# VIREYA VINE
# ISSUE # 23, NOVEMBER, 1989

PUBLISHED BY THE EDUCATION COMMITTEE OF THE
RHODODENDRON SPECIES FOUNDATION

R. S. F. PO BOX 3798, FEDERAL WAY WA. 98063
E. White Smith, Editor

Just in case you missed this notice in Vireya Vine # 22.

Mr. J. Clyde Smith who lives in Keiravile (near Wollongong) Australia, has in conjunction with the Australian Rhododendron Society printed a book called "Vireya Rhododendrons". It has 76 pages, 45 color pictures, a beautiful photo of a R. macgregoriae on the cover, and a complete text about growing these plants. Clyde has included sections on "Introduction to the Section Vireya", a good coverage of Vireya history, native habitat, the flower, the leaf, a list of species in cultivation in Australia, propagation, growing in containers, in the garden, under cover, pest and diseases, a list of hybrids that have been registered that has 122 names and descriptions, and much more. Many of the color photos are from the wild.

I have ordered 40 copies from Australia (shipped by surface mail) and shall sell them to people in North America (25 are sold). Please don't ask us to mail this book back overseas. That would be a waste of our time and your money. The cost in North America will be $17.50 U.S. including postage. Clyde Smith's address in Australia is;

Mr. J. Clyde Smith
15 Cassian Street
Keiraville, NSW 2500
Australia

Write to Clyde for the cost from Australia.

## Another Vireya Book

The Massachusetts Chapter of the American Rhododendron Society is selling another new Vireya book, "Rhododendrons of Sabah" by George Argent. The cost is $14 + $2.00 postage( $16.00). $5.00 of this cost will be sent back to Sabah, Malaysia to support a garden there. Send check payable to;

"ARS Massachusetts Chapter".
Mrs. Henry Wrightington
571 State St. Tel #
Hanson, MA 02341 (617)826-6898

Take it from me; this is a very nice book. There are 90 color plates with drawings and maps. There is a picture of R. javanicum ssp. brookeanum var. kinabaluense that will just make your mouth water. Note that Rhododendron brookeanum is now a subspecies of R. javanicum. Remember in the last Vine (VV22) when Keith Adams was writing about a Rhododendron called R. borneense and you could not find it in any book? Borneense is shown in a color photo in this book.

Out side of the USA the Address is;

Sabah Parks Trustees
P.O. Box 10626
88806 Kota Kinabalu
SABAH, MALAYSIA

I do not know the cost from Malaysia but you could write to them.

We have a note here from Russell Redler who lives in Jefferson, Louisiana. Russell asks if I could put an "expiration of subscription" date on the mailing label. We do keep a record of payments to the Vireya Vine, but would prefer, if practical, to indicate the year of last payment. We do charge an initial subscription fee of $10 US. Not all subscribers send a contribution each year but most send money to the Vine when they feel their need to do so. Our Australian friends have been most generous as have many other Vireya Nuts. When we need more money to print and mail the VV we will ask, but send contributions if you feel the need (it helps). Fran Rutherford and I do this Vine for the love of Vireya Rhododendrons and the friendships that we have gained with you folks.

(E. White)

From Jack Wilson — Victoria, Australia
Dear VV, — April 13, 1989

I have been an avid reader of the "Vireya Vine" since the initial issue and have been growing Vireyas with limited success since the early 1960s. The plants and seed first became available from the Australian Rhododendron Society through the good offices of Rev. Norman Cruttwell of Papua New Guinea.

I have a half acre suburban garden thirteen miles from the CBD of Melbourne at an altitude of 450 ft. The winters are mild with temperatures falling to 32'F (0'C) on 4 or 5 nights a year and very occasionally a little below. Consequently we can grow all of the evergreen azaleas (including the Belgian Indicas) and the Maddenii Rhododendrons outside year around. During January and February we usually get two or three spells of hot weather with maximum of 90'F (32'C) or more and occasionally over 100'F (38'C). These hot spells last only for a few days and are sometimes accompanied by strong drying winds. Fortunately the temperature usually falls at night and we have a good supply of reticulated water. Our plants usually come through these hot spells with nothing more that a little leaf burn.

