Saturday's tour.

The Tennessee Valley Chapter invites you to participate in the fall ARS conference on October 19-21 in Chattanooga, Tennessee. The Chattanooga area is a remarkably vibrant place to live or visit with an endless range of activities and resources. The city has twice won the Outdoor Magazine "Best City Ever" award for the quality of diverse outdoor activities in the region. With its beautiful mountains, scenic vistas and river, Chattanooga has been

attracting tourists since its founding. In fact, the entire Union Army came in the 1800s and stayed for months!

The Holiday Inn Chattanooga-Hamilton Place will host our meeting. This is a recently constructed multi-story hotel with good conference facilities located adjacent to Interstate 75 at exit 5. This location in addition to being convenient for those driving is also within five miles of the Chattanooga Airport. The Holiday Inn has made a special conference rate of $99 (including a hot breakfast for registered guests) available to us if booked by Sept. 27, 2018.

The hotel has agreed to honor this rate for a few days either side of our conference if you would like to stay a little while and partake of the many activities available in the fall in Chattanooga. With the world's largest freshwater aquarium, miles of biking and walking trails, a redeveloped pedestrian and bike-friendly waterfront, a large outdoor sculpture park, countless restaurants and shops, the Tennessee River Gorge, nearby whitewater rafting on a former Olympic course, the Incline Railway and numerous parks and monuments commemorating the Union and Confederate Armies' earlier visits, there is just a lot to do if you have a little spare time.

Friday Banquet and Presentations

The ARS Board meeting will start Friday morning and conclude prior to our Friday evening reception and banquet to which everyone is invited. We have three outstanding speakers who will be discussing exceptional native garden plants with a center of diversity in our Southern Appalachian region. These will include Jack Johnson, who will speak to us about stewartias. Sometimes referred to as the "mountain camellia," these small deciduous trees re not camellias. Jack has hiked all over the Southern Appalachian Mountains studying the unique, rare and beautiful trees and likely knows more about them than anyone else. He has also consulted and assisted arboreta and botanical gardens with stewartias and provided them with important germplasm of these plants. Jack will tell us a little about the related Asian species of stewartia, but he will focus on the varieties found in the South, their bloom color variations, as well as how to cultivate and propagate these treasures. Thanks to Jack, we will have some native stewartias available in the plant sale. Trilliums are a woodland jewel that flourish with rhododendron culture and make excellent companion plants. Tom Patrick is a botanist with the Georgia Department of Natural Resources and has spent much

Rock City Garden on Saturday's tour.

of his time studying these endemic treasures that have a center of diversity in the Southeastern states and particularly the Southern Appalachians. Over the past decade, many new species of trilliums have been discovered, many of which have not been fully described and named. Tom has been at the center of many of these discoveries, and we understand one of these new trilliums will be named for our speaker. While very rare, these new trilliums are beginning to enter commerce and a few are already available by mail order through Plant Delights Nursery.

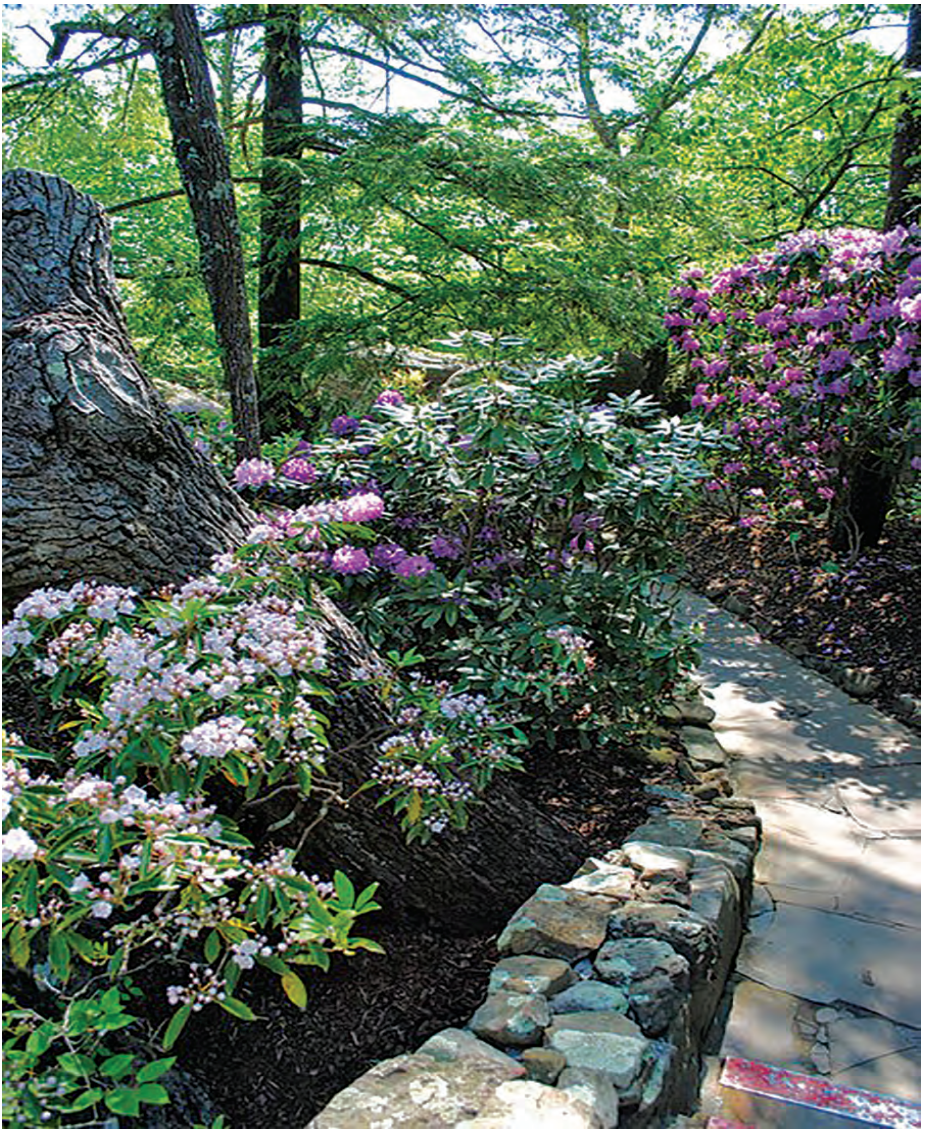
View from Rock City Garden.

Many of you are familiar with the legendary Azalea Balds in the Appalachian Mountains. There are also a lot of other locations in the Southern Appalachians and foothills that are contributing to our growing but very incomplete knowledge about our native azaleas. Charlie Andrews, President of the ARS Azalea Chapter in Georgia, has visited and studied a lot of these lesser-known sites. Charlie will be talking with us about what may be described as natural hybrids of our extensive range of native azaleas. Charlie thinks these are plants in a rapid state of evolution and he will challenge our conventional thinking with his observations and conclusions.

Friday evening's activities will conclude with a little time to shop the plant sale. In addition to the previously mentioned stewartias, we plan to have some of the Southern Living Southgate Rhododendrons available in various sizes for purchase. These have proved highly successful for gardeners in our area on a range of soils including cherty clay. Our experience is once they are established, you can kill them, but you have to work at it. We also plan to have some native azaleas available for purchase. We also plan to have a modest selection of garden-worthy native plants that are special to our region.

**Saturday is Tour Day!**

We board the bus at 8 AM (Eastern) for a short ride to the historic Saint Elmo neighborhood at the foot of Lookout Mountain. Here we will make a brief stop at the garden of Scott and Olga Drucker for coffee and



Pathway at Rock City Garden.

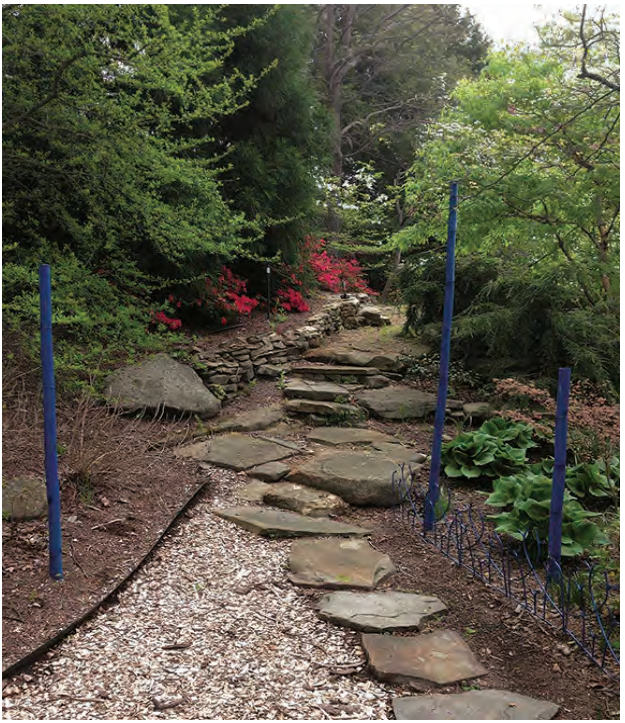
doughnuts (save room when you have breakfast at the hotel). Scott and Olga are professional garden designers with a growing list of clients. They have established a beautiful cottage garden with a discernable English feel on a typical residential lot in a historic neighborhood. This garden continues to evolve and while small, it offers us many design tips on how to effectively use space and borrow or block views from adjoining properties and enhance the garden. After our brief visit with Scott and Olga, we travel up Lookout Mountain to visit Rock City Gardens. This commercial garden is a classic historic tourist attractions

