



VIREYA VINE

ISSUE #88, November 2009

PUBLISHED BY THE EDUCATION COMMITTEE OF THE RHODODENDRON SPECIES FOUNDATION
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E. White Smith, Editor

A lot of Vireya Vine people have sent me their e-mail address and will get the Vine that way from now on. Also I have sent it by e-mail to some people who I already had their address. And really, if you want a printed/mailed copy just say so, because that's alright also.

How much does the Vireya Vine cost you? **“\$10US forever or if I don't hear from you for 10 or so years”, I will remove your name from the mailing list.** Some people send in a contribution every year or so and if you send a letter to the Vine you get money credit. See the year date on your mailing label, that is the last time you sent money or a letter. Because sending the Vine out by e-mail will save a lot of money in the long run, I plan on still collecting your name and address info in my data base, and then if we get what I think is too much money in the fund I will allocate some to operation of the new Rutherford Conservatory at the Species Foundation. That should sound like a good deal for all of us Vireya Nuts.

[SOOOOO I still need your letters and I still need a lot more e-mail address.](#)
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Vireya Rhododendrons

From Hank Helm Bainbridge Island, Washington August 2009

Of the approximately one thousand species of rhododendrons, one third are generally referred to as Vireyas. As a group, these plants are relatively well understood and can be identified by looking at several of their characteristics. They are easily identified as Vireyas when in flower. Vireyas have scales on parts or all of their parts and belong to the larger group of rhododendrons that are called lepidote. Historically they have been included as a Section of Subspecies Rhododendron. Argent's treatment in his 'Rhododendrons of Subgenus Vireya' published in 2006 elevates them to Subspecies level. Craven, et al in a paper to be published keeps them at the section level.

The first Vireya described was *R. malayanum*, in 1822. Vireyas have been cultivated since 1845 when the Veitch nursery sent Thomas Lobb to SE Asia to collect.

From several species introduced into cultivation, numerous hybrids were created. Several of these are still grown today. With the introduction of vast numbers of rhododendron species from China and the Himalayas, the interest in vireyas declined.

Lately there has been a resurgence of interest and more people are enjoying these beautiful plants. There has also been an increase in exploration to find new species. Existing species are being found in new locations. Over half of the vireyas described have been discovered in the last fifty years.

In their native habitats, these plants can be found from sea level to above thirteen thousand feet (4000 meters). They grow as terrestrials and as epiphytes, often in the canopy of trees where they can obtain light. Like many rhododendrons, they are often pioneers, sprouting in clearings and disturbed areas. As epiphytes, seedlings take root in accumulated debris and moss to become established. The majority of Vireyas cannot stand frost for very long periods. At high elevations, the temperatures may drop below freezing, but usually not far below and the air quickly warms up during daylight. Vireyas vary in size from cushion like species only a few inches tall such as *R. saxifragoides* to tall shrubs or trees up to fourteen feet tall such as *R. konori*.

Although there are exceptions, Vireyas are defined by having tailed appendages at both ends of their seeds. Their flowers lack spots or flecks of pigment color (with the exception of a very few species). Their flowers are on stems or pedicels that grow from a common base and never have a common stalk as found in many rhododendron species. Most vireya species have seed pods whose valves twist after opening to release seed. There are no blue flowers. The shape of the flowers show more variation than any other group of rhododendrons. Vireyas rarely have a proper calyx. As far as is known, they have twenty six chromosomes ($2n=13$).

The modern classification of rhododendron is based on the 1949 work of H. Sleumer who gave the first proper organizational treatment to the entire genus Rhododendron. He revised his classification of vireyas in his 'Flora Malesiana' in 1966. It remains the classic reference work and enabled the species discovered later to be grouped. He used scale types and flower shape and color to divide vireyas into subgroups. Since his work, others have revised and made groupings. Most of the classifications until very recently have been based on morphologic characteristics. The recent development of techniques for analysis of rhododendron DNA have enabled researchers to infer evolutionary relationships in current classifications. Some of those who are currently working on the classification of Vireyas include, Argent, Craven, Hall, Brown, Goetsch and Chamberlain. There will be changes to groupings within the vireyas as continued DNA studies take place. Some vireyas will also be moved to other areas within the genus. Current DNA studies are being carried out in Australia as well as at the University of Washington and at the Royal Botanical Garden in Scotland. The Japanese are also actively engaged in research. Many papers are being written and published in scientific journals.

