The Vireya Venture

Issue No. 64 June 2007

Editorial

The issue of climate change, drought and their affect on Vireya gardening which we introduced in the last issue of T V V struck a cord with several readers – as you will see from the responses included in this issue. Here in Australia it appears that we might be at the beginning of a break to the drought with reasonable recent rain in some districts. We will need much much more for the drought to be over but things are looking up.

We noted an article in the recent issue of the newsletter of the Aust. Rhodo. Soc. South Australian Branch about a breakthrough in rhododendron breeding at Glendoick Gardens in Scotland. YES, hybrids of ordinary rhododendrons, not Vireays but that other kind. For 20 years they have been cross breeding dwarf rhodos to enhance red or purple foliage. They are claiming "these new hybrids should revolutionize the use of rhododendrons in the landscape."

Two plants have been released: *Wine and Roses* – pink flowers with leaves that are pink fading to red on the underside of leaves; and *Everred* – reddish purple leaves on both upper and lower surfaces. Photographs provided on the Glendoick Gardens' website certainly look very interesting. We won't include photos here but if you want to see them go to: www.glendoick.com and follow the leads.

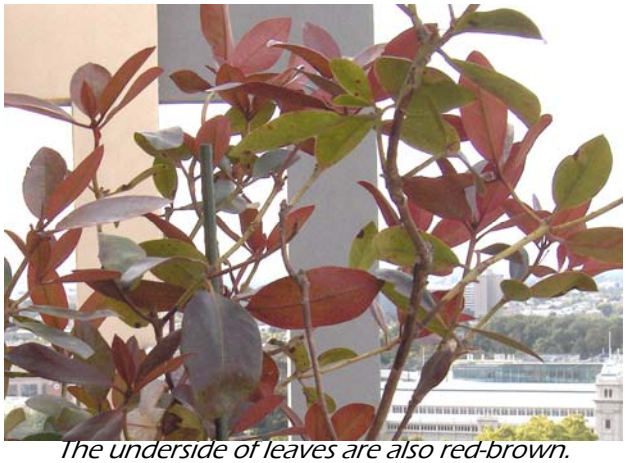
In T V V Issue #58, September 2005, we noted that some vireya hybrids had new red-brown leaves that turned purplish-brown as they matured and only went green in their very late stages and that this feature was a hybridising strategy worth pursuing. The hybrid we spoke of was (*R. phaeopeplum* x *R. zoelleri* I.S.) x *R. superbum* and the top photo here shows the flowers of that plant. The other photos show its tawny red/brown new growth leaves and the red/brown/purple mature leaves.

We have not heard of other Vireyas with such leaves but people have spoken casually of

Flowers of the hybrid (R. phaeopeplum x R. zoelleri I.S.) x R.superbum which has purplish-brown leaves.

Tawny red/brown leaves on new growth.

Red-brown-purplish mature leaves.



The underside of leaves are also red-brown.

them so apparently this colouration is a recognized hybridising objective. The way to improve on such a plant, that is to get a hybrid which has red/brown/purple leaves all the time, is to keep crossing between plants that have a little of this characteristic. Back-crossing can be used with the aim of getting a double dose of the relevant genetic controls into a few seedlings. Obviously this can take time - 20 years for Glendoick Gardens.

We wonder whether any T V V readers are presently engaged in this sort of hybridising and what feature(s) are you trying to achieve? What are your strategies and how far have you progressed?

Please write and let us know about your hybridising or any anything else to do with Vireyas; and please send photos; to:

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Email: *lithic01@bigpond.net.au*

Email from Maggi Carver in Tasmania

March 2007

Dear Graham, Janet and Vireya Venturers,

Further to my last letter (T V V Issue # 63) I am replying to your request on what we are all doing about the worrying water situation.

We collect rainwater for drinking off our house, garage and two glasshouse roofs into three tanks of 7000, 5000 and 3000 gallons, which we have so far found more than adequate. We do not have town water and use our dam (about half a million gallons) for the garden. We haven't had it checked for quality though quite a few properties above us have cattle and effluent from septic tanks goes into the creek that feeds the dam. Also it is a haven for ducks and we think there are fish in it, certainly lots of frogs, so it can't be too bad.

