VIREYA VINE

ISSUE # 10 MAY 1986

AN INTERNATIONAL GROUP OF "VIREYA BUFFS"- PUBLISHED BY THE EDUCATION COMMITTEE OF THE RHODODENDRON SPECIES FOUNDATION

From Leslie Riggall South Africa
Dear Vireya Vine, March 7, 1986

In answer to your questions regarding the use of crushed bark for germinating Rhododendron seedlings, the size of the particles of bark varies from thin flakes with a maximum linear dimension of 3/8 inch (1cm) down to fine dust. We get our milled bark form a nursery which obtains it from a paper mill, treats it with urea and stores it while the fertilizer is slowly absorbed by the bark.

We then sift it into three grades, coarse pieces of 1 to 2 inches (3-5 cm.), which we use only for drainage in the bottom of plant bags and containers, or in raised beds, medium grade for potting mixtures, and the fine material described above.

Strangely enough, the pine species involved are all American. Most of the bark is from the beautiful Mexican species P. patula and occasionally it will be P. teada (Loblolly Pine) or P. elliottii (Slash Pine), both form the South East United States. However, I think any pine bark would serve our purpose and it should be easy to get from nurseries which make up their own compost for potting. One could try fir bark if it is easier to obtain, as all tree bark is said to inhibit phytopthora (root rot).

One advantage which I failed to mention in my previous letter is the total absence of weeds. When we used peat or peat mixtures we had thousands of little ferns growing among the seedlings and had to spend hours picking them out. We think that the spores must have been in the peat.

It is easy to store pollen for up to a year. The pollen is stored in gelatin capsules, obtainable at pharmacies or drug stores. Place calcium chloride chrysals at the bottom of a screw-top jar, to a depth of half-an-inch (1 cm.), cover with cotton wool, place capsules on the cotton wool and screw down the lid tightly. The capsules (which can "breathe") will keep dry, which is essential as any atmospheric moisture would allow bacteria or fungi to spoil the pollen. The jar is placed in the vegetable compartment of the refrigerator until required. The capsules can be marked with a code number by affixing small pieces of gummed paper to them. The temperature must be higher than 60 degrees F. for successful pollination and after pollination the stigmas should be protected from rain with paper bags (never plastic).

Fred Renich certainly has problems in his climate. As for his water, I wonder whether his own letter may contain a clue to solving the problem, as he says that sandstone filters out the alkaline salts on the other side of the valley. My suggestion would be to consult firms that sell filtration units.

I am surprised to learn that one could have problems with R. christianae. It may be of course the seaspray which they can not not tolerate, most plants resent it. In nature christianae grows on steep rock faces, so obviously it requires perfect drainage and little nutriment.

I would be happy to supply Mr. Culliane with seed from my two healthy plants so that he could experiment with this species in conditions similar to the natural habitat. One must never forget also that ordinary fertilizers are dangerous to the health of Vireyas.

Leslie Riggall
Fern Valley Botanic Garden
Igwababa Road, KLOOF 3610, South Africa

ED NOTE-- Thanks for the answer about bark and info about pollen. Now I will need to pull your leg a bit about R. christianae. I also have trouble with it, and think that the one that I have is just a weak plant because I have seen good ones. Many of the plants we grow are from seed and we need to get good selections to grow. I think that we will in time. The Species Foundation can be a real help with good forms if people would send them cuttings. I must tell every one that I saw the most orange R. javanicum (real bright clean orange) yesterday at the Rhododendron Species Foundation. I have always put christiane down as hard to grow which is an easy way out for me. I also say that about zolleri and few others but I must say that I have not been without at least three plants blooming for a couple years now, and new things all of the time. Also Leslie-- I do use commerical fertilizers on my Vireyas. But I am careful and don't use them often or heavy. I never use any type of slow release fertilizer on any Rhododendrons. Many people do but not I. We had a bad cold spell in early November last year and many hardy plants were killed. I do not want growth from nitrogen when plants are to be harding off. Cold hardy is not a problem with Vireyas of course, but in our cold dark winters I do not want my plants to grow too much anyway. I do have a warm greenhouse which I try to keep above 50' F., but when it gets real cold I can go down to 35' F. I must also note here that Bob Badger uses commercial (dry type) fertilizers on his Vireyas. He also uses slow release fertilizers on his Vireyas. (E. White)

From Tom Tatum Delta, B.C. Canada (South of Vancouver)
Dear VV, Nov. 25, 1985

I guess it's about time to start coming out of the woodwork. I've been sidetracked for a while with a long illness, recovery period and more time to start getting the cash coming in.

