The Vireya Venture

Issue No. 63 February 2007

Editorial

Prominent in the minds of many Australians at present are the issues of Global Warming and drought and we suspect these might be on the minds of many people around the world. The recent report of the InterGovernmental Panel on Climate Change, the film "An Inconvenient Truth" by Al Gore and recent local experiences of high temperatures and low rainfalls have forced most Australians, including our politicians, to accept that these are important issues that must be addressed now.

In Australia high temperatures, droughts and even floods, are common and we are used to them. Our country has often been characterized by its extremes – most memorably in the 1904 poem by Dorothea McKellar titled *My Country*, the second verse of which reads:

> I love a sunburnt country,
> A land of sweeping plains,
> Of rugged mountain ranges,
> Of droughts and flooding rains.
> I love her far horizons,
> I love her jewel-sea,
> Her beauty and her terror –
> The wide brown land for me!

However, we are told that we are now in "*the worst drought ever*" and that our water catchments are at their lowest ever. With the coincidence of drought and global warming people are wondering if this condition will be permanent and if we will have to get used to always living with less water.

Brisbane will be the first major city in Australia to go to Stage 5 water restrictions (no washing of cars, garden watering only twice a week at restricted times and by specified methods and other bans) in early April. Melbourne is currently on Stage 3 restrictions and is likely to go to Stage 4 in April. There are frequent discussions of what needs to be done to provide a long-term solution, including treatment and re-use of storm and sewerage water; pipelines to bring water thousands of kilometres from our tropical north (where there is abundant water from regular monsoons and cyclones) to our parched cities and agricultural areas in the south; and desalination plants to convert seawater into drinking water (all of Australia's capital cities are located on the coast, so there's plenty of seawater). Perth in Western Australia has already built a desalination plant which is contributing 17% of that city's water.

This photograph is of the cross R. Calavar x (R. christianiae x R. laetum). An interesting vireya because of the different colours of its flowers as they mature.

During these times of environmental concern we notice that the relevant economic signals still don't appear to be established in this the driest inhabited continent on Earth. The most recent water bill for our household (3 people in a city apartment) shows that our average water usage is only 420 litres per day and for this we pay the princely sum of $0.35 at the rate of $0.82 per kilolitre. Surely this is just ridiculously low.

We understand that salt water desalination will produce water at about $1.20 per kilolitre and that pipelines from the north will deliver water at a cost of about $1.50 per kilolitre! The cost of treating storm and sewerage water

will be less than desalination of seawater, though many people have irrational concerns about treated sewerage water entering our town supplies.

So really, it's just a matter of money, and the way politicians spend money in election years its obvious there is plenty of that available. Sure, there is a "cost" in using electricity to power desalination plants which produces greenhouse gasses, but again there are solutions to that – it only takes more money.

So why are we writing about this in a newsletter about Vireya rhododendrons? Well, there are several comments related to changing weather in the letters from correspondents in this Issue. Also, our Vireyas are suffering from restricted water and I'm sure other people's vireyas must be also. Although they get drip irrigated twice a week, some plants need supplemental watering of a few extra litres to keep them going, probably because they are new and not yet established.

What we will do under Stage 4 restrictions, forecast for mid April at the current rate our water storages are going down, is uncertain. We will probably have to carry shower water down to the plants in buckets.

To some all this must sound like luxury. Toowoomba, a largish town in southeast Queensland to the west of Brisbane, has been on Stage 5 restrictions since last September. All outside watering using town water with any watering device is prohibited, including pot plants as well as gardens. We wonder how Graham and Wendy Snell are coping - they moved to Toowoomba last year and we understand they took their extensive Vireya collection with them.

Some people will say we should be using low-water-adapted Australian native plants and not water-hungry plants from the tropics. We don't really have an adequate response to this and accept that Vireyas are probably an extravagance that cannot be tolerated during a water crisis. We hope it doesn't come to this but we know in our hearts that we might have scale back on our Vireya collection.

How are others coping in these circumstances and what strategies have you put in place to keep your Vireyas happy? Are you suffering from limited rainfall, or from too much? Not only lack of water but also the problem of poor water quality? What are people thinking when faced with changes in climate that could impose pressures on the pursuit of our gardening pleasures?

Please send your responses/letters on the above topics, or any anything else to do with Vireyas; to:

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We apologize for the delay in producing this issue of The Vireya Venture. It should have gone out in January. We have no real excuse – just too busy. Sorry.

Graham and Janet

Two photos of flowers from the cross (R. Tropic Summer x R. zoelleri Island Sunset) x R. Robert Bates. These and the three others from the same cross presented elsewhere in this issue, show the interesting variations one can get when the parents are both hybrids.