As more field collections are made and material examined, some species may be found to be merely part of other rhododendron divisions and there are undoubtedly new species to be found. *R. rushforthii*, for example was found in North Vietnam in 1992 and published in 1996. There are areas in the Philippines, Borneo, Sulawesi and New Guinea that have not been explored. Many of the locations where these plants are found are difficult to get to and are subject to various degrees of political and religious unrest.

Vireyas are and have been called Malaysian or Tropical rhododendrons. Neither name is very descriptive or accurate as members of the group are found in Nepal, Bhutan and China in Asia. The name Vireya came from Carl Ludwig Blume who first created the name for five species found in Indonesia. The name honored a French pharmacist friend. Tropical is not an accurate or even good term, as several Vireyas grow in areas removed from the tropics and at latitudes north of the Tropic of Cancer. Many Vireyas grow at high altitudes and like cooler conditions. To refer to them as tropical is misleading as many will not grow well in hot steamy conditions.

The overall distribution of Vireyas stretches from Nepal, Bhutan, Myanmar, Tibet to Taiwan and then south and east to Vietnam, Thailand, the Philippines, Sabah, Borneo, Sumatra, Java, Sulawesi, Ceram, West New Guinea, Papua New Guinea, the Solomon Islands and Australia. There is evidence that these plants originated in the western part of their range and have migrated eastward over a very long period of time.

This is a table comparing the classifications of four authors.

Vireya Rhododendrons

Major Subdivisions of Taxonomy as defined by four authors.

<u>Sleumer – 1966</u>	<u>Chamberlain et al 1996</u>	<u>Argent 2006</u>	<u>Craven et al 2007</u>
Subgenus Rhododendron	Subgenus Rhododendron	Subgenus Vireya	Subgenus Rhododendron
Section Vireya	Section Vireya	Sections	Sections
Subsections	Subsections	Pseudovireya	Pseudovireya
Pseudovireya	Pseudovireya	Siphonovieya	Discovireya
Siphonovierya	Siphonoviereya	Malayovireya	Vireya
Phaeovireya	Phaeovireya	Albovireya	Subsections
Malayovireya	Malayovireya	Discovireya	Euvireya
Albovireya	Albovireya	Euvireya	Malayovireya
Solonovireya	Solenovireya	Subsections	
Euvireya	Vireya	Euvireya	
Series		Saxifragoidea	
Linnacoides		Solenovireya	
Saxifragoides		Linnaeopsis	
Taxifolia		Malesia	
Stenophylla			
Citrina			
Buxifolia			
Javanica			

A map showing general geographical areas and the number of species found in each area.



Over one hundred fifty species of vireya are cultivated. There are publications mailed to people around the world devoted to this group of plants. One such publication is the 'The Vireya Vine' published by the Rhododendron Species Foundation's Education Committee and edited by E. White Smith of the Bovees Nursery in Portland, Oregon, USA. There is a web site devoted to vireyas, www.vireya.net maintained by Chris Collard of Great Britain. There is a Vireya chat group on Yahoo where enthusiasts communicate with each other and share information. The Hawaii chapter of the American Rhododendron Society is devoted almost exclusively to vireyas. It is one of the larger ARS chapters. Australia and New Zealand have nurseries devoted to Vireyas.

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 Bainbridge Island, Washington

Thanks Hank. I am not sure how many Vireya species are in cultivation around the world. I suspect about 180 different ones. Dr. George Argent's book 'Rhododendrons of subgenus vireya' list 313 species and there are probably a couple more by now. But of the 313 species there many that we just can not grow, for different reasons. One of the reasons is that many species come from very high altitudes and just don't do well at sea level where most of us are. And then there are some species that have not been introduced to cultivation yet. Maybe this is why some of us find Vireyas so interesting.
 (E White)

From Lyn Craven
Dear Vireya Vine

Cambria Australia
August 2009

Reading the Brian Oldham's notes on vireyas in Auckland, New Zealand in the last VV made me very envious. A winter air temperature of positive 1 or 2 C (33 to 35F) would be a delight for me. Here in Canberra, Australia (inland, altitude about 600 m (1968 Ft), latitude about 35 20S) we had an air temperature of about negative 5 C (23F) this year, and we have had it down to about negative 12 or 13 C (53.6 to 55.4F) from memory. My vireyas are in a greenhouse, with a single 3 Kw heater set to come on at about positive 2 C (35.6F); the heater is to stir up the air as much as anything so as to minimise the chances of "cold spots". To seriously heat the structure, I think I would need about 4 of these heaters but as the objective is just to prevent frost injury I have only the one.