A lot of people say they would like to have Vireyas but don't have a greenhouse to hold them during winter. Well, I don't have a greenhouse either right now but there are sure a lot of Vireyas around here. Our Vireyas are kept outdoors during the summer months. No problem. We moved to our present house in the fall of 1984. Our car port has a 66 foot see-through concrete block wall along the outside. Next to the car port is a 9 foot wide side yard enclosed by a 4 1/2 foot high fence. Now I've tacked plenty of plastic on greenhouses, but as Dick Cavender knows, I'm a pretty terrible carpenter. What I did, basically, was to set up a lean-to affair between the top of the carport wall and the top of the fence. After planning and shopping, it only took a weekend to put together. Most of the lumber was light. 1x4's were laid about 3 feet apart at a low angle between the top of the carport wall and the top of the fence. I laid a couple of long 2x4's along the top of the wall and over the 1x4's. The long 2x4's were then nailed to the supporting post of the carport. This all held the lid down there. The 1x4's were simply nailed to the top of the fence on the other side. Because of the low angle of the roof, I made a couple of lattices with squares of about 18". They were 4 foot lath tacked together at the ends. These lattices were laid on top of the 1x4's and entirely covered the top. This provided a rigid supporting mesh under the polyethylene top, providing for good water runoff.

Because of the low pitch, an insufficiently supported poly roof of this type would trap a good deal of water and break down. With most of the woodwork in place, we simply took a big sheet of 4 mil poly and wrapped it up on the outside of the wall and fence like a big package. Slits were made around a few post and at one

end for the door. Then everything was tacked down with lath. Next we hung a second layer of plastic inside the greenhouse. It was hung rather loosely and lathed down in as few places as possible. This provided a dead air space of several inches, a major factor in reducing heat loss. Especially important on the ceiling , as cold tends to drop straight down. The heat source is two 110 volt electric heaters hooked to wall sockets in the house by extension cords, each on a separate circuit, of course. My heaters are not very big. I suggest the biggest heaters your circuits can handle. Those kinds that have little fans. You will probably need to have both heaters on when the temperature goes into the teens. Not a bad bet to use both (temp on one set lower) even if it's a little below freezing, just in case one fails.

Is this making sense? Or is it confusing? You don't need a carport or a fence. Any wall in a reasonably protected area will work. Simply a lean-to that's a few feet off the ground on the downhill side. With double plastic and a plug in electric heater.

I ended up with a floor space of almost 18X9 feet. The ceiling is only 6foot on the high side and 4 1/2 at it's lowest. No heat wasted overhead but not recommended for basketball players.

It's going down to around 10' F. tonight. The past week or so has set record lows here for November, down into the single digits. No plants lost. None last year either. The reason this thing works appear to be; (1) Double plastic, (2) Very low roof - little heat going to waste overhead, (3) Protected location - house, wall and fence to help.

If you don't have a fence handy, a few sheets of 4X8 plywood fastened lengthwise around the base will serve even better to cut exposure. A couple of nights ago when the temperatures really dipped, I threw a few blankets on top. The next morning, the place seemed almost as warm as our kitchen. The blankets are still there. The kids are looking for them. It's better to have a big tarp handy for these occasions. Some cold was creeping in the "door" area at first. Then I laid a sheet of plywood up against it a couple of big towels at the base. No one has missed the towels yet. For colder climates, I'd suggest either bigger heaters of a smaller structure with less air space to heat.

It won't win any beauty contests, but the whole affair cost under $70 (Canadian).

Just in case, Vireyas do tend to harden up a bit if grown outdoors as late in the season as possible. This outdoor treatment can be extended a few extra weeks by placing them in the carport or anyplace where there is overhead protection to break a few light frost. As really cold weather approaches, it's a good precaution to run your Vireyas very much on the dry side. They become far less succulent and you greatly increase the ratio of "antifreeze" to water. Spot water where wilt occurs and water thoroughly if you think that you are in for a milder spell. To reduce rust and mildew in such close quarters, provide air circulation with a small fan. Open both ends of the house as much as you can during repreives from the cold. AND USE FUNGICIDES.

My Vireyas are packed in like sardines. Next season there will be more. Where to put them? Haven't got a answer to that one yet.