Besides that little lot we are very careful in the house and only have 2 minute showers. Alf sometimes collects his shower water into a 20 litre bucket which he then uses to wash his overalls by treading them!

Our water pipes run at least two litres of cold water before hot comes through so we collect this in clean 2 litre milk or juice bottles for use when jobs only want cold water or for the garden, pot plants, etc. With lids on the bottles can be left out hidden under bushes around the garden ready for an extra boost to plants that need a drink. I probably use about 6 bottles a day in this way and collect more than that, so there is a build up for later use. It makes an extra job I guess, but is worthwhile.

Hopefully here in the path of the Roaring Forties our rainwater is pretty clean, being south of any built up or industrial areas. It may be short of nutrients - except for dust, bird and animal droppings that find their way onto the roof. The filter is supposed to make it safe to drink and Alf never has any trouble with it. However I hate the thought of possum and bird stuff and at least boil my drinking water.

At our previous home our water tank didn't have a lid and when we cleaned it out Alf found all sorts of ghastly things at the bottom that had fallen in!! I won't enlarge on that except to say we now have lids on the tanks.

In England in 1976 we had a very dry year with a water problem and having returned recently from a South Pacific island where there was no rainfall, I was very mindful of wasted water, so we set up a hose and syphoned bathwater to the garden. Now there are special outlets to do the same job.

It is hard to imagine Tasmania ever running out of rainfall and quality water but we don't know what problems the future will bring and feel we must be vigilant as even if we can't indulge our vireya passions we need to eat!

That's about enough from me. I shall be looking forward to other folks' answers to the water situation.

Best wishes all, from Maggi Carver

Eds. Thanks for the response Maggi. We suspect your attitude of being vigilant about water is a common one throughout Australia,

including among people who live in cities. We recently heard about new developments to take water directly out of the atmosphere by condensation onto cool surfaces using solar power to create the cooling. Essentially it's a form of solar distillation. The cost is still too high but over time it will come down to an acceptable level. However it will have to be very cheap to be used in the garden.

This is a lovely flower from the complex hybrid [(R. phaeopeplum x R zoelleri I.S.) x R. superbum] x {[R. laetum x R. aurigeranum) x R. zoelleri I.S.] F2}. Six other nice examples from this cross were shown in T V V #62. However not all hybrids are worthwhile. The photo below shows the flower of another sibling from the same cross but this one is very poor and not worth keeping.

More on Climate Change from Brian Savage in the UK

Dear Graham and Janet, March 2007

Many thanks for sending me the latest issue of Vireya Venture. Climate change has certainly hit the headlines in a big way. Some of the reactions and even edicts made by authorities here in Europe seem to be generated somewhat by panic. I do hope that the heat and drought conditions with you are now easing. If it is of any interest for you, after our hottest and driest summer on record we have just had one of the wettest winters!

Where I live is very near the river Severn, Britain's longest river. It runs through several large towns and the city of Worcester. Storm and treated sewage water has long been returned to the river along its course and also extracted from it for public consumption (after treatment of course). It is not infrequently said in jest, but with some truth, that our water is third hand by the time we get it! However, no one seems to mind.

I would have thought some bright inventor could come up with a means of using your hot sunshine to power desalination plants with a zero "carbon footprint". Perhaps you already do something along these lines? Anyway, a most interesting T V V issue and a joy to read and look at the pictures.

On a sad note, you will probably have already heard the news that Chris Fairweather died after a long struggle with cancer. His vireya collection was the largest in Europe I believe.

Very best wishes, Brian.

Eds. Thanks Brian. As you can see in our reply to Maggi Carver research is going on in Australia into solar desalination and also into electricity generation from wave action. It's all being done privately so we think it has a good chance of getting to market quickly.

Thanks for the news about Chris Fairweather. We never met but he contributed an article to T V V Issue #56. We extend our condolences to his family and friends. Janet & Graham

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Email from Jane & Peter Adams in Hawaii

Hi Graham and Janet, March 2007

Great to get this latest edition of the Vireya Venture! To get the Venture and the HI Chapter's newsletter in the same week makes for good reading!