Of course even the Garden of Eden had its problems and I was devastated about 8 years ago to lose half of my Vireyas. We had a completely atypical winter with several frost and temperatures down to 26 1/2'F (-3'C). We lost large plants of some of the very good species which I had been given by two of our pioneer Vireya growers, Tom Lelliott and the late Don Stanton. I have spent the intervening time licking my wounds and am renewing my interest. Incidentally I have now recovered all but one of the species which I lost from the various acquaintances to whom I had given cuttings and plants.

I grow most of my Vireyas in containers in a shade house with 50% protection and initially had difficulty in keeping then alive for any length of time. I suspected that they were getting too wet from the winter rainfall, although the pots were on wire mesh raised a foot above the ground. By increasing the air circulation around the plants in the winter and getting more sunlight into the sides I am now able to raise the easily grown Vireyas to flowering stage. I use 15" (39cm) plastic pots of Bamboo (Phyllostachys aurea and P. nigra) which are 8 to 10 feet tall around the perimeters of the shade house to regulate light and wind, putting the pots close together in the summer and widening they out and removing some completely in the winter. The bamboo foliage makes a moving pattern of light which is esthetically pleasing and simulates the natural light conditions in which these plants are found.

Vireya zealots are usually horrified at the appearance of my plants, as I replant them very rarely and keep them in small containers. However most of them stay alive and eventually flower. I have 3 different clones of R. laetum which were given to me in about 1965. These plants eventually graduated to 2 gallon metal containers in which they have flowered for years. Last year I planted them in a carefully prepared raised bed in a sheltered open garden spot. They have expressed their pleasure with the change by having some flowers at almost all times in the past year.

Historically they are of interest because they are much inferior to the forms of R. laetum which became available about 1970.

I greatly appreciate the work of Bob Badger and E. White Smith in starting and continuing the "Vireya Vine". I see its long term value as an archival record for future plant breeders and collectors. For this reason I would like to provide some supplementary information on Ivan Menzies' letter on page 1 of VV issue #18. Perhaps readers have been puzzled by the numbers preceding 6 of the plants listed by Ivan. They are simply code numbers which I always allocate to any seed or scion given to me. These numbers enable easy reference to my written records. They obviously refer to seedlings that I raised and distributed some years ago. This seed came from Bill Mearns of Illawarra, NSW and Peter Schick of Fort Bragg, California. Details are as follows:

Ex Bill Mearns:

458 Oct 1982 R. zoelleri "Island Sunset" selfed
515 Aug 1983 (R. zoelleri "Island Sunset" X laetum) selfed

Ex Peter Schick

426 Jan 1982 (R. christianae X laetum) X (laetum X zoelleri "Golden Gate")
441 Apr 1982 {R. aurigeranum X zoelleri} X {(laetum X zoelleri) #2}
472 Nov 1982 (R. zoelleri "Island Sunset" X lochae) X "Taylori"
499 Apr 1983 {(R. phaeopeplum X lochae) X leucogigas} X lochae

I have experienced similar difficulties to Ivan in raising seedlings of R. konori and gardenia, losing many seedlings to powdery mildew on the leaves. I now raise them under cover from the rain to keep the leaves as dry as possible until they are about 4 inches high, after which they can tolerate shadehouse conditions. Good air circulation is critical and better than fungicides.