In the greenhouse, about 8 by 5 m, I used to have about 400 plants with about 110 species represented. My major interest is in species but I did have about 10 plants of different hybrids. Some of the plants were quite tall, and none was bushy due to the competition for light. The smaller species were easy to accommodate as they were in small pots tucked in between the larger ones, or on a bench dedicated to the "smalls". When plants got a little too large, I would work through, pruning judiciously to maintain the plant's shape but reduce its height. And I was continuously growing small plants to replace the big ones when they finally outgrew their allotted volume.

Due to ill-health, I have decided to significantly reduce my collection. This was a little sad for me as many of my plants I associate with particular people. For instance, I gave John Rouse the only plant of *R. leucogigas* 'Hunstein's Secret' that was in cultivation when I moved to Canberra but he subsequently took a cutting from that plant, which he rooted and gave to me; I guess I had had this plant for about 32 years or so. This was one of the plants that I disposed of, and my son and I drove it and a station wagon load of other vireyas to Melbourne a couple of years ago to give to others. Fittingly, the large 'Hunstein's Secret' and several other species rare in cultivation in Australia were given to Andrew Rouse, one of John's sons, who now has a collection equalling his father's in diversity.

My wife and I took another load of plants to Melbourne (a 600 km trip from Canberra) a month ago, and a trailer load was taken to the town dump by my neighbour as these plants had no particular merit and were not worth a trip to Melbourne. (I should explain that having greenhouses to indulge in one's plant hobby is a rare thing in Canberra. Power-boats, sitting in the driveway ready for their once-a-year wetting, are much more common).

Now, I can see the floor in the greenhouse, and this spring I will feed the plants up and pot on those that I am especially interested in to encourage some growth from lower down. Plants currently flowering (on 30 August in the S hemisphere) include *loranthiflorum* (this from material collected by me on Bougainville Island in 1964, my first vireya seen and collected), *wrightianum* (2 forms: bright red and black-red), *macgregoriae*, *williamsii*, *rarum*, *himantodes*, *pauciflorum*, *warianum*, *quadrasiatum*, *celebicum*, *leptanthum*, *jasminiflorum*.

Lyn Craven lyn.craven@csiro.au
Canberra, Australia

I was in Lyn's greenhouse, must have been 35 plus years ago and I thought it was full then. (E White)

THE BUSY PERSON'S GUIDE TO GROWING VIREYA CUTTINGS

Mary Hare The Hare's live in Warrandyte which is North East of Melbourne on the Yarra River. It is, probably one of the highest bushfire risks anywhere in the world rivalling the Dandenongs. The fires last February got very close to them. They were saved by a wind change.

Okay, I love vireyas and want to grow as many varieties as I can, species and hybrids. Each new one I see, a greedy desire to acquire lurks in my mind. I love them perfumed, I love them with large heads of multiflowered trusses, I love the dainty littlies and the hanging baskets of "Coral Flare". Each vireya show I go to I see more that are so beautiful. Anne O'Connor paints one and, in the painting, I see subtle colours that escaped my eye when I looked at the plant itself. I know there is a limit and I have to be rational, but they are *so* attractive. Many are not commonly available commercially. I work full-time away from the house; I don't have a shade-house or misting/watering system and besides there happens to be a drought anyway (in case you haven't noticed). Solution, EASY. I grow the cuttings in water, on **The Laundry Window Sill**.



I take the cuttings whenever. They work best if I can take new growth just as it hardening but, if it's a matter of taking a cutting from a plant that is dying, you don't have the luxury of choosing the time which is most suitable. Take the cutting as best you can, dip it in a hormone rooting powder/solution, place it in a labelled jam jar and place it on a window sill where it will have good light. And wait. Depending on the plant and the season the roots may grow in about 5 weeks (the quickest) or it may take a year. The longest a cutting took was 2 years but more of that later.

