



# *The Rhododendron*

*The Australian Rhododendron Society Inc.*

**2013**

**Volume 53**



BHARAT K. PRADHAN

**Above** *Rhododendron arboreum* var. *roseum* in full bloom in Sikkim. See page 11.

**Front cover** Newly registered vireya 'Joan McClelland'. Photo by Andrew Rouse.

**Below** *R. ferrugineum*. See page 23.



ROBERT HATCHER

The  
*Rhododendron*  
Official Journal of the Australian Rhododendron Society

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2013

Volume 53

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# The Australian Rhododendron Society Inc.

## Aims

The Society's objective is to encourage interest in and disseminate information and knowledge about the genus *Rhododendron* and to provide a medium by which all persons interested in the genus may communicate and co-operate with others of similar interest.

## Membership

Membership of the Society is open to all persons interested in the objectives of the Society upon payment of the annual membership subscription. For further information contact Branch Secretaries or the National Secretary.

## Subscriptions

Annual subscriptions cover the period 1 July to 30 June, and vary up to \$25 (single member) and \$35 (member & partner) depending on the Branch selected. (Branches set their own level, out of which an amount is paid to the national Society). The annual journal *The Rhododendron* is included as a benefit of membership.

Overseas members may nominate for affiliation with any of the Branches. The base annual subscription for membership of the Victorian Branch is AUD \$25. This covers dispatch of *The Rhododendron* by airmail in the last quarter of the calendar year and other communications by email (if there is a preference for receipt of other communications in hard copy form, an additional subscription amount of AUD \$15 applies to cover airmail cost). The Victorian Branch accepts Visa or Mastercard payments. Overseas subscriptions to other Branches may vary from these rates and require to be paid by bank draft or cheque payable in Australian dollars. Contact the ARS National Secretary.

## Contact details

Details of local Branches, along with Office Bearers of the Australian Rhododendron Society, are listed on page 56.

# Editorial

BARRY STAGOLL

In addition to carrying news about Australian rhododendron-focused groups and their activities, we're privileged this year again to publish another most interesting and detailed article about the Sikkim Biodiversity Conservation and Forest Management Project, the very scenic and floriferous territory covered by this project, and its riches of rhododendrons in particular, authored by Bharat K Pradhan, Kamal Poudyal, SBS Bhadauria, Suraj Subba and Dorjee Chewang of the Forest, Environment and Wildlife Management Department, Government of Sikkim, India.

Also an article by Rob and Jackie Hatcher, respectively Australian Rhododendron Society President and Secretary, chronicling their observations of rhododendrons in another most fascinating mountainous region – in this case the European Alps.

And lots of interesting news about the Australian rhododendron groups and the gardens where their members volunteer their time, expertise and labour to maintain and improve the collections and the displays, and to enthuse visitors with the wonders of their contents.

This year, again, an impressive list of newly-registered rhododendron hybrids is reported, with illustrations to attest to their merits.

I trust that readers won't think I've been self-indulgent in contributing an article myself this time. It's been some years since I've done so, and the amount of volunteered content was a bit low this year.

On this note, I feel I should close by renewing the invitation to all members (and other readers) to consider writing about their interests, insights, and/or adventures in connection with rhododendrons (and companion plants) and take the opportunity of sharing them in our pages in a future volume. ❀

In Vol. 52 - 2012 we were  
Pleased to include:

***The Jury vireya legacy***

by **Abbie Jury**

Due to an oversight we  
omitted website & Facebook  
addresses, as follows:

[www.jury.co.nz](http://www.jury.co.nz)

[Facebook.com/thejurygarden](https://www.facebook.com/thejurygarden)



# The President's Report

ROBERT HATCHER

This year has been one that has thrown up several challenges.

Getting a permit to collect our Australian species has turned into a drawn out saga, that if I had known, I would have shelved early in the piece. However, having invested a lot of time and energy into it I will persevere. The Botanic Gardens of Adelaide continue to support this process.

The journey to Edinburgh to address the Scottish Rhododendron Species Conservation Group organised conference in April threw me a curved ball on my journey there. Security after the Boston marathon bombing was tight and with my Edinburgh connection ready to fly I raced off leaving my wallet behind. Finding yourself in a foreign city without funds is not a good feeling even though they speak a version of English. With help from Royal Botanic Gardens Edinburgh and the staff at the hotel, and the wonders of a supportive wife, using technology and Western Union I got back on track and presented my paper along with the rest of the international group. The papers are all available on The Botanic Gardens Conservation International Website (BGCI).

As a society we continue to grapple with what it means to have a national focus. This year Emu Valley has proposed they become an affiliated group of the National body with a sub group of ARS members. The national Council has put in place an interim arrangement that will facilitate this and at this year's AGM the main discussion will revolve around what this means for all the branches.

The future of National Council and the Australian Rhododendron Society does stand at a crossroads as to how it continues to function and where its priorities lie. I continue to take the position that we need a national presence. As a plant society we are too few to go it alone in the individual branches without staying connected. The relaunching of the National Website in this last twelve months has been one thing that stands out as being a move that can keep us together, a Facebook connection as well as the main website has the potential to increase our profile enormously.

Finally on a personal note my year as far as rhododendrons had a highlight – seeing *Rhododendron ferrugineum* in the wild in the Alps around Chamonix Mt Blanc in France and Italy. As a tonic to my love of rhododendrons this was an amazing uplift. I can recommend the area as a destination. As a result of late snow melts this year all the usual wildflowers as well as the last patches of *Rhododendron ferrugineum* were in flower. A truly fantastic experience.

Keep having fun with rhododendrons! ❁

## *Reports – Australian Rhododendron Groups*

### *Blue Mountains Rhododendron Society*

Our first news is, unfortunately, sad news. Norm Campbell, Garden Supervisor from our beginning – until I took over in 2006 – passed away. Norm and his late wife, Olive, were the backbone of our Society from its early days. Olive was our secretary for many years and Norm worked tirelessly in developing the Gardens. Being a draughtsman, Norm drew up plans of the Gardens and with a small band of volunteers constructed paths, bridges, planted and maintained 1000s of plants, mainly rhododendrons and azaleas but also a large number of other exotics which exist happily among our local natives. He laid many, many metres of pipe to carry water to these plantings and was in charge of constructing paths, steps, bridges and oversaw the building of our Lodge. Norm had been made a Life Member of our Society and was a patron. The Gardens are now called “The Campbell Bacchante Gardens” being given that name some years ago.

This year we also added another Life Member with our Archivist and garden volunteer, Beryl Black being awarded this honour. Beryl and her late husband Sam volunteered alongside Norm for many years and Beryl still comes on Mondays and volunteers.

Last October we had a late surprise snowfall of several centimetres which did quite a deal of damage, although the Gardens still looked wonderful with Rhodos of many colours poking their flower heads through caps of snow. It did, however, bring down quite a few branches from our eucalypt canopy.

Being blessed with up to 16 volunteers each Monday we have been able to keep up with the ongoing maintenance of plants, paths, steps etc as well as taking measures to stop erosion that was occurring during heavy rain with run off from asphalt streets bordering the Gardens, and we have continued with our environmental weed program, targeting Montbretia, Ivy, Holly, Cotoneaster, Privet, etc. and with an area of 45 acres to care for this is a huge and ongoing job. Not only do we have to poison and remove established plants, some quite large, but it is an ongoing job to keep on top of fresh germination.

We are currently planning a raised lookout adjacent to The Lodge which will give us stunning views of the valley area and allow those visitors who can't make the walk into the valley, and also those in wheelchairs to appreciate the stunning spectacle when the rhodos and azaleas are in flower.

Once again this spring is going to be stunning with a wonderful amount of buds on everything thanks to our potash program and we will also have a great display of waratahs.

Once again the last 12 months has been a good one financially with us able to maintain our bank balance as well as cover the cost of maintenance and improvements to the Gardens. If the weather is kind to us this spring we will no doubt have another good open season both in sales and donations for entry.

Dick Harris  
Garden Supervisor.

## ***Emu Valley Rhododendron Garden***

2013 was a year of highs and lows for the Emu Valley Rhododendron Garden. Increasing recognition of our garden at the local, national and international levels has been a significant high. Building on those past successes is our major challenge, and I am heartened by the help being offered in ensuring that we successfully expand our support and volunteer base.

The Management Committee would like to advance a greater feeling of community ownership in our garden. Our membership is at a record high of 400 and our target is to reach 1,000 members. Our initiative in offering a complimentary pass this year to every Burnie household, with the support of the Burnie City Council, has been very well received. We will review its success next year and consider a similar offer to our adjoining municipalities.

We were all saddened by the loss of our long serving garden stalwart and Chairman Terry Shadbolt during the year, and he will be missed by us all. Terry would be delighted to know that the work he and so many others over the past 32 years has put EVRG into the position where it is finally rising towards the status that he believed it deserved.

The achievement of Tourism Tasmania accreditation was a major step forward for us and already is bringing many benefits. An application to Tasmanian Community Fund saw a grant towards the nursery upgrade, which will answer an urgent need to increase its efficiency. However we were unsuccessful with our applications to both TIRF and TQAL to expand the tea room.

It was a pleasure to host the Australian Rhododendron Society Convention in October 2012 and hear from the representatives about the North Queensland vireya expedition. There is little public knowledge of our two endemic vireya rhododendrons, *R. viriosum* and *R. lochiai*, and it was personally an exciting expedition for EVRG to be involved in. Congratulations to the ARS for its initiative in organising the expedition which hopefully will lead to much greater public recognition of our unique Australian native plants.

Congratulations to our Curator Maurie Kupsch and his many volunteers for their dedication and commitment to the garden's development again this past year. The Chinese Pavilion is our current major "work in progress",



financially supported by MMG of Rosebery and our continuing supporter, the Tasmanian Community Fund. The demanding and intricate nature of the work involved in this project has meant an overrun on timing. However it will be another outstanding feature in the garden upon completion, and of a quality that we will all feel justifiably proud. Our horticulturist Juanita Wood is progressing her studies towards her diploma. Our labelling machine, funded by the Ian Potter Foundation, is seeing Juanita make significant progress with plant identification. The major challenge ahead is to upgrade all garden signage. Significant progress has already been made on design and costings.

Thanks to our many supporters, the garden maintains a debt free position. However, we still have a shortfall in our annual budget. The contribution of our tea room and catering volunteers is helping to significantly underpin our current finances. We will need to see continuing support from local, state and federal governments to progress the garden towards its full development.

Each year our garden reaches a new level of maturity. Including plants in the nursery, Maurie is now approaching a collection of 500 rhododendron species, including the vireyas. This is a phenomenal figure and we have them all growing outdoors.

My thanks to all our dedicated staff and volunteers. In particular my sincere thanks to our business manager Sue Johnson and our newsletter editor Nigel Burch for their professional contribution to an incredible team effort.

Feel proud of your achievements; my congratulations to you all on another highly successful year.