Jack Wilson
P.O. Box 59
Forest Hill, Victoria 3131
Australia Tel # (03) 878 4119

Editors Note; Jack did not say what his shadehouse was covered with. I have heard about problems with using shade cloth because it does not let enough air move through and it can get very hot underneath. I do think that shade cloth is a wonderful product but I prefer plain old wooden lath. My plants spend at least 8 months each year in the greenhouse (heated plastic covered growing area) and I do not use vent fans and have no real trouble with diseases. I just can not stand the noisy fan or the cold air blowing on me. ALSO NOTE THIS; I am going to try to insert into VV letters the conversions to and from the Metric system in ( ). I understand the need for us to all communicate in the same language but in the "good old USA" we do not as a rule use metric measurements. We sort off tried for a while but the American people just were not interested. I am going to need to find a better slide converter because I tried to do the conversion on my computer (which I was able to do) and have it pop up to use (which I can not do) inside of the Word Processor. I will try to be as accurate as I can and hope that it will help our readers better understand measurements in text.

We have a note from Steven Trout in Oakland California that needs to be thought about; "Has anyone in the Vireya group discussed the possibility of establishing a cutting exchange program? I have had relatively decent success (in spite of myself) in increasing my collection from cuttings. I am assuming that an organized exchange would find immediate and enthusiastic support. As I have (like many others) little facility for caring for seedlings, cuttings would be a very successful approach to obtaining those hard to find plants. Also, this would be a method of insuring the survival of rare plant material. So, what do you think?"
Steven Trout, 89 Yosemite Ave., Oakland Ca. 94611...

What do other Viners think? Remember that there are people selling Vireyas and we do not want to hurt them. Cuttings can not be easily sent over National Borders.

From Leslie Riggall Kloof, South Africa
Dear VV, June 16, 1989

I would like to comment on your notes in VV #21 (E. White's comments). Unfortunately I have to disagree with you, I hope you will not mind this.

I am totally opposed to the use of chemical fertilizers on any kind on Vireya Rhododendron. The philosophy behind this is my belief that we should follow the Laws of Nature. I follow this principle in my own diet, which is 80% raw unprocessed food and includes a plate of mixed fruit with each meal. I do not eat or drink factory products and enjoy excellent health even though I was born in 1911. Similarly I believe it is wrong to feed Vireyas with factory products.

There is no doubt whatsoever that in their natural habitat these plants survive with a low level of nutrition. They often grow on stony or rocky hillsides where there is heavy rainfall, which means there is little topsoil. Many are epiphytic, and the conclusion to be drawn from all of this is that they require very little nourishment but perfect drainage.

If one provides chemical fertilizers to plants which do not need it, and are not adapted to using it, the plants can be damaged instead of being helped. One New Guinea field worker with whom I corresponded put it very strongly, saying that artificial fertilizer would probably kill Vireyas. In the same VV, Fran Rutherford reported that, "Tropical soils are generally leached and lack significant quantities of such nutrients as Ca, Mg, K and Na. These elements are stored in the vegetation itself and are constantly being recycled as vegetation decays".

It seems clear to me that chemical fertilizers should be avoided, and only natural food should be used, if any is used at all. I make a small square enclosure with 4 short logs laid on top of the soil, and fill this with a mix of shredded pine bark and garden compost. As the land is sloping and the loose planting mix is on top of the ground the drainage is excellent. I use dead leaves, twigs, spent flowers and husks from the trees as mulch, and that is all they get, apart from water. Although the mulch does eventually break down and provide some food for the plant, this is not the main purpose, which is to keep the roots cool and to discourage weeds. If weeds do appear they can be removed from the loose mulch easily without disturbing the shallow roots of the Rhododendrons. They grow very well without any fertilizer and I get flowers in 4 years from seed with some crosses.

Our worst problem in this warn, mostly moist climate is fungal attack, damping off or browning of seedlings, and latter root rot (Phytophthora cinnamomi) which kills many plants here, even well established avocado pear trees. I prefer pure live sphagnum moss for germinating seedlings, and it is interesting to note that all of the Rhododendron seedlings that I collected in Borneo were in perfectly drained vertical banks growing in thick moss. But sphagnum moss does not grow here. Among the other materials which I can get, pine bark shredded and then sifted to obtain small particles, has given by far the best results and I am sure it helps prevent root rot. But there is hardly any nutrient in pine bark, so we assist the seedling with a weak foliar feed. I think that it is vitally important to use only organic foliar feeds, and always below normal strength. This would then approximate to the natural food carried to the plant by rain in the forest.