The focus on the weather and global warming issues is certainly timely. I really don't know any plant enthusiast who doesn't develop a habit of being a weather watcher. Water is a precious commodity in the plant business and one of the reasons we moved from Maui to

the Puna district on the Big Island as it gets pretty good rainfall on a steady basis.

That said, you should also know that we can be in the midst of huge rainfall totals one week and then feel like a drought has struck in the next. For many parts of this area, the "soil" is really mostly rock with a little peat mixed in. This gives us wonderful drainage for vireyas, but it doesn't retain a lot of moisture. We have had little or no rain for the past 10 days and have been hand-watering plants on our outside benches – so far, something we seem to have to do only about 3-4 times a year.

Being completely "off-grid" we rely on catchment water and photo-voltaics for electricity. When we put in our 26,000 gallon tank some nursery friends from Maui suggested that we should have put in two.

Sherla and Richard tell us that there was a nearly 3 month period of drought in 2003 that had people really scrambling – buying water to fill their catchment tanks and such. I can easily imagine just how devastating that could be for extensive plantings. Mulch, mulch, mulch, but carefully! Luckily, in 2½ years our tank has been full most of the time, but a determined drought could easily change that.

There are many publications about developing grey water systems commercially, municipally and for homes. Many "homesteading" or green building publications are out there on the web on this topic. On Maui there are efforts underway to ensure that landscape plantings on the west (leeward) side utilize such a system, as well as golf courses. It comes out of water treatment plants at points where it is safe for gardens and is piped to various resorts, parks and such. It's an expensive public works project but it makes good sense.

Retro-fitting a house for a grey water system may be quite expensive, but worth the effort in the long run. Of course, if you're building from scratch it's much easier. The costs you mentioned for desalinization water are daunting, especially if you're trying to water a large garden or commercial nursery.

Our catchment tank only gets water from the sky (porous cover) and what comes off the gutters of our small house. The greenhouse (90' x 32') puts out copious amounts of water in a rainfall. We could put a second tank off it if there were a long-term need. Luckily, when the weather is dry and sunny there's lots of electricity available for running pumps. As our greenhouse has a solid cover that's certainly an issue during gloomy periods.

Anyway, our thoughts are with you and everyone there – it sounds like a very difficult time with many fears about future implications of global warming. I hope that you hear from Graham and Wendy Snell and can let us know how their vireyas are doing. I guess the greatest fear is the sort of thing that happened to the great glasshouses in England in WWII – loss of many plants and decades of work by botanists.

Please include us in the group for getting some of the *R. konori* selfed seeds. We have several batches of seeds going and are having a good time seeing how they are turning out – a patience process, but satisfying!

Jane and Peter Adams
www.whitecloudnursery.com

Eds. Thanks for the letter Jane. You have almost the opposite climatic conditions to Australia, which is to be expected given our different geographic circumstances – tropical mid-oceanic island vs the driest habitable continent.

What is amazing is that Vireyas can cope with this huge difference, with a little human assistance. Obviously they are very adaptable. I wonder if there are other groups of plants that are as adaptable as Vireyas?

You asked about the Snells. They have sent in a letter, which follows this.

Cheers, Graham & Janet

A nice bushy vireya hybrid – (R. konori x R. Gardenia Odyssey) x (R. christianae x R. laetum). It is included here just because it looks nice.

A Letter from Graham and Wendy Snell in Queensland.

June 2007

To the Editors, Vireya Venture

In the last issue Graham Price gave us some of his thoughts on Climate Change and it's effect on our hobby (or is it driving passion) of growing Vireyas. He kindly expressed a thought on how Wendy and I were faring following our move from Maleny, in the coastal hills of the Sunshine Coast, to Highfields near Toowoomba. The move took us a bit further inland, and about twice as high in elevation (1000m) compared to where we were in Maleny.

The move was made for personal reasons, not really relevant here, but considerable thought was given to our Vireya collection in the location, planning and expenditure that the move would entail. We missed the mark in some aspects but had great good fortune in others. On balance we are faring very well but I cannot say the same for the Vireyas. It is not a complete disaster but maybe we could have done better.