*Ian Chalk*  
*Chairman of the Management Group*

### ***Southern Tasmanian Branch***

Once again it is time to reflect on another rhododendron year which has flown by so quickly.

Our membership, whilst remaining stable, is like so many clubs and organizations these days, is just failing to attract new members. So the perennial problem of how to bring the rhododendron genus back into favour remains one of our most pressing issues. Keeping our present membership is paramount and the committee constantly tries to find interesting topics and speakers to not only educate our members but to also entertain and inspire them.

Our first meeting for the 2012–2013 year began with Ken and Lesley Gillanders giving a nostalgic presentation on the history and development of their labour of love, Woodbank Gardens. From seeing photos from the early days to when Ken and Lesley left Longley saw a transformation from an overgrown block to a maturing garden filled with a collection of treasures from

around the world, many of which Ken collected in the wild. Truly inspiring.

Our intrepid traveller, Gill Fitzgerald, was our September speaker. She took us from Bhutan to Britain giving an insight into the countryside, the people and plants and gardens.

Round table discussions have been proving quite successful and all the members seem keen to participate. This was once again the case when in October a large cross section of the genus rhododendron was shown and talked about.

Sue Wallbank, from Pen-Lan Plants, gave an excellent presentation on *Primula auricula*. Many of us were tempted to purchase some of the beautiful specimens she had brought along and the members unanimously agreed that a garden visit to Sue's would be a high priority for the following October.

After a hot, dry summer the new year's meeting commenced with Ken Gillanders initiating discussion on surviving drought conditions. This certainly brought forward some creative suggestions on what to grow and how members had saved their gardens from total desiccation.

Fabulous foliage was the topic for the April meeting. Varied examples of foliage were tabled and members were given a new perspective to the genus.

Finally to finish off the year, Barry Davidson gave us an interesting insight into growing orchids outside in Tasmania.

I must not forget to sincerely thank all the committee members for their help and support during the year. The society just couldn't function without these willing members. Thank you, too, to all the wonderful members who opened up their homes and gardens each month. These gatherings allow a wonderful social interaction between members which is so vital.

Now it is time to look forward to a new rhododendron year with, hopefully, fresh faces not only joining the society but giving a new lease of life to your hard working committee.

*Lesley Eaton*  
*President*

### ***Tamborine Mountain Botanic Gardens***

Good rain for the first six months of this year, including a cyclone, has had a positive effect on the rhododendrons and other plants at Tamborine Mountain Botanic Gardens. The vireyas in particular have shown a new lease of life and even our modest collection of elepidote rhododendrons has given a great display of flowers.

We have noticed that many visitors to the Botanic Gardens, especially from Northern NSW and Queensland, have a fascination with vireya and rhododendron flowers. Rhododendrons are a rare sight in gardens in these

parts of Australia. They are attracted by the shape and colour of the flowers and often take an interest in the information on the interpretive signs that we have along the Rhododendron Walk. However, more vireyas are now being grown, often in pots, where they can be moved out of the sun and the severe summer storms. Both types of rhododendrons are grown in the gardens around Tamborine Mountain but the high humidity is a limiting factor.

We have had pleasing results in the rhododendron area of our Gardens this year. Concerted efforts to rid the area of weeds, some discreet trimming and the application of fertilizer and mulch have had a definite positive effect on our plantings. The vireyas were the first to respond and there are always a few in flower to please the visitors. The azaleas responded by growing a large amount of foliage but few flowers – potash is on the menu for those little dears next year. A negative aspect of our large annual rainfall here on Tamborine Mountain is that the soluble nutrients get leached away relatively quickly, meaning we have to re-fertilize with the risk of building up the nitrogen content.

Until now, we have only had a small number of ‘cool-climate’ rhododendrons in our display, so about three months ago we decided to make a definite attempt to increase the number of elepidotes in our Gardens. Being in a sub-tropical area means there is always a risk from the high humidity, fungal attack and lack of cold winters. However, we are determined to give it our utmost effort and sort out just what can be grown. After some research, we purchased about 60 plants that were recommended by our supplying nursery. Unfortunately, no ‘blues’ were offered as likely to succeed.

The young plants have sat in their pots the last three months awaiting us to prepare the area where they were to be planted, and this has been no small task. But at last they are in place and have a fancy new solenoid-driven watering system for the drier weather. Most of the plants have grown vigorously but a couple have already shown their disgust for the climate and died. We feel that even if we get only half of them to succeed we will have achieved a positive result. Time will tell. If anyone has had experience growing in the sub-tropics and knows of any cultivars of elepidotes that have succeeded, especially blues, please let us know.

*Brian Davison*  
*Honorary Curator*

### ***Victorian Branch***

This year has been a productive one with significant achievements and progress in several projects. The Branch’s activities have mainly revolved around the Garden at Olinda. Principal among the activities was the successful refurbishment and planting out of the Vireya House (articles about this

elsewhere in this Journal) while other projects continued to improve the Garden and its nursery.

The committee of the Victorian Branch made the decision that this year we would abandon the monthly, or more lately quarterly, meetings at Nunawading. Instead we would concentrate on activities based at the Gardens with occasional events when circumstances allowed, such as the very recent talk and visit by Steve Hootman or visits to other gardens (Otto Fauser's). This decision to stop the general meetings and break with over 50 years of tradition was dictated by the very poor attendances when meetings were held. There is, however, some growing evidence that members are slowly starting to get used to this arrangement and we are seeing different members attend different events and Tuesday volunteer gatherings. So we will continue with this approach and continue to encourage members to attend events that suit them or contact a committee member and discuss what they would be interested in doing.

The flowering season going on in the Garden, as I write this, showcases the long-term work of the Society, it also highlights some of the recent efforts of the ARS Victorian Branch members and the results produced by the excellent cooperation between the ARS and Parks Victoria with the gardens looking spectacular. The rock garden, moorland and Vireya House where members have made such an effort in recent years are real focal points for the Garden. The ongoing work of documenting what is present in the Garden is a role being carried out by the ARS working group at Olinda and is vital to aid in the preservation of the plant material as well as the legacy of the ARS.

*John O'Hara*

# *A glimpse of rhododendrons in Khangchendzonga Biosphere Reserve, Sikkim*

BHARAT KUMAR PRADHAN<sup>1</sup>, KAMAL POUDYAL<sup>1</sup>, SBS BHADAURIA<sup>2</sup>, SURAJ SUBBA<sup>3</sup>  
AND DORJEE CHEWANG<sup>4</sup>

SIKKIM BIODIVERSITY CONSERVATION AND FOREST MANAGEMENT PROJECT,  
FOREST, ENVIRONMENT AND WILDLIFE MANAGEMENT DEPARTMENT, GOVERN-  
MENT OF SIKKIM, DEORALI 737101, GANGTOK, SIKKIM (INDIA)

## ***Dedication***

This article is dedicated to the Late Katherine Sangey Lepcha, Divisional Forest Officer (Biodiversity Conservation), Sikkim Biodiversity Conservation and Forest Management Project (SBFP), Forest, Environment and Wildlife Management Department (FEWMD), Government of Sikkim, who was our mentor during her tenure with us.

**R**hododendrons are noted for many clusters of beautiful coloured flowers. They are widely hybridized for their showy flowers. There are 28,000 hybrids of rhododendrons (Leslie, 2004) compared to approximately 1,000 natural rhododendron species globally. Rhododendrons belong to the Ericaceae family and the earliest fossil record from Alaska (Hollick & Smith, 1936) reveals that rhododendrons have been in existence for at least 50 million years. Irving & Hebda (1993) speculated that “*rhododendrons probably did not originate in the region where they are now most abundant and most diverse because these regions did not exist 50 million years ago*”. However, the earliest record of rhododendrons comes from the incident where Xenophon’s soldiers were overcome by nausea and vomiting after consuming honey made from the poisonous nectar of the yellow flowered Pontic Azalea and *Rhododendron luteum*, when they had camped in the Armenian hills inland from Trebizond on the Black Sea coast of Turkey while retreating from Babylon in 401 B.C. ([www.rhodo.citymax.com/page/page/627471.htm](http://www.rhodo.citymax.com/page/page/627471.htm)).

Rhododendrons have global distribution, but are completely absent from South America and Africa. They are mostly distributed in Asia: China alone harbours 571 species of rhododendrons, of which 409 species are endemic to

China ([www.efloras.org](http://www.efloras.org)). In Indian context, out of 72 rhododendron species reported, the highest number of species (61 species) is present in Arunachal Pradesh (Mao et al., 2001), and Sikkim harbours 36 species (Pradhan & Lachungpa, 1990). Sikkim, being an explorer's paradise, famous naturalists and explorers like Sir J.D. Hooker and Dr. A. Campbell had explored Sikkim during 1849, and their work forms the baseline literature even today. Sir J.D. Hooker had given an account of 43 rhododendron species from Sikkim Himalaya including Darjeeling Hills (Hooker, 1849).

Being a part of the Eastern Himalaya biodiversity hotspot, and due to its unique topography, Sikkim is very rich in biodiversity. In order to conserve this, Sikkim has been brought under a network of protected areas (1 Biosphere Reserve and 6 Sanctuaries) covering around 31% of the total geographical area (7,096 sq. km.). Khangchendzonga Biosphere Reserve (BR), the only biosphere reserve in Sikkim and the highest biosphere reserve in India, covers 41.31% (core zone or Khangchendzonga National Park (KNP): 1,784 sq. km., buffer zone: 835.92 sq. km., transition zone: 311.80 sq. km.) of the total geographical area of Sikkim. The altitude of Khangchendzonga BR ranges from 1,220 m to 8,586 m asl (Mt Khangchendzonga), and lies between 27°30'–27°55'N longitude and 88°02'–88°37'E latitude. It is home to several endangered, threatened, rare and endemic species of plants and animals and is one of the richest reservoirs of rhododendrons (Badola & Pradhan, 2010a) and harbours over 20 species of rhododendrons, including the state tree of Sikkim, *Rhododendron niveum*, (Badola & Pradhan, 2010a) and *Rhododendron maddenii*, a species of high conservation concern (Badola & Pradhan, 2010b). The Khangchendzonga BR harbours some of the endangered fauna like Red Panda (*Ailurus fulgens*), Snow Leopard (*Uncia uncia*), Musk deer (*Moschus* sp.), Blue Sheep (*Pseudois nayaur*), etc., and pheasants such as Blood Pheasant (*Ithaginis cruentus*), Himalayan Monal (*Lophophorus impejanus*) and Satyr Tragopan (*Tragopan satyra*).