Tom Tatum
5285 8a Ave.
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Canada

Many good ideas in Toms letter. I only have a small oil filled electric heater in my lean-to greenhouse and I am able to keep it warm enough. I also keep a gas lantern in the potting shed that can be used if my heater dies while I get a new heater. For many

years I bought the very cheapest electric heaters because they don't last long in a greenhouse anyway. Thanks Tom, we will be looking for more from you from now on. (E. White)

From Graham Smith, Pukeiti, New Zealand
Dear VV, December 16, 1985

My last contribution was for issue #4 of the Vireya Vine and shamefully issue #8 now has reached me. However I have been busy in the meantime visiting Papua New Guinea and raising the plants collected. Visiting the U.S.A. and speaking on Vireyas at the ARS, and now planning for another trip to P.N.G. next August.

I thoroughly enjoyed meeting up with many old friends in Seattle (spring 1985) and made many new ones. Cultivation of Vireyas is certainly on the increase and I was very impressed with the extent of the knowledge already achieved in a relatively short period of time.

When I first wrote to the Vireya Vine I mentioned growing in baskets. Elaborating on this method, we use wooden slat baskets, similar to orchid ones, about 30 cm square and 15 cm deep. I line this with one layer of shadecloth material and much prefer this to moss - easier and less messy to use. The mix is our normal Rhododendron compost, 1 part loam, 1 part peat, 1 part sawdust (course pine) with a 7-6-5 fertilizer plus dolomite added. Plants are set in the basket in a hollow, some 2-3 cm lower in the center than the outer edges. Baskets are difficult to water properly if the soil is level and in keeping with our practice, we keep all of our Vireyas on the dry side. Soaking the basket once a week in the summer and every 3-4 weeks in the winter is sufficient. Little and often does not go down well with these plants, but an occasional syringe or spray of water over the foliage between waterings does help. The following have responded to this treatment:

R. rarum, lochae, pauciflorum, anagalliflorum, stenophyllum, rubiniflorum, phaeochitum (grows tall), gracilentum, Saint Valentine and macgregoriae X rarum. Many others of dwarf or sprawling habit should be worth trying.

The R. macgregoriae X rarum mentioned above is the natural hybrid mentioned by Norman Cruttwell, Curator of the Lipizauga Botanical Sanctuary, Mt Gahavisuka, P.N.G. Norman will be pleased to learn that the 1973 visit yielded a high percentage of collection success and we are growing his unusual form of R. maius. Also R. multinervium, N122 with tubular pink flowers, R. dielsianum and R. hyacinthosmun (cultivated). We hope to be back in 1986 to review progress, Norman, so I trust you have trained those pigs to stay on the tracks!

Also from the 1983 P.N.G. visit, R. christi from MT. Miap has flowered from four different collections. Despite marking one as 'deep red' and another 'good form' in the field, the differences in cultivated plants were minimal. The 'good form' did however produce five flowers per truss instead of 3 or 4 for the others, and proves the point that the best forms should always be sought. I much regret not saving a magnificent deep pink form of R. plieanthum whilst the more common white and blush pink forms have grown well. I think that I can find the exact spot again so will try again next year.

I have enclosed a form with details of the P.N.G. tour 1986 and would be glad to forward more if requested. The approximate cost ex Brisbane, Australia is $2800 U.S. and the tour is for 21 days in P.N.G. commencing August 8th 1986. Fran Rutherford has already booked. (Ed note, in case you don't know, Fran is the Chairman of the Rhododendron Species Foundation Education Committee that put's out this newsletter. In fact Fran now also

has a Kaypro Computer and types some of the letters for me and prints the Vine on his printer and makes all of the copies at the Foundation Office, and puts on the address labels and puts the Vine in envelopes and puts the stamps on and puts them in the mail box. He has a big job and does it well. E. White)

I am in the process of getting slides of Vireyas copied for the Education Committee. They will represent plants cultivated at Pukeiti and those seen in P.N.G.

Graham Smith
Curator, Pukeiti Rhododendron Trust
R.D. 4, New Plymouth
New Zealand

From Brian Clancy Victoria, Australia
Dear Fran, March 26, 1986

In my previous letter contained in V.V. No. 4, the Editor commented on the large number of flowers per truss {21} in one of my hybrids. He then asked "where does the gene come from to provide large number of flowers per truss" and "which species have been selected that have large numbers of flowers per truss". Without any doubt the gene in question comes from R. macgregoriae and would you believe that any Vireya VINER using the best form of macgregoriae could easily produce hybrids with trusses of 40 or 50 flowers in shades of red, pink, yellow, orange and pure white.