A rhododendron truss at at Rock City Garden.

that is very well known for its many years of signs painted on thousands of barns across the eastern United States. Rock City Gardens was started about 85 years ago by a German immigrant and her husband who was a real estate developer. It is a fascinating site to visit. Situated along the eastern bluff of Lookout Mountain, the garden consists of an easily walkable paved trail trail (and a handicapped-accessible alternate path) that leads you through deep natural crevasses in the rocks from which soar mature trees, rhododendrons, mountain laurels and companion plants as they reach for the sky. These narrow chasms open onto broader garden views and then lead to grand vistas overlooking the Blue Ridge Mountains in the distance. We are not sure if you can really see seven states from Rock City as they claim, but we know you can see a beautiful garden that puts a really unique twist on the concept of a rock garden. The garden is well labeled and relies heavily on the use of "ironclad rhododendrons" derived from early crosses with *Rhododendron catawbiense* throughout the plantings. The rhododendrons, kalmias, and azaleas should not be in bloom when we visit, but with some seasonal fall color, you should really enjoy your time in Rock City. At the end of this visit, you have the opportunity to purchase an iconic Rock City birdhouse in the gift shop to commemorate your visit to this American landmark.

After visiting Rock City, our bus descends the west side of Lookout Mountain to take us to Reflection Riding Arboretum and Nature Center. Reflection Riding was initially established along the foot of Lookout Mountain as a private arboretum designed in the European style to be toured and viewed from riding on horseback. Today the large Arboretum is operated as a non-profit. There are still horses in the meadow, but the extensive arboretum horse trail has been replaced many years ago with a leisurely driving lane for our modern version of the horse. Unfortunately, this lane will not accommodate our bus, but there is much to see from the entrance facility where we will enjoy a box lunch. Reflection Riding will also open their extensive on-site native plant nursery for you to shop among their wide range of difficult-to-source nursery-propagated perennials and woody plants.

From Reflection Riding, we take a bus ride up nearby Signal Mountain to visit the sprawling rhododendron garden developed by chapter member Jimmy Wooten. Jimmy and his late wife Ilona collected and planted many rhododendrons in their woodland garden over decades along with many other companion plants such as ferns, viburnums, hostas, ephemeral wildflowers and



Path at the Dolan Garden.

many more. There is a certain patina in this woodland garden that only develops over time as plants mature and seedlings of companion plants colonize suitable nearby areas and display themselves in new arrangements. This effect can only be achieved with time and a little luck. Now, most of these rhododendrons are mature and provide a marvelous living library of diverse rhododendron selections that have stood the test of time in our area.

After visiting the Wooten garden, we will make a brief drive-by visit to view a nearby typical habitat of our native lowland form of *R. catawbiense* f. *insularis,* which occurs along many mountain stream corridors on Signal Mountain.

Our last visit will be to Dolan Gardens, the home of chapter member Frances Jones. This amazing five-acre (two ha) garden rambles along the bluff of Signal Mountain with beautiful views of downtown Chattanooga, surrounding mountains and the entrance to the Tennessee River Gorge, where the massive Tennessee River has carved a canyon through the Cumberland Plateau. These views are just the setting for

The Dolan Garden.

a large rambling garden chock full of rare, unusual and beautiful plants that are well displayed and labeled. This is a special private garden that has been developed over time by a keen and knowledgeable plantswoman. There will be adequate time to walk the garden paths, enjoy the exceptional views of the city, visit with Frances and appreciate the extensive plant collections and skill with which they are blended into a beautiful garden.

Rock outcroppings at Dolan Garden.

In the South, where two or more are gathered, at some point, there should be a barbecue. Frances has a large covered patio seating area in her garden and this is where we will end our Saturday field trip with a catered barbecue dinner prepared for us by a local restaurant. (There will be some options available for different diets). This casual garden dinner will give us an opportunity to visit together and discuss the sights we have enjoyed as the fall twilight brings out the lights of the city below us.

After the bus ride back to our hotel, the plant sale will briefly reopen for any last minute purchases. No additional events are planned at the hotel.

**Sunday**

For those of you who can stay with us for the day or part of the day, we will host individual drop-by open houses at some of our other local members' gardens. You will be provided maps and brief descriptions of what to expect at each garden when you pick up your egistration packets. You will be warmly welcomed to visit and explore these diverse gardens. Private gardens are individual expressions of a special form of art and they are all different and each offers different things to learn.

**Please come and enjoy our gardens and community.**

*Hale Booth is the ARS District 10 Director and a member of the Tennessee Valley Chapter.*

# Society News

***American Rhododendron Society Brief Summary of Board of Directors Meeting Monday, May 21, 2018, Bremen, Germany (Revised June 4, 2018)***

1. Welcome
   President Ann Mangels welcomed 19 board members and committee chairs to the meeting. The Secretary confirmed that there was a quorum.
2. Van Veen Nursery
   Brenda Ziegler and Mike Stewart presented background information and current challenges as the Portland Chapter takes over as owner of the nursery bequested to them by Kathy Van Veen. As a part of the bequest, Kathy required that the property be subject to a conservation easement to ensure that the nursery continues its operation. The Portland Chapter is asking that the ARS take on the role of Grantee to enforce the easement so that the owner of the land (Portland Chapter) continues to use the land as intended. The ARS will be indemnified by the owner from any claims from the property. There will be no costs to the ARS and the Portland Chapter will provide reports on a regular basis on activities at the nursery.
   Moved by Hale Booth and seconded by Rose Nicoletti that the ARS accept the grant of a conservation easement on the property occupied by the Van Veen Nursery.
   Carried Unanimously.
3. President's Report – Ann Mangels
   -- Don Smart was confirmed as Associate Editor of JARS to replace retiring Sonja Nelson.
   -- A lawyer to provide pro bono advice to the ARS is being sought.
4. Highlights from Executive Members, District Directors and Committee Chairs:

- A grant of $2929 was approved for the Hinsdale Garden near Reedsport, Oregon to upgrade its irrigation system.
- An ad hoc committee of Steve Krebs and Linda Derkach was struck to consider possible enhancements to the Rhododendron of the Year Awards.
- Ken Webb reported that convention pre-tours were going very well, and that local members of the ARS chapters in the Netherlands, Denmark, Sweden and Germany were coming out to meet members from US, Canada, New Zealand, Australia, France, Scotland, Japan and Russia.
- Steve Krebs shared that the ARS 2021 convention may be held in Montreal. However, final approval has not yet been given.
- The online brochure entitled A Guide to Planting & Care will be updated.
- Dave Banks, ARS Treasurer provided Income and Expense statements that showed the society to be financially healthy. The draft budget for 2018 – 2019 was approved.
- There may be an increase in the cost of liability insurance for US chapters. US chapters were encouraged to apply annually for their tax exempt status. Failure to do so for three years will result in loss of tax exemptions.

- Long term investments are healthy and increasing in value.
- Overall membership in the ARS is down, and chapters are encouraged to work with the new Membership Committee Chair to retain and attract new members.
- Concern was expressed by several members that the cost of travel to meetings is a deterrent. Chapters are changing how often and when they meet to adapt to members' needs.
- Glen Jamieson announced that the second issue of Rhododendrons International is on line and focuses on ARS Chapters outside the US. This online publication is sent to all rhododendron societies in the world.
- Current members are reminded that if they choose to re-new membership on line, they should do so using arsoffice. org and not the public side of the website.
- Chris Hodgson told us of the opening of the Greig Species Rhododendron Garden in Qualicum Beach, BC. Two chapters on Vancouver Island are holding a one-day mini-conference with five outstanding speakers on Oct 28, 2018, In Parksville, BC.
- Much concern was expressed about the cost of travel to ARS board meetings, particularly for the fall meeting. We considered suggestions about how we can use teleconference facilities to reduce costs and include people not able to travel to a meeting. A trial teleconference meeting will be arranged for the fall to see if this might work. This will not eliminate the in-person meeting already scheduled for Chattanooga. Many other societies are using teleconference capabilities.
- Brenda Ziegler noted that the ARS convention in Portland, Oregon will be held April 30 to May 3, 2020.
- Tim Walsh said that the vireya garden of Mitch Mitchell on the island of Hawaii is being maintained by his son.
- Steve Henning invited us all to the 2019 Spring Convention in Philadelphia to be held May 15 to 19.
- Hale Booth invited us all to the Fall 2018 conference in Chattanooga, Tennessee. Speakers will focus on related plants such as stewartia, trilliums, natural hybrids of native azaleas. A full day tour on Saturday will include gardens, local attractions and a barbecue.
- Laura Grant told us about "pop-up gardens" whereby chapter members can invite folks via email on fairly short notice to visit their gardens when the weather and the bloom are in perfect harmony.
- Steve Henning reminded us to use amazon.arsstore.org.
- When Ken Webb moves to the position of President of the ARS next May, the new Western VP will be John Stephens.
- The Privacy Policy utilized by Bob Weissman to protect members' personal information on line was adopted by the board.