From Jane Adams in Hawaii

Eds The following is a compilation of emails discussing a move of Vireyas from the island of Maui to The Big Island (Hawaii) and a problem with powdery mildew. It should have been included in a TVV issue last year, but it was mislaid.

Graham and Janet,
Thanks so much for the newsletter! We always enjoy it very much and always learn something from each issue.

About us: We (my husband Peter and I) have established a nursery here on the Big Island, mostly focusing on Vireyas, along with Hawaiian native plants and some selected tropicals. We have approx. 130 different Vireyas (hybrids and species) in propagation, though most are still in very limited quantities. Our website, which we do ourselves, is http://www.whitecloudnursery.com. It is definitely still under construction needing many more entries and pictures.

We've been rhododendron folks for many years. We had a small commercial wholesale nursery in Washington State during the late 80's while we actually earned our living with day jobs. We then spent nearly 10 years in the California Bay Area doing programming and computer networks, where we tried but were mostly unsuccessful in growing rhodos. We moved from there to Maui and then to the Big Island. The move to Hawaii was a big "Oh Wow – we could grow Vireyas" moment.

Its interesting that you are a geologist Graham as our place in Washington state was only a few miles "as the crow flies" from Mt. St. Helens, a volcanic eruption we experienced with much interest from our property on the Kalama River. We've been very happy with our decision to move from Maui to the Big Island and it gives us ample opportunity to watch volcanoes! It's interesting how many plant folks are also avid environment watchers (weather, volcanoes, etc...)!

We have 5 acres (about 2 ha) outside Pahoa, HI at about 1100 feet elevation, which was completely undeveloped (meaning jungle) when we purchased it. We are completely "off-grid", meaning no utilities – hence photovoltaic electricity, solar hot water and catchment water. Rainfall is approximately 140" per year. The past nearly 2 years has been consumed with house building, greenhouse building, land clearing, and getting the nursery off the ground.

We are actively planting our stock plants (3-5 of each variety) into beds, along with many native plants, which have also been a long-time interest. Some have been in the ground for over a year, some less, and more due for planting very shortly. We plan to eventually plant out nearly every Vireya variety in order to make even the older varieties or more collector types always available. We are certified for shipping to the mainland.

Our website only shows what we feel is ready to go at this time (mid 2006 Eds). To make the site we used Chris Callard's website quite a lot, along with Sherla and Richard's. We have been trying to use all our own photos and are getting closer to getting 100%, at least of the ones we expect to be selling. Some of the species haven't bloomed for us as yet. We also would like to have a "gallery" button for each vireya that would include photos of growth habit, and close-ups of flowers, leaves and new growth. That will be a while coming, though! Pete does our website, in addition to writing our nursery management database and our son's aviation flight log database. Of course, there's all that work outside as well!

What we moved from Maui were essentially our initial stock plants. I have started a few batches of seeds from Sherla's seed exchange and some open-pollinated of our own, but am definitely a neophyte at that. We've not yet gotten into hybridizing, though perhaps that could be future endeavour. We've always loved propagation, and are quite successful at it, and have always been collectors. Our friends in the Vireya ARS chapter here have been a great source of encouragement, education and community.

We've enjoyed The Vireya Venture newsletters and are very happy that you are making such an effort. If there's anything we can contribute, would be very happy to do so.

Jane and Pete Adams
White Cloud Nursery, Pahoa, Hawaii

More from Jane - About Powdery Mildew.

When we sold our home and nursery in Haiku, Maui, we moved our plants a bit further towards the ocean – approx. 400' elevation to where we were renting a cottage. Our old

place had a shade area (in the open, under 47% shade cloth) with overhead watering as needed (not automatic, though monitored on a daily basis). The owners of our rented cottage were a large palm/orchid nursery, and made an area available to us for our plants.

The situation is that Maui's Haiku (north shore) area has a nearly constant wind – the trades are strong and nearly constant. The new benches were in a deeply shady area created by huge Ficus benjamina trees. In any event, shortly after moving the Vireyas down from our 650' elevation location on the same road in the early spring, we started to see powdery mildew and it eventually spread to most of them. We sprayed with commercial anti-fungals, we pruned, we tweaked the watering, and all sorts of things. Basically, the wind blew constantly and strongly, and nothing seemed to be working. Other genus did not suffer from the mildew (we also propagate Hawaiian native plants). Hot, windy and humid conditions prevailed.

Luckily, we completed purchase of our property on the Big Island, and we prepared the plants for shipping in October of 2004. Lots of detailing of the plants, plus a good dose of anti-fungal and other substances the Ag. inspection folks required (mostly focused on unwanted insects) yielded a full container of healthy plants to ship to the Big Island.