A survey was conducted along Yuksom–Dzongri–Goeche La trekking trail (ca. 40 km) within Khangchendzonga BR (west Sikkim, India) during April–May, 2013. This trek has gained its popularity not only amongst the locals, but thousands of foreign visitors come to Sikkim to experience this fascinating trek. Yuksom (1,780 m asl), the last human inhabited area and an entry point to the particular trek is a beautiful rural settlement (comprising 12 villages) and is situated in the midst of lower wet temperate forest. The area is inhabited by a mixed community including Bhutia, Lepcha, Limboo and Nepali, signifying the perfect example of 'unity in diversity'. Besides, numerous plainsmen (especially Biharis) have also settled at Yuksom and are running restaurants and other grocery shops. Yuksom, being the first capital of



KANAL POUJAL

**Above** Scrubs of *Rhododendron lepidotum*.

**Below** The pink floret of *Rhododendron falconerii*.



BHARAT K. PRADHAN





KAMAL POUDEL

**Above** View of Mount Pandim from Phedang.

**Below** *Rhododendron barbatum* along trekking trail.



BHARAT K. PRAJHAN

Sikkim, has historic significance too. Some of the important places of interest in Yuksom include the coronation throne of first King or Chogyal of Sikkim, (which have been preserved since more than 350 years); Dubdi monastery (the oldest monastery in Sikkim, founded in 1701 AD by Gyalwa Lhatsun Namkha Jigmee or Lhatsun Chenpo); Karthok Lake, etc. Yuksom, especially *bazaar* area (market), is full of lodges and restaurants for the tourists, and the local youths make substantial income from the tourism industry by working as part time or full time guides/porters/cooks, etc.

This trekking trail starts from Yuksom and ends right at the base of Mt Khangchendzonga (ca. 5,000 m asl), the third highest peak in the world, which passes through Sachen, Bakhim, Tshoka, Phedang, Dzongri, Kokchurung, Thangsing, Lamuney, and Samiti Lake. Variability in species compositions with altitude can be clearly observed in this particular trek. Within Khangchendzonga BR, there exist different types of forest systems, such as wet temperate broad-leaved forest, temperate conifer forest, sub-alpine forest, alpine scrubs and alpine grasslands. The wet temperate broad-leaved forest, extending up to 2,800 m asl, comprises of evergreen and medium-sized trees, rarely exceeding 24 m in height. Oak species and laurels cover a massive forest area and are abundantly covered with mosses and epiphytes. The forest is extremely thick and the forest floor is covered with numerous species of herbs, shrubs and ferns. We encountered 20 species of rhododendrons along this trek, which were in the flowering stage up to 3,800 m asl; however, above this altitude, the species were in vegetative stage.

Rhododendron diversity is very low up to 2,800 m asl. The trekking is much easier up to the Prek chu (river, 2,150 m asl), which is followed by steep climbing, up to Bakhim (2,600 m asl, a camping site for the trekkers) and Tshoka (2,950 m asl; old Tibetan camp which now has been evacuated by the KNP authority). Even though one has to cover 16 km long trek in the very first day, one does not feel exhausted because the forest harbours variety of colourful birds like Redstart, Whistling thrush, Drongo, Warbler, Bulbull, Tit, Magpie, Myna, Fly catcher, Cuckoo, Coal tit, Sun bird, Grandala, Barbet, Finch, etc., whose activities are so refreshing that even the person with little knowledge about birds cannot remain without capturing them in their simple cameras. The rhododendron species available between Yuksom and Bakhim are *Rhododendron arboreum* var. *arboreum*, *R. grande*, *R. griffithianum* and *R. lindleyi* (epiphytic rhododendron). Amongst these rhododendrons, *R. arboreum* has broad range of distribution and can be observed up to 3,200 m asl along this trekking trail; similarly, *R. grande* is available from 2,150 m to 2,700 m asl; while the status of *R. griffithianum* is very pathetic, there is a small patch at an altitude of ca. 2,300 m asl. The situation is similar in Fambong

Lho Wildlife Sanctuary in east Sikkim where we encountered few trees of *R. griffithianum* at an altitude of ca. 2,250 m asl. The species needs immediate conservation measures for its long term survival. *Rhododendrons* are medicinal as well as poisonous. In this part of the Himalaya, *R. arboreum* is used in the form of medicine, the dried petals are chewed to clear the choking caused by fish or chicken bone (Pradhan & Badola, 2008); however, Major Madden reported cattle dying after consuming the foliage of *R. arboreum* in Kumaon Hill (Hooker, 1849). The nearby forest is highly disturbed between Bakhim and Tshoka owing to human habitation during the recent past; nonetheless, Tshoka, which formed the heart of the trekking trail, has its own significance. The view of Mt Pandim, early in the morning from Tshoka, when the golden rays of sun dart into the snowy peak, is so splendid that it looks like a beautiful painting clinging on the wall; the spectator feels like staring at it for hours or until one gets weary. The prominent rhododendron species available between Bakhim and Tshoka are *R. arboreum* [var. *arboreum* (red flower) and var. *roseum* (pink flower)], *R. griffithianum* and *R. falconeri*. On reaching 2,800 m asl altitude, the wet temperate forest species are replaced by conifer tree species such as *Abies densa* and *Tsuga dumosa* along with other species such as *Magnolia globosa*, *Betula utilis*, etc. *Rhododendron falconeri* with creamy yellow flower starts appearing at this altitude and extends up to 3,250 m asl; nevertheless, the immature pink floret, when young, sometimes creates confusion between *R. falconeri* and *R. hodgsonii*; at this time, they can easily be identified by their leaves, which are completely different for the two species. Along this altitude, *R. arboreum*, *R. falconeri* and *Magnolia globosa* forms a large distinct patch intermingled with each other, sheltering a variety of animals like Himalayan black bear, red panda, barking deer, Himalayan Thar, jungle cat, Binturong, etc. Dwarf bamboo, (*Arundinaria maling*) growing as undergrowth is very common, the leaf of which is an important food for the red panda and the new shoot for Himalayan black bear. Similarly, the fruit of *Prunus nepalensis* and *Lithocarpus pachyphylla* are relished by the Binturong and the Himalayan black bear. There have been instances of sighting of red panda by the people during winters, when they come out for the purpose of taking sunbaths (personal interaction) at Bakhim and Tshoka. We observed several scratch marks of Himalayan black bear on the tree trunk of *Abies densa*, *Lithocarpus pachyphylla*, *Tsuga dumosa*, etc.

Above 3,100 m asl, *Tsuga dumosa* is replaced by *Abies densa*. The forest of *Abies-Rhododendron* extends up to 3,900 m asl. *Tsuga dumosa* has very restricted distribution; it has been observed only at Tshoka (west Sikkim) and below Lachen area in north Sikkim (author's personal observation). Steady change in the rhododendron species is a very distinct feature from this zone

and the rhododendron diversity is high between 2,800 m to 4,000 m asl. *R. barbatum* and *R. hodgsonii* with red and pink flower appears at 3,200 m asl, sharply replacing *R. arboreum* and *R. falconeri*. These two rhododendron species have widespread availability up to Phedang (3,700 m asl) and are found in association with the only conifer tree species i.e., *Abies densa* and other tree species like *Sorbus cuspidata* towards the lower limit and *Betula utilis* towards the upper limit. Epiphytic rhododendron species viz., *R. camelliflorum* and *R. vaccinoides* can also be observed on the *Abies* trees along with *Vaccinium* sp., but they are very difficult to sight due to its low availability in the area. Species such as *Rosa sericea*, *Daphne cannabina*, *Viburnum cordifolium*, *Berberis insignis*, etc., are the common associates of rhododendrons at this altitude. Scrubs of *Gaultheria nummaruloides* are very common, densely covering the ground surface. It is interesting to note the very high regeneration of *R. hodgsonii* along this transect likewise in Tholung–Kishong trekking trail in north Sikkim (Badola & Pradhan, 2010a); nevertheless, such excess regeneration of the species perhaps will have negative ecological impacts in the longer run. The dense canopy formed by the large leaves of *R. hodgsonii* will inhibit the growth of its own seedling as well as the seedlings of *Abies densa* by hindering the light required for their growth. There have been reports of availability of *R. decipiens*, a replica of *R. hodgsonii* which can be differentiated by its rose pink wide open corolla, fading to completely white, from the later species bearing bell shaped rose-pink flowers, fading to light pink (Pradhan & Lachungpa, 1990); however, we could not spot the species during our survey.

With the increasing altitude, the soil becomes less exposed due to boulders and rocks, which are densely covered with spongy moss/peat moss, *Sphagnum squarrosum* and ferns, which make walking very difficult beside the designated footpath. In some shady places, even the trees are covered with spongy/peat moss. Further, the beauty of the trail is enhanced by the light green coloured lichen, old man's beard (*Usnea sikkimensis*) hanging down the *Abies-Rhododendron* trees; this forms the chief food for the musk deer during the winter. Nearing to Phedang, a resting place for the trekkers, *R. barbatum* disappears and the shrub of *R. wightii*, *R. campanulatum* and *R. campylocarpum* appears as the main associate of *R. hodgsonii*. The flowering in *R. wightii* had just begun during our visit (yellow flower); while *R. hodgsonii* and *R. barbatum* was in full bloom. The trekkers' hut at Phedang (3,700 m asl) is situated in the midst of the *Abies-Rhododendron* forest and the stunning view of Mt Pandim from here is beyond exaggeration. The beauty is further enhanced by the presence of *R. campanulatum*, *R. campylocarpum*, *R. lanatum*, *R. cinnabarinum*, *R. pendulum* and *R. triflorum*. We were told during the interaction that the flower colour (dark red) and flower shape of *R. cinnabarinum* in this part is

different from those present in Singba Rhododendron Sanctuary (pink and cinnabar red) in north Sikkim (Badola & Pradhan, 2009), but we could not observe the flower this time; however, from personal experience (first author's) in Sikkim–Nepal border trek along Singhalila range in west Sikkim, it can be speculated that the flower colour of *R. cinnabarinum* along this trek should be pink because of the distance factor, as both the ranges are close to each other. Though the species possesses beautiful flowers, Hooker (1854) reported goats and children dying after consuming the leaves and flowers of *R. cinnabarinum* in north Sikkim; even the wood is said to be poisonous – when used as fuel, it results in swelling of face and inflammation of eyes.