*Submitted by Linda Derkach, ARS Secretary*

# Society News

## In Memoriam: Jay Whitney Murray

Jay Whitney Murray passed away January 13, 2017 at age 94, when the ARS lost an exceptional friend. Jay is survived by her husband Bob. Jay was known to many ARS members as she was the North American Registrar for both the American Rhododendron Society (ARS) and the Royal Horticultural Society (RHS) from 1985 until her retirement in 2012. In that capacity, over 27 years she received and processed many thousand registration applications for rhododendrons and azaleas named by North American registrants. Her registration of plant names required careful attention to detail and long hours. Together, they created a computer database of more than 25,000 registered and unregistered names of rhododendron and azalea cultivars that greatly improved the registration process. With her extensive knowledge of taxonomy and terminology, she was also an invaluable proofreader for the ARS Journal and the Seed Exchange catalog. However, their contributions went far beyond the registration process, as their efforts extended to helping hybridizers in the development of new plants, in taxonomic studies, and in the creation of a method of systematizing associated data in a digital database when digitization was in its infancy.

Jay ceded her rhododendron garden to the abundant deer and ticks many years ago after a bout with Lyme's disease, but her boundless enthusiasm for the genus Rhododendron was not diminished. Jay retired due to rapidly diminishing eye sight, not loss of enthusiasm. There are few if any ARS members who have contributed more to our society as evidenced by the awards Jay individually and Jay and Bob jointly have received. They are listed below with largely verbatim rationales for the awards. A Bronze Metal was awarded jointly to Jay and Bob in 1979 by the Princeton Chapter in recognition of their contributions there in many ways, including organizing and participating in regional plant exchanges, truss shows, annual plant sales, and as various officers. An ARS Gold Metal was awarded to Jay and Bob in 1999 as for more than two decades, they both provided exceptional service to ARS members. Bob served as chapter president, the first director for District 7, and as an ARS treasurer. Jay also served as chapter treasurer and was also heavily involved in chapter activities.

The Loder Rhododendron Cup, awarded annually by the RHS Rhododendron, Camellia and Magnolia Group, was awarded to Jay W. Murray in 2006 in recognition of the value of her work to the field of horticulture. She was also a determined promoter of rhododendron cultivar registration, writing articles and speaking at conventions. The ARS Pioneer Achievement Award was awarded to Jay and Robert Murray by the ARS in 2013. Recognizing the breadth, scope and fundamental value of this legacy, Jay and Bob are true pioneers in this domain.

Jay and Bob were among the first members of the now defunct New Jersey Chapter and were also members of the Princeton Chapter since 1964, shortly after it began in 1962. Jay was born and lived nearly her entire life in New Jersey, mostly in Colts Neck, and was a graduate of Rutgers University with a BS and of Newark College of Engineering in mechanical engineering. She worked as an engineer at a number of companies, including the Titanium Division of National Lead

where she managed the electron microscopy facility. On a more personal note, Jay brought greeting cards to every Princeton ARS meeting to be signed by members and which were then sent to those who were ill or unable to attend.

When we moved into a rhododendron garden and house in Colts Neck, NJ, Jay and Bob kindly invited us to ride with them to monthly Princeton Chapter meetings.

*Melinda and Lester Martin, with gratitude for input from across the ARS.*

## In Memoriuam: Tom Wynn

The De Anza Chapter is very sad to announce the death last November of our beloved member Tom Wynn.

Tom was an original member of this chapter that was formed after the San Mateo Chapter closed. Over the years, Tom became President, Vice President, Treasurer and Show Chairman–and not just once at these positions, but several times. During the 1991 Convention in Oakland, he was the Registrar. This was followed by his leadership role in the 1997 Western Regional in San Jose. Once more Tom was called upon to be in the committee for the 2007 Convention in San Francisco and was responsible for the very beautiful Truss Show.

We will miss his knowledge of rhododendrons as we all relied on him for identification and culture. But mostly we will miss his humor, good will, and friendship.

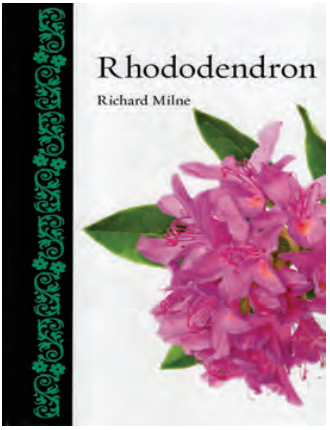
*Nan Ray*

*I grow plants for many reasons: to please my eye or to please my soul, to challenge the elements or to challenge my patience, for novelty or for nostalgia, but mostly for the joy in seeing them grow.*

David Hobson

# Book Review: Rhododendron, by Richard Milne

Reviewed by
Steve Henning
Fleetwood, PA




***Rhododendron***
Richard Milne, Reaktion Books, London, England. 224 pages, 70 color, 30 halftones. 5.5 x 1 x 8.5 inches, hardbound.

In this beautifully illustrated volume, Richard Milne shows the many ways that rhododendrons have influenced human societies. Over one thousand species that rhododendrons have influenced human societies. Over one thousand species exist in the genus Rhododendron, ranging from rugged trees on Himalayan slopes to rock-hugging alpines, and delicate plants perched on trees in rainforests.

Chapter 1 explores the promiscuous behavior of rhododendrons, since each of the 1000 species can cross with many of the other rhododendron species. The rhododendron's propensity towards sexual infidelity makes it very popular in horticultural breeding programs. However, there are limits on which species can cross with which other species. Hybridizers face the challenge of choosing the most promising viable crosses. In the wild, evolution combined with natural hybridization has enabled the genus to adapt and migrate over millions of years.

Chapter 2 follows the constantly changing classification of rhododendrons and azaleas. Recent results of DNA studies enable us to follow the path that rhododendrons followed in the millions of years they have evolved. In fact, the evolution of rhododendrons has assisted scientists in following the drifting of the continents. Although the natural range of rhododendrons is currently confined to the northern hemisphere, rhododendrons were on continents before the continents drifted into the northern hemisphere. Equally interesting is the beauty and variety of hybrids developed in nurseries after the hybridization of rhododendrons and azaleas became common place.

Chapter 3 shows how early merchants delighted in bringing back exotic plants. This led to merchants bringing botanists to find and care for these treasures. Eventually botanists, merchants, missionaries and other early

explorers became plant collectors, trying to satisfy the tastes of sponsors who were eager to obtain new and novel plants, especially rhododendrons.

The many species introduced by plant explorers further fueled the efforts of nurseries to combine the best qualities of various species through hybridization. Rhododendrons were initially very expensive, but soon became widely available.

Chapter 4 demonstrates how the beauty of the approximately 250 species of tropical rhododendrons, the *vireyas*, led to an intense interest in greenhouse rhododendrons. Spice merchants brought back vireya rhododendrons that caught the interest of nurseries. With the development of the Wardian Case, a type of terrarium, merchants and botanists could bring back live plants. Work hybridizing the vireyas produced many compact plants with vivid colors. Since *vireyas* grow in the tops of trees in jungle regions, they are still being found in the Malay Archipelago.

Chapter 5 investigates how rhododendrons were known and appreciated in China for centuries. After China opened up its borders to traders in the mid-18th century, explorers, missionaries and merchants arrived in China. They were constantly discovering new species of rhododendrons. Plant collectors became intent on bringing back seed for their sponsors in Europe and North America. Not only have explorers brought back seed, they have found fossil records which add a time-line to the evolution of rhododendrons. Scientists have matched fossil evidence with DNA studies to follow the evolution and migration of rhododendrons over millions of years. Rhododendrons were in central Europe, China, and eastern North America before the Himalaya Mountains were formed. *R. camtschaticum*, which is found in Alaska, was one of the first species to split off. When Mao took power, foreign exploration stopped. Alertly, botanists in the West made connections with Chinese botanists. This has led to more Chinese botanists being interested in the study of rhododendrons. This eventually led to joint plant exploration by Western and Chinese botanists that continues today.