Are there variations that work best? Yes there are.

CUTTING CHOICE

If you have the luxury of choice then take the cutting from new growth just after it has hardened sufficiently. However this technique has worked just as well with broken off bits that have been lying on the ground and it works well with very dehydrated growth from dying vireyas. If the cutting is dehydrated I immerse it in water in a basin until it has rehydrated- one to two days, no longer until the water penetrates the intercellular spaces in the leaves replacing the oxygen and carbon dioxide and the plant effectively 'drowns'.

Sometimes I scrape back the epidermal tissue on the base of the stalk to expose the cambium layer before I dip it in the rooting hormone, other times I don't. When I do then I find that the roots grow from where I have scraped away the surface tissue, but if I don't then the roots grow just as fast from the bottom of the cutting. The roots grow just as rapidly either way – the only difference is where the roots form.

ROOT-GROWTH HORMONE

There are a number of these on the market, try what suits you best. I started using a powder that Yates had on the market about 20 years ago. Nowadays I use “Clonex Purple”. It works quite well but the jar of water does tend to grow an algal slime very quickly so I have to change the water more frequently.

CONTAINER

As long as it's glass so that you can see the roots it doesn't matter. I daresay that if interior decoration on window-sills matters to you then you could buy a matching set of lead crystal vases but I find the odds and ends of jars from the Scout's Bottle dump work quite well – but then I use the window-sill in the laundry which my visitors do not frequent.

LABELS

This is CRUCIAL!! I will admit that on the occasion when our vireyas were devastated by *Colectrichum* and we lost 45 of them over 3 weeks, we grabbed cuttings as soon as the next plant started to go brown and wilt. We ended up with 4 unlabelled unknowns and now have to wait until they flower to be sure of their identities. Do the label before you put them into the water. I use a sticky label on the outside of the jar (waterproof ink).

POSITION

Light is, of course, essential. My Laundry window-sill faces south and has good light all day with only oblique direct sun on the jars early on summer mornings. I would not like to expose them to full sunlight in summer or they would cook. That's **How**, now **How Successful?**

The success rate is over 90% of all cuttings live, grow roots in varied times and transplant into soil successfully and live for at least a year outside. I stop counting after that as all the usual living hazards exist. So yes, it is a most successful method with the minimum of effort.

I do top up the jars of water each week and change the water when the look of the algal growth is annoying me. I have to move them once a week to dust the windowsill. If the weather is very hot (over 40°C for 2-3 days in a row) I change the water completely because it has warmed up and would be likely to be low in oxygen-which, as far as I know, the plant stems/roots need.

TIME

The roots grow at very varied rates. One set of cuttings I acquired at “Emu Valley” in Tasmania were carted around Tasmania for about 2 weeks in a little water in a plastic bucket in the car. It was summer so they were stressed somewhat. When we got home I set them up as usual though and none of them died but they did take 2 years to grow roots. I have noticed that when a cutting is fresh and placed into water, the water level drops quite rapidly for about 2 weeks and then slows considerably and the cutting uses much less water from then on. I have a suspicion that the cuttings become somewhat dormant, a resting phase rather than growth, and that is why the marked change in transpiration rate. (I have checked that it is not due to evaporation rate from the water surface but that transpiration from the leaf surface definitely slows.) The roots start to grow- they often match the growing season of the garden plants. Once the roots have appeared they grow quite rapidly.

I also suspect that plant cuttings in the same jar have some hormonal influence on each other. I am not so organised that each cutting has its own jar of water. My window sill is limited so I will put a new cutting in a jar with an older one already there. Once roots start to appear on one cutting in a jar it seems to me that other cuttings in the same jar do speed up their development of roots also. So when the time comes for them to “leave the nest” I usually have about 8+ plants to transplant out into pots in the “nursery”(a sheltered spot with little direct sunlight where I will remember to water them through the hot days.

This water article was first published in the Newsletter of the Victoria Chapter of the Australian Rhododendron Society. Thanks to Simon Begg for all of his hard work on the newsletter.

*Chris Callards web site at www.vireya.net Sorry about the green paper that last Vine was printed on. I did not ask for it and they charged me \$15 extra, but I will get it back this printing, unless you are getting the e-mail version which is in color. **Send your e-mail address to info@bovees.com E White***

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