Most of my vireya collection has been raised by myself from seed and this experience has shown wide variation in the species grown. The best of my R. macgregoriae has 14 yellow flowers. When crossed with R. christianae (4 flowers} most of the hybrid seedlings flowered at three years from seed and the best of these had 21 trusses each of 14 sunset orange flowers. When this R. christianae/macgregoriae hybrid {14} was crossed with R. javanicum (7) the best of the seedlings had trusses of 21 orange flowers. R. laetum (8) crossed with R. macgregoriae (14) produced a best truss of 20 deep yellow flushed orange flowers measuring two inches across the lobes. (A color plate of this hybrid is featured on the cover of "The Rhododendron" Vol. 11 No. 1). R. lochiae (5) crossed with R. macgregoriae (15) by Tom Lelliott and grown on by myself produced a best truss of 22 reddish flowers.

The best form of R. macgregoriae has huge multi-flowered trusses of more than 50 flowers to a truss of the deepest orange. This magnificent specimen was discovered in 1965 by the late Michael Black in the Sirunke Grasslands West of Wabag in the Western Highlands of New Guinea. It was found at 8,000 feet and the locals told Michael Black that in 1941 there was a disastrous frost which lasted a fortnight, destroying much of the food crop and creating a famine. Amongst the half dozen R. species in the area was this outstanding form of R. macgregoriae, more than 30 years old, which had survived the frost. Plant material was taken home to Greenbank, Grassmere, England by Michael Black and also cultivated elsewhere in England. A color picture of this magnificent specimen of R. macgregoriae in the wild, was featured in the R.H.S. Year Book, 1966, Plate 9. I do not know whether this form is cultivated in Australia but most of Michael Black's collections were sent to Australia but I am not privy to the details. However, one of our local members has told me that he regularly gets 40-flowers per truss on his R. macgregoriae.

Probably the best form of R. zoelleri was also collected by Michael Black on a ridge near Aregenan where he came upon a bank of R. zoelleri in full bloom. From a very large number of flowering plants he selected the best two. One of these was grown

by my friend Arthur Headlam and the other, rather fortuitously and much later by myself. The flowers of the two clones are indistinguishable from each other and the only real difference between the clones is that my plant has more leaves and is more compact. The magnificence of Michael Black's form of R. zoelleri is depicted in a color picture by Arthur Headlam in the A.R.S. Quarterly Bulletin Vol. 3 No. 3. I used pollen of my clone to cross with "Dr. Sleumer" which is a natural hybrid of R. phaeopeplum and R. zoelleri (the smaller West Irian form). To expedite growth, I approach grafted the soft stem of a two year old seedling onto a three foot laetum/mac seedling by utilising a soft shoot at the base of the stalk. Once the graft had taken all the growth buds were removed from the stalk but leaving all the leaves intact. This grafted seedling is now 3 1/2 years old with seven main shoots containing five large flower buds and two small flower buds.

To expedite flowering, I grafted another sibling onto a two foot "Souv. de J.H. Mangles" which had 8 flower buds. I then nipped out the top of the seedling expecting the plant to branch but in 4 weeks it had a single, one inch, growth which could soon be seen with a flower bud. In the meantime, I made six different crosses on the flowers of the stalk plant and then the grafted seedling flowered on February 4 1986. Six large zoelleri-like flowers on the 9-inch high seedling were excellent and demanded the removal of the seed capsules and the growth buds from the stock but leaving all the leaves to provide maximum growth of the seedling. I can best describe this graft as a reverse cleft; that is, the slit was made at the base of the stalk with the stem of the scion-seedling fitted into the slit with both lots of roots intermingled. This type of graft is a little more intricate than the approach graft which needs no skill. Another successful graft last year was that of a scion from a vireya seedling into the non-vireya R. ciliicalyx. I showed this at a Rhodo meeting last year and several experts stated that once the leaves on the R. ciliicalyx stock were removed the graft would die. However, all the leaves were removed from the stock more than three months ago and since then the vireya scion has thrived.