Chapter 6 reveals the medicinal uses and toxicity of different rhododendrons from ancient times through to modern times. Rhododendrons can poison livestock and intoxicate humans, and its narcotic honey has been used as a weapon of war. They can also be used as an herbal remedy for an astonishing range of ailments. Many of the powers attributed to rhododendrons have been confirmed by modern medicine and science. The most famous story is of the military use of mad honey made from the nectar of rhododendrons in 69 BC, but the Nepalese have discovered a way to enjoy honey from rhododendron nectar. Sheep in Scotland have learned not to eat *R. ponticum*, even though it is widespread. These effects have caused rhododendrons to gain a prominent role in myths and traditions of several Chinese ethnic groups. Medicinal uses

of various rhododendrons are found in both Eastern and Western medicine. Prior to the reformation, gruit ales were made with *R. tomentosum* and *groenlandicum* for their intoxicating effects. This practice was eventually banned entirely in Germany in 1855.

Chapter 7 follows the impact of rhododendrons on human culture. This is especially true in southwest China where the Yi people hold their Torch Festival, offering rhododendron flowers to their Flower God. Every year, at the height of the rhododendron flowering season, this minority people will put on their holiday costumes, light a fire, sing and dance, and warmly welcome guests. Numerous Chinese folktales link the plant with tragedy and death. Some Chinese legends describe a tragic figure that turns into a cuckoo whose song recalls its tragic life and whose mouth spills blood which sprouts into rhododendrons. In Nepal, *R. arboreum* is a female god that bursts into beautiful bloom. Daphne du Maurier used the red rhododendron as a symbol of blood in her best-selling novel Rebecca. Milne enumerates other instances where rhododendrons and azaleas appear in literature.

Chapter 8 reports that there can be too much of a good thing. *R. ponticum* has run wild across the British countryside, but the full story of this invader contains many fascinating surprises. One is that *R. ponticum* was native to Ireland 400,000 years ago. Another is that it was introduced on purpose, and the common wild variety comes from an area in Spain and Portugal where the original native form is struggling. It easily establishes itself in areas where the soil is disturbed, much as Scotch broom does in the Pacific Northwest. Today, *R. ponticum* is an even greater problem today since it is a carrier of *Phytophthera ramorum*, sudden oak death. Its negative economic and ecological impact has led to efforts to eradicate *R. ponticum*, but also permitting it to be left on limited sites where its beauty can be appreciated. Obviously, this leads to charged discussions.

The last chapter, chapter 9 is a look at the ecological status of rhododendrons and their possible plight in the future. We have detailed records from plant collectors of where the various species of rhododendrons were found. More and more, when plant explorers return, the rhododendron species are no longer there. Rhododendrons are being cleared to make room for agricultural development. Not only are known species disappearing, many species that had not yet been discovered are thought to be destroyed as well. The work of plant collectors to bring these species to other parts of the world provides a safety net for these species, but does not allow for the natural evolution that was occurring in the wild. In "captivity," the natural diversity of a species in the wild is lost. Fortunately, native habitat of some rhododendrons is in areas where agricultural development is

not practical.

Throughout the world, many botanical gardens are working to collect and protect different forms of the known rhododendron species. Milne concludes: "The future of rhododendrons is in our hands."

Milne's book, "Rhododendron", is not a gardening book or a horticultural book, but rather a very readable and up-to-date book of interesting facts about the genus Rhododendron that most other rhododendron books gloss over if they mention them at all. This is not a reference book, but a book of interesting information that is especially great for those of us with a keen interest in rhododendrons.

The publisher is correct when it says, "Milne relays tales of mythical figures, intrepid collectors, and eccentric plant breeders. However much you may think you know about the rhododendron, this charming book will offer something new." [224 pp, 70 color plates, 30 halftones.]

The book's retail price is $27, but it is discounted at the ARS Store (www.arsstore.org) in the Amazon or Walmart stores.

*Steve Henning is a member of the Valley Forge Chapter and is currently Director for District 8.*

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*Gardening simply does not allow one to be mentally old, because too many hopes and dreams are yet to be realized.*

Allan Armitage

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# That's Why The Lady Is A Tramp

David G. Leach North
Madison, Ohio

(modified from *1982 JARS 36(4)*)

Readers of this and other publications on rhododendrons here and overseas may remember several articles on rhododendron poisoning published over the years. One, published in "*Rhododendron Information*," entitled "The Two Thousand Year Curse of the Rhododendron," was a detailed account of the historical impact and medical record of lethal honey produced from rhododendron nectar, and of equally deadly rhododendron tea prescribed by 18th and 19th century doctors, mainly for the cure of arthritis. I concluded the article, "...the hazard to humans from any source but honey is infinitesimal." However, the reassurance was not entirely justified, as later information has demonstrated.

One reason is that rhododendron poisoning is extremely difficult to diagnose, and even more unlikely to be identified by an autopsy. The poisonous compound is acetylandromedol, now more often called grayanotoxin, which produces a profound depression of blood pressure, shock and death. Such fatalities occur routinely each year overseas, especially on the shores of the Eîlack Sea, where honey is produced by bees from the nectar of *R. flavum* (syn.: *luteum*). In the United States, poisonous honey appears only intermittently in about six-year cycles when bees are repelled by flowers near ground level wet from protracted rains. Alternative sources of nectar are then sought, especially *R. occidentale;* the honey produced from the nectar of that azalea can be extremely dangerous. Each spring, in the doctors' lounges of some hospitals in the Pacific Northwest, bulletins are posted as reminders to consider rhododendron poisoning as a possibility for patients with undiagnosed illnesses.

Cases of rhododendron poisoning continue to be noted, and accounts of allergic reactions suffered by propagators handling cuttings, especially of lepidotes and of azaleas, and of urticaria ("hives") contracted by susceptible persons removing faded flowers trusses or even brushing against rhododendrons in flower. The cultivar, 'Pride of Leonardslee', derived from *R. fortunei* × *R. thomsonii* is particularly virulent in its concentration of acetylandromedol. The well known English horticulturist, Geoffrey Gorer, at Haywards Heath in Sussex, wrote that his gardener must avoid any contact with 'Pride of Leonardslee' lest he be afflicted with nettle rash, as the British call it, of the utmost severity. There is no proof that acetylandromedol in rhododendrons also acts as an allergen, but there seems to be a strong association between species and hybrids known to contain a high concentration of it, and the appearance of urticaria among people who are

exposed to these rhododendrons.

Professor Fang Wen-pei, at Szechwan University, told me that *Rhododendron molle* has been known to be poisonous since some time before 800 to 1000 A. D. An authoritative herbal published in the Han dynasty refers to its use in China as a poison, and, in very small quantities, for medicinal purposes.

Natives of Appalachia often believe that rhododendron foliage is innocuous because deer browse on it when other forage is not available in the winter. However, deer produce in their stomachs an enzyme that renders acetylandromedol harmless. Horses which consume the more virulent species and hybrids die quickly, and most knowledgeable farmers are careful to keep their cattle away from rhododendrons when grazing is poor. Perhaps the most dramatic account of contemporary human poisoning was sent to me by Robert Hebb, Director of Horticulture at the Cary Arboretum, Millbrook, New York. He was leading a group of American gardeners through the rhododendron collection at Inverewe, Scotland, when he stopped to take a close-up photograph of the pendant salmon-pink flowers of 'Lady Chamberlain'. As he jostled the branch on which they were borne, two drops of nectar fell on his finger. Although he had read at least one of the articles on rhododendron poisoning, he was preoccupied with his camera and he unthinkingly removed the sticky nectar by putting his finger in his mouth.

Hebb knew almost at once that he had inadvertently created a serious problem. Within one to two minutes the pleasantly sweet tasting nectar produced a tingling "pins and needles" feeling in fingers and toes, accompanied by the numbness and lack of control that occurs when a limb, deprived of blood circulation, "falls asleep." Within five minutes after ingestion of the nectar, his coordination was so impaired that he had great difficulty walking to a nearby bench to rest. He felt weighed down by an overwhelming depression, and his mind then became disoriented.

Hebb's account suggests that his thought processes were disassociated. He had a suffocating foreboding of death; irrationally, he dreaded discovery in his condition by his companions at the same time that he imagined himself floating in space. He relates in his letter to me how he was unable to speak intelligibly. The syllables of words were not in correct sequence; "rhododendron" became "doderendron."

The acute symptoms lasted 20 to 25 minutes. He then returned to his tour group, walking with some difficulty. Speaking slowly and with intense concentration, he was able to explain his pale and shaken appearance. In another 20 minutes he became extremely thirsty and then hungry. His mind cleared. An hour and 40 minutes after the incident he became drowsy and a headache that had earlier developed intensified. After sleeping for about one hour he awakened without symptoms of any kind.

Many of these are the classic symptoms of acetylandromedol poisoning, first described 2400 years ago in Anabasis by Xenophon, after his soldiers had eaten poisonous honey. 'Lady Chamberlain' was doubtless named for a benign and gracious peeress of faultless character, but her wayward predilection makes the Lady truly a femme fatale, if not a tramp. She was bred from *R. cinnabarinum*, a species so toxic in its tissues that browsing cattle, even goats, are commonly killed in its Sikkimese homeland.