The good news is that in the 2 years we've been here on the island of Hawaii, only one Vireya showed any signs of powdery mildew and that went away quickly with a little TLC and a move out into more sun. They quickly reverted to healthy plants with no mildew.

Our personal theory is that the combination of the intense shade from those huge Ficus trees and crowding plants onto sparse bench space created optimal conditions for the mildew, perhaps augmented with somewhat more irregular watering. I believe that sunshine may be a key here – the hot weather and moderate shade we previously provided our Vireyas may be the more perfect combo.

Of course, other things could have been issues as well. No laboratory here, but just our personal experiences. It was so sad to see all that mildew, and then so great to see them happy here in their new home.

Jane Adams White Cloud Nursery

Eds Thanks for the emails Jane. I (Graham) visited the 'Big Island' back in the 80's and was very impressed. Because the whole island is essentially two large volcanoes, depending on which way one travels around the island the land surface has a consistent slope, either down to the left (for clockwise travel) or down to the right (anticlockwise). To me the climate was wonderful and the volcanoes made it a magical place. Re Powdery Mildew – Yes, I agree with your diagnosis. It's only a problem when vireyas don't not get enough sunlight and the leaves cannot dry quickly. The same for rust. Abundant sunshine and wind will make it disappear.

Three photos of complex hybrids with different coloured flowers - from the cross (R. Tropic Summer x R. zoelleri) x R. Robert Bates.

Email from Brian Savage in the UK

December 2006

Dear Graham and Janet,

Thank you for sending 'The Vireya Venture' issue No. 62, successfully received from your second attempt. My computer had been having mental health problems earlier on and I thought 'failure to deliver' was its fault.

By coincidence, I had been about to send you an e-mail with a picture taken just now of my Vireya "*Just Peachy*". I have just two Vireyas(!) I bought them as very small plants on impulse in April 2005 at a RHS show for rhodos, camellias and magnolias held at Borde Hill in Sussex. They were on a very colourful stand put on by Chris Fairweather.

Photo of Brian Savage's Vireya *R. Just Peachy*

This one flowered in the late summer that I bought it. This plant seems very happy with my treatment of it. The other one grew very vigorously but did not flower, and during this last hot summer it began to show signs of distress although it has had exactly the same treatment. On reflection, I think possibly it got a bit dry in our heatwave. It has become chloritic and most of the leaves have fallen. I am keeping it just damp.

In 2003 I managed to get to New Zealand and much admired the Vireyas outdoors there. It rekindled my interest in them. It is winter here now and we have had a couple of night frosts to minus 2°C. The Vireyas were brought indoors well before the cold nights. The weather here has been similar to that described by your correspondent from Belgium, Hendrik Van Oorst. However, maybe not quite so hot as over 35°C.

August was damp rather than very wet. We are on course for the warmest year ever recorded in the British Isles. I have been growing an Acacia Dealbata outside for about ten or eleven years. It has been twice damaged by frost, once to minus 10 and again less so at minus 8C. I raised it from seed and it flowers well, so well that people stop in the lane past our house to look at it!

I grow Nerium oleander in large pots. These are kept in an unheated greenhouse for the winter and severely pruned back each year. Eventually I discard them for replacements from cuttings which are very easy. This year I have planted one due to be thrown out, in the open garden just to see what happens. I think some of them are almost hardy here. I had one survive outdoors in a pot the whole winter, it was left out in error. It was however completely defoliated.

With thanks again and best wishes for the Christmas season and New Year,

Brian Savage.

Eds Great to hear from you Brian and nice photo; thanks. Your comments on the weather *"... on course for the warmest year ever recorded in the British Isles"* echoes our concerns and are similar to ones from many places around the world.

The reason we are all thinking like this is that our societies have been built over the last 6000 years during the most stable climatic period since the start of the Ice Ages about 2 million years ago. There have been over 10 Ice Ages in just the past 1 million years; and during the glacial maximum, which began to wane about 20,000 years ago and finished completely about 14,000 years ago, the sea level was as much as 140 metres below its present level. That's an average rate of sea level rise of 2.33m per 100 years, or 2.33 cm per year! However, during the last 6000 years the temperature has been relatively constant and consequently sea levels have remained about the same. All our physical infrastructure has been built during this exceptionally stable period and simply assumed that this would be the way it always will be – that nothing will, or should, change. However, the only constant about the climate of our planet is that nothing is constant and things will change, sometimes quite quickly.