How else can we assist our Vireyas with out using chemicals from factories? A very important factor in Rhododendron nutrition is the mycorrhizal association with certain minute species of fungus. Ericaceous plants such as ericas, vacciniums and rhododendrons are usually found in poor acidic soils, or soils in which important chemicals such as nitrogen and phosphorus are bound up in complex molecules which the plant roots are not able to tap.

The mycorrhizal fungus invades and lives in the fine hair roots of the host plant, forming a symbiotic relationship which benefits both the fungus and the host plant. The value to the host plant is that the fungus can obtain the nitrogen, phosphorus, and perhaps the other elements not available to the host plant.

There are also other benefits to the rhododendrons. The fungal partner tolerates very high levels of copper and zinc and confers resistance to heavy metal toxicity on mycorrhizal plants compared with non-mycorrhizal plants. It is likely that the fungus accumulates the metals in its hyphal coils, acting as a barrier. Phytotoxicity can also arise from phenolics and the fungus is marvelously adapted to protecting the host from these, and may actually use them as a source of carbon. Conversely, no fungi can obtain energy rich carbon compounds through photosynthesis. They get these compounds from dead or decaying plants, or by parasitism on living plants. In these mycorrhizal relationships the fungi absorb sugars synthesized by the host plant. It has been conclusively demonstrated that mycorrhizal plants of Vaccinium have higher yields and higher nitrogen contents than non-mycorrhizal plants. From this it is clear that mycorrhiza benefit their host.

Vacciniums are a source of vitamins A and C and therefore are very important for a balanced diet. Without them the early settlers would have died. Even cancer is now recognized to be a disease of diet deficiency, (I battled against the medical profession for years over this), and it follows that mycorrhizal inoculum will become commercially available to Vaccinium farmers in the future. Until we can buy this for our Rhododendrons in nurseries, a simple way to provide mycorrhizal fungi for our plants is to take some soil from around the roots of a well established Rhododendron and add it to the compost, very close to the roots, of any newly planted specimen.

So I suggest that instead of adding more chemicals to try to correct the damage done by other chemicals, the best way to grow Rhododendrons is to provide the nearest possible to natural conditions, and leave the rest to nature.

## PILL BUGS

These are not bugs but crustaceans, allied to crabs and lobsters, and are usually called wood lice. This group is of considerable scientific interest, being the only isopods that live entirely on land and breathe air. They feed mainly on dead and decaying vegetable matter, and when they follow this normal diet, they are entirely beneficial to plants. They convert dead plant material into food for new generations of plants, as do worms, fungi and bacteria. However it is also said that they nibble certain plants in frames and greenhouses. I have never observed this, but in any case I am certain that they would never attack Rhododendrons, which are very poisonous plants. Rhododendron growers can regard wood lice as beneficial, and a necessary factor in the balance of nature.

There can be no doubt as to the poisonous nature of Rhododendrons. Michael Black related that R. macgregoriae, a prominent feature of the New Guinea landscapes, has the reputation of being extremely poisonous. He was told of 3 mules which had died recently after eating small quantities of the foliage. Primitive peoples knew how poisonous Rhododendrons were. The pounded pulp of leaves was thrown into a pool of water to paralyze fish, which could then be caught on the surface. Another interesting example was the complete collapse of Xenophon's invincible army for 4 days in Armenia, caused by eating the honey made by bees from the flowers of Rhododendron luteum (Azalea pontica). Had the enemy attacked the completely helpless soldiers during these 4 days the course of history would have been changed by a Rhododendron species. Three hundred and thirty five years later history was changed by these same plants. Pompey's mighty Roman army camped there, was poisoned by the honey, and slaughtered by the much weaker Pontac army of King Mithridates. Mithridates was a man of amazing intellect, a master of 22 languages. He knew all about plants and these Rhododendrons in particular, and probably lured Pompey's hungry army to that fatal last camp.