Acetylandromedol produces a narcotic action upon the higher centers of the brain, as it simultaneously and progressively causes dypsnoea, paralysis, convulsions and, finally, respiratory failure. As little as 0.28 milligrams kills a rabbit in a few hours. It is apparent that Mr. Hebb was an involuntary practitioner of brinksmanship. Several more drops of ingested nectar would almost certainly have been fatal. His graphic account of his brush with death is unique among survivors of rhododendron poisoning.

As a matter of perspective, it seems appropriate to point out that many plant genera are poisonous in whole or in part, including those that are grown for ornamental purposes. The venomous monkshood (*Aconitum*) is notorious; the common English yew (*Taxus baccata*) contains an alkaloid, taxine, which is rapidly absorbed and causes sudden death; buxine, found in boxwood (*Buxus*), causes respiratory failure; and oleander (*Nerium oleander*) is deadly in all of its parts. The list is long. Even the eating of green and sprouting parts of potatoes may cause severe poisoning.

So rhododendrons are far from alone as potential killers. The antidote, as always, is foreknowledge and a continuing awareness of the peril of ingesting any part of them. Although not all species and hybrids are poisonous, and, in fact, the flowers of some are candied in honey by natives of the Himalaya, few hobbyists will want to play Russian roulette.

Readers who are interested in obtaining more information of poisoning by acetylandromedol in honey, and of the misuse of rhododendron extracts in medicine, can go to Steve Henning's rhodos and azaleas page on toxicity http://www.rhodyman.net/rhodyntox.php, and to websites such as https://www.poison.org/articles/2015-mar/azaleas-and-rhododendrons and http://www.thepoisongarden. co.uk/atoz/rhododendron.htm.

*David G. Leach, a plant geneticist, authority on horticulture and internationally renowned breeder of ornamental plants like hybridized rhododendrons, magnolias and azaleas, died in 1998, at 85 at his home in Madison, Ohio. His best known book was Rhododenrons of the World (1961), a bible for aficionados. The Holden Arboretum in Kirtland, Ohio, has a sizable garden of Leach hybrids and houses the David G. Leach Research Station, his legacy to the arboretum, which carries on the plant research and hybridization he began in the 1950s. Much of Mr. Leach's writing grew from his own study of plants, particularly in Southeast Asia.*

**Reference**

Leach, D. 1961. *Rhododendrons of the World and How to Grow Them.* Scribner, NY: 544 pp.

# A Century of Rhododendrons at Longwood Gardens

Peter Zale
Philadelphia, PA

In 1906, industrialist Pierre S. du Pont purchased the property that would serve as the canvas for the creation of Longwood Gardens in Kennett Square, serve as the canvas for the creation of Longwood Gardens in Kennett Square, Pennsylvania. His initial motivation for purchasing the property was to conserve a unique collection of mature trees originally amassed and planted by the Peirce family in the late 1700s and early 1800s. The 36-year-old du Pont, like his family members before him, maintained a family interest in botany and gardening and relished the opportunity to create gardens of his own. From the time of the purchase, he meticulously researched, designed and developed many of the garden spaces that nearly 1.5 million yearly visitors associate with the modern Longwood Gardens. Although his primary interest was in formal French and Italian-inspired gardens replete with ornate fountains and trimmed hedges, his savvy as a plantsman and connoisseur grew, and he filled the gardens with plants from around the world. Following the horticultural trends of his time, rhododendrons of many kinds soon became some of his favorites and began to populate various garden spaces.

In addition to being an accomplished businessman, inventor and gardener, du Pont was also a meticulous record keeper. Details of all the plants that he purchased during the development of Longwood Gardens were kept and were ultimately housed at the Hagley Museum (the du Pont family Museum) in Wilmington, Delaware. A surprising number of the plants he purchased are still found in the gardens, but one shortcoming of his record keeping was the lack of maps to accurately describe the garden locations for many of the plants he purchased. To retrace some of the plants purchased and planted by du Pont still extant in the gardens, the "Hagley Project" was initiated in an attempt to match du Pont's original purchases to actual plants. This project started with the compilation of all of the invoices of all of the plants that Pierre and his wife, Alice, ever purchased or otherwise received during his lifetime. The invoices

were transcribed into a digital database that ultimately swelled to 37,846 entries. Numerous plant groups figured prominently, including boxwood, lilac, rare and exotic trees, and rhododendrons of many types. In fact, over 900 of the entries were from the genus Rhododendron–a large number considering that many rhododendron species were only just becoming known in horticulture at the time.

Du Pont was well connected and had the resources to obtain the finest rhododendrons from around the world. He received allocations of Sino-Himalayan rhododendrons from golden age plant explorers such as E.H. Wilson; from famous English plantsmen, nurseries and hybridizers like Knap Hill Nursery and Walter Charles Slocock stationed on the Bagshot Sands of Surrey in Southwestern England; British Lord Lionel de Rothschild; and from progressive Pennsylvania nurseries such as Thomas Meehan & Sons. He benefitted from a truly exciting time in the history of plant exploration and horticultural innovation, but also suffered from the lack of knowledge and skill for growing many of these choice introductions. There was little information on how to grow and maintain these species in cultivation in the Eastern U.S., and many succumbed to the vagaries of the southeastern Pennsylvania climate: cold winters and hot, humid summers. This did not sway du Pont from his quest to continue to prominently display and enjoy rhododendrons.

The crowning achievement of his passion for rhododendrons was the construction of the Azalea House–designed by E. William Martin and completed in 1928. The uncertainty of growing rhododendrons outside prompted du Pont to build this climate-controlled conservatory setting where the difficulties of the climate could be ameliorated. For many years, robust collections of Belgian Indica azaleas, Kurume azaleas, species and hybrid elepidote rhododendrons and others flowered marvelously in the structure. His dedication to azaleas in particular was commemorated when a Belgian Indica hybrid azalea was named in his honor–'Pierre du Pont'. From 1971 to 1974, the Azalea House was renovated and when it reopened. it was called the East Conservatory and although rhododendrons were still grown there, increasing attention was given to other plants until rhododendrons were no longer the prominent feature of the space.

Pierre du Pont died in 1954, but he had endowed the gardens, to perpetuate his hobby and provide the means to further develop it into one of the great gardens of the world. Longwood then transitioned from a grand private garden into a public garden, and the first director, Dr. Russell Seibert, a visionary with training at the U.S. Department of Agriculture, was at the helm in this important period in the garden's history. One of Seibert's key contributions was the establishment of the plant exploration program, and his major contribution

to the genus *Rhododendron* was through this program.

In the late 1950s and 1960s, there was a lack of plant diversity in American nurseries. One of the plant groups particularly poorly represented at the time was that of vireya rhododendrons —the rhododendrons from high elevation in the tropics of Southeast Asia and Oceania. Seibert knew of their tremendous potential for conservatory plantings at Longwood and in 1970, sponsored USDA plant explorers Joseph Higgins and Walter Hodge on a trip to New Guinea to collect vireyas and other unknown and potentially useful plants for Longwood. The trip was tremendously successful and resulted in the introduction of many previously unknown rhododendron species. Among them were species such as the deliciously fragrant white flowered *R. konori*, the flamboyantly colored and exceptionally variable *R. zoelleri* and several undescribed species.

Many collections of both of these species were ultimately grown at Longwood, but few made it out of the Research Greenhouses. The lack of knowledge on how to grow these highland beauties in a lowland climate ultimately resulted in failure due to "heat exhaustion." It should be pointed out that during the time when these introductions were being made, container cultivation of plants was in its infancy in the United States, before modern soilless container mixes were commonplace. Even though the original plants may have failed, the metaphorical seeds of an idea were planted. There was renewed interest in vireyas and other warm-temperate and tropical rhododendrons for conservatory plantings, and with new collections being made from new explored regions, there is ongoing hope that vireyas may one day soon feature more prominently in the Longwood Conservatory, the fruition of Seibert's original vision. As a side note, there were many successful ornamental plant introductions from the New Guinea expeditions–most notable were a group of Impatiens species that were first hybridized at Longwood Gardens to create the New Guinea impatiens. Twenty selections, the Circus Series, were released by Longwood in the late 1970s, and today they are an industry standard that adorn the gardens of millions worldwide. Two years later, garden breeding was halted due to intensive interest and the adoption of subsequent cultivar development by the floriculture industry.

Seibert was also a savvy plantsman and paid attention to the great rhododendron hybridization trends and interests of his time. Being a keen plantsman, he sought out rhododendron selections from hybridizers such as Dexter, Gable, and Nearing. These represent some of the most successful rhododendron plantings in the history of Longwood Gardens. Many of them still exist, and these are a testament to the utility and beauty of these introductions. Mature plantings of 'Atroflo', 'County of York', 'Montchanin',

'Westbury' and 'Windbeam', among many others, still excite garden guests every year.