Toowoomba is situated on, and is the commercial centre for, the Darling Downs, which is a rich and extensive farming area. More relevant to this letter, Toowoomba is known as the 'Garden City' of Queensland. The biggest annual event of the year is 'The Garden Festival', held in September, which draws in tourists from all over; State, National and International. Not only that, while looking through real estate ads we found a home with a prize garden featuring Vireyas prominently in the front yard. That home was not for us, but how could we go wrong? We did find what we were looking for, well almost anyway!

We did know there was a drought on, but that had been around for about 5 years and could not last. Statistically, rainfall is mainly in the summer months, but the monthly average during the rest of the year is quite reasonable so Vireyas should do well. Here our good fortune came into play - a drilling rig became available the day following taking possession of our new property, so we went straight into action and a day later we had a whopping 1500 gallons (6000 litres) an hour water bore. The soil is volcanic, fertile, deep, friable, free draining and of a beautiful red colour (when kept outside).

We knew from the start that Vireyas would need shade and were able to erect a shade area as soon as we moved in, but before the plant collection arrived. Here there was some contention. I was reminded that I was getting older and we were no longer dependent on Vireyas for a living. A compromise was reached and the shade area shrank considerably compared with the one we had in Maleny. The plant numbers were reduced too, but not by enough, so the shade area became very very full.

It was here, also, that I made a big mistake. In Maleny Vireyas in pots thrived under 30% density shade cloth and out in the garden I had many growing beautifully in full sun. As we moved in October we were coming into the Summer months so I quickly opted for 30% shade again.

The change in climate proved to be too great, partly due to continuing drought, which brought much drier conditions than average, but also hotter than average. We had plenty of water but the sprinkler system did not penetrate the crowded plants evenly and the summer rains, which should have been heavy and frequent enough to make up for the sprinklers' failings, did not eventuate. A considerable amount of burning and many losses were experienced that first summer.

This past summer was a continuation of the drought conditions. However, because of losses experienced the previous year and planting in the ground the non-Vireya plants we brought from Maleny, the remaining plants were not so crowded and the watering system was able to do the job it was designed to do. In addition, we increased the shade density of the cover from 30% to about 70%. The combination of these changes meant that the remaining plants came through the second summer in much better shape. However, as I have learnt from past experience, sick Vireyas take a long time to recover to thriving plants again and it will be some time yet before I will be able to show off my plants without stammering out a whole lot of excuses.

Our long term plan is to plant in the garden as many Vireyas as possible but this will require good shade trees to start with. We have one and a half acres and not a shade tree on it, so providing shade is a project in itself. Good soil and ample bore water has produced promising results over the last 18 months and we are already eyeing a few spots where it would be worth while trying a Vireya or two.

By planting on the east side of the house and the work shed we have already proven that Vireyas will thrive here. Whether they will do as well as in Maleny remains to be seen, especially as I have in the past spoken of Maleny as the 'Vireya Heaven' of Australia.

Having seen Neil Puddey's success at growing Vireyas in his garden I have no doubt he could contest that claim of mine and he would have good grounds. I do not expect to have it easy here in Highfields but I do believe we have some prospect of success, despite the drought.

Graham Price wrote of Climate Change, whereas I prefer to think in terms of a period of drought. Over the last 200 years or so there have been similar periods, just as severe. One or two longer, others shorter, but they ended just the same. The difference this time could be that there is the pressure of a much larger population to provide for and the much greater dependency that population puts on the water supply. I cannot believe we are at the stage where we should throw our hands in the air and say 'Enough is Enough, let's give up growing pretty gardens'. Viva Vireya for some time to come!

Just as a post script, the last 24 hours it has been raining here, on and off. Nothing to write home about as yet, but enough to keep me indoors and give me time to type this out on the computer. I think this is about the first time since Graham mentioned his interest in how we were managing that I have been able to say that. At least that is my excuse for taking so long to respond Graham.

Best regards to all Vireya Venturers from
Graham and Wendy Snell.