The vast number of hives were kept by the local inhabitants only for the very valuable beeswax. So if you grow such plants please do not keep bees for honey.

As a final comment on this subject I quote from Fran Rutherford's article again; "The best specimens of small leaf Vireyas on Mt. Kaindi, as well as other mountains, were growing on rotting logs or in heavy forest debris". And we can be sure that there were thousands of wood lice converting the logs, etc. into food for the Rhododendrons.

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

From Mitch Mitchell Volcano, Hawaii
Dear Vireya Vine, July 12, 1989

(Letter to E. White from Mitch with interest to everyone)

This is a quick note to say how pleased we are with the performance of 2 species plants that came bare-rooted from the annual R.F.S distribution list last March. Actually all 7 plants that we bought are looking very healthy. Two plants have bloomed already and both came originally from your collection (E. White's)! The R. retusum has had 1 truss and 2 more buds are swelling. The R. kawakamii (79-026) had 6 beautiful trusses.

You will remember that I told you at the Wollongong meeting that I had followed your instructions in installing a sprinkler system with PVC pipe, Rainomatic timer and micro sprinkler heads from Jean Minch. It was remarkably easy to do, just as you said, and very efficient when I had it in operation. However, even though we usually have dry spells of several months each year, this year has been different. At the present rate we'll see about 300 inches before the year is out. As of now there has been about 140 inches and that is usually the annual total. Aloha,

R. A. Mitchell, Jr
P.O. Box 298
Volcano, Hawaii 96785

Thanks Mitch, we are very pleased when plants from the Rhododendron Species Foundation do well. We usually only hear from people when things go wrong. I am very happy to hear about you success with the "micro Sprinklers". I just love them and have my whole yard done with micros now. We have only had 22 inches of rain so far this year (September 18th) and I have not needed to do any supplemental watering at all. The micro's do it all (even the grass). I don't know if I saved any money but I am sure I have saved water because the water meter just slowly ticks over when the micro sections are running. I put all of my Vireyas in an outdoors lath house from May to October and have 2 upside down micro heads that take care of them. At the RSF we have micro heads in the hoop houses and in the big lath house. I am sold on them so far. (For information see Jean Minch's advertisement in the American Rhododendron Society Journal) E. White

Richard Chaikin is selling Vireya Rhododendrons by mail order.

Cape Cod Vireyas
405 James Road This is the Boston / Cape Cod area (NE USA)
Falmouth, Ma 02540 Tel # (508)548-2233 (leave a message)

Richard has 44 different Vireyas in his catalog. They include Aravir, Cair Paravel, Calavar, Dr. Herman Sleumer, Emmanuel, George Bungen, Pink Delight, Red Poppy, Taylori, Triumphans, Vladimir Bukowsky, a hybrid of laetum X lowii which I have not heard of before, and quite a good selection of species. Richard wrote about his experiences in VV # 17 & 19. Write to him for a catalog.

From Roland Perry — Los Gatos, California
Dear VV, — July 30, 1989

I am particularly interested in the list of 122 hybrids (Aust Vireya Book). In the ARS (American) Quarterly Bulletin Vol 21 #2 dated April 1967 there is an article titled "Malaysian Rhododendrons" by Dr. Frederick W. Coe. He gives a brief history of the hybrids made in the last half of the 19th century, many by Veitch Nursery in Chelsa, England. Dr. Coe refers to a paper presented to the RHS in 1891, giving parentage of numerous hybrids, at that time numbering in the hundreds. He then refers to one very beautiful group called "balsamaeflorum hybrids". These are double or simidouble flowered hybrids and covered the full range of colors found in other hybrids. Dr. Coe also stated "As is the case in many double flowers, these were very durable and would last many weeks in perfect condition". He goes on to say they were all lost in England during WWI.