Rhododendrons continue to play an important role at Longwood Gardens, and native American azaleas and their hybrids continue to be a focal point of Peirce's Woods, which is a garden focused on native American plants. This collection forms the backbone of an understory rich in large swathes of native woodland forbs and ferns. Native azaleas are also a "core collection" at Longwood, and azaleas are designated in our plants collections policy as one of a few key groups that will continue to be evaluated in the Research Nursery, where new plants are continually being planted and assessed for inclusion into the gardens proper. New emphasis will be placed on developing a collection of azaleas not currently in the garden and evaluation of plants from the more recent hybridizers including Koon, Sommerville and Strickland. Recent staff plant explorations to Vietnam and the Republic of Georgia have resulted in new and exciting rhododendron introductions that can be used in either indoor and outdoor gardens. Of particular note are the recent inclusion of both large leaf and maddenia rhododendron species that may serve either as conservatory plants and possible substitutes for vireyas.

Over the last century, rhododendrons have played a prominent role in the evolution and development of Longwood Gardens. It is one of few plant groups that transcend changes in staff, design intent, garden renovations and collections development initiatives. Renewed interest in them through recent hybridization trends and plant exploration initiatives are paving the way for another century of these charismatic plants at Longwood Gardens.

*Peter Zale, Ph.D., is associate director of conservation, plant breeding and collections at Longwood Gardens in Kennett Square, Pennsylvania. Longwood, one of the premiere public gardens in America, will be one of the tours of "The Philadelphia Story: Rhododendrons in America's Garden Capital," at the May 2019 International ARS Conference.*

*No occupation is so delightful to me as the culture of the earth, and no culture comparable to that of the garden.*

Thomas Jefferson

# Benefits of Designing Native Azalea Collections

Michael Bamford
Atlanta, GA

Pim Rust
Atlanta, GA

M. Bamford

P. Rust

Should I add another rhododendron into my garden? If so, which one? The sheer magnitude of cultivars can sometimes stall the on-the-spot decision making process at plant sales for even the most enthusiastic gardener! To help alleviate missed design opportunities for garden enthusiasts such as this, including ourselves, we developed customer-ready design collections for our

'Orange Carpet'. Photo by Earl Sommerville.

Azalea Chapter's plant sale of native azaleas that met certain criteria. These collections are series of native azaleas that bloom sequentially for a long bloom season, using harmonious color themes, and which take advantage of height variations. It was a challenging but rewarding puzzle solved by a team that included a native azalea grower, a garden design and color enthusiast, and a plant sale coordinator. Sequential blooming and themed gardens are well known garden design concepts to which native azaleas are very well suited. The wide-array of native species alone can provide blooms from early spring with *R. austrinum* into autumn with *R. viscosum* (previously R. *serrulatum*). Taking advantage of the locally grown deciduous azaleas, we developed three series for our southern gardens. These are the Sunshine Series, the Georgia Moon Collection and the Gulf Sunset.

**Georgia Moon Collection**: This is a series of white-blooming Georgia native species. Fragrant blooms start in April and extend into September. These understory trees provide dazzling fall foliage.

*R. canescens*. Photo by Ted Meredith.

R. colemanii. Photo by Ken Gohring.

- *R. canescens* (Piedmont azalea): Pink buds open to a white bloom in late March through April. R. canescens has a glorious honeysuckle fragrance and will eventually grow over 10 feet (3 m) tall.
- *R. colemanii* (Red Hills azalea): Produces white blooms with a pink flush from May into June. *R. colemanii* will grow over 10 feet (3 m) tall and has a lemony fragrance.
- *R. arborescens* (sweet azalea): Provides fragrant white flowers with red stamens from June into July. This tree-like species will also grow over 10 feet (3m) tall.
- *R. viscosum* (previously *R. serrulatum*) (hammocksweet, swamp honeysuckle): This late-bloomer will provide flowers from August into September.

*R. arborescens*. Photo by Ken Gohring.

R. flammeum. Photo by Ken Gohring.

Producing small white flowers with a clove fragrance, this species will grow up to 15 feet (4 m). Excellent deep foliage with reddish new leaves and a bold fall colors.

**Gulf Sunset Collection:** Bold red and orange blooms appear in late March into August. The varied heights provide maximum visibility for the blooms throughout the season.

- 'Orange Carpet': Only 2 feet (60 cm) tall, this dwarf produces profuse bright orange blooms from late March through April. Discovered by Earl Sommerville in N. Georgia.
- R. *flammeum*: (Oconee azalea): Blooms in late April or May; colors range from bright red to orange. R. *flammeum* typically grow 6 to 8 feet (1.8-2.4 m) tall.
- R. *prunifolium* (plumleaf azalea): Brilliant orange to red flowers in July and August. This species grows 10-14 feet (2-4.3 m) tall.

'Orange Carpet'. Photo by Joe Coleman

*R. prunifolium*. Photo by Ken Gohring

**Sunshine Series:** Soft warm yellow blooms start to appear in late March and extend into July.

*R. austrinum.* 'Strickland's selection #52'.* Photographer unknown.

'Siskin'. Photo by Chris Wetmore.

- *R. austrinum* (Florida flame azalea) 'Strickland #52'*. This variation produces yellow blooms in April, reaches over 12 feet (3.7 m) in height and is moderately fragrant.
- 'My Mary': Fragrant yellow blooms throughout May. A compact grower reaching 6 feet (1.8 m). Named after Mary Beasley and developed by a transplant nursery in Georgia.
- 'Siskin': Blooming in June, 'Siskin' produces large yellow flowers with a dark yellow blotch. This Knapp Hill compact cultivar will reach 6 feet (1.8 m) in height.
- 'Weston's Lemon Drop': Small yellow flowers with light fragrance will cover this azalea in June. Wonderful fall foliage adds to the many benefits of this late blooming Weston cultivar.

Developing these "collections" or series has had unforeseen benefits. Some gardeners appreciated the simplicity of collections and purchased additional plants. Other gardeners studied the collections to discover more cultivars within the genus not previously considered. Still other gardeners discovered opportunities to extend bloom-times, to fit dwarf cultivars into mature gardens, to add fall interest, or simply to add fragrance just by considering all plant attributes within the various collections. Although these collections were developed for the US southeast, the process can be applied o any locale. Developing "collections" also becomes a useful educational tool, and we encourage others to develop additional series.

* = unregistered names.

*Pim Rust and Michael Bamford are members of the Azalea Chapter, and along with Ernest Koone, developed this series of azaleas.*

# Tips for Beginners

(Reprinted from the Oct 2016 Siuslaw Chapter newsletter)

Dear Dr. Rhody,

I just bought a rhododendron. Is there a special way to plant it, and where should I plant it?

First Timer

Dear First Timer,

Your purchase of a rhododendron in the fall is well timed for its planting, particularly on the Oregon Coast. This is a perfect time to plant rhododendrons. Rhododendrons prefer a location that has well drained soil and high broken shade. When you are ready, dig a hole twice as large as the root ball. Mix the soil with equal amounts of bark. Fill the hole approximately one half full with the mixture. If the root ball is dry, it should be soaked before planting. If the root ball contains clay, it is best to wash as much of the clay away as possible before planting.

Container grown plants may be root bound. The root balls should be cut and the roots loosened before planting. Score the roots and then set the plant in the prepared hole. The root ball should be at least 1.5 inches (4 cm) higher than the surrounding soil. Use the rest of the mix to fill in around the plant. Mound the soil around the side of the plant and leave the top of the root ball uncovered so that water will penetrate easily. Pack the soil gently around the root ball and water lightly and thoroughly.

After planting, mulch with bark, wood chips, pine needles or any other organic material to conserve moisture, keep the soil cool and restrict the growth of weeds.

Good planting, Dr. Rhody

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*A perfect summer day is when the sun is shining, the breeze is blowing, the birds are singing, and the lawn mower is broken.*

James Dent

# Rhododendrons For Beginners

## *The deciduous azaleas of Rhododendron subgenus Hymenanthes*

Glen Jamieson
Parksville, BC,
Canada

Photos by Photos by Don Hyatt except as noted.

In my first article on "Rhododendrons for Beginners" (Jamieson 2018), I explained what the different rhododendron group names (rhododendrons, azaleas, maddenia and vireyas) referred to. In this article, I discuss how the deciduous azaleas are related to other rhododendrons and to each other. Deciduous azalea species are naturally most common in North America, and virtually all rhododendron growers in the east either have them in their gardens or have seen them growing wild, where they put on spectacular floral displays in the spring. While there is only one species growing wild in western North America, many western gardeners at least have deciduous azalea hybrids, both for their impressive flower colours and for their ragrance. I therefore thought it would be interesting to discuss these wonderful rhododendrons in more detail.

The *Rhododendron* subgenus *Hymenanthes*, which includes the large

*R. molle* subspecies *japonicum*. *Photo by Susan Lightburn.*

*R. luteum*. Photo by author.

leaf, evergreen, elepidote (without scales) rhododendrons (what most of us think of when we think of a rhododendron), also includes most of the deciduous azaleas. This subgenus contains two sections (a lower level of plant classification), which collectively have about 157 species.