Eds. Thanks very much for the update Graham. We know that many readers will be interested to know what you and Wendy are doing and how the move went. Not sure we could face all the work involved in moving to an almost virginal block (virgin to Vireyas), though I know it was enjoyable when I did do it (*Graham's opinion not Janet's*). As indicated by the other articles in this newsletter water is an important issue for many gardeners. When droughts in Australia end they commonly do so with floods and that is what occurred last week (8-11 June) in the Hunter Valley region north of Sydney. Many people there have much too much water. We hope that over the next months you get just the right amount of rain. Graham & Janet

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R. javanicum - A difficult flower to photograph - something about the colour and reflectance of the petals that doesn't allow a crisp well-defined image.

So you want to import Vireya seed into Australia. Good luck!

By Murray McAlister and Graham Price

For obvious reasons, mostly involving risk of introduction of pests and diseases, the import of Rhododendron plants, including Vireyas, into Australia is complicated, takes a long time, is expensive and the success rate is not high. Consequently, people prefer to import seed because it is relatively easy, cheap and quick.

That is, it has been up until now. A new control system for seed importation has been introduced which has raised the difficulty barrier in an attempt to prevent the arrival of exotic/invasive weeds in Australia. There are already some 30,000 introduced plants in Australia that are classified as weeds and authorities don't want any more!

This article arose because members of the Aust. Rhodo. Soc. Victoria Branch, led by Murray McAlister, Bill Taylor and Andrew Rouse, have been working with the Government authority to try and make the system as easy as possible. The outline that follows is intended to help those who are contemplating importing Vireya seed.

If a person wants to import seed into Australia then in most cases a permit must be obtained – ie. an **Application to Import Quarantine Material** must be submitted before the seed arrives. This application must be submitted to the Australian Quarantine Inspection Service (AQIS), which is a unit within the Department of Agriculture, Fisheries and Forestry (DAFF). Information about who to contact and a copy

of the application form can be obtained from: *http://www.daffa.gov.au/aqis/import/application/forms/plant-seeds-nursery*

To determine whether to immediately accept the import AQIS will consult an electronic database called ICON that lists all plants already in Australia (*www.aqis.gov.au/icon*). ICON is described by AQIS as " a simple and convenient way to access information about Australian import conditions for more than 20,000 foreign plant, animal, mineral and human commodities" .

Well, AQIS might consider that ICON is "simple and convenient" but it doesn't seem that way to us. For example, a search of ICON using just the commodity word "*vireya*" and defaults entries of "*from all countries*" and "*all end uses*" returned a ~17 page list of conditions that applied to the import of the single species "*Vireya javanica*". No other species or hybrid was listed. This response for "*Vireya javanica*" stipulated many import conditions, eg: documentation; packaging; cleanliness of seed; no disease or pests; cross-contamination with seed of other plants; fumigation; visual inspection, sampling and analysis on arrival; special requirements for seed from New Zealand or USA,; seed supplier's declaration and treatments with highly toxic chemicals if necessary. Most of these conditions won't apply to a small packet of seed, but they are what could happen. Searches on other Vireya species returned no responses but a search using just "*Rhododendron*" returned a listing under "*Non Commercial*" that was essentially the same as that returned for "*Vireya javanica*".

If it is known that the species is definitely on the ICON list (ie. if/when the list is expanded) then a permit is not necessary and the process of getting approval to import can be quick, perhaps as quick as a few days. If the quantity of seed is less than 10kg and is in clean packets labelled with the botanical name, then AQIS will inspect the seed and if OK they will forward the consignment on to the receiver. If the quantity is over 10kg then a more detailed and protracted examination and analysis is conducted in their laboratory.

There are good reasons for wanting to import seed of plants that are already in Australia (ie. already on the ICO list), such as bringing in a different variety, but the incentives are less than for plants that are not already here.

If it is known that the species is NOT on the ICON list, and particularly if AQIS staff are consulted (ie. you actually talk to a human), then the applicant can go directly to a **New Plant Introduction Form** (NPIF). Go to: *http://www.daffa.gov.au/aqis/import/plants-grains-hort/new-plant-form* . One form is required for each species. There are 49 questions covering such things as origin, growth environment, growing conditions, dispersal methods and intended use.

Here is a précis of some of the more challenging questions posed on the NPIF:

C6: How are the propagules likely to be dispersed?