I guess Brian you would respond to our question above "... what are people thinking when faced with changes in climate ...?" that you are contemplating going further and planting more of your tender plants outdoors. But what if the amount or rainfall over you "*green and pleasant land*" (William Blake - we think) decreases significantly? We understand that Britain doesn't have significant water storage capacities because normally it rains sufficiently to keep your small reservoirs full.

Email from Maggi Carver in Tasmania

February 2007

Dear Graham, Janet and Vireya Venturers,

Here is a photo of my Vireya Rhododendron *R. konori*, sadly with split corollas, which I had put down to a frost attack while in bud.

Photo of Maggi Carver's R. konori with split corollas.

I keep my Vireyas on a concrete terrace, which faces east and they get an overhead spray watering once a day, except in summer when the watering is increased up to three times a day. I also hand water the leaves if it is very hot - and yes, we do get some very hot days in Tasmania, like this week when it has been aound 35°c for three days. There is a loggia above to help cut down excessive sun and cold.

I was very interested to read the article by Sherla Bertelmann from Hawaii in TVV Issue #61 of July 2006, that other folks also experience this problem of split corollas and to read your comments in reply. My plants are in pots on the terrace and I shall take more notice of conditions when *R. konori* comes into bud again.

We usually have little frost where we live due to being across the road from the D'Entrecasteaux channel, which separates Bruny Island from Tasmania. Last year was different with several frosts, maybe due to changing weather of global warming. (Eds – We note your comment about changes to the climate Maggi).

My Vireyas are only part of my garden which takes up nearly three acres and my interests vary, leaving not enough time to spend on any one part of it, or with the necessary energy. My attempts at growing Vireyas to the standard I'd like therefore may seem a bit haphazard to the specialists.

In 1999 I collected seed from *R. laetum* which had developed fat seed pods - unplanned so pollination was from other plants in flower at that time. These were an unnamed Vireya hybrid given to me by a friend (which I have never managed to identify) and *R. laetum x R. loranthifolium* Narnia? plus *R.jaminiflorum*.

I collected plenty of seeds and they duly germinated, however all but 4 damped off or died. Eventually only one seedling survived and it grew very slowly. It is now 30cms tall and is very healthy and compact. This vireya has been re-potted several times but I wonder how long I have to wait for it to flower? My plants are fed with dynamic lifter or seaweed/fish fertilizer.

I have written to The Vireya Venture in the past and described our garden, which is almost 3 acres on a claypan close to the surface. It was mostly paddocks when we bought the property and it had a stand of 40 eucalyptus globulus and others planted too close to ever make crowns. We asked council for permission to cut down some of these trees and they allowed us to remove half. Those left are still too close to develop properly, hence they are extremely tall for their years. We were told to keep cutting out the tops but as a result we have multi-trunk trees still trying to reach their potential. On two borders of the property are more Eucalypts and *Acacia melanoxylon*.

Thirteen years ago we moved in and began development by having a dam made. It fills from a small creek when it is running high. We are the last property on our side of the creek before it runs into the sea.

As well as all the eucalypts and a house there were two large glasshouses on the property and a small shed between, which became my potting shed. We designed garden beds and planted them with two truckloads of potted propagations and bought plants that we had collected for this garden at our old place. There are shrubs, trees, rhododendrons, camellias, roses and natives depending upon the situation. We also planted the dam bank to eliminate mowing and put waterlilies in the water with a few other aquatics. It is a haven for ducks and other birds and we have even had a platypus in there.

The larger glasshouse is about 20 x 8m and in it we planted a very successful citrus grove - because of the cold winds we have here. Also in this glasshouse we put early crops of broad beans and peas to avoid wind damage and in summer we have tomatoes. Some years we have grown melons too. We always tend to have more crops than we can eat ourselves and give a lot away to family and friends.

The smaller glasshouse has a hotbed for propagation and it houses tropicals such as hibiscus and cordylines, plus a Pyrostegia venusta and Stephanotis, both of which flower well in there. In winter two infra-red lamps come on late pm until about 0900.

I cannot resist keeping a stocks of my favourite plants as insurance against loss or to give away. So you see there is a lot for an old woman to do. My vireyas get there share of care, but not excessive. Alf, my husband, does all the heavy work and grows the vegetables.

Best wishes and thanks for a brilliant newsletter.

Maggi Carver, Woodbridge, Tasmania

Eds Thanks for the interesting email Maggi. Another possibility for you open pollinated *R. laetum* is that it self-pollinated, in which case your sole surviving seedling would still be straight *laetum*. This would be consistent with it growing on its own roots and not having any 'hybrid vigour'. You will probably be able to tell once it flowers.