**Subgenus *Hymenanthes*** has a wide distribution in the temperate Northern Hemisphere. The subgenus presently has two sections:

1) **section *Ponticum***: This section includes what many of us think of when we refer to a rhododendron. It is divided into 24 subsections and about 140 species. This section's species are evergreen shrubs and are mostly small to medium-sized trees (up to 20 m (66 ft) tall), with medium-sized to large leaves (very large, over 40 cm (1.3 ft) long, in a few species). The flowers are large, and are produced in terminal trusses of 5-40 flowers. Aspects of this section will be discussed in more detail in a future issue of JARS in another "Rhododendrons for Beginners" note.

2) **section *Pentanthera***: In Goetsch et al. (2005), the subgenus was expanded by scientists studying DNA relationships by adding section *Pentanthera*, which contains most of the deciduous azaleas. However, newer data are showing that the studied genes of rhododendrons in section *Pentanthera* look a lot like those genes in another genetic grouping, even though based on morphology, these two groupings would never be considered close relatives (B. Hall, pers. comm.), which suggests more understanding is needed to clarify systematic relationships.

The current section *Pentanthera* has 18 species. Sixteen of these species are indigenous to North America, with 15 found only in eastern North America.
Section *Pentanthera* (two subsections) This is a group of closely related, highly ornamental deciduous plants that are commonly called "azaleas."

- subsection *Pentanthera* (17 species)
- subsection *Sinensia* (one species, *R. molle* (Japan and China)

**Subsection *Pentanthera***

Sixteen of the seventeen species recognized in this subsection (Table 1) are indigenous to North America.

Table 1: The 17 deciduous azalea species in the subsection *Pentanthera*.

| | | |
|---|---|---|
| *R. alabamense* | *R. canescens* | *R. occidentale* |
| *R. arborescens* | *R. colemanii* | *R. periclymenoides* |
| *R. atlanticum* | *R. cumberlandense* | *R. prinophyllum* |
| *R. austrinum* | *R. eastmanii* | *R. prunifolium* |
| *R. calendulaceum* | *R. flammeum* | *R. viscosum* |
| *R. canadense* | *R. luteum* | |

**Subsection *Sinensia***

This subsection has only one species, *R. molle*, which is native to China and Japan, where it grows from sea level to 2500 m (8200 ft). It flowers in mid-spring, and its blooms are fragrant and yellow with dark red flecks.

**Note:** Another deciduous azalea is also endemic to eastern North America, *R. vaseyi* (Pink Shell Azalea), and is found in both North and South Carolina), but it belongs to a totally different *Rhododendron* subgenus, namely subgenus *Azaleastrum*. This subgenus and its species will be discussed further in another article.

Ignoring their taxonomic relationships, which are currently in flux, the deciduous azaleas in subsection *Pentanthera* are grouped below firstly by flower colour, and secondly by some of their perceived ancestral relationships. The easiest first line of investigation for identification purposes is flower color (Kron 1996). Three main groups can be identified using this criterion:

**1) Orange to red-flowered, with a blotch on the upper corolla lobe, defines two primarily orange to red-flowered groups.**

**A)** The first group, the only species in the subsection not indigenous to eastern North America, has a Tertiary Period (66 to 2.6 million years ago) disjunct (species widely separated) distribution and comprises *R. luteum* and *R. occidentale*.

*R. luteum* (yellow azalea or honeysuckle azalea, ranges from Poland and Austria south through the Balkans and east to the Caucasus) – very fragrant yellow flowers and great late fall leaf colour.

*R. occidentale* (western azalea or California azalea, ranges from Southern Oregon to the mountains of San Diego County, California) -sparkling white or pink flowers, marked with a bright yellow to orange spot, with a delightfully sweet and spicy clove fragrance.

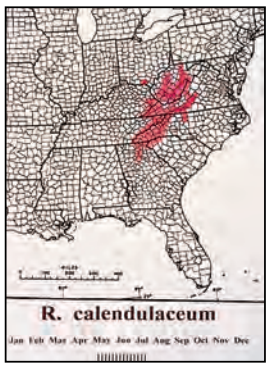
*R. occidentale*. Photo by author.

**B)** The second group comprises *R. austrinum, R. calendulaceum, R. cumberlandense, R. flammeum, and R. prunifolium.*
[**Note:** On the maps that follow, the verticle bars below the months at the bottom show the flowering period.]

*R. austrinum* (Florida flame azalea, honeysuckle azalea, southern yellow azalea, or orange azalea, ranges through Alabama, Florida, Georgia, and Mississippi) – has showy, fragrant flowers in shades of yellow or cream to nearly red that particularly attract hummingbirds. Its flower color varies from yellow to orange with a dark pink tube, and it has a deep yellow to orange blotch on the upper corolla lobe.
*R. calendulaceum* (flame azalea, ranges rom southern New York to northern Georgia) - one of the most spectacular native shrubs with flowers larger than most of the other native azaleas, which are tremendously variable in leaf pubescence and flower color, which is in a range of colors from clear yellow, through shades of orange, to brilliant red. This species flowers early in the spring and is a tetraploid, whereas all other azaleas mentioned here are diploid.

*R. austrinum 'Gold'.*


Range of *R. austrinum.*



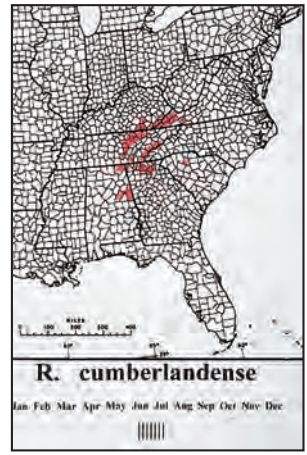

Range of *R. calendulaceum.*

*R. calendulaceum* 'Roan yellow'.

*R. cumberlandense* (cumberland azalea, found in Kentucky, Virginia, Tennessee, North Carolina, Georgia and Alabama.) – moderately sized flowers ranging from yellowish-orange to deep red. Blooms very late, from June into August, after the leaves are fully expanded. Like R. calendulaceum, it's variable in flower color but is usually a darker red.

*R. flammeum* (Oconee azalea, is found from central Georgia to South Carolina) - flowers are not fragrant, open before the leaves have formed and come in shades of yellowish orange, through orange to deep red.

*R. cumberlandense.*

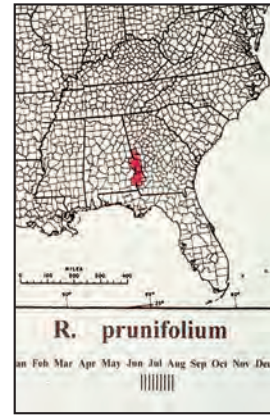



Range of *R. cumberlandense.*


Range of *R fammeum.*

*R. fammeum.*

*R. prunifolium.*



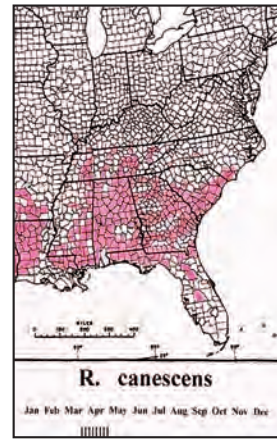

Range of *R. prunifolium.*

*R. prunifolium* (plumleaf azalea, is found on the Georgia-Alabama border) – a late-flowering azalea that has orange to bright red flowers over crisp green leaves in summer to autumn, and tolerates high temperatures well. It is the rarest of the deciduous azaleas.

***2) The pink flowering species* are *R. canescens*, *R. periclymenoides* and *R. prinophyllum*, which are all early flowering species that bloom before the leaves are fully expanded. Their flowers range in color from pale pink (almost white) to a deep cherry color and all lack a blotch on the upper corolla lobe.**

*R. canescens* (Florida pinxter or Piedmont azalea, is found in the Carolinas) – has sticky, slightly fragrant flowers, which bloom before the leaves are mature, grow in whorl-like clusters and are pink (rarely white) and trumpet-shaped. Is very variable in pubescence (hairiness) and in corolla color.

*R. canescens.*




Range of *R. canescens.*

*R. periclymenoides* (pink azalea or Pinxter flower, is found from Alabama to New Hampshire) - The white to pink flowers open in mid spring as the foliage is expanding, and are slightly fragrant. Their stamens are more than twice the length of the corolla tube.

*R. prinophyllum* (the early azalea, rose azalea or roseshell azalea, is found from southwestern Quebec, through New England to the Appalachian Mountains in Oklahoma and Arkansas) - mid- to late-spring flowering, showy with rose-pink flowers that have a delightful fragrance, with foliage that turns nice shades of


Range of *R. periclymenoides.*

*R. periclymenoides.*

*R. prinophyllum.*

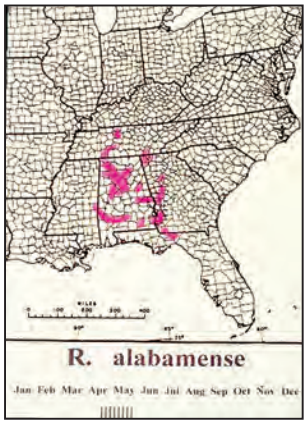

Range of *R. prinophyllum.*

purple in the fall. Like *R. canescens*, is often covered with soft unicelluar hairs, but this species has a broader corolla tube.