C9: What is the native habitat of the plant?

C15: Is the plant parasitic on other plants?

C27: What is the pollinating agent?

C29: Are the propagules ..... buoyant?

C30: Do the propagules remain viable after being eaten and excreted by animals and/or birds?

Each question is typically accompanied by a number of possible responses that can be ticked. For example: C6 offers these choices: wind, water, insects, eaten by birds, eaten by animals, on the bodies of animals, on the bodies of birds, other. This compels the applicant to research the particular seed before lodging an application.

If you are lusting after a species or hybrid that doesn't appear on ICON (ie. almost all Vireyas at present) then a permit will be needed and you need to fill out a NPIF. At present it does not cost the importer anything to get this permit.

Biosecurity Australia (another government section) is charged with screening the

This article is continued on the next page.

This photo shows the flowers of another three seedlings from the cross listed in the caption for the two photos on page 3. These are good enough to keep as garden plants but not worth registering.

application and conducting a **Weed Risk Assessment** (WRA); see: *www.daffa.gov.au /ba/reviews/weeds/methodology* The procedure that AQIS staff will follow in making a decision to allow or not allow an import is outlined on the above website and it is recommended that importers consult it to understand the procedure they will follow.

AQIS people advised us to include as much additional information as possible to assist in processing the application for a permit, e.g., relevant journal articles, internet articles, etc. Should a permit be refused the applicant will be advised of the reasons. They have sent us a flow chart to help understand the assessment procedure. If you want a copy of this chart contact Murray McAlister (details below).

The Aust. Rhodo. Soc. has been assisting DAFF to develop an up-to-date list of Rhododendron species known to be in Australia and this process is still continuing. A list of about 100 Vireya species has been provided so hopefully in a few months the ICON list will be much larger than simply "*Vireya javanica*".

The following are possible complications that have been recognized so far:

(i) Seed sent without a permit may be seized, the intended recipient notified and given an opportunity to apply for a permit. This would probably not help with Vireya seed because of their short viability life, but most Asiatic seed would keep whilst an application is processed.

(ii) Tales of huge penalties imposed on senders are incorrect (unless there is a substantial breach of regulations involved).

(iii) Bio Security Australia will need to have a fast learning curve considering the immense range of seed imported. Few personnel will have appropriate familiarity with all the issues. Vireya is not particularly well known.

(iv) It will be almost impossible to get a permit for seed from overseas expeditions because new plants will not be known well enough.

(v) Exchange of seed with overseas colleagues will also become difficult. We may have to apply for a permit when fruit has been set on a particular plant and well ahead of its harvesting. Hopefully then approval will be granted before seed eventuates. Alternatively, we may have to ask that seed be frozen and stored, as is done in Hawaii. Once issued a permit will only last 6 months.

(vi) Rules for the import of hybrids are being developed - AQIS call it "a work in progress". At present the same procedure as for species will apply. It appears it will be cumbersome given the complexity of antecedents of some varieties. We wonder what the implications will be if one antecedent is *R. ponticum,* which is considered a noxious weed in parts of the UK. Hopefully, if an importer indicates that the parents from which the hybrid seed came are on the ICON list then it is likely the hybrid will behave much as the parents and a new assessment won't be required. However, that's an issue for the future.

(vi) How does one differentiate between varieties of Vireya species seed from a cursory examination of the material?

The best advice we have is to provide as much information as possible so a cumulative picture of the genus can eventuate with authorities. We have already sent off an application to import R. *mendumiae* just to test the process. We hope too for some tolerances until we become familiar with the new approach. Perhaps more importantly, we all hope that our overseas colleagues are not dissuaded from sending seed because it is one of the best ways of preserving the species.

We ask that if any of the subscribers to TVV are intending to import Vireya seed, or are currently in the process, then please contact one of us, preferably Murray McAlister at *Muznbev@aol.com* or +61 3 9756 6327, and let us know of what you experience.

Well, that's the end of another issue of The Vireya Venture. Issue # 65 will be produced and distributed in August.

Again, its goodnight from YumYum (on the left) and Buster. They are always interested in sticks. We have seen 6 of their relatives on one stick!