Between 3,800 m and 4,000 m asl, the valley is entirely covered with red flowers of *R. fulgens* and *R. thomsonii* along with pink flowers of *R. campanulatum* and yellow flowers of *R. campylocarpum*, *R. lanatum*, *R. wightii*, *R. triflorum*, etc., and the ground is densely enveloped with scrubs of *R. anthopogon*, *R. lepidotum*, *R. setosum*, *Juniperus recurva* and *Gaultheria pyroloides*. Along this zone, nausea, dizziness and vomiting sensation is very common due to inhalation of the fragrance of these species. The tree species disappear completely on reaching near to Dzungri, which is situated at an altitude of ca. 4,000 m asl. From Dzungri view point (4,200 m asl), the fascinating sight of perpetual snow covered Khangchedzonga range is stupefying. The two-day trek (10 km) from Dzungri to Thangsing (4,200 m asl) to Samiti Lake (4,300 m asl) is very exciting, as the slope is mild and the ground is full of rhododendrons (*R. anthopogon*, *R. lepidotum*, *R. nivale*, *R. setosum*) and Junipers (*Juniperus indica*, *J. recurva*) and other high altitude floras like *Aconitum* sp., *Anemone* sp., *Arenaria* sp., *Bergenia* sp., *Bistorta* sp., *Caltha* sp., *Cassiope fastigata*, *Corydalis* sp., *Gaultheria pyroloides*, *Primula* sp., *Mecanopsis* sp., *Myricaria* sp., *Potentilla* sp., *Rumex* sp., *Rheum acuminatum*, *Saussurea ovalata*, *Saxifraga* sp., *Silene* sp., etc., which – when in a flowering – gives a feeling of colourful carpet spread all over the ground. The noble rhubarb or Sikkim rhubarb (*Rheum nobile*) scattered on the rugged cliff gives a sensation as if someone is keeping a close eye on everyone passing through. The sighting of blue sheep, blood pheasant, Himalayan monal, etc., on rocky outcrops and steep slopes covered with rhododendrons, is very common; they can be seen foraging; however, one has to look very carefully on the slopes because they get camouflaged very easily. We observed a flock of blue sheep at Lamuney (4 individuals) and below Samiti Lake (25 individuals) during our trek; we spent almost two hours watching their activities and capturing them in our cameras. During our personal interaction with one of the Himal Rakshak (mountain guard) at Thangsing, he narrated about his encounter with Snow Leopard [when he was looking for his *Dzo* (breed of yak and cow, which is used for carrying

loads)], wild dogs, musk deer, etc. After climbing the strenuous steep slope from Samiti Lake to Goecha La, the eye-catching face to face view of Mt Khangchendzonga, the last abode, from very close is so enthralling that the feeling comes out in the form of spontaneous exclamation, wow!; however, due to bad weather, we could not reach Goecha La and had to retreat from Samiti Lake itself. The entire trek from Yuksom to Goecha La in Khangchendzonga BR is very fascinating and is a rich repository of biodiversity, which offers remarkable scope for rhododendron gene conservation as well as wide scope for the researchers to undertake researches on various aspects.

It has been the priority component of the Sikkim Biodiversity Conservation and Forest Management Project (SBFP) of Forest Environment and Wildlife Management Department (FEWMD), Government of Sikkim supported by Japanese International Cooperation Agency (JICA) to undertake the long term monitoring of the biodiversity of Sikkim, and this article is the by-product of the same project. ❀

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### ***References***

- Badola, H.K. and Pradhan, B.K. 2009. Singba Rhododendron Sanctuary in Sikkim, an explorer's paradise. *The Rhododendron* 49: 24–30.
- Badola, H.K. and Pradhan, B.K. 2010a. Discovery of new populations of a rare species *Rhododendron niveum* in Khangchendzonga National Park, Sikkim. *The Rhododendron* 50: 40–49.
- Badola, H.K. and Pradhan, B.K. 2010b. Population exploration of *Rhododendron maddenii* in Sikkim, bordering Khangchendzonga Biosphere Reserve – questioning rarity and endangerment. *NeBio* 1(1): 1–9.
- Hollick, C.A. and Smith, P.S. 1936. *Tertiary floras of Alaska*. US Govt. Publ. Off., Washington, DC, 185pp.

- Hooker, J.D. 1849. *The Rhododendron of Sikkim – Himalaya*. Reeve & Co., Henrietta Street, Covent Garden, New York.
- Hooker, J.D. 1854. *Himalayan Journal*. Chapter XXIII, Vol. 2, London.
- Irving, E. and Hebda, R. 1993. Concerning the origin and distribution of Rhododendrons. *Journal of American Rhododendron Society* 47(3): 139
- Leslie, A.C 2004. *The International Rhododendron Register and Checklist*. 2nd Edition, Royal Horticultural Society, UK, 1544pp.
- Mao, A.A., Singh, K.P. and Hajra, P.K. 2001. *Rhododendrons*. Vol IV, pp 2167–2202. In *Floristic Diversity and Conservation Strategies in India* (eds. Singh NP and Singh DK), BSI, Kolkata.
- Pradhan, B.K. and Badola, H.K. 2008. Ethnomedicinal plants use by Lepcha tribe of Dzongu valley, bordering Khangchendzonga Biosphere Reserve, in North Sikkim, India. *Journal of Ethnobiology and Ethnomedicine* 2008, 4:22. doi:10.1186/1746-4269-4-22.
- Pradhan, U.C. and Lachungpa, S.T. 1990. *Sikkim Himalayan Rhododendrons*. Primulaceae Books, Kalimpong, West Bengal, 130pp.



# *Rhododendron Conservation Conference Report*

ROBERT HATCHER

The theme for day one was entitled "Setting the Scene" and had four speakers and then two tours of RBG Edinburgh.

Speaker one was Sara Oldfield, Secretary general of BGCI, and she gave a review of the findings outlined in the IUCN/BGCI Red List of Rhododendron species.

Speaker two was Dr David Chamberlain who gave a talk on "A Temperate perspective of Rhododendron Conservation" which in the main focussed on Chinese rhododendron conservation issues.

After morning tea George Argent presented A vireya rhododendron conservation perspective which really was a review of the work he has carried out over more than thirty years in research of vireya species.

There was a panel comprising of the morning's speakers, which raised a lot of questions but no conclusions. Many proposals were made as to what could be done such as using BGCI as a conduit for rhododendron species conservation program initiation and a hub for networking among groups interested in same.

After Lunch David Knott Curator of RBGE Living Collections at Inverleith, gave a presentation on RBGE perspective involved in conserving their rhododendron collections.

The rest of the afternoon was taken up with tours of:

- the vireya collection in the public as well as the non public access collections conducted by George Argent and
- the outdoor collections with David Chamberlain discussing issues to do with temperate species held at RBGE. Both tours were focussed around those species under threat in the wild. Much of what he said was in relation to new species identification and the need for proper verification.

Sir Peter Hutchinson gave a resume of the day.

The morning of day two of the Conference was entitled "A perspective from the Wild on Rhododendron Conservation" and had speakers giving presentations on the issues surrounding rhododendron conservation in China by:

- Dr Gao Lianming from KIB in Yunnan.
- Kenneth Cox, standing in for Dr Ashibo Mao from Arunachal Pradesh, giving a modified presentation with an overview of the Sub Continental issues of conserving their species.
- Dr Wigiuna Rahman from Cibodas Botanic garden, LIPI, West java, Indonesia on the Indonesian perspective of vireya conservation.

This was followed by a speakers' panel and questions from the floor.

After Morning tea came the ex-situ conservation perspectives – from North America, Steve Hootman, RSF Executive director and curators RSBG, Seattle, Washington, on the work they are doing in collecting and growing species; from Hawaii, Sherla Bertleman on growing vireyas in Hawaii; Dr Marion Mackay on New Zealand's assessment of what they have in both public and private collections and Robert Hatcher on an Australian perspective of ex-situ conservation with an overview of the gardens involved in growing rhododendrons and including the trials and tribulations of trying to collect *Rhododendron lochiaie* and *viriosum*.

After lunch, Dr Hartwig Schepker, Scientific Director, Bremen Rhododendron Park and Botanic Garden, gave a European perspective of what is being done to collate all the data in Europe of what is in collections.

Kenneth Cox gave a horticulturist's perspective of *Rhododendron* species conservation in British gardens.

Ian Sinclair President of the Species Conservation Group gave a snapshot of their work.

After the afternoon tea break, there was a general discussion with a panel of some of the speakers – Sara Oldfield, David Chamberlain, George Argent, Hartwig Schepker, Steve Hootman and Gao Lianming, trying to get some ideas on what to do from here .

Most of the panel agreed there needed to be a lot more done on Identifying the unnamed species that have been recently discovered and verification of the many that have been named where there is some doubt over their voracity (more old-fashioned systematic botany).

Nothing was however conclusive on conservation programs over and above what is currently being done currently apart from continuing to communicate and try to set up a coordinated approach, using BGCI as a conduit. ❀

# *An Alpen Rose is a rhododendron by another name*

ROBERT HATCHER

**D**uring August Jacki and I had a great experience hiking in the Alps around Chamonix and Mt Blanc.

Jacki had been performing at the Basel International Tattoo with the SA Police band from mid July and I joined her in late July for the last few days in Basel before going to Lake Como for some rest and recuperation before the hiking.

The hiking trip was with Exodus, which has a connection with Peregrine Adventures here in Australia.

Being August I was looking forward to some great scenery of the Alps but not expecting to see very much in the way of flowering things. Jacki had been on a day trip with the band in Switzerland to the Grindelwald (near the North face of the Eiger) and seen the Alpen Rose in flower but I still thought that would be it's last hurrah.

How wrong I was.

As we started our first days hike I saw the remnants of flowers on *Rhododendron ferrugineum* at lower altitude than we would be getting up to and started to be hopeful of seeing flowers further up .

Then I saw *Lillium martagon* and a whole range of flowers I was not sure on, that turned out to be *Gentiana purpurea* and *G. villarsii* along with *Ranunculus* and *Epilobium* and many other little treasures. Soon after I spotted the first actual *Rhododendron ferrugineum* and by this time the camera was getting a decent work out. I should have held out as further up there were better specimens and by then the space on the SD card was full. There was of course no spare with me, that was back at the Chalet. Jacki to the rescue with the Smart phone

There were also the cacciniums that had fruit as well as the wild strawberries everywhere at this altitude.

This was only day one! It turns out there had been a very late snow melt and this had meant that the meadow flowers were hanging on a lot longer this season, later than Graham our guide had ever seen. You have to be lucky sometimes. Every day there were different things out at different altitudes. Sempervivums, campanulas, dianthus, thyme, helleborine and out in front of one of the refuges in a hollowed-out log some Edelweiss just to add to the ambience.

This all went toward a great experience. The weather stayed good for most of the time with only the last day washed out to the extent that the scene over Chamonix and Mt Blanc was obliterated.

All up we climbed five days and took in five different aspects of the Mt Blanc Massiff including one day in Italy and one on the border with Switzerland. We saw the effects of climate change on the glaciers of the region. Each day was starting at 1,200 to 1,400 m altitude going up to over 2,200 m most days. An unexpected bonus was learning how to use hiking sticks to make them do the work instead of our knees.

On our rest day we visited the Mer de Glace Glacier and looked inside the famed ice caves and learned about Forbes bands (the annual movement bands of glaciers) and how glaciers are formed expand and contract over time.

I can recommend the experience to anyone with “moderate” fitness. Both Jacki and I had a great holiday and met some fantastic people from the UK and Australia. Inspired by Rhododendrons in one sense helped to come to fruition by Jacki having a work commitment in Europe, still a great place to go for a holiday even after being a tourist destination for hundreds of years. ❁



**Above** Rob Hatcher walks among alpine communities of *Rhododendrum ferrugineum*.  
**Below** *Rhododendron ferrugineum* growing at high alpine altitudes.