**3) The white species are *R. alabamense, R. atlanticum, R. arborescens,***

***R. colemanii, R. eastmanii and R. viscosum.*** **Although the flowers of these species are consistently white, they may occasionally be pale pink or tinged with pink.**

*R. alabamense* (Alabama azalea, found in Alabama and adjacent states) - unique because it has a lemon-spice fragrance and snowy white flowers sparked by a prominent yellow blotch on the upper corolla lobe.




Range of *R. alabamense*

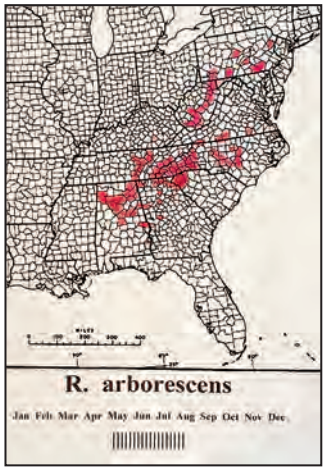
*R. alabamense.*

*R. atlanticum.*


Range of *R. atlanticum.*

*R. atlanticum* (Atlantic azalea or coastal azalea, is found on the coastal plains from Pennsylvania and Delaware south to Georgia.) – have a strong musky-sweet odour, white flowers that are often blushed with pink on the outside, although some may have a yellow blotch. Often less than a meter (three feet) in height, and is spread extensively by rhizomatous roots. Its flowers bloom before the leaves expand.

*R. arborescens* (sweet azalea, is a deciduous azalea found from Pennsylvania south to Georgia and Alabama.) - a late spring and early summer flowering azalea with a sweet-scented aroma and flowers ranging in color from white to pink with red stamens. Foliage turns deep red to purple in fall. The entire plant of *R. arborescens* is smooth and shining due to the lack of soft white (unicellular) hairs that are usually common on plants of *R. viscosum*. Blooms after the leaves have expanded.



Range of *R. arboresens.*


*R. arborescens.*

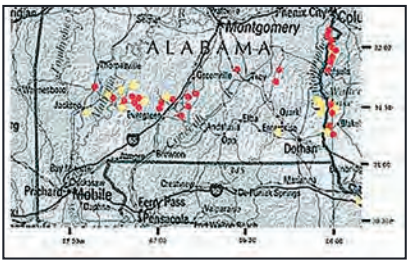

*R. eastmanii.*

*R. colemanii* (Red Hills azalea, from the upper coastal plain of Alabama and Western Georgia) - flower color varies widely from white with a yellow blotch on the upper corolla lobe, to uniformly white, pink with yellow blotch, or uniformly pink, to rarely yellow. The outside of the flowers is covered with gland-tipped hairs and the flowers are fragrant with a sweet, musky or lemony odour.

*R. eastmanii* (May white azalea found in South Carolina) - strongly fragrant flowers open after the leaves have expanded, and has stems covered with hairs, or pubescense.

*R. viscosum* (swamp azalea, or swamp honeysuckle, is found from Maine to Georgia and west to Texas (previously also known as R. serrulatum)) – has fragrant flowers that are generally white to pale pink, and blooms after the leaves have fully expanded. Has white flowers suffused with pink that have a spicy, sweet fragrance and the plant is usually covered with soft white (unicellular) hairs. This species has

*R. colemanii.*




Range: Yellow = *R. colemanii* and Red = *R. alabamense*.


Range of *R. viscosum.*

*R. viscosum var. montanum.*

the most variable flower characteristics of the southeastern azaleas, which has led to many species names that are not now recognized.

**4) The purple flowering *R. canadense.***

*R. canadense* (rhodora) is found in Canada from Newfoundland into eastern Ontario and in the United States, where it occurs naturally from Maine west to high altitudes in the Appalachian Mountains of Pennsylvania and south to New Jersey. Other regional rhododendrons have tubular flowers with five stamens each, while R. canadense has ten stamens within a zygomorphic (flowers can be divided by only a single plane into two mirror-image halves) five-lobed purple and rarely white flower.

Acknowledgements:
Thanks to Don Hyatt and Loretta Goetsch for their constructive comments.

*R. canadense.*


Range of *R. canadense.*

References

Goetsch, L., A.J. Eckert, and B.D. Hall. 2005. T*he Molecular Systematics of Rhododendron (Ericaceae): A Phylogeny Based Upon RPB2 Gene Sequences.* Systematic Botany 30(3): 616–626.

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Kron, K.A. 1996. *Identifying the Native Azaleas.* The Azalean 18(4): 72-74.

*Glen Jamieson, a member and current president of the Mount Arrowsmith Chapter, is the editor of the Journal American Rhododendron Society.*

# A Special Plant Given the Names of Two Honorable Men: *Rhododendron benhallii*

Maria Stewart
Sandy, OR

In the late 1700s, a Scottish surgeon named Archibald Menzies made several Trips on sailing ships to North America, Hawaii and China. On board the ships, he was in charge of keeping the sailors healthy, but he also found time to collect plants. His discoveries include *Pseudotsuga menziesii*

(Douglas fir), *Arbutus menziesii* (Pacific madrone), *Araucaria araucana* (monkey puzzle tree) and *Menziesia* (a genus of ericaceous shrubs). For over two hundred years, these botanical names have been honoring Menzies' discoveries. In the last ten years, however, the entire genus of *Menziesia*, the ericaceous shrubs, has been moved into the genus *Rhododendron*. Today's research has verified this relationship to rhododendrons. One of the shrubs in the genus was *Menziesia ciliicalyx*, but since there is already a rhododendron named *R. ciliicalyx,* a new name needed to be found.

R. benhallii, formerly Menziesia ciliicalyx

In honor of Dr. Ben Hall's work in genetics at University of Washington, Seattle, WA, M. ciliicalyx has been renamed as *Rhododendron benhallii.* Dr. Hall runs the lab that has done much of the genetic work on rhododendrons, and he has been very generous to the Rhododendron Species Foundation in Federal Way, WA, over many years.

Here is more information about *R. benhallii*:

**Native origination:** Japan, in woodland areas.

**Flowers:** small, nodding, urn- to bell-shaped; four to five lobes per flower; white with purple-pink edges; blooms late spring.

**Leaves:** deciduous; leaves are bright green and oval to obovate; about three inches (7.6 cm) long in clusters.

**Habit:** slow growing, bushy, about three feet (0.9 m) wide and tall in maturity.

**Placement in your garden:** Grow in moist, but well-drained, humus-rich, acidic soil in partial shade. Shelter from cold, drying winds. Likes cool, damp summers.

*Maria Stewart is a member and past president of the Portland, OR, Chapter. She and her husband, Mike, also owned and operated the Dover Nursery in Sandy, OR.*

# Rhododendron Calendar

**2018** ARS Fall Conference, Chattanooga, Tennessee. Board Meeting. October 19-21, 2018

**2018** New Zealand Rhododendron Conference, November 3-6, 2018 https://www.rhododendron.org.nz/conference_info_2018.php

**2019** ARS Annual Convention, Philadelphia, Pennsylvania. Board Meeting. May 15-19, 2019, Malvern, PA.

**2019** ARS Fall Conference, Parksville, BC, Canada. Board Meeting. Sept. 27-29.

**2020** ARS 75th Anniversary Convention, Portland, Oregon. Board Meeting. Apr. 30 - May 3, 2020, Portland, Oregon.

## Errata

In the print version of JARS 72, P 96, the statements "However, following phylogenetic analysis, the appropriately named subsection *Pseudovireya* of section *Schistanthe* was raised to section rank, and was split into two geographic section clades:

- Rhododendron sect. *Discovireya*. 48 species, Malesia
- Rhododendron sect. *Pseudodovireya*. Ten species, Mainland Asia" are incorrect.

More recent data has confirmed that *Pseudovireya* and *Discovireya* should each be a subsection of *Schistanthe* (Craven et al. 2011), so there are now only four (previously seven) subsections in *Schistanthe*, and just three sections in *Rhododendron* subgenus *Rhododendron* (L. Goetsch, pers. comm.).

**Reference:**

Craven, L.A., Danet, F., Veldkamp, J.F., Goetsch, L.A., and Hall, B.D. 2011. *Vireya Rhododendrons: their monophyly and classification (Ericaceae, Rhododendron section Schistanthe). Blumea - Biodiversity, Evolution and Biogeography of Plants*. Vol. 56 (2): 153-158(6). https://doi.org/10.3767/000651911X590805.]