I think that you may still get reasonable rainfall in Tasmania even if global warming does result in a shift of weather patterns to the south of their normal trajectories, which is causing the drought in southeast Australia.

Email from Marion Bairstow in New Zealand

Hi,
I would like to be added to your mailing list for this TVV newsletter.

I am particularly interested in propagating techniques, e.g., when to take cuttings, treatment of them from the cutting until placement in the mist-house (length, where to make the cut, depth in cutting medium, etc.). Also whether to pinch the centre at time of cutting or later when some growth is evident. Plus any other relevant information.

Many thanks Marion Bairstow, New Zealand

Eds Hi Marion. Here are some brief answers your specific questions.

When to take cuttings? Any time of the year. Preferably take a recently growing shoot when it has hardened off slightly. Shoots from lower down on the bush are best. However, if you must take an older shoot with a flower bud it should still be OK. Cutting length should be about 12cm or slightly wider than the width of the palm of your hand.

Treatment of cuttings? (i) Cut off all but the top three leaves and cut each of the remaining three in half (cut across the leaf). If there is a flower bud pinch it out. The objective is to keep enough green leaf surfaces to provide photosynthesis but to decrease transpiration so the cutting doesn't dry up. Remember the cutting cannot take up any moisture until the new roots develop. (ii) Cut off the bottom 2cm of the shoot with sharp secateurs or similar and try not to bruise the stem. Final stem length should be about 10cm or the width of the palm of your hand. (iii) Using a very sharp blade (eg razor or scalpel blade) cut a small sliver off the side of the stem from a point about 1cm up from the base down to the cut surface at the base. The objective here is to expose the cambium layer but not cut down deeply into the interior of the stem. The cambium layer is a thin green layer just beneath the bark and it is from this layer that new roots emerge. (iv) Dip the base of the stem (ie all the exposed cambium layer) into a root stimulation material, either a cutting powder, liquid or gel. If using a liquid allow it to dry for ~10 minutes. The objective is to irritate the cambium layer and make it form a callus, from which the new roots will grow.

The propagation medium? Make up a root striking medium; a 50:50 mix of sharp sand and peat moss is good, or add some Perlite. Definitely do not add fertilizer. Put this medium into a suitable container (eg shallow tray or pot or similar) with numerous holes in the bottom to provide excellent drainage. The medium depth should be about 10-15cm. Wet the medium thoroughly by saturating it with boiling water. Don't worry if some of the peat moss floats to the surface or washes out of the holes. Allow the medium to cool completely.

Put in the cuttings? Using a clean (sterile) rod with diameter a little less than 1cm (eg a pencil) make enough holes into the striking medium to take all the cuttings you prepared. The distances between the holes should be no less than 5cm and the hole depths should be about 5cm (ie ~50% of cutting length). Gently push the cuttings down into the holes to the 5cm depth. The objective is not to scrape off the rooting compound. When all cuttings are in place water them in well using cooled boiled water. The objective is to close any open spaces around the base of the cutting (ie remove air pockets).

Where to put the cuttings? If using a chamber with mist and bottom heat (21°C), turn these on. Adjust the mist so that the medium doesn't become over-saturated but keeps it moist. If using an isolated tray or pot then place a clear plastic bag over the top with the bag puffed out. Keep the bag puffed out (ie, not touching the cuttings) using sticks such as wooden or metal skewers stuck into the medium around the edges of the tray or pot. Seal the bag under the tray or pot so as to maintain moisture saturation in the air around the cuttings. Place the tray or pot in a warm place where it will not get direct sunlight.

Check the cuttings every day or so until new shoots grow from the buds in the leaf nodes. When these new shoots are about 3cm long it can be assumed that new roots have developed from the callus at the base of the cuttings. The plastic bag can be removed and the cuttings given frequent watering with plain water. Once a week add a little liquid fertilizer to the water (¼ strength). After a few weeks (or longer) the cuttings can be dug out and planted into normal pots with fertilizer in the soil mix.

Good luck Graham and Janet

Seed Available from *R. konori*

We have some seed available for distribution to TVV subscribers from *R. konori* (selfed), the flowers of which are shown in the photograph below. It's a beautiful flower with pink markings near the base of each petal. One of our best Vireyas.

If you would like some of this seed then please send us an email, or write a letter, as a contribution to the next issue of TVV. Deadline is Sunday April 8. Be sure to give us your mailing address.

The End

That's the end of another issue of The Vireya Venture. The next, Issue # 64, is scheduled for production and distribution next month, in April. We will do our best to meet this schedule

Again, its goodnight from Buster (on the left) and YumYum. These photos are from when they were younger, about 6 months old.