ROB HATCHER



ANDREW HOUSE

New vireya registrations: *R.* 'Sarah Ormiston', above, and *R.* 'Victoria Griffith', below.



ANDREW HOUSE





ANDREW ROUSE

New registrations: **Above** R. 'Coco Williams'.

**Below** R. 'Fiera', left, and R. 'Joy Lenore', right.







**Newly registered vireya  
rhododendrons**

*Top row* 'April Vows' and 'Graham's Gift'.

*Middle row* 'Golden Dunes' and 'Happy Cam'.

*Above* 'Martin John' and 'Noah's Gold'.

*Left* 'Tijuana Bell'.



*Above* 'Veron Star' and 'Captain Ollie'.

*Right* 'Susan Marie'.



*Below* The top pond at Mirrabooka in autumn. See page 33.







BARRY STAGOLL

*Brachychiton acerifolius* at Mirrabooka.



Rhododendrons at Mirrabooka: 'Mrs Odee Wright' (above) and 'Ross Maude' (below).







Rhododendrons at Mirrabooka: *R. cubitii* 'Ashcombe', above, and *R.* 'Donvale Ruffles', below.



PHOTOGRAPHS BY BARRY STAGGILL

# *Making Mirrabooka*

## *A gardening marathon*

BARRY STAGOLL

When Gay and I decided to move house almost a quarter-century ago, the largest factor in our consideration of possible locations was the potential to create a bigger and better garden than the one we had established over a period of 22 years on a one-third acre allotment in the suburb of Bayswater in Melbourne's east upon which we'd built our first home, not long after we married. Not that we were disappointed with what we had achieved there. Each of us had been infected with the "gardening bug" from our youth. We gained a great deal of enjoyment and satisfaction designing and creating this, the first garden of our own. From the inception of its planting we indulged our already well-formulated preferences for particular trees, shrubs, and smaller plants – listed (and sketched) in notebooks we'd each carried about on our travels in the outdoors and garden visits. Having a shared interest in rhododendrons and azaleas there were soon more than a few of these in the ground, along with a wide selection of plants, indigenous and exotic, from other genera. We installed glasshouses and enclosures for propagating and maintaining collections of plants unsuited to exposure in the outdoors, and enjoyed designing and building garden features (including water features) to complement the plantings. The native soil needed little improvement, and the allotment was level so aside from building some raised beds we were quick to begin planting.

Two decades later, after designing and building extensive improvements to the house and outbuildings and exhausting the potential for accommodating more plantings, we decided to start a search for a larger property offering more 'interesting' topography and the potential for development of a more ambitious garden.

Preferring to remain at a similar distance east of the city we chose a property of around two acres on a ridge at Park Orchards, in a Special Environmental Zone known as the "Green Wedge" where most properties are of generous size and sub-division of property titles is not permitted. The original owners had named the property "Mirrabooka", which we researched to ascertain that this was an Aboriginal name used by tribes of the southern coast of New South Wales for the constellation of the Southern Cross, now symbolized in the design of the Australian flag and other regalia. Being approving of its origins, we

retained the name. Down-slope to our north is the Yarra River and the town of Warrandyte, founded early in Victoria's settlement after the first discovery of gold in Victoria was made on the site in 1851. It still retains Colonial-era buildings and remnants of the gold workings which persisted well into the last century. The district also contains very extensive environmental reserves, both along the banks of the Yarra River and more distant from it, and is rich in indigenous flora and wildlife, this being an additional factor in our choice of site. We have been richly rewarded for the efforts we have made to husband the native flora – including a number of very miniature native orchid species, for instance; and provide a safe and appealing haven for wildlife visitors – large numbers of native species of birds and other wildlife visit regularly.

The house was sound, and the design appealed to us, although we considered some decisions on room layout, finishes, and facilities needed correction. So we drew up new plans and got to work implementing these. We delayed moving house for two years, getting in preliminary work on the garden during that time whilst doing the most part of the work on the house (and other infrastructure) ourselves. We began by creating a bed down-slope from the house and directly opposite, leaving room for a large pond to be

Mirrabooka: The Japanese garden.



installed in front. Into this bed we placed the first three advanced specimens of favourite trees, all of the *Acer* family, which we lifted from our Bayswater garden and planted bare-rooted on what was up to that time the hottest Melbourne Cup Day (the nation's biggest annual horse-racing event) on record up to that time – all of them have thrived.

Without delay we laid out our broad design for the rest of the garden, including beds and pathways, installed new tall perimeter fencing incorporating shadecloth as a windbreak for the main garden, commenced the removal of the first of the 90 or so well-established *Pinus radiata* ((Monterey pines) and huge numbers of other weeds including over 800 large *Agapanthus* clumps, installed water reticulation lines, outlets, and automated watering systems throughout the garden and began planting. Numbers of plants went into the ground month by month. Then, two years down the track, we relocated as a family permanently, in the process disassembling and reinstalling our several glasshouses and their contents at our new home, along with other plants transplanted from the ground.

As foundation members of the Fern Society of Victoria we had assembled a very large collection of ferns, both native and non-native, and relocating them was the most delicate part of our move – unfortunately our efforts to provide temporary accommodation to Gay's many tropical "maidenhair ferns" (*Adiantum* sp.) were unsuccessful, and before long we lost them all (there were a great many other things to do at that hectic time, of course). All we have now are the photos! Later on we designed and added 25 square metres of glazed conservatory to the house with direct access from our living space, and these days that looks after ferns and fern allies with tropical or sub-tropical preferences, and certain flowering plants that prefer similar atmospheric conditions.

Following the move – whilst continuing to fell pine trees and tidy away the debris – we began in earnest to search out and plant other desirable additions to our new garden. Over the next few years these included many rhododendrons, vireyas and azaleas (evergreen and deciduous), and a wide selection of other flowering shrubs, including camellias and magnolias, along with favourite acers (lots of these), aesculum, arbutus, cercis, cornus, daphne, deodar, fagus, fraxinus, ginko, gordonia, harpephyllum, lagerstromia, liquidambar, parrotia, phellodendrum, pieris, pistachio, quercus, sprikelia, stachyurus, syringia, zelkova, etc., and a wide selection of Australian indigenous plants, including rainforest plants to accompany a large quantity of native ferns we had on hand (being long-time fern growers). Amongst a long list of Australian species, we're particularly proud of our large collection of the unusual and highly ornamental *Brachychiton* species. Almost everywhere we dug to install plants we encountered large fractured bands of sandstone. We



made good use of smaller pieces to create cobbled paths, as well as using larger ones, in combination with other rock we imported, for edging planting beds.

The native soil needed considerable improvement to satisfy the needs of our introduced plants, and apart from a modest amount of sandy loam we brought in, we chipped and shredded all the bark stripped from the pines as the clearing proceeded, also processing all fallen twigs and leaf material from the garden through the shredder, blending the resulting mulch together with other composted material and a certain amount of gravel into the soil, with gratifying results.

In this phase of development, we constructed several ponds (important not just for their landscape value, but also for the welfare of our wildlife); a Japanese garden – housing lots of azaleas; and a walled garden which aside from permanent plantings provides a useful space to house and display container-bound plants.

The removal of the pines, and other “weeds” (including vast numbers of very persistent foreign species of grasses, flowering plants and creepers) has been an ongoing and time-consuming process over the years since. The last of the giant pines was felled only in 2012, and as I write we are close to finalising clearing of the area they inhabited to begin planting what will be the largest bed in the garden to house non-indigenous plants – finally a proper home for the plants in our overflowing shadehouse! These include a considerable number of plants of the rhododendron genus.

As it stands, we do have quite a number of rhododendrons and other ericaceous plants in the ground. At first we were rather apprehensive about the welfare of our rhododendrons in warmer months, especially in the summer, in view of our site being quite high on the ridge, directly in the path of the drying northerly winds prevailing during much of every year. Our planting records list 72 rhodo hybrids, 13 species, 19 azaleas, and a few vireyas planted (most of the latter we keep in a shadehouse). Over the years we’ve had lots of losses, which we put down mainly to the stresses of exposure to these winds. However, on the plus side – with much care taken in choosing planting sites, watering and other attention, aided in our selections initially by generous advice from experienced growers and research gleaned from published sources – a reasonable number of plants (both species and hybrids) we’ve selected, as well as those ‘donated’ by friends, have performed well, and given us much pleasure. The numbers surviving fell away during the long drought, which prevailed over a number of years ending 2009, and we look forward to restoring the line-up soon now.

Amongst the more successful (among our earliest plantings) have been *R. decorum*, *R. veitchianum* and *R. arboreum* species such as *R. arboretum* ssp.

*peramoenum* and *ssp.delavayi*; *maddenii*s have done well but given up recently; *arboreum* hybrids such as the late Jack O'Shannassy's 'Donvale Pearl'; and venerable older Waterer's hybrids including 'Mrs. E.C. Stirling' (named for the consort of an early Governor of South Australia), other British hybrids including 'Bronzewing', 'Seta', 'Tyermanni' and 'Winsome', American ones including 'Mrs Odee Wright' and 'Golden Gate', and Australian hybrids 'Midnight' and 'Ross Maude'. Dick Harris, Blue Mountains Rhododendron Society President, sent us down some fine plants around a decade ago, including the very nice US hybrid: 'Sweet Sixteen' which has done well (unfortunately, we lost his fine red: 'Vulcan's Flame' just recently after many good annual showings). We're not about to give up on growing rhodos!

Nor on gardening in general. We're still motivated by the satisfactions of achievement, despite the incidental and inevitable disappointments born out of excessive ambitions. And there's always plenty of good, healthy, outdoors exercise to be enjoyed, much more to be learned, and much sharing of interests with gardening friends. ☘

**Mirrabooka Garden website:** <http://members.iimetro.com.au/~mirra/mirra.html>

Mirrabooka: The conservatory.



# *Refurbishment of the Vireya House at Olinda*

JOHN O'HARA

**T**he building of a display house for rhododendrons of the subgenus vireya has been an objective of many ARSV society members for a long time. Over the years plans had been drawn up several times but the project was always problematic. In 2012 a resolution was put to a general meeting of the ARSV to refurbish the main glasshouse at Olinda and use it to house the vireya collection. The resolution was passed and a budget of \$20,000 was agreed. Collaboration between the volunteers of the ARSV (particularly Hugh Eitzke, Michael Hare, Prue Crome, Andrew Rouse and the author) and Parks Victoria staff (special mention to Glenn Maskell) has produced an excellent result that came in on budget (just).