In another ARS Quarterly dated October 1969 Vol. 23 #4 is an article by Michael Black titled "Historical Survey of Rhododendron Collecting". Mr. Black mentions collecting R. retusum in a form with petaloid stamens which has been grown on from cuttings. He said that if this plant is stable it could lead to the foundations of a new race of "double Malaysian hybrids". On page 207 of this same Quarterly he states that R. longiflorum is another old timer which may in the future be used to recreate some of the lost hybrids of the past.

Since this information is over 20 years old, does anyone know if any progress has been made in recreating the "lost double hybrids"? If they are half as good as claimed, they must have been truly beautiful plants.

Roland H. Perry
161 Prospect Ave.
Los Gatos, Ca 95032

From Dick Cavender — Sherwood (South Portland), Oregon
Dear VV, — August 19, 1989

Thanks for the 'Plug' in VV #22. I have had several orders for plants as a result, including an order from Leslie Riggall in South Africa (shipped to an American location).

I have received a letter from Dr. A.C. Leslie, registration officer for the R.H.S. He was inquiring as to the parentage of 'R. Balaser'. I am embarrassed to say that I have been misspelling this name for several years. The plants that I have are R. wrightianum X 'Belisar' not R. wrightianum X 'Balasar' as stated in VV #22. When I obtained the plants I had just heard the name and did not see it in print. I obviously failed to check the spelling later and perpetuated the error. I offer my apologies to all who may have been confused by this error.

In late May I tried a rather unscientific experiment in hybridizing. I had a plant of 'Calavar' in bloom and dabbed some pollen from R. occidentale and 'Polynesian Sunset' on 2 flowers each. I also crossed a Vireya onto 2 flowers for comparison. It is still to soon for the seeds to have ripened but the pods have not fallen off. The R. occidentale (pods) are the smallest and rather shriveled and look doubtful. The 'Polynesian Sunset' pods are about equal in size to the Vireya cross and look like they may contain seed. I did not use any special procedure in making the crosses and will keep the Vine informed.

Dick Cavender
% Red's Rhodies
15920 S.W. Oberst Lane
Sherwood, Oregon 97140
Phone (503) 625-6331

Editors note; The Fall 1989 issue of the "Journal of the American Rhododendron Society Vol. 43 # 4", has a 6 1/2 X 6 inch (16 1/2 X 15 cm) picture of R. konori X 'Hunstein's Secret' on the cover, in full color of course.

The photo is from our friend John Rouse in Melbourne, Australia. John and Lyn Craven from Camberra, Australia have an article in this Journal about Rhododendron leucogigas 'Hunstein's Secret'. The article talks about this plant and how it was discovered and its relationship with other closely related Vireya Rhododendrons. I will need to read the article again because I do not understand the difference among the plants in this group. ie. R. leucogigas, gardenia, konori, phaeopeplum. This group of plants is very important because they are large and showy. Maybe John, Lyn and others can tell us more about them and how they differ.

On October 1st, after the Western Regional meeting of the American RS, I went to Bovees Nursery in Portland to see their Vireyas. Lucie Sorensen who is one of the owners showed me around and they do have a lot of Vireyas for sale. Lucie's plants look real good and she is justifiably proud of them. Bovees have many hybrids and a good selection of species also. When you buy a plant from them you get an instruction sheet and a small sample of Lucie's special Vireya fertilizer. Vireya growers should write for their 1989 Vireya Catalog.

The Bovees Nursery
1737 S.W. Coronado
Portland, Oregon 97219
Phone (503) 244-9341

Bovees is a little hard to find in Portland but it is sure worth the trouble. They sell other Rhododendrons and special plants also.

Does anyone know if R. fallacinum will root from cuttings? I put 2 cuttings in last week and then heard from another grower that it is very hard to root. Anyone??? This is a very nice looking species Vireya. EWS

Send Vireya seed to "The Vireya Seed Exchange" , Bill Moyles, 4243 Norton Ave, Oakland, California 94602. And order seed too:::

VIREYA VINE
RHODODENDRON SPECIES FOUNDATION
P . O . BOX 3798
FEDERAL WAY, WASHINGTON 98063
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