Whilst Michael Black was a discerning horticulturist, he also fell for the trap which most of us fall into (particularly myself) of collecting or growing something because it is different and not because of its quality. One of these was R aurigeranum of which two published photographs show trusses of only five flowers. The taxonomy of this species reads "umbels 8-10 (-14) - flowered" and this description is based on the then available material. My best seedling of R. aurigeranum has trusses of 22 flowers and the quality of this clone is pictured on page 20 of the Garden Magazine, published by The New York Botanical Garden, March/April 1977. Finally, the R. gardenia exhibited by Graham Snell at the last monthly meeting of the Victorian Branch for 1985 was outstanding. The truss of 24 cream colored flowers was carried on the central stem of a 3-foot cutting grown, robust plant. The flowers were approximately 4 1/2 inches across the lobes and it had a nice perfume. The cutting came from Bill Mearns and has been grown and flowered by him for several years. When I wrote to Bill seeking some pollen, he replied that he would give me a cutting when we meet at the Vireya Show of the Victorian Branch on 20/21 April. I would strongly recommend this form of gardenia as a must for any hybridist who wants large numbers of flowers per truss.

Would all those who have the Michael Black form of R. macgregoriae please stand up and be counted.

Yours Sincerely,
Brian Clancy
31 Renown Street
Bentleigh 3204
Vic. Australia

A very informative letter which should generate comments, opinions and experiences from other Viners. Using the best form of plants in hybridizing does produce superior plants. However, the better forms are often not in general cultivation. This is very true in the U.S.A. When a superior form is located, we should consider propagation using micropropagation. We have these facilities in Washington State and I am sure in many other places in the world. Initial cost of micropropagation are quite high but Michael Black form of R. macgregoriae would be in high demand. (Fran)

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A special thanks to Graham Smith, Pukeiti Rhododendron Trust for the 54 slides of vireya species and hybrids.
We include the Itinerary for Graham's trip for your info and to show what can be done in P.N.G.

Saturday	09	Fly to Wau. Stay at Wau Ecology Institute in a comfortable Guest House set amongst native flora and fauna.
Sunday	10	Day excursion by four wheel drive vehicle to Edie Creek and Mount Kaindi (2300 M) to view many of the magnificent rhododendrons for which this area is renown.
Monday	11	Drive to Lae. Visit Botanical Gardens, Herbarium and Orchid House. Stay Lae Lodge.
Tuesday	12	Drive to Goroka in the Highlands. Stay Minogere Lodge.
Wednesday	13	Day visit to Gahavisuka National Park with a forest excursion and visit J.K. McCarthy Museum.
Thursday	14	Drive to Niglguma Village Guest House at base of Mt. Wilhelm.
Friday	15	The group divide into two: Group A : Trek to Mt. Wilhelm base hut. Group B : Botanise around Niglguma. Visit village.
Saturday	16	A : Field trip on Mt Wilhelm B : Drive to Kundiawa. Chumbu Lodge
Sunday	17	A : Return to Kundiawa B : Field trip from Kundiawa - Chumbu Lodge
Monday	18	Drive to Hagen/Wabag/Kaiap Orchid Lodge.
Tuesday	19	Field trip from Kaiap.
Wednesday	20	Drive to Laigam.
Thursday	21	Field trip to Mt Yakopimanda.
Friday	22	Field trip to Mt Maip

Saturday	23	Group A : Trek to huts on Mt Giluwe Group B : Drive to Hagen. Stay private guest house with Maggi Wilson and family.
Sunday	24	A : Field trip on Giluwe. Drive to Hagen. B : Day trip to Giluwe
Monday	25	Day trip to the Baiyer River Wildlife Sanctuary. In a natura setting of tropical forest you will be able to view the magnifi cent Birds of Paradise, the native Cuscus, Eagles, Goura Pigeons and quaint Kokomo birds.
Tuesday	26	Fly Hagen to Madang on the North Coast, stay Smugglers Inn.
Wednesday	27	Morning cruise on Madang Harbour with coral viewing and visi to Siar Island village. Afternoon free to visit markets an cultural centre.
Thursday	28	Fly Port Moresby. Clear plant exports through authorities.
Friday	29	Depart afternoon flight to Sydney. Transfer to hotel.

Maggie Wilson

The education committee now has an "Independent Study Course" on Rhododendrons. The course consists of slides and descriptive material on one or more of each species in each subsection except for Vireya. We are now expanding this program to include Vireyas and urgently need copies of slides of Subsections Malayovireya and Albovireya. Later we will develope a complete program on Vireyas. If you have some good slides that you would be willing to share, please let us know. We are interested in slides of trusses, plant habit and native terrian. (Fran Rutherford)

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