## *Why a Vireya House?*

Members of the ARS have long been at the forefront of introducing wild vireya species into cultivation. So much so that the number of species cultivated by local members and at Olinda represent probably the largest collection of vireyas anywhere other than that held by the Edinburgh Botanic Gardens. Unfortunately ageing and declining membership of the ARS has meant that much of this collection is increasingly at risk of being lost. It is hoped that presenting much of this collection in a permanent display for the public to see would not only increase the number of plants held for each species but might also attract new interest and members to the society.

Such a display must be attractive to the public, it must be housed in a space or enclosure that enhances the Gardens and shows the vireyas at their best. The advantage of a glasshouse is that it provides a year round focal point that is out of the weather. A glasshouse allows for a concentration of plants and provides a venue where the public can be educated about the beauty, diversity and at risk conservation status of species within the subgenus.

## *The Structure*

There was much discussion about what sort of structure was required to best suit the range of vireyas we could envisage growing. An open structure with shade-cloth for the roof and walls was favoured from the point of view of

disease control, the better air circulation reduces fungal and pest outbreaks, but this offered no great ability to control the environment particularly mitigating the cold winters. Shade-cloth structures with a solid roof would give control over watering while still giving excellent airflow but no improvement in the winter. A solid walled and roofed “glasshouse” would provide warmer winter temperatures but internal airflow for disease control and high summer temperatures would need to be considered. Of course plants that are not suited to the warmer environment can still be grown outside thereby providing a wider total range of growing environments.

In the end the deciding factor was that we had an existing glasshouse structure in a spot within the Garden that would be appropriate. It was a bit too small, in poor repair and suffered from bad drainage but it would be relatively cheap to fix and would provide a great learning guide for a Vireya House Project if we chose to build a bigger, better structure later. In the end it was easier to repair and reclad this structure as a “glasshouse” than to dismantle the structure and rebuild as a shade-house.

### ***The Aim***

The aim was to build a structure that would suit a broad vireya collection, it also had to be attractive enough to encourage the general public to want to go in and have a look at its contents.

### ***The Objectives***

Having made the decision to refurbish the existing house as a solid walled enclosure it then became possible to include a significant amount of environmental control. Good thermal control was needed, so this meant insulation for the winter and cooling for the summer. Good airflow demanded both forced ventilation into and circulation within the house. Shading was needed for the summer but not for the winter. Automatic humidity control and automatic watering were needed to avoid increased labour demand. Where possible the humidification, watering and air circulation would be designed to keep the leaves dry and therefore reduce the likelihood of fungal disease.

### ***Preparation***

Re-using the existing structure meant we had a galvanised iron frame mounted on a 600 mm high brick stud wall. It was 15 m long by 9 m wide and 5 m high. It had a central ridge vent that was opened by a pulley system. It had no facility for shading or additional ventilation. The house had originally been glass but this had been converted to a corflute cladding which had aged and

was beyond its use by date. The drainage was poor and not helped by leaking, old plumbing and stormwater inflow.

The brickwork and galvanised frame were in good condition but the glazing bars and base plate were completely rusted. The old overhead sprinklers mostly worked, they were however inadequate for the new configuration.

The glasshouse had served as a propagation house for many years so the project began with the removal of the old propagator and the building of a new propagation house elsewhere in the gardens. The benches were removed, the plumbing removed and the structure stripped back to the frame. The brickwork was cleaned and in parts re-pointed. The drainage was improved and new gravel was added. The frame was re-attached to the brickwork, re-braced and painted.

### ***Refurbishment***

The complete removal of the glazing bars and stripping back to the frame allowed the re-cladding of the building to be done using a twin walled polycarbonate with the appropriate aluminium joiners and mouldings. This made for a relatively easy building process and gave a very neat finish. The polycarbonate used was manufactured by Suntuf and was their 10 mm Sunlite product in clear. This is a highly attractive, tough and long lasting material which because of its twin walls and central air gap has good insulating properties.

To allow shading to be used during the summer and removed during the winter a reflective shade cloth made from thin aluminium strips was installed as a curtain 300 mm below the roof. This curtain can easily be pulled up for shade in the summer and retracted for the winter. This material is widely used for shading in commercial glasshouses; it gives a 50% block-out and was purchased from Monbulk Rural.

The ventilation installed consisted of two 300mm electric fans kindly given to the project by Simon and Marcia Begg. They were installed low down in the end wall to force air into the glasshouse. Internal circulation is maintained by two 1200 mm ceiling fans mounted just below the shade cloth.

Humidity control and cooling is produced by a high pressure (1000 psi) pump and nozzle system supplied by OZMIST Misting Systems of Wangaratta. Lines of misting nozzles on the roof trusses achieve routine relative humidity control, while rings of nozzles in front of the air intake fans produce cooling.

A control unit was made using a RH controller and a thermostat. This controls the external fans, the high pressure pump and misting nozzles. The controller turns the fans on when the glasshouse is too hot, turns the misting nozzles rings on to produce cooling or the roof nozzles on for RH control.

## ***Preliminary Testing***

Some testing of conditions achieved inside the glasshouse were attempted. The measurements were made with the glasshouse empty, i.e. no plants and a dry gravel floor as the base. This dry, plant free glasshouse would equate to the worst possible case, in that plant transpiration and evaporation would normally help keep internal temperatures down somewhat. The measurements were made on warm, cloud free days with minimal external breezes. The central ridge vent was open right through these experiments.

The glasshouse, without external fans running, no shading or misting, levelled off at temperatures about 10°C above the external temperature (42°C internal with 33°C external and 33°C internal with 23°C external).

The use of the internal shades clearly reduced the radiant heat you felt inside the glasshouse but the measured air temperatures inside the glasshouse were still about 8°C to 10°C hotter than outside. It would appear the shades stopped some of the heat directly hitting the floor but the heat remained in the glasshouse. In this passive system the ridge vent did not appear to adequately remove heat.

Some reduction of the internal temperature was achieved by running the external fans with the shade cloth drawn but the internal temperature was still 6°C above external.

When all temperature control measures were acting, fans, shades and mist nozzle rings the internal temperature was much closer to the external temperature. The amount of cooling achieved did appear to be more dependent on the external relative humidity than on the external temperature. With an external temperature of 23°C and a RH of 42% the internal temperature reached 20°C and 65% RH internally. A second measurement on a day of 33°C and 20% outside gave an internal temperature of 30°C and 45% RH (so cooled to below external temperature).

## ***Where to from here?***

Andrew Rouse discusses the task of landscaping the interior with hard surfaces, garden beds, hanging baskets and plants elsewhere in this journal. How to use the misting system, fans and shading to produce the conditions most suitable for the plants will be an ongoing experiment. ❁







**Above** Preparing the raised beds with rock edges and gravel substrate.

**Below** Vireya House immediately after planting out.





**Above** Curator Brian Davidson amongst new plantings of rhododendrons at Tamborine Mountain Botanic Gardens.

**Below** Interpretative signage at Tamborine Mountain Botanic Gardens.



# *Rationale for refurbishing the vireya house at the National Rhododendron Gardens, Olinda*

ANDREW ROUSE

**V**ireyas have been grown at the National Rhododendron Gardens at Olinda since the early in 1970s. Since then, the gardens have built up an impressive collection of species and hybrids. Many of the larger vireya species, particularly those from mid-montane climates, have adapted well to the conditions at Olinda, and the species bed now has a good collection of larger species growing in ground.

Despite repeated attempts there has been little success with establishing in ground the smaller vireya species and those from lowland and high montane climates. This is due to a number of factors including unsuitable climate (hot and dry summers), disease, difficulty in establishing epiphytic species in ground and providing specific horticultural requirements for plant health, and even the damage or uprooting caused by lyrebirds!

As a result, many of the vireya species in Australia are only held by private collectors, with some species only grown by those private individuals with a glasshouse. Whilst there have been very few vireya species lost to cultivation in Australia, species only held by a couple of individuals are at greater risk of being lost. To help safeguard vireya species in cultivation, the ARS-Vic branch decided to refurbish the glasshouse at NRG Olinda, with the following aims:

- to provide a publicly accessible collection of vireyas species and sub-species of known provenance (and other tropical/sub-tropical Rhododendron) to showcase the diversity in the group and to ensure a high quality reference collection;
- to display vireyas in an environment best suited to provide optimal growing conditions (which also minimizes the likelihood of pests and disease) that will showcase the diversity in the group;
- provide a display that is well presented and informative that potentially becomes a focal point for ARS-Vic activities.

## ***Glasshouse configuration and horticultural requirements***

There are about 160 vireya species and subspecies in cultivation in Australia. Ultimately, the bulk of these will be housed in the glasshouse – two plants of each provenance – so the glasshouse layout needed to take into account that up to 320 plants need to fit within 130 square metres. Those species that grow well in the gardens at Olinda such as *R. tuba* will not be displayed in the glasshouse.

In order to provide suitable environment and conditions for the diverse requirements of vireyas, the glasshouse has been laid out to display plants in raised garden beds, pots, hanging baskets and treefern logs.

### ***Raised garden bed***

Four raised garden beds have been established, two along each side wall. The intent in creating smaller beds is to cater for different watering and other horticultural requirements, as well as to have a physical barrier in the event that a section of bed shows signs of a soil-borne pathogen. A low wooden sleeper wall along the side and back walls provides a narrow breeze way in which irrigation plumbing and wiring is concealed. It also prevents the raised beds from having direct contact with the glasshouse brickwork.

The raised beds have a base of gravel to provide drainage. After much experimentation, the mix for the beds used is equal parts potting mix and ground tree fern. The potting mix is a commercial brand – the mix used for potting at NRG Olinda – comprised of different grades of pine park, with some coir peat and a small percentage of sand. Ground tree fern fibre was added to this mix to provide more organic matter of a type known to be suitable for vireyas, to make the mix ‘lighter’ and to improve drainage and air penetration.

Rocks have been used to delineate the edge of the raised beds and to provide crevasses in which to plant smaller species. Particular attention has been given to securing plants in the beds, either through staking or wedging between rocks, to ensure minimal movement of the root ball so that the roots can grow into the beds. Once the plants are well established the stakes will be removed.

To date about 110 species and subspecies have been planted into the garden beds. Some of them were already established in tree fern logs, however most were transplanted directly from pots. No plants were transplanted from other garden beds so as to reduce the risk of introducing soil borne pathogens.

The bed layout has larger plants towards the back with smaller specimens at the front, which in time is hoped will provide a tiered effect. One bed has been reserved predominantly for small leaf species and those from higher altitudes where it is hoped that the micro-climate – good air flow and sunlight – will allow them to flourish without being crowded out by larger plants.

Some non-vireya rhododendrons from sub-tropical regions have also been planted in the glasshouse, including *R. championae*, *R. excellens*, *R. ludwigianum* and *R. saxicolum*.

## **Pots**

A small area of floor space at the front of the glasshouse has been set aside for potted specimens. This area will house old, large specimens that would not take to being transplanted into the raise beds, and to allow other specimens to be displayed as they come into flower. Species currently displayed in pots include *R. carringtoniae*, *R. konori*, *R. kochii*, *R. viriosum* (large, old specimens) and *R. lowii* (transplanted from a garden bed and now confined to a pot to reduce risk of introducing soil borne disease). Whilst space is limited, it is hoped that private collectors will consider donating old/mature specimens they no longer wish to look after.

## **Hanging Baskets**

Vireyas requiring excellent drainage or other special horticultural requirements, along with those with poor root systems or spreading habit, will be established in hanging baskets. The specimens in place are plants provided by ARS members that were already established in hanging baskets. These include *R. rarum*, *R. leucogigas*, *R. multicolour*, *R. minus v chapmanii* (a non-vireya), *R. womersleyi* and *R. gracilentum*. In time it is planned to have up to 20 hanging baskets.

## **Tree fern logs**

Lengths of tree fern have been embedded in the garden beds, and three tree fern 'towers' placed in the centre of the glasshouse. These provide a growing environment for small, epiphytic species that require excellent drainage and good air flow. The tree ferns in the garden beds have been planted out with small species such as *R. rubineiflorum*, *R. rarum*, *R. stenophyllum*, and in due course the 'towers' will display range of other small species (and possibly hybrids).

## **Next Steps**

There are about 40–50 species and sub-species still to be planted out. This will occur once cuttings have been taken to ensure back-up plants are held, and when other specimens get to a size suitable for planting out. It is envisaged that the bulk of these will be in place over the next 12 months.

All plants currently have an aluminium plant tag. These will be replaced by a small tag with a database number along with an etched plant label in ground next to the plant.

There is still some landscaping to be undertaken, including providing a fine gravel base for the paths, and determining how best to display the potted



specimens. With the exception of the hanging baskets, the glasshouse watering is fully automated, and the hanging baskets will also be automatically watered once some plumbing works are completed.

Once completed, the glasshouse will have one of the few publicly accessible displays of vireya species under glass. With the provenance known for many of the species held, it will also be an important reference collection of living material that can be made available to those studying the taxonomy of vireyas. It will also provide source material for propagation so that other public gardens can be stocked, along with ARS members seeking to build their own private collections.

### ***Acknowledgments***

ARS members have donated most of the plants for the glasshouse with the remainder coming from the potted collection at NRG Olinda. Special acknowledgement goes to Murray McAlister and Bill Taylor whose collecting trip to NZ in 2006 resulted in the single largest increase in vireya species in cultivation in Australia, specimens that have subsequently been propagated and form a sizeable portion of the species planted out in the glasshouse. To date plants have been received, either directly or indirectly, from the collections of Laurie Begg, Simon Begg, Lyn Craven, Murray McAlister, John O'Hara, Andrew Rouse and Elizabeth Xipell.

The project would not have been possible without the support of Parks Victoria, and the ARS is particularly appreciative of the assistance provided by Glenn Maskell and his team at the NRG Olinda. ❀

# *Vale Terry Shadbolt*

Tuesday 22<sup>nd</sup> May, 2013 saw the passing of our much esteemed and valued Chairman of Emu Valley Rhododendron Garden Inc., Terry Shadbolt.

In the garden's 32-year history Terry has been an outstanding contributor for most of those years, including a term as President in 1990 when we were the North West Tasmanian Branch of the Australian Rhododendron Society.

His background was an illustrious teaching career – the last 19 years as science master. This, together with considerable success in the sporting world, led to him knowing a great number of people, who he either taught or played sport with.

Early in the development of the garden Terry was able to encourage the Yeoman Cricket Club members to fell and cut up unwanted trees for firewood to be distributed to needy families in the district.

He also encouraged a manager of a mining company to make available a cottage for us to use as a caretaker's cottage. This needed to be cut in half to be transported and Terry's prowess with the chainsaw came to the fore. The deal included unloading it at the garden and placing it on the footings previously built, all at no extra cost.

On a personal level, his daughter Stephanie was working in Japan for the Olympus Company and on one of her trips home she was asked by Dad to see if the company would sponsor the building of a bridge. This approach was successful, and a very fine bridge now adorns the garden, appropriately named "Olympus Bridge". It was duly officially opened with pomp and ceremony, Terry being the President at that time. Rarely absent when there was a working bee, his catch cry was "I am only here to roll rocks around and cut trees down". He also enjoyed meeting people and volunteered many hours on a regular basis on gate duty. When cruise ship passengers visited, he loved to gather them together on the balcony and explain the garden to them before organizing guides to escort them around to see for themselves.

He showed his expertise on a managerial level as President of the Society, Chairman of the Garden Board, and putting the newsletter together, to name a few. Of particular note was the many, many hours spent working on grant applications, the majority of which were successful. One of these grant applications was to procure funding for a Chinese Pavilion which is now being built in the garden in Sichuan Province.

What talents Terry Shadbolt was given he used wisely, never in a boastful way but with a subtle and encouraging approach to people – a born teacher.



Kay was right beside him for over 50 of his 77 years, two halves of a whole. Then there came their children Justin (now in WA), Stephanie (Seattle, USA) and Craig (Canberra) with respective partners, Jen, Jesse and Kathryn, and grandchildren Joey and Bronte. In the death notice they requested “No condolences please” – we respect that and just say “Thank You”.

How we will miss him.

*Maurie & Pam Kupsch*

A commemoration of Terry's life was held at the EVRG on the 28th May, and afterwards the Life Membership that was to be presented to Terry at the next Annual General Meeting, was presented to his family.

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# New Registrations 2012–2013

LESLEY EATON

The following is a listing of registrations submitted by the Australian Rhododendron Society Plant registrar, and approved by the Royal Horticultural Society during the year 2012/2013.

Colour numbers refer to the R.H.S. Colour Chart. Accompanying colour names are taken from “*A Contribution Towards Standardization of Color Names in Horticulture*”, R.D. Huse and K.L. Kelly, edited D.H. Voss (ARS 1984).

Parents of plants are reported in the conventional order – seed parent × pollen parent.

Abbreviations used: H hybridized by  
G grown to first flower  
S selected by  
N named by  
I introduced by  
R registered by

I have included broad colour definitions after RHS Colour Chart numbers for the flowers. This will enable members without access to the chart to have some idea of the colour of the flower.

**‘April Vows’** Vireya hybrid of ‘Neesa’ × phaeocephalum H: the late Graham Snell (2004). G: Neil Puddey (2010). N: Kathryn Puddey (2012). I & R: Neil Puddey (2012). Truss: umbel consisting of 8–12 tubular funnel flowers. Corolla: 85mm × 75mm. Lobes: 5–6 flat. Buds: 187A (deep red). Corolla: Inside & outside 155B (yellowish white) seeping to 11D (pale yellow) in centre of corolla and along the corolla tube. Leaves: elliptic 100mm × 50mm, margins decurved. Indumentum: 158B (pale yellow) when young 174A (dark reddish-brown when mature). Height: 1.4m × 0.6m in 8 years. Flowering time: irregular times throughout year. Scented.

**‘Captain Ollie’** Vireya hybrid of unknown seed and pollen parents. H: Neil Puddey (2010). G: Neil Puddey (2010). N: Neil Puddey (2012). I & R: Neil Puddey (2012). Truss: full umbel, consisting of 10–12 funnel-shaped flowers. Corolla: 60mm × 55mm. Lobes: 5–6 flat. Buds: 187A (dark red).. Corolla: inside and outside 41A (vivid reddish orange). Leaves: broadly elliptic 110mm × 65mm margins flat. Upper surface: glossy. Height: 0.6m × 0.3m in 3 years. Flowering time: irregular.

**‘Coco Williams’** Vireya hybrid of *suaveolens* × *laetum*. H: Andrew Rouse (2002). G: Andrew Rouse. N: Andrew Rouse (2013). Truss: open, consisting of 7–12 trumpet-shaped flowers. Corolla: 45–50mm. × 40mm. Lobes: 4–5 wavy. Buds: colour unknown. Corolla: inside 158C (yellowish-white), outside 36D (yellowish-white flushed to pale yellowish pink). Leaves: broadly elliptic 30–70mm × 18–38mm margins flat to upcurved. Upper surface: glossy. Height: 1.2m × 1.2m in 11 years.

**‘Fiera’** Vireya hybrid. Seed & pollen parent unknown. H: Neil Puddey (2008). G Neil Puddey (2010). N: Neil Puddey (2011). I & R Neil Puddey (2012). Truss: umbel consisting of 8–10 funnel flowers. Corolla: 65mm × 70mm. Lobes: 5–7 wavy. Buds: 194D (pale yellowish-green). Corolla: inside & Out 36A (light yellowish pink) streaked with 158D (yellowish-white). Leaves: broadly elliptic 75mm × 45mm margins flat. Upper surface: glossy. Height: 0.6m × 0.6m in 4 years. Flowering: irregular.

**‘Golden Dunes’** Vireya hybrid of ‘Carillon Bells’ × ‘Desert Song’. H; Neil Puddey (2008). G: Neil Puddey (2010). N: Neil Puddey (2011). I& R: Neil Puddey (2012). Truss: open umbel consisting of 8–10 tubular funnel flowers. Corolla: 50mm × 20mm. Lobes: 5 flat. Buds: 174A (dark reddish-brown). Corolla: inside & outside 23B (brilliant orangish-yellow). Spots: 26A (strong orange). Leaves: broadly elliptic 50mm × 20mm margins decurved. Upper surface: glossy. Height: 1m × 0.5m in 4 years. Flowering time: irregular.

**‘Graham’s Gift’** Vireya hybrid of ‘Neesa’ × *phaeopeplum*. H. The late Graham Snell (2004). G: Neil Puddey (2010). N: Neil Puddey & Wendy Snell. I & R: Neil Puddey (2012). Truss: open umbel consisting of 5–8 tubular funnel flowers. Corolla: inside & outside 155B (yellowish-white deepening to 11D (pale yellow) along the outside corolla tube. Leaves: broadly elliptic 100mm × 50mm margins wavy. Upper surface: glossy. Height: 1.2m × 0.6m in 8 years. Flowering period: irregular 2–3 times throughout year. Lightly scented.

**‘Happy Cam’** Vireya hybrid of ‘Kisses’ (selfed) × ‘Beejay Bay’. H: Neil Puddey (2008) G: Neil Puddey (2011). N: Neil Puddey (2011). I & R: Neil Puddey (2012). Truss: open umbel consisting of 5 funnel-shaped flowers. Corolla 65mm × 55mm. Lobes: 5 flat. Buds: 193B (pale yellowish green). Corolla: inside & outside 30A (vivid reddish orange) with 21D (light yellow) inside tube and base of lobe. Leaves: broadly elliptic 70–120mm × 32–57mm margins upturned wavy. Upper surface: glossy. Height: 1.2m × 1m in 12 years. Flowering season: no set time.

**‘Joan McLelland’** Vireya hybrid of *viriosum* × *rarilepidotum*. H: Andrew Rouse (2001). G: Andre Rouse (2008). N& R: Andrew Rouse (2013). Truss: open, consisting of 10–15 campanulate flowers. Corolla: 40mm × 45mm. Lobes: 5 wavy, Corolla: inside & outside 31A (strong reddish-orange). Leaves: broadly elliptic 70mm–120mm × 32mm–57mm margins upturned wavy. Upper surface: glossy. Height: 1.2m × 1m in 12 years. Flowering season: no set time.

**‘Joy Lenore’** Vireya hybrid of ‘Kisses’ × ‘CharmingValentino’. H: Neil Puddey (2008). G: Neil Puddey (2008). N: Neil Puddey (2010). I&R: Neil Puddey (2012). Truss: domed/umbel consisting of 8–10 funnel-shaped flowers. Corolla 45mm × 50mm. Lobes: 5 flat. Buds: 194D (pale yellowish-green). Corolla: inside & outside 38C (light yellowish pink). Leaves: broadly elliptic 60mm × 35mm margins decurved. Upper surface: glossy. Height: 1m × 0.5m in 4 years. Flowering time: Irregular 2–3 yearly.

**‘Mansandra’** Elepidote hybrid of ‘Petra’s Debut’ × unknown pollen parent. H: Don Dossier. G: Don Dossier (2012) N & R: Don Dossier (2012). Truss: ball consisting of 14 funnel-shaped flowers. Corolla: 50mm × 90mm. Lobes: 6 wavy. Buds 58A (dark magenta). Corolla: inside & outside 64D (dusky pink). Leaves: upper surface matt. HeightL 1.5m × 1m in 10 years. Flowering time: Oct/Nov. Slight scent.

**‘Martin John’** Vireya hybrid of ‘Saxon Glow’ × ‘The Star’. H: Neil Puddey (2008). N: Neil Puddey (2010). I&R: Neil Puddey (2012). Truss: open umbel consisting of 3–4 funnel-shaped flowers. Corolla: 50mm × 55mm. Lobes: 6 flat. Buds: 174A (dark reddish-brown). Corolla inside; 30B (vivid reddish-orange) fading to 24D (pale orangish-yellow) at centre of lobes and inside tube; outside: 30C (vivid yellowish-pink) on the tip of the lobes fading quickly to 24D (orangish-yellow) on the tube. Leaves: narrowly elliptic. Upper surface: glossy. Height: 0.5m × 0.25m in 4 years. Flowering time: irregular.

**‘Murrundindi’** Elepidote hybrid of ‘Petra’s Debut’ × unknown pollen parent. G: Don Dossier (2012). N & R Don Dossier (2012). Truss: funnel consisting of 14 conical shaped flowers. Corolla: 50mm × 100mm. Lobes: 5 wavy. Buds: 57D (rose pink). Corolla: inside and outside 57D (rose pink). Blotch: 58A (deep lipstick pink). Height: 1m × 1m in 10 years. Flowering time: October/November. Slight scent.

**‘Noah’s Gold’** Vireya hybrid. Seed and pollen parent unknown. H: Neil Puddey (2008). G: Neil Puddey (2010). N: Neil Puddey (2010). I&R: Neil Puddey (2012). Truss: Flat consisting of 5–8 tubular funnel-shaped flowers. Corolla: 70mm × 60mm. Lobes: 5 flat buds: 135D (light yellowish-green).

Corolla: inside & outside 9B (vivid yellow). Leaves: narrowly elliptic 110mm × 35mm margins upcurved. Height: 1.5m × 0.8m in 4 years. Flowering time: irregular 2–3 yearly.

**‘Sammey Smyth’** Elepidote hybrid of ‘Countess of Lockington’ open pollinated. H: Don Dosser (1990) G: Don Dosser (2000) N&R Don Dosser (2012). Truss: ball consisting of 10 funnel-shaped flowers. Corolla: 60mm × 115mm. Lobes: 7 wavy. Buds: 11D (cream). Blotch: at base 59C (crimson). Calyx: 50mm 11D (cream). Height: 1m × 1m in 12 years. Flowering time: November/December. Slight scent.

**‘Sarah Ormiston’** Vireya hybrid of *macgregoriae* × *luraluense*. H: Andrew Rouse (2001), G: Andrew Rouse (2009). N& R: Andrew Rouse (2013). Truss: open, with some flowers held partially upright, consisting of 6–9 campanulate-shaped flowers. Corolla: 30mm × 30–35mm. Lobes: 5 wavy buds: 145D (light yellowish green). Corolla: inside & outside corolla tube 157D (greenish-white) and lobes 36C (light yellowish-pink). Leaves: elliptic 50–60mm, margins slightly wavy. Upper surface: glososy. Height: 1.2m × 1m in 12 years. Flowering time: June.

**‘Susan Marie’** Vireya hybrid of ‘Kisses’ × ‘Tropic Glow’. H: Neil Puddey (2008). N: Neil Puddey (2010). I&R: Neil Puddey (2012). Truss: open umbel consisting of 6–8 funnel-shaped flowers. Corolla: 45mm × 50mm. Lobes: 5 flat. Buds: 173A (dark reddish-orange). Corolla: inside & outside 28B (vivid orange) fading to 15D (light yellow). Leaves: broadly elliptic 110mm × 55mm, margins decurved. Upper surface: glossy. Height: 1m × 0.5m in 4 years. Flowering time: irregular 2–3 yearly.

**‘Teresa Smyth’** Elepidote hybrid of ‘Countess of Lockington’ open pollinated. H: Don Dosser (1990). G: Don Dosser(2000) .N&R:Don Dosser (2012). Truss: ball consisting of 15 funnel-shaped flowers. Corolla: 50mm × 100mm. Lobes: 5 wavy. Buds: 37C (light orange). Corolla: inside & outside 2D (pale greenish-yellow) . Blotch: 2 top lobes ray of 59C (light reddish-purple). Calyx: 10mm 2D (pale greenish-yellow). Height: 1.5m × 1m in 12 years. Flowering time: November. Scented.

**‘Tijuana Bell’** Vireya hybrid of unknown parentage. H&G: Neil Puddey (2010). N: Neil Puddey (2011). I & R: Neil Puddey (2012). Truss: lax consisting of 5–6 funnel-shaped flowers. Corolla: 75mm × 80mm. Lobes: 5–6 wavy. Buds: 173A (dark reddish orange) exposing 193A (pale yellow-green) on expansion. Corolla: inside & outside 43D (strong yellowish pink) fading to 11D (pale yellow). Leaves: ovate 100mm × 80mm, margins decurved. Upper surface: matt. Height: 0.6m × 0.3m in 2 years. Flowering time: Irregular – twice yearly. Good scent.

**‘Verona Star’** Vireya hybrid of unknown parentage. H: Sylvia Saperstein (2006). G: Sylvia Saperstein. N: Neil Puddey (2009). I & R: Neil Puddey (2012). Truss: flat, consisting of 5–6 funnel-shaped flowers. Corolla: 75mm × 75mm. Lobes: 5 flat. Buds: 174A (dark reddish-brown). Corolla: inside & outside 47D (deep pink) fading to 18C (pale yellow) at the centre and tube of corolla. Leaves: broadly elliptic 110mm × 75mm, margins flat. Upper surface: matt. Height: 1.2m × 0.5m in 5 years. Flowering time: irregular 2–3 yearly.

**‘Vicky Griffith’** Vireya hybrid of *luraluense* × *psammogenes* var. *inundatum*. H: Andrew Rouse (2005). G, N & R: Andrew Rouse (2013). Truss: upright, consisting of 5–10 trumpet-shaped flowers. Corolla: 35mm × 35mm. Lobes: 5 distinctly fluted. Buds: 149D (pale yellowish-green). Corolla: inside & outside white. Leaves: Broadly elliptic 40–60mm × 11–30 mm, margins slightly wavy. Upper surface: glossy. Height: 1m × 1m in 8 years. Flowering time: March.

**Wilmot’s Red** Elepidote hybrid of ‘Cornubia’ × ‘Coronation Day’. H: Don Dosser (1992) G: Don Dosser (1998) N&R Don Dosser (2012). Truss: Ball consisting of 12 funnel-shaped flowers. Corolla: 55mm × 135mm. Lobes: 5 wavy. Buds: 60A (deep blueish-red). Corolla: inside & outside 58A (deep purplish-pink). Leaves: elliptic 140mm × 60mm, margins flat. Upper surface: glossy. Height: 2m × 2m in 20 years. Flowering time; October.



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# *The Australian Rhododendron Society Inc.*

## *Contact Information*

<i>President</i>	Mr Rob Hatcher hatcher.robert@saugov.sa.gov.au
<i>Vice-President</i>	Mr Graham Simpson grasuesi@bigpond.net.au
<i>Secretary</i>	Ms Jacki Hatcher hatcherhouse@internode.on.net
<i>Treasurer</i>	Vacant
<i>Plant Registrar</i>	Mrs Lesley Eaton, PO Box 597, Snug, Tasmania 7054. lesley.eaton@bigpond.com
<i>Editorial Committee Chair</i>	Mr Barry Stagoll, 170 Knees Road, Park Orchards, Victoria 3114. mirra@iimetro.com.au
<i>Journal Editor</i>	Mr Richard Francis, 18 Sinclair Street, Colac, Victoria 3250. richard@wildeel.com
<i>National website</i>	www.rhododendron.com.au
<i>Correspondence</i>	National correspondence to The Secretary (above)

## *Local contacts*

### **SOUTH AUSTRALIA**

#### ***ARS South Australian Branch***

<i>President</i>	Mr Ian Smylie	smylie@adam.com.au
<i>Secretary</i>	Mrs Jamie Smylie	smylie@adam.com.au

### **TASMANIA**

#### ***Emu Valley Rhododendron Garden Inc.***

<i>President</i>	Mr Ian Chalk	<a href="http://www.emuvalleyrhodo.com.au">www.emuvalleyrhodo.com.au</a>
<i>Secretary</i>	Mrs Jenny Chalk	enquiries@evrg.com.au ijchalk@bigpond.com

#### ***ARS Southern Tasmanian Branch***

<i>President</i>	Mrs Lesley Eaton	lesley.eaton@bigpond.com
<i>Secretary</i>	Mrs Debbie Farmilo	mdwj@bigpond.com

### **VICTORIA**

#### ***ARS Victorian Branch***

<i>President</i>	Mr John O'Hara	<a href="http://www.vicrhodo.com.au">www.vicrhodo.com.au</a>
<i>Secretary</i>	Mr Michael Hare	johnohara@optusnet.com.au secretary@vicrhodo.org.au

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PHOTOGRAPHS BY BARRY STAGOLL

**Rhododendrons at Mirrabooka:** 'Mrs E.C. Stirling' (top) and 'Donvale Pearl' (above).  
Back cover: 'Melba'. See page 33.



